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xEnergy Xpole
Energy distribution, switching and protection

Moeller is Eaton

EATON
Powering Business Worldwide

Darwin Technology
The easy way to connect

xCommand
Control and Indication

xStart
Switching, protecting and actuating motors

xCommand
xSystem
Automation, control and visualization

Safety Technology
Control the unexpected

Matching of Voltage and Current

xEnergy
Xpole
Energy distribution, switching and protection

Xboard
Optimal switchgear enclosure

Service

IEC UL CSA

SASY busbars system
Accessories for control panel building

The innovative accessory for control panel construction is optimally matched to the Eaton control and distribution systems. Whether cable management systems, connection and interconnection technology or locking systems, Eaton accessories help you to realize your applications easily and without wasting time.

Moeller Systempartner Schaltanlagen

SASY busbar system
Interval between busbar centers of 60 or 185 mm conforms to market requirements +++ Devices and adapter mount directly to rail without bore holes +++ System covering for optimal protection against accidental contact +++ For application worldwide +++ Type-tested in Eaton control panel systems

D fuse switch-disconnector with flashing function - D02-LTS/63/3-R
Blink function signals tripped fuse link+++ Snap-action drive switches the load all-pole and hand-autonomous+++ Available with/without integrated auxiliary contact → Page 16/21

LV h.b.c. fuse switch-disconnectors - GST
Construction sizes 000, 00, 1, 2, 3 to 630 A +++ Easy, fast mounting to 60 mm systems +++ Comprehensive device accessories and fuse inserts LV h.b.c. → Page 16/16

K connecting terminals
For cross sections from 16 to 4 x 185 mm² +++ Accepts round and ribbon cables +++ Conductor mounts easily from front → Page 16/67

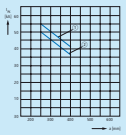
F3A flanges, ZSD-2K, DH-COMF comfort hinged handle
Insulating material or steel plate +++ Metric cable entry knockouts or cable grommets +++ Version with sponge rubber for direct cable inlet +++ Simple handling +++ Halogen-free +++ Hinge comfort grip for control panels +++ Fold instead of swing +++ Ergonomically formed grip from cast zinc +++ For all market-typical profile semi-cylinders → Pages 16/62, 16/81

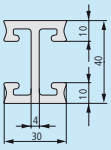
Cable grommets and cable glands
For cable external diameters from 1 to 68 mm +++ Simple handling, high protection type +++ PG or metric → Page 16/62

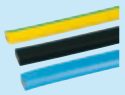
Accessories for control panel building
Optimally matched to busbar systems SASY, Chapter 16 +++ CI insulation material housing, Chapter 20 +++ Steel plate wall housing CS, Chapter 21 +++ Installation distributor IVS, Chapter 22 +++ Add-on board XVTL, Chapter 22 +++ Universal application in other control panels

Prefabricated energy and control distribution
Our system partner switchgear systems operate prefabricated energy and control distributions worldwide.
www.moeller-systempartner-schaltanlagen.net

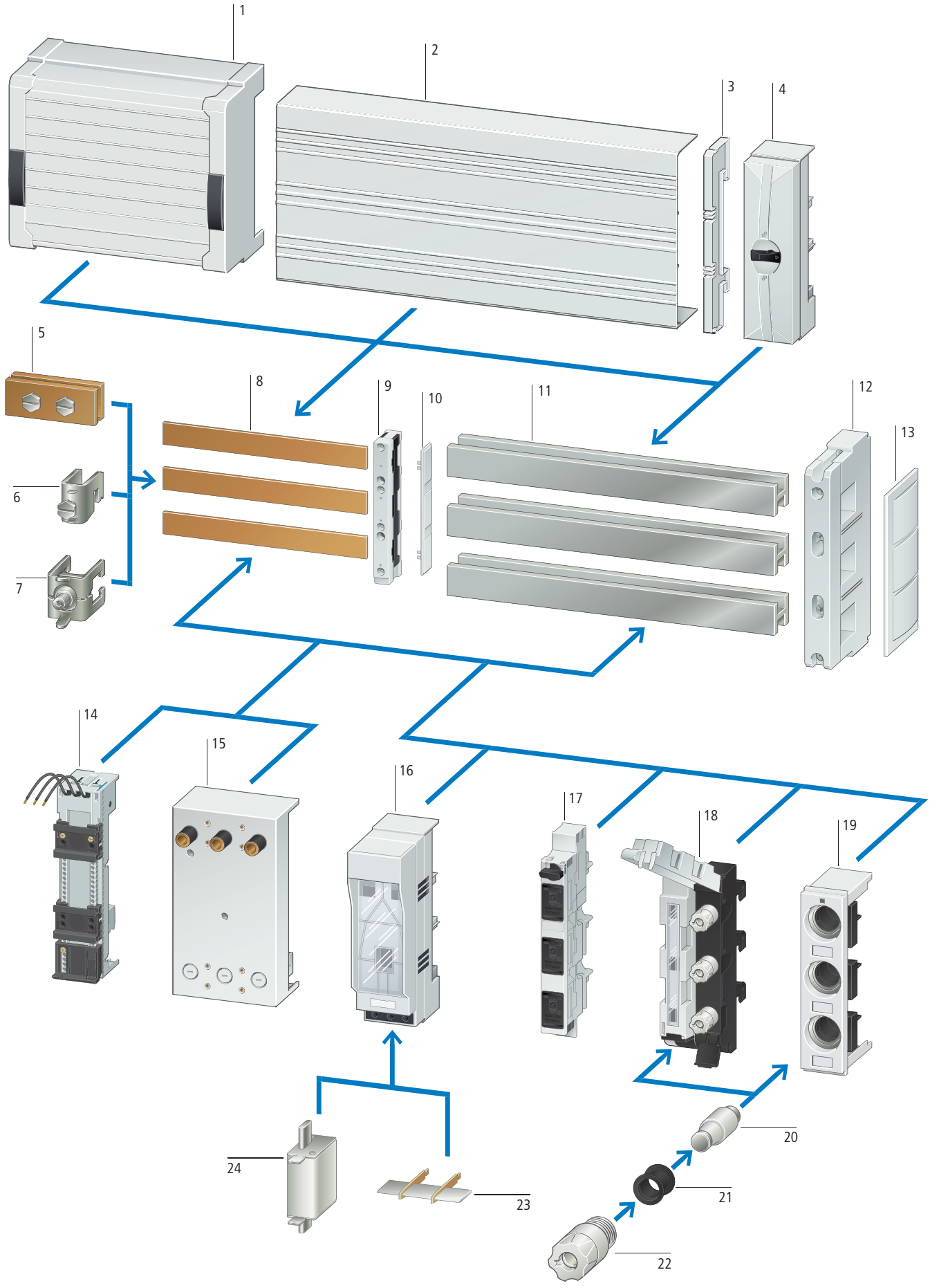
SASY busbars system, accessories for control panel building







System overview



System covers 1
Partitioning of busbars or terminals for increased personal safety.
Different versions, for individual customization or ready to install in defined dimensions.
For 3- and 4 pole systems.
→ Page 16/8

Cover for empty sections, modular 2
Spare section cover can be cut to length.
Clipped on simply and quickly to the support provided.
For 3- and 4 pole systems
→ Page 16/7

Cover for empty sections support 3
Simple push-fit, for all copper busbars.
For 3- and 4 pole systems
→ Page 16/7

Terminal plates 4
Terminal modules protected against direct contact, lockable.
For commonly available connection cables and busbars.
For 3- and 4 pole systems
→ Page 16/7

Busbar end-to-end connectors 5
For interconnecting busbar systems.
For flat and profiled busbars.
→ Page 16/13

Universal conductor terminals 6
With integrated retaining spring.
Captive fixing screw.
Suitable for all copper, flat and profiled busbars.
→ Page 16/12

Expansion terminals 7
For fitting to busbars without drilling
Cables can be inserted from the top simply and quickly.
→ Page 16/10

Profiled busbars 11
Cross-sections 500, 720 and 1140 mm².
Tin-plated surface for low contact resistance
Tin-plated copper busbars cut time needed to prepare contact points.
→ Page 16/11

Double T profile busbar supports 9
Cross-sections 500 mm² (1250 A) and 720 mm² (1600 A)
Very high short-circuit rating for greater system safety.
Fewer supports required.
Spacing between busbar centers 60 mm.
→ Page 16/6

Terminal shroud 10
For covering the copper busbar ends for increased contact protection.
→ Page 16/6

Flat busbars 8
12 x 5 up to 30 x 10 mm, Cu.
→ Page 16/24

Busbar supports 12
For all commonly available flat busbars.
Can be fitted to all busbar sizes using concertina system.
For 3- and 4 pole systems
Versions for IEC and UL/CSA.
Spacing between busbar centers 60 mm.
→ Page 16/4

Terminal shroud 13
For covering the ends of flat copper busbars
→ Page 16/4

Busbar adapters for PKZ and PKE 14
Mounting rails and connection cables prepared for motor starter combinations with PKZ, PKE or DILM.
With combi-base suitable for 5 and 10 mm thick flat and profiled busbars.
Versions with connection cables for spring-loaded terminals or without electrical contact.
→ Page 7/22
Two-row double adapter for specific applications, e.g. with fuses.
→ Page 16/21
Complete devices prefitted and wired for DOL starters.
→ Page 8/26
Complete devices prefitted and wired for reversing starters.
→ Page 8/28

Busbar adapters for NZM 15
Innovative terminal design for rear connetion.
For all commonly available flat busbars and for double T profile.
For 3- and 4 pole systems.
Conductors completely embedded for maximum safety.
Easy mounting and terminal connection
→ Page 16/14

LV h.b.c. fuse switch-disconnectors 16
Switching devices NH000, NH00, NH1, NH2 and NH3 up to 630 A.
→ Page 16/16

D fuse switch-disconnectors without flashing function 17
Switch-disconnectors for D02 screw fuses.
Clear contact position indication.
Screw caps available as accessories.
→ Page 16/21

D fuse switch-disconnectors with flashing function 17
Flashing function indicates blown fuse link.
Switches the load on all poles and without touching by hand.
With fuse plug, therefore no new screw caps required.
Low heat dissipation.
With contact position indicator.
→ Page 16/21

D busbar mounting fuse devices 19
D02, DII and DIII with front and bottom plate supplied.
→ Page 16/20

Fuse links 20
D01, D02, DII, DIII and C10.
→ Page 19/47

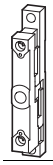
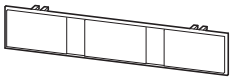
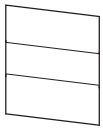
Fuse adapters 21
D01, D02 cartridge ring adaptes, DII and DIII gage rings.
→ Page 19/47

Screw caps 22
D01, D02, DII and DIII.
→ Page 19/44

Disconnecting blades 23
Can be used instead of LV h.b.c. fuse links.
Full contact blades.

LV h.b.c. fuse links 24
Compact construction size up to 100 A; NH00 fuses can also used in NH000 devices.
Fuse links NH00, NH1, NH2 and NH3 up to 630 A.
High breaking capacity 120 kA.
→ Page 19/53

Ordering

		Poles	Rated operational current I_e A	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar supports							
• Thermoplast, silicone-free, chlorine-free • Halogen-free • Self-extinguishing to UL 94 • RAL 7035 • Creepage resistance CTI 200 • Temperature-resistant up to 120 °C							
IEC busbar supports							
	Can be fitted to all busbar sizes using concertina system. With internal screw holes.	3	630	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10	**BBS-3/FL**[1) 2)] 107066		10 off
		4	630		**BBS-4/FL** 138381		10 off
UL busbar supports							
	Can be fitted to all busbar sizes using concertina system. With internal screw holes.	3	630	12 x 5/10 20 x 5/10 30 x 5/10	**BBS-3/FL-NA**[1) 2)3)] 107067		10 off
PE/N busbar supports							
	Can be fitted to all busbar sizes using concertina system. Can be mounted individually.	2	630	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10	**BBS-2/FL** 107069		10 off
		1	630		**BBS-1/FL** 107161		10 off
Terminal shroud							
	For covering busbars.	–	–	BBS-3/FL BBS-3/FL-NA	**ES-BBS-3/FL**[1) 2)3)] 107068		10 off
UL bottom plate							
• Silicone-free, chlorine-free • Temperature-resistant up to 110 °C • Self-extinguishing to UL 94							
	For use when air gap between busbars and mounting plate is not sufficient. 1100 mm long.	–	–	BBS-3/FL BBS-3/FL-NA	**BBC-BT-NA**[1) 2)] 107172		2 off

Notes

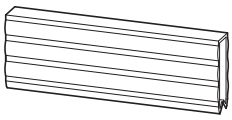
[1)] Current load → Page 16/39
[2)] Current load → Page 16/39

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Specially designed for NA	No Yes[3)]
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

Busbar shrouds

- Silicone-free, chlorine-free
- Temperature-resistant up to 110 °C
- Self-extinguishing to UL 94

	Poles	Rated operational current I_e A	For use with	Part no. Article no.	Price See price list	Std. pack
 1000 mm long.	–	–	12 x 5 15 x 5 20 x 5 25 x 5 30 x 5	**BBC-FL5** 107173		10 off
	–	–	12 x 10 15 x 10 20 x 10 25 x 10 30 x 10	**BBC-FL10** 107174		10 off

Flat busbars

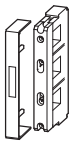
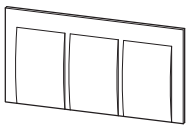
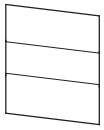
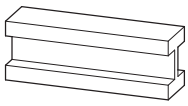
	Rated operational current I_e A	Copper bars mm	Length mm	Copper factor[1]	Material	Part no. Article no.	Price See price list	Std. pack
	160	12 x 5	1500		Copper, tinned	**CU12X5** 034121		10 off
	160	12 x 5	2250		Copper, tinned	**CU12X5-2250** 005093		10 off
	250	20 x 5	1500		Copper, tinned	**CU20X5** 044092		10 off
	250	20 x 5	2250		Copper, tinned	**CU20X5-2250** 007466		10 off
	460	20 x 10	1500		Copper, tinned	**CU20X10** 041719		5 off
	460	20 x 10	2250		Copper, tinned	**CU20X10-2250** 009839		5 off
	630	30 x 10	1500		Copper, blank	**CU30X10** 051211		1 off

Notes

[1] Calculation of material surcharge → Chapter 23

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Specially designed for NA	✓
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

		Poles	Rated operational current I_e A	For use with	Copper factor	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar supports								
Double T profile busbar supports • Thermoplast, silicone-free, chlorine-free • Halogen-free • Self-extinguishing to UL 94 • RAL 7035 • Creepage resistance CTI 200 • Temperature-resistant up to 120 °C								
	For use as outer or center support. With internal screw holes.	3	1600	Double T profile		**BBS-3/PR**[1) 4)] 107162		3 off
	Suitable for assembly of PE or N bar. With internal screw holes.	1	1600	Double T profile		**BBS-1/PR**[3)] 107165		10 off
Terminal shroud								
	For shrouding busbar systems.	–	–	BBS-3/PR		**ES-BBS-3/PR**[4)] 107164		4 off
UL bottom plate								
• Silicone-free, chlorine-free • Temperature-resistant up to 110 °C • Self-extinguishing to UL 94								
	For use when air gap between busbars and mounting plate is not sufficient. 1100 mm long.	–	–	BBS-3/PR		**BBC-BT-NA**[4)] 107172		2 off
Busbar shrouds								
• Silicone-free, chlorine-free • Temperature-resistant up to 110°C • Self-extinguishing to UL 94								
	1000 mm long.	–	–	Double T profile		**BBC-CU-BAR/PR**[4)] 107175		5 off
Profiled busbars								
E-CU double T profile busbar								
	Tinned, cross-section 500 mm², 2400 mm long.	–	1250	For supports BBS-3/PR, BBS-1/PR, BBS-3/FL-185		**CU-BAR-500/T**[2) 4)] 107166		32 off
	Tinned, cross-section 720 mm², 2400 mm long.	–	1600	For supports BBS-3/PR, BBS-1/PR, BBS-3/FL-185		**CU-BAR-720/T**[2) 4)] 107167		32 off

Notes

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[2)] Current load → Page 16/39

Calculation of material surcharge → Chapter 23

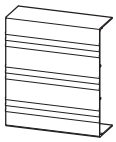
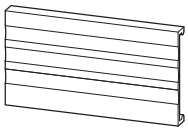
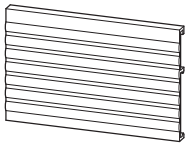
Information relevant for export to North America

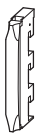
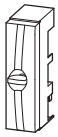
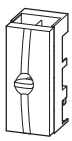
[3)]

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

[4)]

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Specially designed for NA	Yes
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

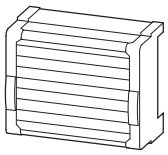
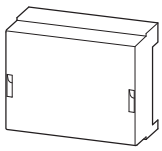
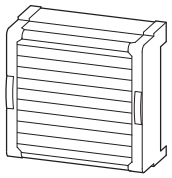
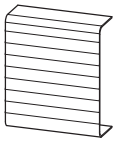
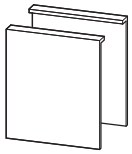
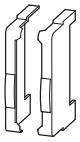
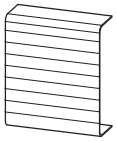
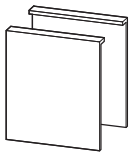
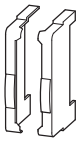
	Description	Part no. Article no.	Price See price list	Std. pack
Spare covers				
Cover for empty sections, modular				
 To cover the 60 mm system from the front. Can only be used with BBC-MRCOV1.	1100 mm long.	**BBC-RCOV1** 107178		2 off
Empty sections cover support				
 Suitable for all busbar thicknesses. Can only be used with BBC-RCOV1.	–	**BBC-MRCOV1** 107179		10 off
Empty sections cover for front panel cutouts				
 Cover module for cutouts	54 mm wide. 194 mm high.	**AM-195/54** 107963		15 off
Separation profiles double T				
 For 3 pole systems with BBS-3/PR	48 mm high. 2400 mm long. Fixing on (profile) busbar support.	**BBC-CS48/PR** 107176		1 off
	76 mm high. 2400 mm long. Fixing on (profile) busbar support.	**BBC-CS76/PR** 107177		1 off

		Width	Poles	Rated operating current	Terminal capacity ⊙ Round conductor, solid ⊛ Round conductor, flexible, with correctly crimped ferrule ⊙ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded ▤ Copper strip ■ Copper bar	For use with	Cu factor[1]	Part no. Article no.	Price See price list	Std. pack
		mm		I_e A	mm					
Terminal plates • Silicone-free, chlorine-free • Temperature-resistant up to 120°C • Self-extinguishing to UL 94 • Creepage resistance CTI 200										
	Spring-type terminal design.	20	3	80	1.5 - 16 mm² AWG 16 - AWG 6. ⊛ ⊙	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double T profile		**BBA-TP3/16** 107205		1 off
	The terminal can be removed for the connection of uncut conductors. Terminal area W x H 10 x 15 mm . Loop-through is possible.	54		300	6 - 50 mm² AWG 10 - AWG 2/0. ⊛ ⊙ ▤ 6 x 9 x 0.8			**BBA-TP3/50** 107183		1 off
	The terminal can be removed for the connection of uncut conductors. Terminal area W x H 15 x 15 mm. Loop-through is possible.	81		440	35 - 120 mm² AWG 2 - MCM 250. ⊛ ⊙ ▤ 10 x 16 x 0.8			**BBA-TP3/120** 107184		1 off

Notes [1] Calculation of material surcharge → Chapter 23

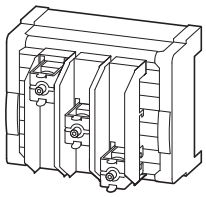
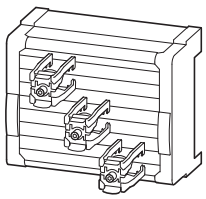
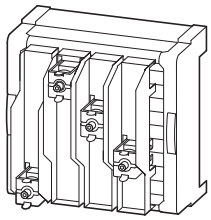
Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

		Description	Part no. Article no.	Price See price list	Std. pack
System cover, complete					
	For 3 pole systems	228 mm long.	**BBC-CS1** 107209		1 off
		270 mm long.	**BBC-CS3** 138377		1 off
	For 4 pole systems	228 mm long.	**BBC-CS4** 138387		1 off
System cover, modular					
• Silicone-free, chlorine-free • Temperature-resistant up to 120 °C • Self-extinguishing to UL 94					
	For 3 pole systems	Cover for empty sections, front. 1100 mm long.	**BBC-CS2-F** 107180		1 off
		Cover for empty sections, top/bottom 1100 mm long.	**BBC-CS2-T/B** 107181		2 off
		Support for cover for empty sections. Each set contains one left and one right support bracket.	**BBC-MCS2** 107182		1 off
	For 4 pole systems	Cover for empty sections, front. 1100 mm long.	**BBC-CS4-F** 138384		1 off
		Cover for empty sections, top/bottom 1100 mm long.	**BBC-CS4-T/B** 138383		2 off
		Support for cover for empty sections. Each set contains one left and one right support bracket.	**BBC-MCS4** 138382		1 off

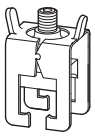
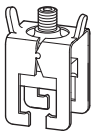
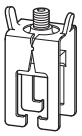
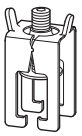
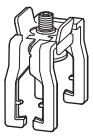
Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Terminal area W × H	Width	Poles	Rated operating current	Terminal capacity ○ Round conductor, solid ⊛ Round conductor, flexible, with correctly crimped ferrule ⊙ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded ▤ Copper strip ■ Copper bar	For use with	Cu factor	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm		I_e A	mm					
Connection kit										
• Silicone-free, chlorine-free • Temperature-resistant up to 120°C • Self-extinguishing to UL 94 • Creepage resistance CTI 200										
Pole spacing adjustable. Fixing direct over busbar terminal. Includes shroud with adjustable width. Loop-through is possible.										
	–	180 - 240	3	560	120 - 300 mm² MCM 300 - MCM 600. ⊛ ⊙ ▽	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile		**BBA-TP3/300**[1] 107185		1 off
	32 x 25	180 - 240		800	Up to ▤ 10 x 32 x 1 ■ 30 x 25			**BBA-TP3/ CU-BAND**[1] 107186		1 off
Adapted to Eaton NZM4. Fixing direct over busbar terminal. Loop-through is possible.										
	5 x 28	228	3	1600	Up to ▤ (2 x) 10 x 50 x 1 Up to ■ (2 x) 50 x 10	30 x 10 Double T profile		**CU-BAND** **BBA-TP3/1000**[2)4)] 107207		1 off
Pole spacing adjustable. Fixing direct over busbar terminal. Includes shroud with adjustable width. Loop-through is possible.										
	–	180 - 228	4	560	120 - 300 mm² MCM 300 - MCM 600. ⊛ ⊙ ▽	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile		**BBA-TP4/300**[3] 138385		1 off
	32 x 25	180 - 228		800	Up to ▤ 10 x 32 x 1 ■ 30 x 25			**BBA-TP4/ Copper strip**[3] 138386		1 off

Notes

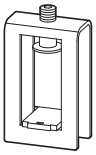
[1] Each set contains 3 pole pieces.
[2] Equipment supplied: 1 x BBC-CS1, 3 x AKS1000.
[3] Each set contains 3 pole pieces.
[4] Calculation of material surcharge → Chapter 23

		Terminal area W × H	Width	Rated operating current	Terminal capacity Round conductor, solid Round conductor, flexible, with correctly crimped ferrule Round conductor, stranded Sectoral conductor, solid Sectoral conductor,, stranded Copper strip Copper bar	For use with	Copper factor[1]	**Part no.** Article no.	**Price** See price list	Std. pack
		mm	mm	I_e A	mm					
Expansion terminals										
Connects onto busbars without drilling										
	Contacting of cable with busbar via cable bedding.	–	38	480	35 - 150 mm² AWG2/0 - MCM 300. Directly clamped	12 x 5/10 20 x 5/10		**AKS150** 138374		6 off
		–	38	500	95 - 185 mm² AWG3/0 - MCM 350. Directly clamped	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile		**AKS185** 107195		6 off
		–	41	600	150 - 300 mm² MCM300 - MCM 600. Directly clamped			**AKS300** 107196		3 off
	Contacting of cable with busbar via contact block.	32 x 25	41	800	3 x 20 x 1 up to 2 x (10 x 32 x1) 32 x 25			**AKS-CU-BAND** 107197		3 off
		55 x 28	72	1600	Up to (2 x) 10 x 50 x 1 Up to (2 x) 50 x 10			**AKS1000** 107208		1 off
		68 x 28	122	1600	Up to (2 x) 60 x 10	30 x 10 Double T profile Triple T profile		**AKS1200** 138375		3 off
		105 x 28	122	1600	Up to (2 x) 100 x 10			**AKS2000** 138376		3 off

Notes [1] Calculation of material surcharge → Chapter 23

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

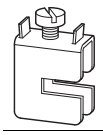
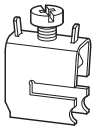
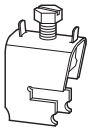
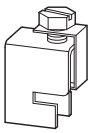
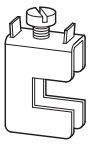
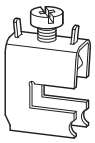
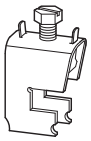
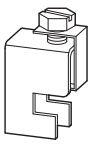
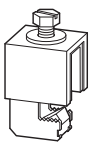
	Terminal area W × H	Width	Rated operating current	Terminal capacity Round conductor, solid Round conductor, flexible, with correctly crimped ferrule Round conductor, stranded Sectoral conductor, solid Sectoral conductor,, stranded Copper strip Copper bar	For use with	Copper factor[1]	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	I_e A	mm					
Profile terminals									
Connects onto busbars without drilling									
 When connecting laminated busbars in parallel, fit a spacer.	–	82	1600	750 mm², terminal area 51 x 5 - 28	Double T profile		**AKP750** 138364		3 off
	–	72	1600	800 mm², terminal area 41 x 20 - 42			**AKP800** 107198		3 off
	–	94	1600	900 mm², terminal area 64 x 5 - 28			**AKP900** 138365		3 off
	–	94	1600	1000 mm², terminal area 51 x 20 - 42			**AKP1000** 107199		3 off
	–	94	2000	1200 mm², terminal area 64 x 20-42			**AKP1200** 138366		3 off
	–	112	2500	1600 mm², terminal area 81 x 20 - 42			**AKP1600** 138367		3 off
	–	132	3000	2000 mm², terminal area 101 x 20 - 42			**AKP2000** 138368		3 off
	–	132	3200	3600 mm², terminal area 101 x 23 - 45			**AKP3600** 138369		3 off

Notes

[1] Calculation of material surcharge → Chapter 23

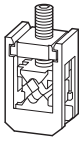
Information relevant for export to North America

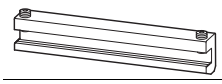
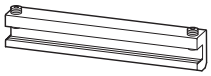
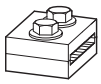
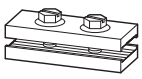
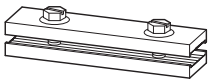
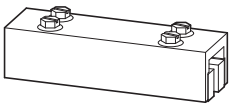
Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Terminal area W × H	Width	Rated operating current	Terminal capacity ○ Round conductor, solid ⊜ Round conductor, flexible, with correctly crimped ferrule ⊙ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded ▤ Copper strip ■ Copper bar	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	I_e A	mm				
Universal conductor Connection terminals								
With integrated retaining spring, open clamping area and captive terminal screw.								
	7.5 x 7.5	11.5	180	1.5 - 16 mm² AWG 14 - AWG 6. ⊜ Directly clamped ○ ⊙ ▤ 8 x 6 x 0.5	All 5 mm thick flat busbars	**AKU16/5** 107187		100 off
	10.5 x 11	15.5	270	4 - 35 mm² AWG 10 - AWG 2. ⊜ Directly clamped ○ ⊙ ▤ 3 x 9 x 0.8 or 6 x 9 x 0.8		**AKU35/5** 107188		50 off
	14 x 14	20.5	400	16 - 70 mm² AWG 4 - AWG 2/0. ⊜ Directly clamped ⊙ ▤ 2 x (3 x 9 x 0.8) or 6 x 9 x 0.8		**AKU70/5** 107189		25 off
	17 x 1	23.5	440	16 - 120 mm² AWG 4 - MCM 250. ⊜ Directly clamped ⊙ ▤ 4 x 16 x 0.8 or 6 x 16 x 0.8 or 10 x 16 x 0.8		**AKU120/5** 107190		25 off
	7.5 x 7.5	11.5	180	1.5 - 16 mm² AWG 14 - AWG 6. ⊜ Directly clamped ○ ⊙ ▤ 8 x 6 x 0.5	All 10 mm thick flat busbars	**AKU16/10** 107191		100 off
	10.5 x 11	15.5	270	4 - 35 mm² AWG 10 - AWG 2. ⊜ Directly clamped ○ ⊙ ▤ 3 x 9 x 0.8 or 6 x 9 x 0.8		**AKU35/10** 107192		50 off
	14 x 14	20.5	400	16 - 70 mm² AWG 4 - AWG 2/0. ⊜ Directly clamped ⊙ ▤ 2 x (3 x 9 x 0.8) or 6 x 9 x 0.8		**AKU70/10** 107193		25 off
	17 x 15	23.5	440	16 - 120 mm² AWG 4 - MCM 250. ⊜ Directly clamped ⊙ ▤ 4 x 16 x 0.8 or 6 x 16 x 0.8 or 10 x 16 x 0.8		**AKU120/10** 107194		25 off
	M8 x 8 bolts	30	490	Cable lugs M8	All 10 mm thick flat busbars Double T profile	**AKU-M8/10** 138362		20 off
	M10 x 10 bolts	38	630	Cable lugs M10		**AKU-M10/10** 138361		6 off

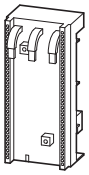
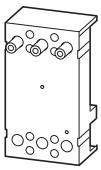
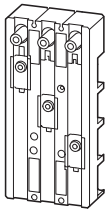
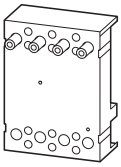
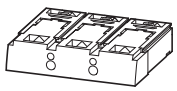
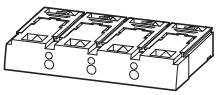
Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Terminal area W × H	Width	Rated operating current	Terminal capacity ○ Round conductor, solid ⦾ Round conductor, flexible, with correctly crimped ferrule ⦾ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded Copper strip Copper bar	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	I_e A	mm				
Plate terminals								
	–	50	630	–	All 10 mm thick flat busbars	**PK900** 138378		3 off
Connection terminals								
	Contacting of cable with busbar via cable bedding.	48	630	95 - 300 mm²	30 x 10 Double T profile Triple T profile	**AK300** 138363		3 off

		Width	For use with	Copper factor[1]	**Part no.** Article no.	**Price** See price list	Std. pack
		mm					
Busbar end-to-end connectors							
For hole-less connection of identical busbars.							
For the same flat copper bars Rated operating current 630 A							
	System spacing 100 - 110 mm. Max. permissible busbar offset 1 mm.	38	12 x 5/10 15 x 5/10 20 x 5/10		**BBT-CU12-20X5/10-38** 138379		12 off
		150			**BBT-CU12-20X5/10-150** 107200		3 off
	System spacing 50 - 60 mm. Max. permissible busbar offset 5 mm.	40			**BBT-CU20-30X5/10-40** 138380		6 off
		95			**BBT-CU20-30X5/10-95** 107201		3 off
	System spacing 100 - 110 mm. Max. permissible busbar offset 5 mm.	150			**BBT-CU20-30X5/10-150** 107202		3 off
For differing and same double T profile busbars. Rated operating current 1600 A							
	System spacing 9 - 20 mm. Max. permissible busbar offset 2 mm.	50	Double T profile		**BBT-CU-BAR500/720-50** 107203		6 off
	System spacing 100 - 110 mm. Max. permissible busbar offset 5 mm.	150			**BBT-CU-BAR500/720-150** 107204		3 off

Notes [1] Calculation of material surcharge → Chapter 23

	Number of poles	Rated operational current I_e A	Adapter width mm	For use with	Copper factor[9]	**Part no.** Article no.	**Price** See price list	Std. pack	
Component adapters for circuit-breakers and switch-disconnectors									
For installation on flat copper busbars 12 – 30 x 5 – 10, double T and triple T profile Rated operating voltage U_e: 690 V • Temperature-resistant up to 120 °C • Self-extinguishing to UL 94 • Creepage resistance CTI 200									
	3 pole	160	90	NZM1, PN1, N(S)1		**NZM1-XAD160**[7] 104554		1 off	1)
		250	106	NZM2, PN2, N(S)2		**NZM2-XAD250**[7] 104555		1 off	2)
		630	140	NZM3, PN3, N3		**NZM3-XAD630** 107206		1 off	3)
	4 pole	250	140	NZM2, PN2, N(S)2 NZM2(-4), PN2(-4), N(S)2(-4)		**NZM2-4-XAD250** 138388		1 off	5)
		630	185	NZM3, PN3, N(S)3 NZM3(-4), PN3(-4), N3(-4)		**NZM3-4-XAD630** 138389		1 off	4)
Connection blocks for component adapters									
For NZM2, NZM3 circuit-breakers									
	3 pole	250		NZM2, PN2, N(S)2		**NZM2-XKR4**[8] 281666		1 off	6)
	3 pole	630		NZM3, PN3, N(S)3		**NZM3-XKR13**[8] 281668		1 off	
	4 pole	250		NZM2-4, PN2-4, N(S)2-4		**NZM2-4-XKR4** 118907		1 off	
	4 pole	630		NZM3-4, PN3-4, N(S)3-4		**NZM3-4-XKR13** 119020		1 off	

Notes

1) For switches with standard box terminal connection.
Connection to the system at top using supplied connection cable.
In conjunction with IP2X protection against contact with a finger
Enhanced contact protection on the switch output end possible.
Latch fitting to busbar using combination fixing base
Combination fixing base for adjustment to 5 and 10 mm rail thickness, terminal capacity 6 x 9 x 0.8.
Rated short-circuit switching capacity 35 kA at 480 V.
Busbar must be de-energized for mounting.

2) Connection to the system from above or below through rear connection (+)NZM2-XKR4…
Mounted with clamp and screw fixing.
Rated short-circuit switching capacity 65 kA at 480 V, 50 kA at 600 V.
Busbar must be de-energized for mounting.

3) Connection to the system from above or below through rear connection (+)NZM3-XKR13…
Mounted with claw-type terminal.
Rated short-circuit switching capacity 65 kA at 480 V, 50 kA at 600 V.
Busbar must be de-energized for mounting. Reduction of rated operating current → Page 16/41

4) Connection to the system from above or below through rear connection (+)NZM3-4-XKR13…
Mounted with clamp and screw fixing.

5) Connection to the system from above or below through rear connection (+)NZM2-4-XKR4…
Mounted with clamp and screw fixing.

6) Part no. and part no. suffix include parts for one switch side at top or bottom (with NZM...-4-... top only).
Required for component adapters NZM2-XAD and NZM3-XAD
O = for fitting at the top
U = for fitting at the bottom

Information relevant for export to North America

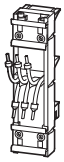
7)

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

8)

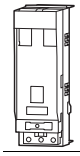
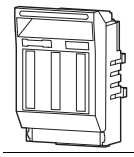
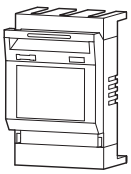
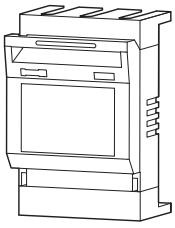
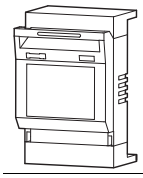
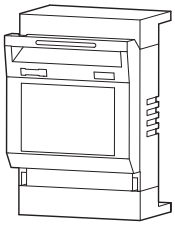
Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
NA Certification	Request filed for UL and CSA
Suitable for	Refer to main component information

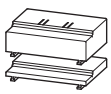
9) Calculation of material surcharge → Chapter 23

	Rated operational voltage U_e V AC	Conductor cross-section	Adapter width mm	For use with	Support rail Number	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar adapters for PKZ and PKE								
Complete range → Chapter 7 For surface mounting to flat copper busbars with 60 mm between busbar centers, suitable for 5 mm and 10 mm busbar thickness and also double T profile. Mounted by latching onto de-energized busbar.								
Connecting cables								
–	–	–	–	BBA…	–	**BBA-XLT-6-130** 116902		30 off
–	–	–	–	BBA…	–	**BBA-XLT-16-142** 116903		30 off
Double adapters Rated operational current 35 A								
	690	AWG 10 (6 mm²)	45	12x5/10 15x5/10 20x5/10 25x5/10 30x5/10	2	**Z-SS-60-ADD/6-45** 288790		1 off
	690	AWG 10 (6 mm²)	54	12x5/10 15x5/10 20x5/10 25x5/10 30x5/10	2	**Z-SS-60-ADD/6-54** 288791		1 off
	690	AWG 10 (6 mm²)	72	12x5/10 15x5/10 20x5/10 25x5/10 30x5/10	2	**Z-SS-60-ADD/6-72** 288792		1 off
	690	AWG 10 (6 mm²)	81	12x5/10 15x5/10 20x5/10 25x5/10 30x5/10	2	**Z-SS-60-ADD/6-81** 288793		1 off

Information relevant for export to North America

Product Standards	UL 508A; CSA-C22.2 No. 14; IEC60439-1; CE marking
UL File No.	On request
UL CCN	On request
CSA File No.	On request
CSA Class No.	On request
NA Certification	UL Recognized, CSA certified

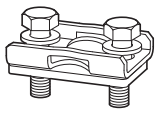
	Connection	Spacing between busbar centers	Rated operational current	Max. fuse link			For use with	**Part no.** Article no.	**Price** See price list	Std. pack
			I_e	500 V	690 V	Size				
		mm	A	A	A					
LV h.b.c. fuse switch-disconnectors										
• Includes handguard top and bottom (except GST-160-40-60-AOU) • Mounting without holes • For surface mounting on busbars 3 pole										
	Box terminal 1.5 - 50 mm² Bottom	60	100	100	–	NH000	20 x 5/10 30 x 5/10 Double T profile	**LTS-100/C00/3-R** 284690		1 off
	Box terminal 1.5 - 70 mm² Top or bottom	40 50 60	160	160	100	NH00	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile	**GST00-160-40-60-AOU**[1] 224550		1 off
	Screw M10 Top	60	250	250	200	NH1	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile	**GST1-AO** 107250		1 off
		60	400	400	315	NH2		**GST2-AO** 107252		1 off
		60	630	630	500	NH3		**GST3-AO** 107254		1 off
	Screw M10 Bottom	60	250	250	200	NH1	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile	**GST1-AU** 107251		1 off
		60	400	400	315	NH2		**GST2-AU** 107253		1 off
		60	630	630	500	NH3		**GST3-AU** 107255		1 off

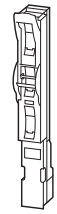
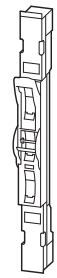
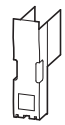
	Size	Rated operating voltage U_e V	For use with	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Handguard for switch-disconnectors							
Provides additional protection for operator during actuation of fuse switch-disconnector							
	00	–	GST00-160-…	**BS-SET-GST00** 107955		1 off	One set contains handguard top and bottom.

Notes

[1] Without handguard.
Order optional handguard BS-SET-GST00 → Page 16/16
LV h.b.c. fuse links → Page 19/53

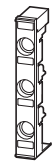
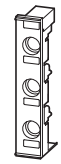
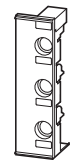
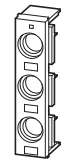
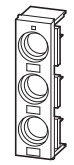
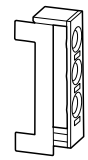
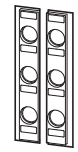
	Size	Rated operating voltage U_e V	For use with	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Cover with fuse monitoring for fuse switch-disconnectors							
• Operation indicator 1 green LED • Fuse failure indication 3 red LEDs (F1, F2, F3) • Fault indication through relay contacts (floating) • Not for 1-phase application.							
	00	400 - 690	GST00...-A...	**GST00-DSI** 107956		1 off	–
	1	400 - 690	GST1-A...	**GST1-DSI** 107957		1 off	–
	2	400 - 690	GST2-A...	**GST2-DSI** 107958		1 off	–
	3	400 - 690	GST3-A...	**GST3-DSI** 107959		1 off	–

	Terminal range	For use with	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Sets of prism terminals						
	1 x (70 - 150) mm² Cu/Al	GSU1, GST…1	**PSK1** 038734		1 off	One set contains 3 prism terminals.
	1 x (120 - 240) mm² Cu/Al	GSU2, GST…2	**PSK2** 043480			
	1 x (120 - 300) mm² Cu/Al	GSU3, GST…3	**PSK3** 048226			
Sets of double prism terminals						
	2 x (70 - 95) mm² Cu/Al	GSU1, GST…1	**PSK12** 041107		1 off	One set contains 3 double prism terminals
	2 x (120 - 150) mm² Cu/Al	GSU2, GST…2	**PSK22** 045853			
	2 x (120-240) mm² Cu/Al	GSU3, GST…3	**PSK32** 050599			
Box terminals						
	25 - 150 mm² Copper strip 6 x 16 x 0.8 mm	GST…1	**SK1-GS** 107960		3 off	3 required for each GST....
	25 - 240 mm² Copper strip 10 x 16 x 0.8 mm	GST…2	**SK2-GS** 107961			
	25 - 300 mm² Copper strip 11 x 21 x 1 mm	GST…3	**SK3-GS** 107962			

	Rated operational current	Max. fuse link		Size	For use with	Connection	**Part no.** Article no.	**Price** See price list	Std. pack
	I_e	400 V	690 V						
	A	A	A						
LV h.b.c. fuse switches									
• With terminal compartment cover • Mounting without holes with spike type terminal Components supplied • NH-SLS-00/160-60(-SI): with box terminals Busbar mounting • NH-SLS-00/160-60(-SI) 60 mm spacing between busbar centers									
Without fuse monitoring									
	160	160	160	00	12 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T-profiles	Top or bottom	**NH-SLS-00/160-60**[1] 106211		1 off
With fuse monitoring									
	160	160	–	00	12 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double-T-profiles	Top or bottom	**NH-SLS-00/160-60-SI**[1] 106216		1 off
Terminal shroud/size adapter for GST…									
For NH-SLS-00/160-60 Size 00									
							**Z-NH-SLS-KA** 106223		2 off

Notes

[2] LV h.b.c. fuse links → Page 19/53

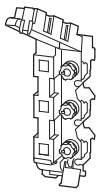
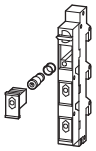
		Rated operational current I_e A	Rated operating voltage U_e V AC	Size	Mounting width mm	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
D busbar mounting fuse devices									
Basic units									
• Includes contact protection shroud with front and bottom plate and designation label • Supplied empty without screw cap									
	Cartridge ring adapter	63	400	E18, D 02	27	12 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double T profile	**D02-SO/63/3-R-27**[1] 114315		10 off
	Cartridge ring adapter			E18, D 02	36		**Z-D02/R/3-36**[1] 100663		60 off
	Cartridge ring adapter			E18, D 02	54		**Z-D02/R/3-54**[1] 100664		40 off
	Gage ring	25	500	E 27, D II	45		**DII-SO/25/3-R**[2] 107965		10 off
	Gage screw	25	500	E 27, D II	45		**DII-SO/25/3-R-PS**[2] 110394		10 off
	Gage ring	63	690	E 33, D III	54		**DIII-SO/63/3-R**[3] 107966		10 off
	Gage screw	63	690	E 33, D III	54		**DIII-SO/63/3-R-PS**[3] 110395		10 off
Side cover Can be fitted on right or left Can be fitted to D…-SO/…/3-R(-PS)									
	–	–	–	–	–	DII-SO/…/3-R(-PS)	**SBS-RS60** 060541		10 off
Kit for fitting over busbar supports Can be fitted to D02-SO/63/3-R-27									
	–	–	–	–	36	D02-SO/63/3-R-27	**Z-D02-S-AB-SET** 100662		10 off

Notes

[1] A complete and functional fuse element consists of the basic unit
- Fuse link → Page 19/47
- Fuse adapter → Page 19/47
- Screw cap → Page 19/47

[2] A complete and functional fuse element consists of the basic unit
- Fuse link → Page 19/43
- Fuse adapter → Page 19/44
- Screw cap → Page 19/44

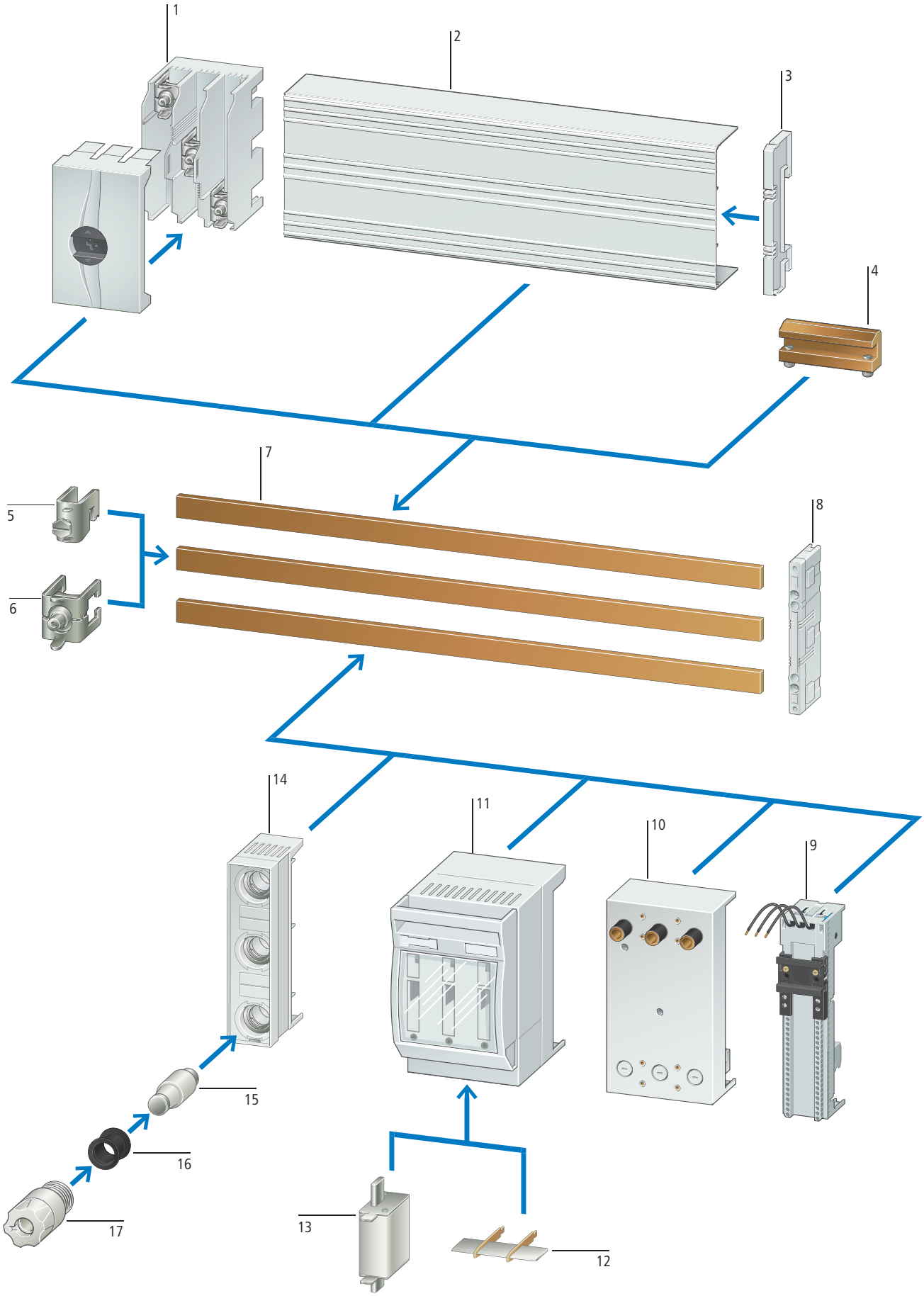
[3] A complete and functional fuse element consists of the basic unit
- Fuse link → Page 19/43
- Fuse adapter → Page 19/44
- Screw cap → Page 19/44

		Rated operational current I_e A	Rated operational voltage U_e V AC	Size	Mounting width mm	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
D fuse switch-disconnectors without flashing function									
• 3 pole • Including contact protective shroud with front and bottom plate • Delivered empty and without screw cap									
	Gage ring	63	400	E18, D 02	36	20 x 5/10 30 x 5/10 Double T profile	**D02-S/63/3-RS**[1] 284649		1 off
D fuse switch-disconnectors with flashing function									
• The flashing function indicates a blown fuse link • Supplied empty, without cartridge ring adapters and fuse links • Retaining springs for D01 fuse links or 10x38 cylindrical fuse links supplied • Contact position indicator • Fuse plug without screw cap • Switches the load on all poles and without touching by hand • D02-LTS/63/3-R-HK with integrated auxiliary contact • Sealable and lockable									
	–	32	400	C10x38	27	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10 Double T profile	**D02-LTS/63/3-R** 114316		3 off
	–	63	400	E18, D02	27		**D02-LTS/63/3-R-HK** 114318		3 off

Notes

[1] A complete and functional fuse element consists of the basic unit
- Fuse link → Page 19/47
- Fuse adapter → Page 19/47
- Screw cap → Page 19/47

System overview



Terminal plates 1
Simple connection by contacting the conductor.
Full contact protection.
→ Page 16/25

Cover for empty sections, modular 2
Spare section cover can be cut to length.
Clipped on simply and quickly to the support provided.
Compact height.
For 3 pole systems.
→ Page 16/24

Empty sections cover support 3
Simple push-fit, for busbars 12 x 5/10.
For 3 pole systems.
→ Page 16/24

Busbar end-to-end connectors 4
For interconnecting busbar systems.
For flat busbars.
→ Page 16/26

Universal conductor Connection terminals 5
With integrated retaining spring.
Captive fixing screw.
Suitable for all copper, flat and profiled busbars.
→ Page 16/26

Expansion terminals 6
For fitting to busbars without drilling
Cables can be inserted from the top simply and quickly.
→ Page 16/25

Flat busbars 7
12 x 5 and 12 x 10 mm, Cu.
→ Page 16/24

Busbar supports 8
Suitable for use with flat busbars 12 x 5/10.
Compact height.
For 3 pole systems.
Spacing between busbar centers 60 mm.
→ Page 16/24

Busbar adapters for PKZ and PKE 9
Mounting rails and connection cables prepared for motor starter combinations with PKZ, PKE or DILM.
Compact height.
→ Page 7/23

Busbar adapters for NZM 10
Safe termination.
For 3 pole systems
Conductors completely embedded for maximum safety.
Easy mounting and terminal connection
→ Page 16/27

LV h.b.c. fuse switch-disconnectors 11
Switching device NH000 up to 100 A.
Simple changing of termination direction bottom/top.
Compact height.
→ Page 16/27

Disconnecting blades 12
Can be used instead of LV h.b.c. fuse links.
Full contact blades.

LV h.b.c. fuse links 13
Compact construction size up to 100 A, NH00 fuses can also be used in NH000 devices.
→ Page 19/53

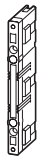
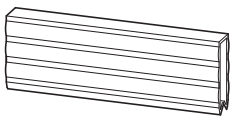
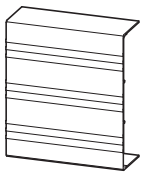
D busbar mounting fuse devices 14
D02, compact height.
Box terminal for connecting cables up to 25 mm^2.
Integrated protection against direct contact
→ Page 16/20

Fuse links 15
D.02
→ Page 19/47

Gage pieces 16
Gage rings D02.
→ Page 19/47

Screw cap 17
D.02
→ Page 19/47

Ordering

		Poles	Rated operational current I_e A	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar supports							
Compact busbar support							
	With removable contact element for adapting to the busbar size. With screw holes on inside and integrated end cover.	3	360	12 x 5/10	**BBS-3/FL-C**[1] 138370		10 off
Busbar shrouds							
• Silicone-free, chlorine-free • Temperature-resistant up to 110 °C • Self-extinguishing to UL 94							
	1000 mm long.	–	–	12 x 5 15 x 5 20 x 5 25 x 5 30 x 5	**BBC-FL5** 107173		10 off
	1000 mm long.	–	–	12 x 10 15 x 10 20 x 10 25 x 10 30 x 10	**BBC-FL10** 107174		10 off
System covers							
Cover for empty sections, modular For covering the Compact System from the front. Can only be used with BBC-MRCOV3-C.							
	1100 mm long.	–	–		**BBC-RCOV3-C** 138371		2 off
Empty sections cover support Suitable for 5 and 10 mm busbar thickness. Can only be used with BBBC-RCOV3-C.							
	–	–	–	12 x 5/10	**BBC-MRCOV3-C** 138372		10 off

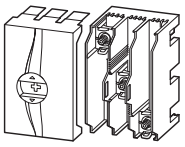
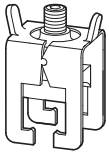
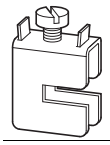
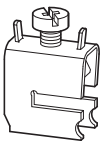
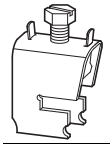
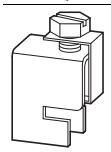
	Rated operational current I_e A	Copper bars mm	Length mm	Copper factor[2]	Material	**Part no.** Article no.	**Price** See price list	Std. pack
Flat busbars								
	160	12 x 5	1500		Copper, tinned	**CU12X5** 034121		10 off
	160	12 x 5	2250		Copper, tinned	**CU12X5-2250** 005093		10 off

Notes

[1] Short-circuit strength → Page 16/40
[2] Calculation of material surcharge → Chapter 23

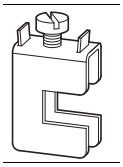
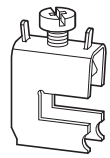
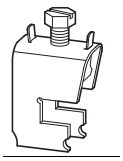
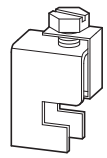
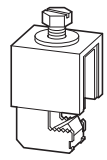
Information relevant for export to North America

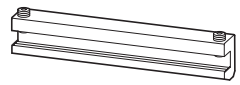
Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Terminal area W x H	Width	Poles	Rated operating current	Terminal capacity ○ **Round conductor, solid** ⊜ Round conductor, flexible, with correctly crimped ferrule ○ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded ▤ Copper strip ■ **Copper bar**	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm		I_e A	mm				
Terminal plates									
The terminal can be removed for the connection of uncut conductors. Contacting of cable with busbar via cable bedding.									
	–	90	3	480	35 - 150 mm² AWG 2 - MCM 300. ⊜ ○ ▤ 10 x 20 x 1	12 x 5/10 15 x 5/10 20 x 5/10	**BBA-TP3/100-C** 138373		1 off
Expansion terminals									
Contacting of cable with busbar via cable bedding.									
	–	38	–	480	35 - 150 mm² AWG2/0 - MCM 300. ⊜ Directly clamped ○ ▽	12 x 5/10 20 x 5/10	**AKS150** 138374		6 off
Universal conductor Connection terminals									
	7.5 x 7.5	11.5	–	180	1.5 - 16 mm² AWG 14 - AWG 6. ⊜ Directly clamped ○ ○ ▤ 8 x 6 x 0.5	All 5 mm thick flat busbars	**AKU16/5** 107187		100 off
	10.5 x 11	15.5	–	270	4 - 35 mm² AWG 10 - AWG 2. ⊜ Directly clamped ○ ○ ▤ 3 x 9 x 0.8 or 6 x 9 x 0.8		**AKU35/5** 107188		50 off
	14 x 14	20.5	–	400	16 - 70 mm² AWG 4 - AWG 2/0. ⊜ Directly clamped ○ ▤ 2 x (3 x 9 x 0.8) or 6 x 9 x 0.8		**AKU70/5** 107189		25 off
	17 x 15	23.5	–	440	16 - 120 mm² AWG 4 - MCM 250. ⊜ Directly clamped ○ ▤ 4 x 16 x 0.8 or 6 x 16 x 0.8 or 10 x 16 x 0.8		**AKU120/5** 107190		25 off

Information relevant for export to North America

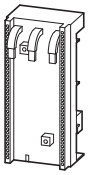
Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

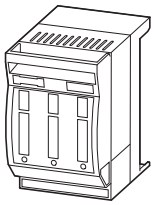
	Terminal area W x H	Width	Poles	Rated operational current	Terminal capacity ○ Round conductor, solid ⊙ Round conductor, flexible, with correctly crimped ferrule ⊙ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded ▤ Copper strip ■ Copper bar	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm		I_e A	mm				
Universal conductor connection terminals									
	7.5 x 7.5	11.5	–	180	1.5 - 16 mm² AWG 14 - AWG 6. ⊙ Directly clamped ○ ⊙ ▤ 8 x 6 x 0.5	All 10 mm thick flat busbars	**AKU16/10** 107191		100 off
	10.5 x 11	15.5	–	270	4 - 35 mm² AWG 10 - AWG 2. ⊙ Directly clamped ○ ⊙ ▤ 3 x 9 x 0.8 or 6 x 9 x 0.8		**AKU35/10** 107192		50 off
	14 x 14	20.5	–	400	16 - 70 mm² AWG 4 - AWG 2/0. ⊙ Directly clamped ⊙ ▤ 2 x (3 x 9 x 0.8) or 6 x 9 x 0.8		**AKU70/10** 107193		25 off
	17 x 15	23.5	–	440	16 - 120 mm² AWG 4 - MCM 250. ⊙ Directly clamped ⊙ ▤ 4 x 16 x 0.8 or 6 x 16 x 0.8 or 10 x 16 x 0.8		**AKU120/10** 107194		25 off
	M8 x 8 bolts	30	–	490	Cable lugs M8	All 10 mm thick flat busbars Double T profile	**AKU-M8/10** 138362		20 off
	M10 x 10 bolts	38	–	630	Cable lugs M10		**AKU-M10/10** 138361		6 off

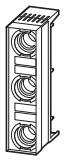
		Width	Rated operating current	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
		mm	I_e A				
End-to-end busbar econnectors							
For hole-less connection of identical busbars.							
	For the same flat copper bars. System spacing 100 - 110 mm. Max. permissible busbar offset 1 mm.	38	630	12 x 5/10 15 x 5/10 20 x 5/10	**BBT-CU12-20X5/10-38** 138379		12 off
		150			**BBT-CU12-20X5/10-150** 107200		3 off

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Poles	Rated operational current I_e A	Adapter width mm	For use with	Copper factor[2]	Part no. Article no.	Price See price list	Std. pack
Component adapters for circuit-breakers and switch-disconnectors								
For surface mounting on flat copper busbars 12 – 30 x 5 – 10, double T and triple T profile Rated operating voltage U_e: 690 V • Temperature-resistant up to 120 °C • Self-extinguishing to UL 94 • Creepage resistance CTI 200								
	3 pole	160	90	NZM1, PN1, N(S)1	0.23	**NZM1-XAD160**[1][2] 104554		1 off

	Poles	Spacing between busbar centers mm	Rated operational current I_e A	Max. fuse link 500 V A	Max. fuse link 690 V A	Size	For use with	Part no. Article no.	Price See price list	Std. pack
LV h.b.c. fuse switch-disconnectors										
 For surface mounting on busbars	3 pole	60	100	100	100	NH00(0) (max. 21 mm width)	–	**FCFSDNH000BBC60-3**[4] 139533		1 off

	Rated operational current I_e A	Rated operational voltage U_e V AC	Size	Width mm	For use with	Part no. Article no.	Price See price list	Std. pack
D busbar mounting fuse devices								
Basic units								
 Latch mechanism for push-fitting on busbar. Gage ring	63	400	E18 D02	36	12 x 5/10	**FCFBD02BBC60-3-36**[3] 139532		6 off

Notes

[1] For switches with standard box terminal connection.
Connection to the system at top using supplied connection cable.
In conjunction with IP2X protection against contact with a finger
Enhanced contact protection on the switch output end possible.
Latch fitting to busbar using combination fixing base
Combination fixing base for adjustment to 5 and 10 mm rail thickness, terminal capacity 6 x 9 x 0.8.
Rated short-circuit switching capacity 35 kA at 480 V.
Busbar must be de-energized for mounting.

[2] Calculation of material surcharge → hapter 23

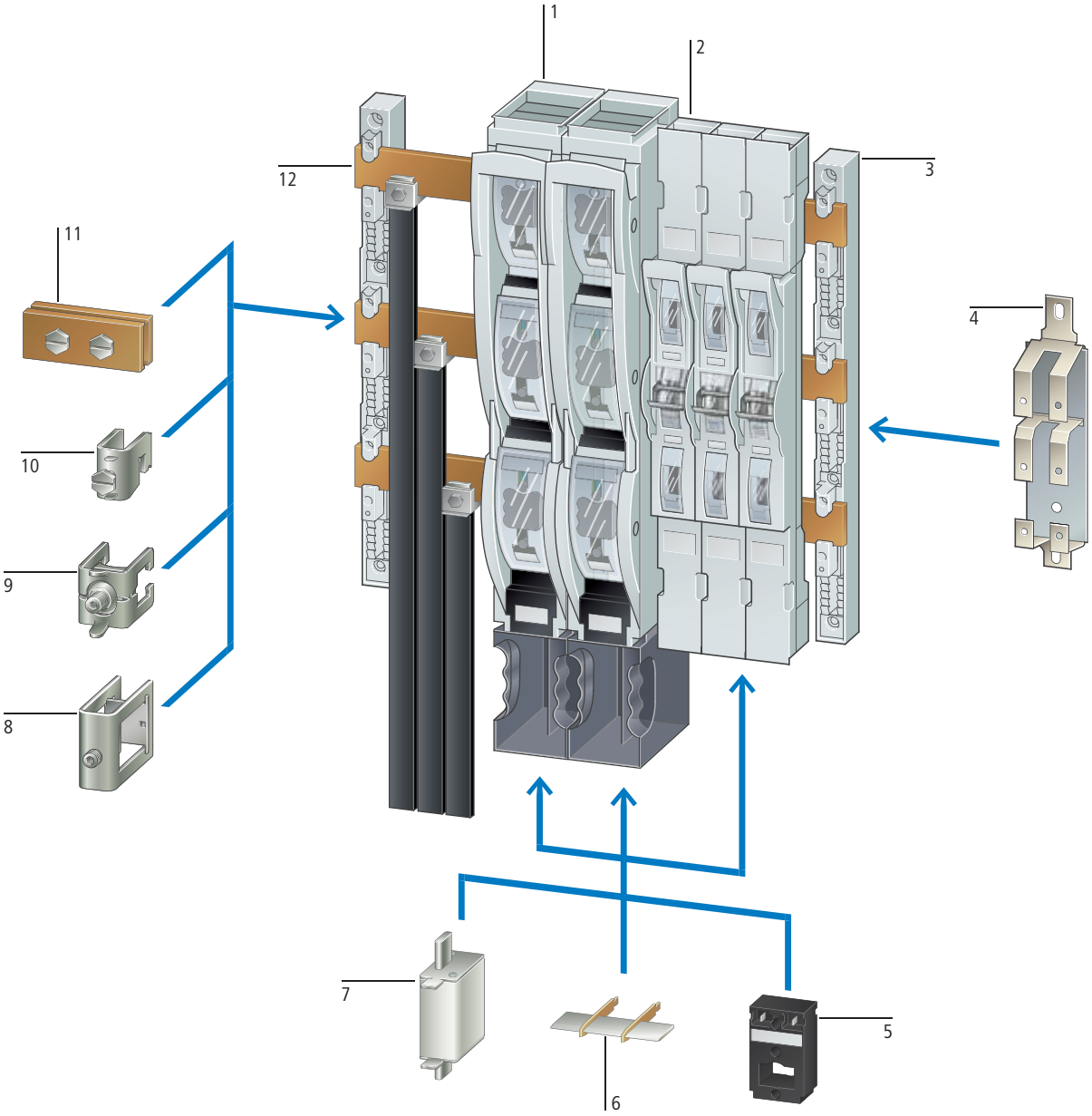
[3] A complete and functional fuse element consists of the basic unit
- Fuse link → Page 19/47
- Fuse adapter → Page 19/47
- Screw cap → Page 19/47

[4] LV h.b.c. fuse links → Page 19/53

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

System overview



LV h.b.c. fuse switches 250 up to 630 A 1

Spacing between busbar centers 185 mm.

Prepared for current transformer.

Top or bottom outgoer possible.

With/without electronic fuse monitoring.

→ Page 16/32

LV h.b.c. fuse switches 160 A 2

Spacing between busbar centers 100 mm.

Adaptable for 185 mm system.

With/without electronic fuse monitoring.

Top or bottom outgoer possible.

→ Page 16/32

Busbar supports 3

Spacing between busbar centers 185 mm.

Hole-less mounting of 30, 40, 50, to 120 x 10 mm flat busbars, double T and triple T profiled busbars.

→ Page 16/31

Adapters 4

Adapts NH00 fuse combination units to the 185 mm system.

Single or double adapters.

Prepared for current transformer.

→ Page 16/33

Current transformer 5

Can be retrofitted at any time with all fuse combination units.

No additional space required, simply swing in.

→ Page 16/33

Disconnecting blades 6

Can be used instead of LV h.b.c. fuse links.

Full contact blades.

LV h.b.c. fuse links 7

High breaking capacity 120 kA.

Fuse links NH00, NH1, NH2 and NH3 up to 630 A.

→ Page 19/53

Profile terminals 8

Safe connection of flat copper busbars or multi-layer copper strip to profiled busbars.

8 different construction sizes from 750 to 3600 mm² terminal area.

→ Page 16/35

Expansion terminals 9

For fitting to busbars without drilling.

Cables can be inserted from the top simply and quickly.

→ Page 16/34

Universal conductor terminals 10

With integrated retaining spring.

Captive fixing screw.

Suitable for all copper, flat and profiled busbars.

→ Page 16/36

End-to-end busbar connectors 11

For interconnecting busbar systems.

For flat and profiled busbars.

→ Page 16/37

Flat busbars, profiled busbars 12

Profiled busbars with cross-sections 500, 720 and 1140 mm², and flat copper busbars up to 30 x 10 mm.

Tin-plated copper busbars cut time needed to prepare contact points.

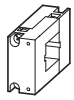
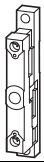
Flat busbars

→ Page 16/24

Profiled busbars

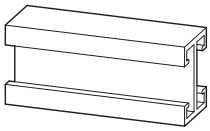
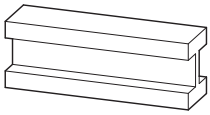
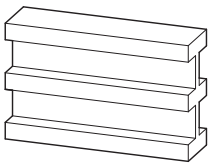
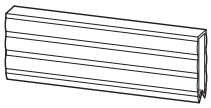
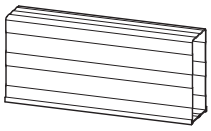
→ Page 16/31

Ordering

		Poles	Rated operational current I_e A	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar supports							
Double T/Triple T profile busbar supports • Thermoplast, silicone-free, chlorine-free • Halogen-free • Self-extinguishing to UL 94 • RAL 7035 • Creepage resistance CTI 200 • Temperature-resistant up to 120 °C							
	Can be fitted with NH-SLS… Hole-less mounting of busbars.	3	2500	30 x 10 40 x 10 50 x 10 60 x 10 80 x 10 100 x 10 120 x 10 Double T profile Triple T profile	**BBS-3/FL-185** 107210		1 off
Double T profile busbar supports • Thermoplast, silicone-free, chlorine-free • Halogen-free • Self-extinguishing to UL 94 • RAL 7035 • Creepage resistance CTI 200 • Temperature-resistant up to 120 °C							
	Suitable for surface mounting of PE or N bar. With internal screw holes.	1	1600	Double T profile	**BBS-1/PR** 107165		10 off
PE/N busbar supports • Thermoplast, silicone-free, chlorine-free • Halogen-free • Self-extinguishing to UL 94 • RAL 7035 • Creepage resistance CTI 200 • Temperature-resistant up to 120 °C							
	Can be fitted to all busbar sizes using concertina system. Can be mounted individually.	2	630	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10	**BBS-2/FL** 107069		10 off
	Can be fitted to all busbar sizes using concertina system. Can be mounted individually.	1	630	12 x 5/10 15 x 5/10 20 x 5/10 25 x 5/10 30 x 5/10	**BBS-1/FL** 107161		10 off

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

		Poles	Rated operational current I_e A	For use with	Cu factor	**Part no.** Article no.	**Price** See price list	Std. pack
Profiled busbars								
E-CU double T profile busbar								
	Tinned, cross-section 500 mm², 2400 mm long.	–	1250	For supports BBS-3/PR, BBS-1/PR, BBS-3/FL-185		**CU-BAR-500/T**[1] 107166		32 off
	Tinned, cross-section 720 mm², 2400 mm long.	–	1600	For supports BBS-3/PR, BBS-1/PR, BBS-3/FL-185		**CU-BAR-720/T**[1] 107167		32 off
E-CU triple T profiled busbars								
	Tinned, cross-section 1140 mm², 2400 mm long.	–	2500	For supports BBS-3/FL-185, KSX-3….		**CU-BAR-1140/T** 107168		10 off
Busbar shrouds								
• Silicone-free, chlorine-free • Temperature-resistant up to 110 °C • Self-extinguishing to UL 94								
	1000 mm long.	–	–	12 x 10 15 x 10 20 x 10 25 x 10 30 x 10		**BBC-FL10** 107174		10 off
	1000 mm long.	–	–	For double T profile		**BBC-CU-BAR/PR** 107175		5 off

Notes

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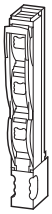
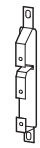
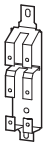
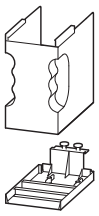
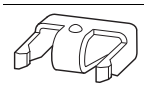
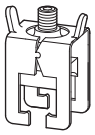
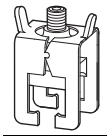
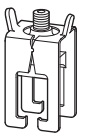
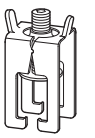
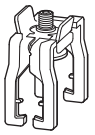
Calculation of material surcharge → Chapter 23

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E300273
UL CCN	NMTR, NMTR7
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Listed, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Rated operational current I_e A	Max. fuse link 400 V A	Max. fuse link 690 V A	Size	For use with	Connection	**Part no.** Article no.	**Price** See price list	Std. pack
LV h.b.c. fuse switches									
• With terminal compartment cover • Mounting without holes with spike type terminal Equipment supplied • NH-SLS-00/160(-SI): with claw-type and box terminals • NH-SLS sizes 1, 2, 3: without claw-type and box terminals Busbar mounting • For size 00: • NH-SLS-00/160-60(-SI) 100 mm spacing between busbar centers, hole-less or screw fixing • Sizes 1, 2, 3: 185 mm space between busbar centers, hole-less or screw fixing									
Without fuse monitoring									
	160	160	160	00	30 x 10 40 x 10 50 x 10 60 x 10 80 x 10 100 x 10 120 x 10 Double T profile Triple T profile	Top or bottom	**NH-SLS-00/160** 106210		1 off
	250	250	250	1			**NH-SLS-1/250** 106212		
	400	400	400	2			**NH-SLS-2/400** 106213		
	630	630	630	3			**NH-SLS-3/630** 106214		
With fuse monitoring									
	160	160	160	00	30 x 10 40 x 10 50 x 10 60 x 10 80 x 10 100 x 10 120 x 10 Double T profile Triple T profile	Top or bottom	**NH-SLS-00/160-SI** 106215		1 off
	250	250	250	1			**NH-SLS-1/250-SI** 106217		
	400	400	400	2			**NH-SLS-2/400-SI** 106218		
	630	630	630	3			**NH-SLS-3/630-SI** 106219		

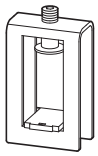
		For use with/ transformer ratio K_N A	**Part no.** Article no.	**Price** See price list	Std. pack
Adapters					
	Single adapter 100/185	30 x 10 40 x 10 50 x 10 60 x 10 80 x 10 100 x 10 120 x 10 Double T profile Triple T profile	**Z-NH-SLS-00-SAD** 106220		1 off
	Single adapter 100/185 for mounting without holes		**Z-NH-SLS-00-SAD-KR** 106222		1 off
	Double adapter 100/185		**Z-NH-SLS-00-SADD** 106221		1 off
Terminal shroud/size adapter for NH-SLS					
	Size 00	for NH-SLS-00/160	**Z-NH-SLS-KA** 106223		2 off
Claw-type terminals					
	For connection at bottom	NH-SLS, size 1, 2, 3	**Z-NH-SLS-KRU** 106224		3 off
	For connection at top	NH-SLS, size 1, 2, 3	**Z-NH-SLS-KRO** 106225		3 off
V-terminals					
Up to 240 mm² for stranded sectoral conductor, up to 300 mm² for solid sectoral conductor					
	For size 1, 2	NH-SLS, size 1, 2	**Z-NH-SLS-1+2-VAK** 106226		3 off
	For size 3	NH-SLS, size 3	**Z-NH-SLS--3VAK** 106227		3 off
Terminal expansion for 2 cable lugs					
	For size 1, 2	–	**Z-NH-SLS-1+2-AE** 106239		1 off
	For size 3		**Z-NH-SLS--3AE** 106240		
Device support with DIN rail for terminals etc.					
	Cover	–	**Z-NH-SLS-1+2+3-GTAB** 106231		1 off
	Lower section		**Z-NH-SLS-1+2+3-GT** 106230		
Current transformer					
	NH-SLS-00 • Fit to Z-NH-SLS-00-SAD… with fixing clip Z-NH-SLS-00BC. NH-SLS size 1, 2, 3 • Swing into the standard rail, no additional space requirement. • Mounting of claw-type terminals still possible • Fix current transformer cables with fixing clips Z-NH-SLS--1+2+3-BC.	150/5	**Z-WAS-150/5A-1** 106232		3 off
		200/5	**Z-WAS-200/5A-1** 106233		
		250/5	**Z-WAS-250/5A-1** 106234		
		300/5	**Z-WAS-300/5A-1** 106235		
		400/5	**Z-WAS-400/5A-1** 106236		
		500/5	**Z-WAS-500/5A-1** 106237		
		600/5	**Z-WAS-600/5A-1** 106238		
Fixing clip					
	For fixing current transformer to adapter in 185 mm busbar system (size 00)	–	**Z-NH-SLS-00-BC** 106229		3 off
	For fixing (current transformer) cables to rear of the LV h.b.c. rails of sizes 1, 2, 3		**Z-NH-SLS-1+2+3-BC** 106228		100 off

		Terminal area W × H	Width	Rated operating current	Terminal capacity Round conductor, solid Round conductor, flexible, with correctly crimped ferrule Round conductor, stranded Sectoral conductor, solid Sectoral conductor,, stranded Copper strip Copper bar	For use with	Copper factor[1]	**Part no.** Article no.	**Price** See price list	Std. pack
		mm	mm	I_e A	mm					
Expansion terminals										
For fitting to busbars without drilling										
	Contacting of cable with busbar via cable bedding.	–	38	480	35 - 150 mm² AWG2/0 - MCM 300. Directly clamped	12 x 5/10 20 x 5/10	0.00	**AKS150** 138374		6 off
		–	38	500	95 - 185 mm² AWG3/0 - MCM 350. Directly clamped	20 x 5/10 25 x 5/10 30 x 5/10 Double T profile	0.00	**AKS185** 107195		6 off
		–	41	600	150 - 300 mm² MCM300 - MCM 600. Directly clamped		0.00	**AKS300** 107196		3 off
	Contacting of cable with busbar via contact block.	32 x 25	41	800	3 x 20 x 1 to 2 x (10 x 32 x1) 32 x 25		0.00	**AKS-CU-BAND** 107197		3 off
		55 x 28	72	1600	Up to (2 x) 10 x 50 x 1 Up to (2 x) 50 x 10		0.20	**AKS1000** 107208		1 off
		68 x 28	122	1600	Up to (2 x) 60 x 10	30 x 10 Double T profile Triple T profile	0.00	**AKS1200** 138375		3 off
		105 x 28	122	1600	Up to (2 x) 100 x 10		0.00	**AKS2000** 138376		3 off

Notes [1] Calculation of material surcharge → Chapter 23

Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

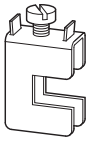
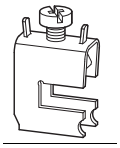
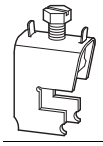
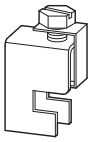
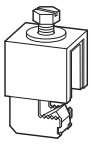
	Terminal area W × H	Width	Rated operating current	Terminal capacity Round conductor, solid Round conductor, flexible, with correctly crimped ferrule Round conductor, stranded Sectoral conductor, solid Sectoral conductor,, stranded Copper strip Copper bar	For use with	Copper factor[1]	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	I_e A	mm					
Profile terminals									
For fitting to busbars without drilling									
	When connecting laminated busbars in parallel, fit a spacer.	–	82	1600	750 mm², terminal area 51 x 5 - 28	Double T profile		**AKP750** 138364		3 off
		–	72	1600	800 mm², terminal area 41 x 20 - 42			**AKP800** 107198		3 off
		–	94	1600	900 mm², terminal area 64 x 5 - 28			**AKP900** 138365		3 off
		–	94	1600	1000 mm², terminal area 51 x 20 - 42			**AKP1000** 107199		3 off
		–	94	2000	1200 mm², terminal area 64 x 20-42			**AKP1200** 138366		3 off
		–	112	2500	1600 mm², terminal area 81 x 20 - 42			**AKP1600** 138367		3 off
		–	132	3000	2000 mm², terminal area 101 x 20 - 42			**AKP2000** 138368		3 off
		–	132	3200	3600 mm², terminal area 101 x 23 - 45			**AKP3600** 138369		3 off

Notes

[1] Calculation of material surcharge → Chapter 23

Information relevant for export to North America

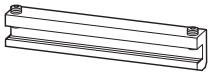
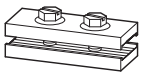
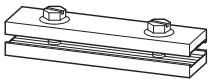
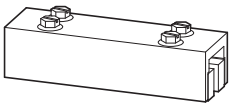
Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Terminal area W × H	Width	Rated operating current	Terminal capacity ○ Round conductor, solid ⊜ Round conductor, flexible, with correctly crimped ferrule ⊙ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded ▤ Copper strip ■ Copper bar	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	I_e A	mm				
Universal conductor connection terminals								
With integrated retaining spring, open clamping area and captive terminal screw.								
	7.5 x 7.5	11.5	180	1.5 - 16 mm² AWG 14 - AWG 6. ⊜ Directly clamped ○ ⊙ ▤ 8 x 6 x 0.5	All 10 mm thick flat busbars	**AKU16/10** 107191		100 off
	10.5 x 11	15.5	270	4 - 35 mm² AWG 10 - AWG 2. ⊜ Directly clamped ○ ⊙ ▤ 3 x 9 x 0.8 or 6 x 9 x 0.8		**AKU35/10** 107192		50 off
	14 x 14	20.5	400	16 - 70 mm² AWG 4 - AWG 2/0. ⊜ Directly clamped ⊙ ▤ 2 x (3 x 9 x 0.8) or 6 x 9 x 0.8		**AKU70/10** 107193		25 off
	17 x 15	23.5	440	16 - 120 mm² AWG 4 - MCM 250. ⊜ Directly clamped ⊙ ▤ 4 x 16 x 0.8 or 6 x 16 x 0.8 or 10 x 16 x 0.8		**AKU120/10** 107194		25 off
	M8 x 8 bolts	30	490	Cable lugs M8	All 10 mm thick flat busbars Double T profile	**AKU-M8/10** 138362		20 off
	M10 x 10 bolts	38	630	Cable lugs M10		**AKU-M10/10** 138361		6 off

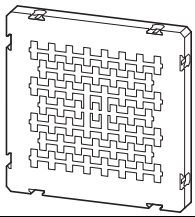
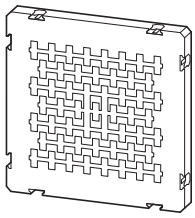
Information relevant for export to North America

Product Standards	UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking
UL File No.	E307559
UL CCN	NMTR2, NMTR8
CSA File No.	236217
CSA Class No.	3211-37
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Refer to approbation report
Suitable for	Feeder circuits
Max. Voltage Rating	600 V AC

	Terminal area W × H	Width	Rated operating current	Terminal capacity ○ Round conductor, solid ⦾ Round conductor, flexible, with correctly crimped ferrule ⦾ Round conductor, stranded ▽ Sectoral conductor, solid ▽ Sectoral conductor,, stranded Copper strip Copper bar	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	I_e A	mm				
Plate terminals								
	–	50	630	–	All 10 mm thick flat busbars	**PK900** 138378		3 off

		Width	For use with	Copper factor[1]	**Part no.** Article no.	**Price** See price list	Std. pack
		mm					
End-to-end busbar onnectors							
For hole-less connection of identical busbars.							
For the same flat copper bars. Rated operating current 630 A							
	System spacing 100 - 110 mm. Max. permissible busbar offset 1 mm.	150	12 x 5/10 15 x 5/10 20 x 5/10		**BBT-CU12-20X5/10-150** 107200		3 off
	System spacing 50 - 60 mm. Max. permissible busbar offset 5 mm.	95			**BBT-CU20-30X5/10-95** 107201		3 off
	System spacing 100 - 110 mm. Max. permissible busbar offset 5 mm.	150			**BBT-CU20-30X5/10-150** 107202		3 off
For differing and same double T profile busbars. Rated operating current 1600 A							
	System spacing 9 - 20 mm. Max. permissible busbar offset 2 mm.	50	Double T profile		**BBT-CU-BAR500/720-50** 107203		6 off
	System spacing 100 - 110 mm. Max. permissible busbar offset 5 mm.	150			**BBT-CU-BAR500/720-150** 107204		3 off

Notes [1] Calculation of material surcharge → Chapter 23

		Poles	Rated operational current I_e A	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar supports							
KSX busbar support, end universal							
	For use in type-tested power distribution systems xEnergy and distribution panels XVTL. Impulse withstand current 110 kA Includes fixing bracket, fixing screws and supports for covers.	3/4	3200	30 x 10 Double T profile Triple T profile	**KSX-34P-EXT** 138268		2 off
KSX busbar support, center support							
	For use in type-tested power distribution systems xEnergy and distribution panels XVTL. Includes fixing material.	3/4	2000	30 x 10 Double T profile Triple T profile	**KSX-34P-MID** 138269		1 off
		3	3200	Triple T profile	**KSX-3P-MID** 138360		1 off

Engineering

Electrical load

BBS-3/FL..., BBS-3/BR

UL 508A

For untested busbar supports UL 508A stipulates a current-carrying capacity of 1000 A/inch² (1.55 A/mm²) unless tests were carried out.
This value can be higher if the product or application was tested accordingly.
Eaton has carried out extensive tests in this area in order to provide the user with maximum benefits when using the 60 mm system.

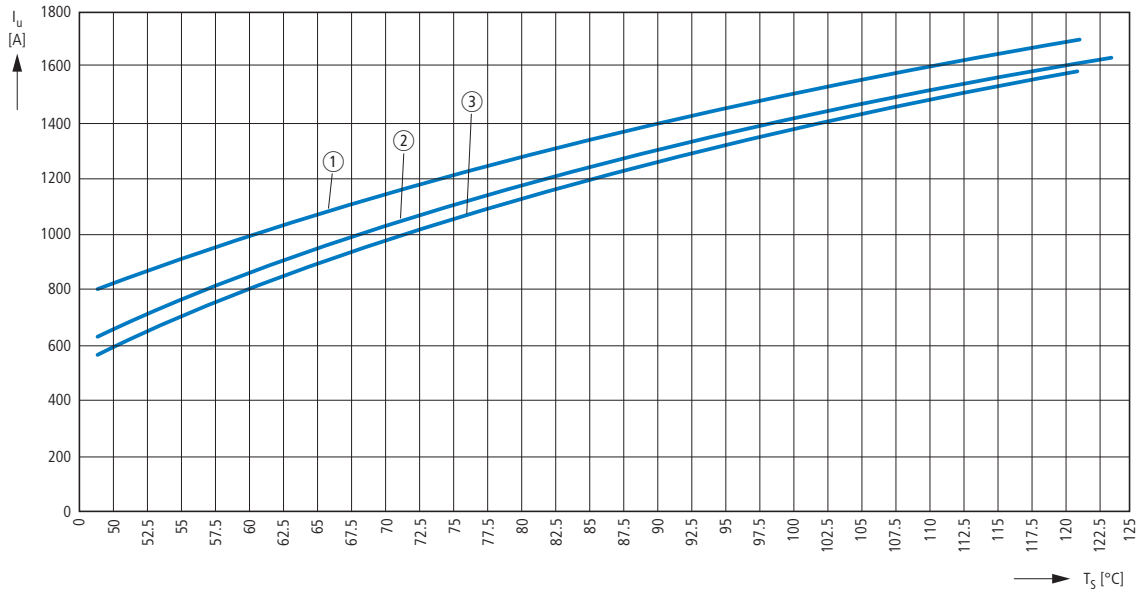
The 60 mm system can be used with higher rated operational currents than permitted by the default value. For example, a busbar support with the dimensions 30 x 10 can be loaded with 630 A instead of 465 A.

DIN EN 13601

The current carrying capacity values that exceed DIN 43671 specifications have been determined under normal operating conditions.
The temperature of the busbars is normally favorably influenced by the fitting of busbar supports and the air circulation within the system.
A correction factor k2 according to DIN 43671 can be determined, depending on the respective ambient air temperature. The correction factor must be taken into account when conditions change or when the load is continuous.

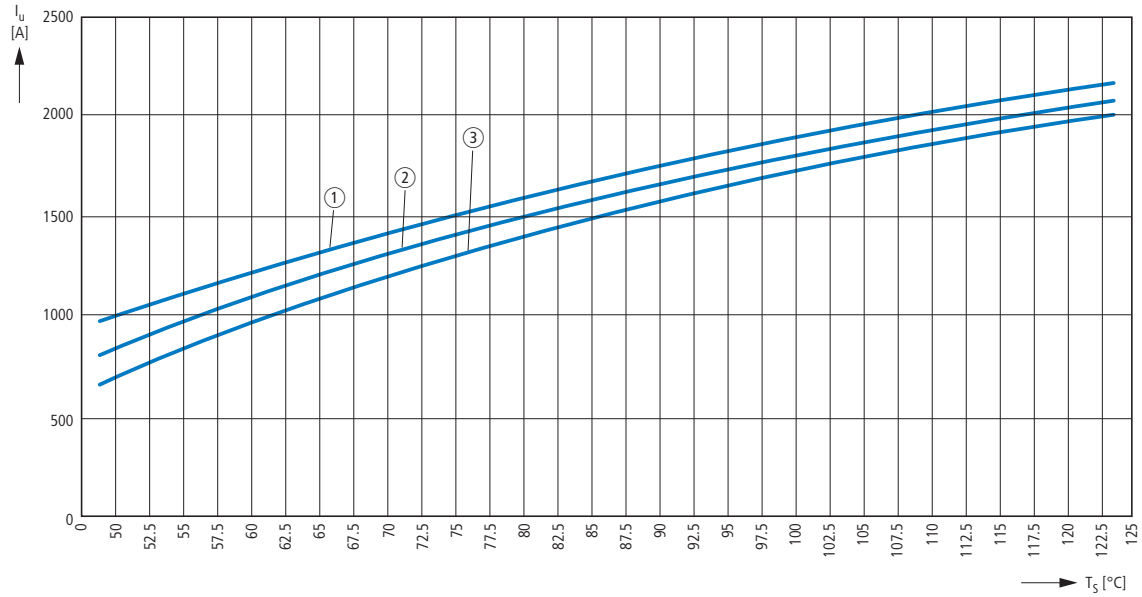
Otherwise, a higher load is possible if the components have a suitable temperature resistance.
A 30 x 10 tinned busbar can be loaded to 630 A. At a load of 800 A, for example, a correction factor k2 of 1.3 is required. The graph shows that with this factor, and at an air temperature of 35°C, the busbars temperature rises to 85°C.

CU-BAR-500/T



Ambient temperature:
① 30 °C
② 35 °C
③ 40 °C
I_U = rated uninterrupted current
T_S = busbar temperature

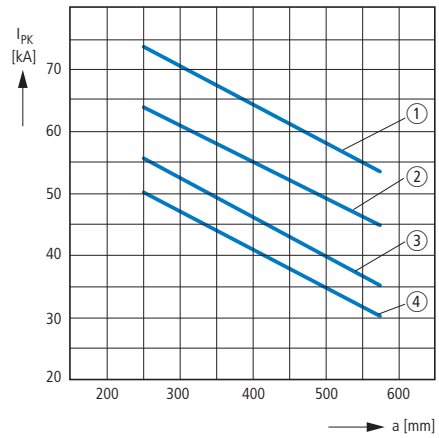
CU-BAR-720/T



Ambient temperature:
① 30 °C
② 35 °C
③ 40 °C
I_U = rated uninterrupted current
T_S = busbar temperature

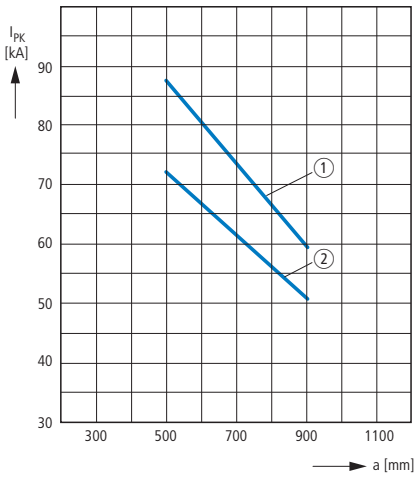
Short-circuit rating to IEC/EN 60439-1

BBS-3/FL



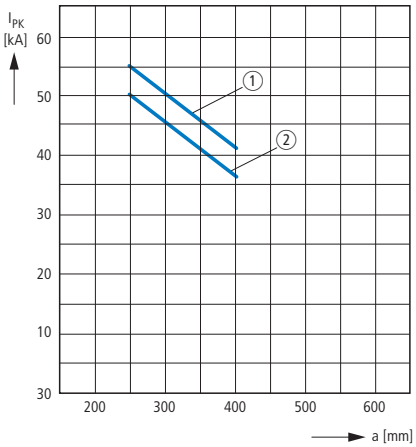
① 30 x 10 mm
② 30 x 5 mm
③ 12 x 10 mm
20 x 10 mm
④ 12 x 5 mm
20 x 5 mm
I_{pk} = Rated peak withstand current
a = Busbar support spacing

BBS-3/PR



① 720 mm²
② 500 mm²
I_{pk} = Rated peak withstand current
a = Busbar support spacing

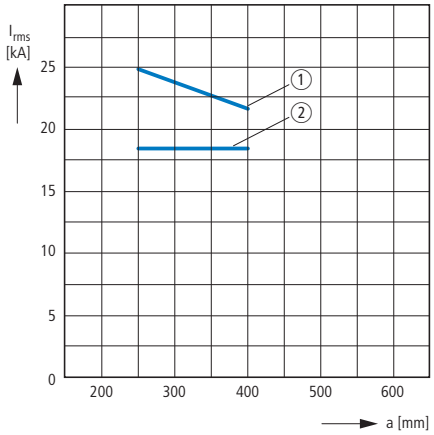
BBS-3/FL-C



① 12 x 10 mm
② 12 x 5 mm
I_{pk} = Rated peak withstand current
a = Busbar support spacing

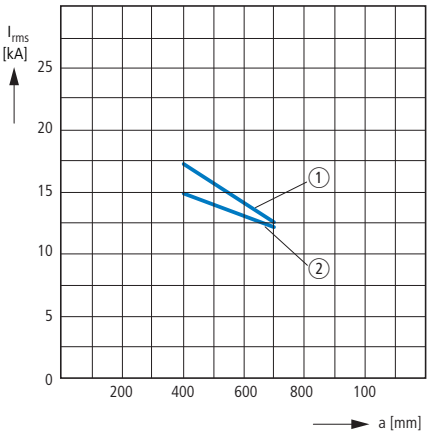
Short-circuit strength to UL 845

BBS-3/FL-NA



① 30 x 5 mm
30 x 10 mm
② 12 x 5 mm
20 x 5 mm
12 x 10 mm
20 x 10 mm
I_{rms} = surge current (RMS)
a = Busbar support spacing

BBS-3/PR



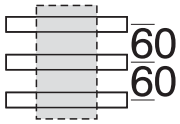
① 500 mm²
② 720 mm²
I_{rms} = surge current (RMS)
a = Busbar support spacing

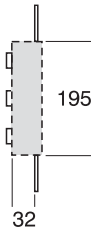
Reduction of rated operating current

Device part no.	Release type	Reduction of the rated operational current (derating) under particular ambient conditions (according to IEC 947) Derating coefficient						
		20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Device adapter for circuit-breakers and switch-disconnectors (reference temperature 40 °C)								
NZM…3-630…+NZM3-XAD630	with XAD…	1	0.96	0.92	0.88	0.84	0.82	0.8

Notes To determine the maximum permissible current load at different ambient temperatures, refer to the derating coefficients shown in the table.
Example: An NZM…3-…630… with a component adapter is to be used at an ambient temperature of 50 °C.
What is the highest permissible rated operating current Ie?
At 50 °C the derating coefficient is 0.88, which means that Ie = 630 A x 0.88 = 554.40 A.
The NZM…3-…630… can therefore be used at an ambient temperature of 50 °C with a maximum Ie = 554.40 A.

Possible combinations without bending the flat busbars





	Device	GST00-160-40-60-AOU	LTS-100/C00/3-R	D02-S/63/3-RS	D02-LTS/63/3-R(-HK)	D02-SO/63/3-R-27 Z-D02/R/3-…	DII-SO/25/3-R…	DIII-SO/63/3-R(-PS)
	Accessories	BS-SET-GST00	-	-	-	-	SBS-RS60	SBS-RS60
CU	12 x 5/10	-	-	-	x	x	x	x
	20 x 5/10	x	x	x	x	x	x	x
	25 x 5/10	x	-	-	x	x	x	x
	30 x 5/10	x	x	x	x	x	x	x
	Double T	x	x	x	x	x	x	x
	Width mm	106	63	36	27	27 36 - 54	45	54

Technical data

			BBS-3/FL(-NA)	BBS-4/FL	BBS-3/PR	BBS-3/FL-C	BBS-3/FL-185
General							
Standards			Type-tested to VDE 0660 Part 500, IEC/EN 60439-1				
Mounting position			Vertical, horizontal				
Material							
Material			Thermoplast, silicone-free, chlorine-free				
Halogen-free			Yes	Yes	Yes	Yes	Yes
Flammability characteristics			Self-extinguishing to UL 94				
Color			RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035
Creepage resistance			CTI 200	CTI 200	CTI 200	CTI 200	CTI 200
Temperature resistance		°C	120	120	120	120	120
Contacts							
Rated insulation voltage	U_i	V	3000	3000	3000	3000	3000
Rated operating voltage	U_e	V	690	690	690	690	690
Rated frequency	*f*	Hz	50/60	50/60	50/60	50/60	50/60
Spacing between busbar centers		mm	60	60	60	60	185
Rated uninterrupted current			With temperature deviations, DIN 43671 stipulates that a correction factor k2 must be taken into account.				
with 12 × 5 mm busbar	I_u	A	218	218	–	200	–
with 15 × 5 mm busbar	I_u	A	273	273	–	–	–
with 20 × 5 mm busbar	I_u	A	349	349	–	–	–
with 25 × 5 mm busbar	I_u	A	436	436	–	–	–
with 30 × 5 mm basbar	I_u	A	491	491	–	–	–
with 12 × 10 mm busbar	I_u	A	392	392	–	360	–
with 20 × 10 mm busbar	I_u	A	567	567	–	–	–
with 30 × 10 mm basbar	I_u	A	687	687	–	–	630
with 500 mm²	I_u	A	–	–	1003	–	950
with 720 mm²	I_u	A	–	–	1281	–	1200
Ambient temperature		°C	35	35	35	35	35
Busbar temperature		°C	70	70	70	70	70
Rated peak withstand current							
with 12 × 5 mm busbar	I_{pk}	kA	50	50	–	50	–
with 20 × 5 mm busbar	I_{pk}	kA	50	50	–	–	–
with 25 × 5 mm busbar	I_{pk}	kA	50	50	–	–	–
with 30 × 5 mm basbar	I_{pk}	kA	64	64	–	–	–
with 12 × 10 mm busbar	I_{pk}	A	56	56	–	55	–
with 20 × 10 mm busbar	I_{pk}	kA	56	56	–	–	–
with 30 × 10 mm basbar	I_{pk}	kA	73	73	–	–	100
with 500 mm²	I_{pk}	kA	–	–	72	–	100
with 720 mm²	I_{pk}	kA	–	–	87	–	100
Short-circuit duration	t	ms	20	20	20	20	20
Distance between busbar supports	a	mm	250	250	500	250	400
For other intervals between busbar supports			See Short-circuit rating characterstics, → Page 16/40				–

			CU...	CU-BAR-500-T CU-BAR-720-T	CU-BAR-1140/T
General					
Standards			EN 13061, UL 508	EN 13061, UL 508	EN 13061, UL 508
Contacts					
Rated uninterrupted current			With temperature deviations, DIN 43671 stipulates that a correction factor k2 must be taken into account.		
T_u = 35 °C and T_s = 65 °C					
with 12 × 5 mm busbar	I_u	A	200	–	–
with 20 × 5 mm busbar	I_u	A	320	–	–
with 30 × 5 mm basbar	I_u	A	450	–	–
with 12 × 10 mm busbar	I_u	A	360	–	–
with 20 × 10 mm busbar	I_u	A	520	–	–
with 30 × 10 mm basbar	I_u	A	630	–	–
with 500 mm²	I_u	A	–	950	–
with 720 mm²	I_u	A	–	1200	–
1140 mm²	I_u	A	–	–	2500

				LTS-100/C00/3-R	GST…00-160-40-60-AOU	GST1-AO(AU)	GST2-AO(AU)	GST3-AO(AU)
General								
Standards				IEC/EN 60947-3				
Climatic proofing				Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical to IEC 60068-2-30				
Ambient temperature			°C	-25 - +55	-25 - +55	-25 - +55	-25 - +55	-25 - +55
Installation altitude			m	Max. 2000	Max. 2000	Max. 2000	Max. 2000	Max. 2000
Distance between busbar centers			m	60	60	60	60	60
Mounting position				Vertical or horizontal				
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3	III/3
Touch protection at the front								
Operational status				IP20	IP20	IP20	IP20	IP20
Front cover open				IP10	IP10	IP10	IP10	IP10
Direction of incoming supply				Any				
Lifespan, mechanical	Operations			1700	1700	1700	1700	1700
Weight			kg	0.57	0.93	4.4	5.3	6.6
Contacts								
Rated operational current								
	500 V AC/220 V DC	I_e	A	100	160	250	400	630
	690 V AC / 440 V DC	I_e	A	–	100	200	315	500
Rated frequency			Hz	40 - 60	40 - 60	40 - 60	40 - 60	40 - 60
Rated conditional short-circuit current								
	AC	I_q	kA_{rms}	50	50	50	50	50
	DC	I_q	kA_{rms}	25	25	25	25	25
Utilization category AC-22B								
Rated making capacity								
	500 V AC		A	300	480	750	1200	1890
	690 V AC		A	–	300	600	945	1500
Rated breaking capacity								
	500 V AC		A	300	480	750	1200	1890
	690 V AC		A	–	300	600	945	1500
Utilization category DC-21B								
Rated making capacity								
	220 V DC/440 V DC		A	400	150	300	475	750
Rated breaking capacity								
	220 V DC/440 V DC		A	400	150	300	475	750
Lifespan, electrical	Operations			300	300	200	200	200
Heat dissipation at I_{th}, without fuse link								
	500 V AC		W	11.5	6.9	12.9	27	52
	690 V AC		W	–	2.7	8.3	16.7	32.8
	220 V DC		W	7.7	4.6	8.6	18	34.7
	440 V DC		W	–	1.8	5.5	11.2	21.8
Rated insulation voltage		U_i	V	500	750	750	750	750
Max. fuse link								
Construction size				NH000	NH00	NH1	NH2	NH3
Max. rated operational current, gL/gG			A	100	160	250	400	630
Max. permissible heat dissipation fuse link		P_v	W	7.5	12	23	34	48
Terminal capacities								
Box terminal								
Stranded			mm^2	1.5 - 50	1.5 - 70	–	–	–
Copper strip	Number of segments x width x thickness		mm	6 x 9 x 0.8	6 x 9 x 0.8	–	–	–
Flange connection								
Bolt diameter		d	mm	–	–	M10	M10	M10
Cable lug			mm^2	–	–	1 x 25 - 100	1 x 25 - 100	1 x 25 - 100
Flat rail		max.	mm	–	–	30 x 10	30 x 10	30 x 10
Box terminal								
Stranded copper			mm^2	–	–	25 - 150	25 - 240	25 - 300
Copper strip	Number of segments x width x thickness		mm	–	–	6 x 16 x 0.8	10 x 16 x 0.8	11 x 21 x 1
Cable clamp								
Stranded aluminium/copper			mm^2	–	–	70 - 150	120 - 240	120 - 300
Double cable clamp								
Stranded aluminium/copper			mm^2	–	–	2 x (70 - 95)	2 x (120 - 150)	2 x (120 - 240)

				NH-SLS-00/ 160-60	NH-SLS-00/160	NH-SLS-1/250	NH-SLS-2/400	NH-SLS-3/630
General								
Standards				IEC/EN 60947-3				
Climatic proofing				Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30				
Ambient temperature			°C	-5 - +40	-5 - +40	-5 - +40	-5 - +40	-5 - +40
Installation altitude			m	Max. 2000	Max. 2000	Max. 2000	Max. 2000	Max. 2000
Distance between busbar centers			mm	60	100	185	185	185
Number of poles/phases			n	3	3	3	3	3
Mounting position				Vertical, horizontal				
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3	III/3
Contact protection shroud at the front	Operational status			IP30	IP30	IP30	IP30	IP30
	Front cover open			IP10	IP10	IP10	IP10	IP10
Direction of incoming supply				Any				
Lifespan, mechanical	Operations			1400	1400	1400	800	800
Weight			kg	1.46	1.37	5.2	6.3	7.0
Contacts								
Rated frequency		f	Hz	50 - 60	50 - 60	50 - 60	50 - 60	50 - 60
Rated insulation voltage		U_i	V	1000	1000	1000	1000	1000
Rated operating mode				Continuous operation; with continuous operation of several adjaced devices the rated diversity factor to VDE 0660 part 500 / EN 60439-1, table 1 must be observed.				
Rated impulse withstand voltage		U_{imp}	kV	8	8	12	12	12
Rated conditional short-circuit current AC		I_q	kA_{rms}	50	50	100	100	100
Utilization category AC-23B								
Rated operational voltage AC		U_e	V AC	500/400	500/400	500	500	500
Rated operational current		I_e	A	125/160	125/160	250	400	630
Utilization category AC-22B								
Rated operational voltage AC		U_e	V AC	690	690	690	690	690
Rated operational current		I_e	A	160	160	250	400	630
Utilization category AC-21B								
Rated operational voltage AC		U_e	V AC	690	690	690	690	690
Rated operational current		I_e	A	160	160	250	400	630
Heat dissipation at I_{th} AC, without fuse link			W	20	20	30	67	116
Lifespan, electrical	Operations			200	200	200	200	200
Max. fuse link								
Construction size			NH	00	00	1	2	3
Max. rated operational current gL/gG			A	160	160	250	400	630
Max. permissible heat dissipation without fuse link		P_v	W	12	12	23	34	48
Mechanical data								
Mounting on busbars								
Adapter for busbars				–	Z-…SAD Z-…SADD	–	–	–
Combination base for busbars				Directly on 12 - 30 x 5/10 Double T profile Triple T profile	–	–	–	–
Screw connection for busbars				–	M8 … x 5/10 mm	M12… x 10 mm	M12 … x 10 mm	M12 … x 10 mm
Terminal capacities								
Flange connection	Bolt diameter	d	mm	M8	M8	M10	M10	M12
	Cable lug		mm^2	1 x 70	1 x 70	1 x 120	1 x 240	2 x 185
	Flat rail	max.	mm	20 x 8	20 x 10	30 x 10	30 x 10	30 x 10
Box terminal	Stranded		mm^2	1.5 - 70	1.5 - 70	–	–	–
	Flexible with ferrule[1)]		mm^2	1.5 - 70	1.5 - 70	–	–	–
Copper strip	Number of segments x width x thickness			6 x 9 x 0.8	6 x 9 x 0.8	–	–	–
V-terminals	Stranded		mm^2		–	50 - 185	50 - 185	120 - 300
	Sectoral conductor, stranded		mm^2	–	–	70 - 240	70 - 240	120 - 240
	Sectoral conductor, solid		mm^2	–		95 - 300	95 - 300	150 - 300
Terminal expansion	Cable lugs		n	–	–	max.2	max.2	max.2

Notes The clearance to grounded parts must be at least 50/100 mm at the top and 25/50 mm on the sides with construction sizes 00/1-3.
Technical data for fuse monitoring → Page 16/45

[1)] Ferrule with maximum cross-section with a correctly crimped ferrule.

				NH-SLS-…-SI
General				
Standards				IEC/EN 60255, VDE 0435 part 303
Climatic proofing				Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			°C	-5 - +40
Installation altitude			m	Max. 2000
Contacts				
Rated operating voltage		U_e	V	3 x 400 AC
Voltage range			V AC	0.8 … 1.1 x U_e
Rated frequency		*f*	Hz	50 - 60
Intrinsic consumption per phase (conductor)			VA	2 (L2/L3)
Rated insulation voltage		U_i	V	400
Overvoltage category				III
Rated operating mode				Continuous operation
Rated impulse withstand voltage		U_{imp}	kV	4
Relay contacts				
Standards				EN 60947-5-1
Rated voltage		U_e	V AC	250
Conventional thermal current		I_{th}	A	4
Utilization category AC-15				
Rated operating voltage		U_e	V AC	230
Rated operational current	AC-15 at 230 V	I_e	A	1
Lifespan, electrical		Operations		1.5 x 10^5
Lifespan, mechanical		Operations		> 10^8
Max. admissible back-up fuse			A gL	4
Terminal capacities				
Box terminal	Solid		mm^2	2 x 2.5
	Flexible		mm^2	2 x 1.5
Response/reset time			ms	< 500

				GST…-DSI
Electrical data				
Standards				IEC/EN 60255, VDE 0435 part 303
Rated operating voltage		U_e	V AC	3 x 400 - 690
Voltage range			V AC	0.9 … 1.1 x U_e
Rated frequency		*f*	Hz	50 - 60
Energy consumption		P	VA	1.5 (L2/L3)
Rated insulation voltage		U_i	V	690
Overvoltage category				III
Rated impulse withstand voltage		U_{imp}	kV	6
Rated voltage		U_e	V AC	250
Rated operational current		I_e	A	8 A DC
Inrush current			A	≦ 15
Minimum switching load				5 V AC/DC, 300 mW, 5mA
Max. switching power	AC 1		VA	2000
	250 V AC 15		VA	400
	250 V AC 3		W	300
Lifespan, electrical		Operations		80 x 10^3 (AC 1)
Max. admissible back-up fuse				4 A gL/gG / PLSM-B4…-HS
Mechanical data				
Terminals				Lift terminals
Terminal cross-section, flexible			mm^2	0.25 - 1.5
Tightening torque of terminal screws			Nm	0.5 - 0.6
Lifespan, mechanical		Operations	x 10^6	> 10
Response/reset time			ms	< 500
Degree of protection				IP20
Temperature range			°C	-10 … +55
Pollution degree				3
Terminal capacity			mm^2	0.25 - 1.5

			D02-SO/63/3-R-27 Z-D02/R/3…	DII-SO/25/3-R(-PS)	DIII-SO/63/3-R(-PS)
General					
Standards			Design according to IEC/EN 60269-1, VDE 0636 Part 301		
Climatic proofing			Damp heat, constant, to IEC 60068-2-78, Damp heat, cyclical to IEC 60068-2-30		
Ambient temperature		°C	-25 - +55	-25 - +55 35 normal temperature, at 55 with reduced operating current	
Mounting position			Vertical or horizontal		
Electrical data					
Poles			3	3	3
Rated operating voltage	U_e	V AC	400	500	690
	U_e	V DC	–	–	–
Conditional rated short-circuit current tested with fuse links	I_q	kA	50	50	50
Rated frequency	f	Hz	40-60	40-60	40-60
Rated operational current	I_e	A	63	25	63
Conventional thermal current with fuse links	I_{th}	A	63	25	63
Rated operating mode			Continuous operation		
Overvoltage category			IV	III	III
Utilization category			–	–	–
Rated impulse withstand voltage	U_{imp}	kV	6	4	4
Current heat dissipation per contact at I_e		W	0.5	0.4	3.34
Heat dissipation					
Heat dissipation per contact with fuse link at I_e		W	1.5	1.2	10
Max. permissible heat dissipation of fuse links		W	5.5	4	7
Operating category			–	–	–
Mechanical data					
Standard front dimension		mm	194	194	194
Enclosure width		mm	201	200	200
Built-in width		mm	27	45	54
Weight		g	150	140	150
Electric thread			E18	E27	E33
Mounting			–	–	–
Degree of protection Integrated			IP20	IP20	IP20
Terminals			Lift terminals	Lift terminals	Lift terminals
Terminal capacity					
Solid		mm^2	1.5 - 35	1.5 - 25	1.5 - 25
Pollution degree			3	3	3
Creepage resistance			–	–	–

			D02-S/63/3-RS	D02-LTS/63/3-R(-HK)
General				
Standards			Design according to IEC/EN 60947-3	
Climatic proofing			Damp heat, constant, to IEC 60068-2-78, Damp heat, cyclical to IEC 60068-2-30	
Ambient temperature		°C	-25 - +55	-25 - +55
Mounting position			Vertical or horizontal	
Electrical data				
Poles			3	3
Rated operating voltage	U_e	V AC	400	400
	U_e	V DC	–	–
Rated short-circuit current, tested with fuse links	I_q	kA	50	63
Rated frequency	*f*	Hz	40-60	40-60
Rated operational current	I_e	A	63	63
Conventional thermal current with fuse links	I_{th}	A	63	63
Rated operating mode			Continuous operation	
Rated short-circuit switching capacity	I_{cn}	kA	–	50
Overvoltage category			III	IV
Utilization category			AC 23 B	AC 22 B
Rated impulse withstand voltage	U_{imp}	kV	8	6
Current heat dissipation per contact at I_e		W	2	1.5
Heat dissipation				
Heat dissipation per contact with fuse link at I_e		W	7.5	7
Max. permissible heat dissipation of fuse links		W	5.5	5.5
Auxiliary contacts				
Changeover contacts		Number	–	5A/250 V AC
Back-up fuse		A gL	–	2 A gL PLSM-B4/…-HS/CLS6-B4/…-HS
Connection			–	Blade terminal sleeve 2.8 x 0.5 mm
Mechanical data				
Standard front dimension		mm	194	194
Enclosure width		mm	212	226
Built-in width		mm	36	27
Weight		g	260	340
Electric thread			E18	–
Mounting			Busbar with 60 mm clearance	
Degree of protection Integrated			IP30	IP20/IP40
Terminals			Lift terminals	Lift terminals
Terminal capacity				
Solid		mm^2	1.5 - 25	1.5 - 35
Pollution degree			3	3
Creepage resistance			–	–

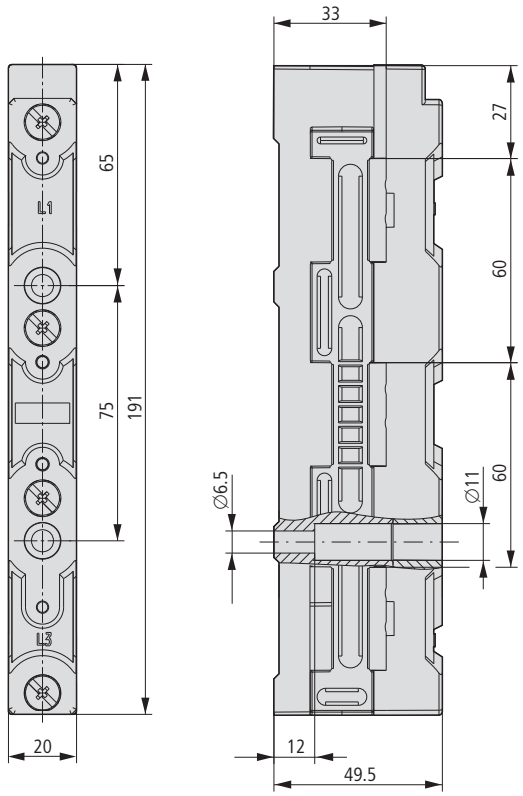
						FCFSDNH000BBC60-3
General						
Standards						IEC/EN 60947-3
Climatic proofing						Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature					°C	
Installation altitude					m	Max. 2000
Mounting position						Vertical or horizontal
Overvoltage category/pollution degree						III/3
Contact protection shroud at the front	Operational status					IP20
	Front cover open					IP10
Direction of incoming supply						any
Lifespan, mechanical		Operations				1700
Weight					kg	0.93
Contacts						
Rated operational current		690 V AC / 440 V DC	I_e	A		100
Rated frequency			f	Hz		40 - 60
Rated conditional short-circuit current		690 V AC	I_q	kA_{rms}		50
		440 V DC	I_q	kA_{rms}		25
Utilization category AC-22B	Rated making capacity			A		100
	Rated breaking capacity			A		100
Utilization category DC-21B	Rated making capacity			A		80
	Rated breaking capacity			A		80
Lifespan, electrical		Operations				300
Heat dissipation at I_{th}, without fuse link		690 V AC	W	W		2.7
		440 V DC		W		1.8
Rated insulation voltage			U_{imp}	V		750
Max. fuse link						
Construction size	Number of segments x width x thickness					NH00(0) (max. 21 mm width)
Max. rated operational current gL/gG				A		100
Max. permissible heat dissipation of fuse link			P_v	W		9
Terminal capacity						
Box terminal	Flexible			mm^2		2.5 - 50
	Flexible with ferrule			mm^2		1.5 - 50 (ferrule with maximum cross-section may not be possible)
	Solid			mm^2		1.5 - 10
	Stranded			mm^2		16 - 50
Copper strip	Number of segments x width x thickness			mm		6 x 9 x 0.8; 9 x 9 x 0.8

					FCFBD02BBC60-3-36
General					
Standards					Type according to IEC/EN 60269-1, VDE 0636 Part 301
Climatic proofing					Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature				°C	-25 - +55
Mounting position					Vertical or horizontal
Contacts					
Poles					3
Rated operational voltage			U_e	V AC	400 V AC
Rated short-circuit current, tested with fuse links			I_q	kA_{rms}	50
Rated frequency			f	Hz	40 - 60
Rated operational current			I_e	A	63
Conventional thermal current with fuse links			I_{th}	A	63
Rated operating mode					Uninterrupted operation
Overvoltage category					IV
Rated impulse withstand voltage			U_{imp}	kV	6
Current heat dissipation per contact at I_e				W	0.5
Heat dissipation per contact with fuse link at I_e				W	1.5
Max. permissible heat dissipation of fuse links			P_v	W	5.5
Mechanical data					
Enclosure width				mm	160
Built-in width				mm	36
Weight			g	g	130
Electric thread					E18
Degree of protection	Integrated				IP20
Terminals					Lift terminals
Terminal capacity	Solid			mm^2	1.5 - 25
Pollution degree					3

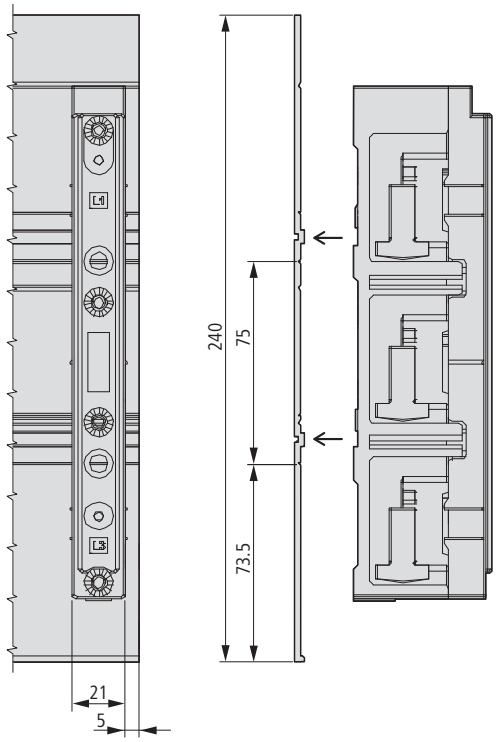
Dimensions

Busbar supports

BBS-3/FL



BBS-3/FL-NA



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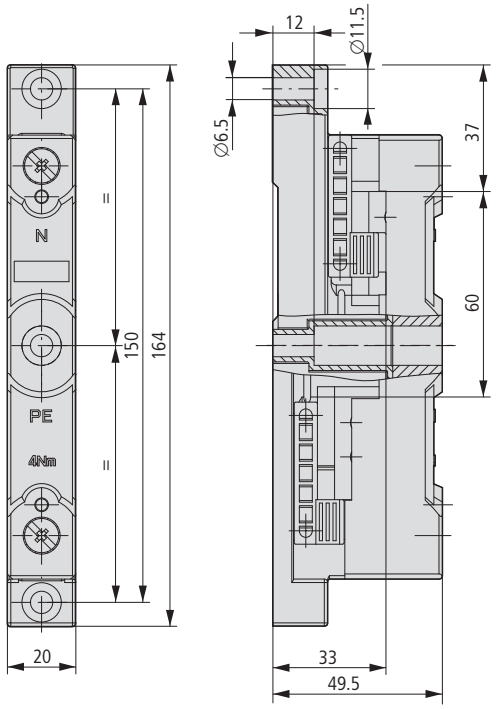
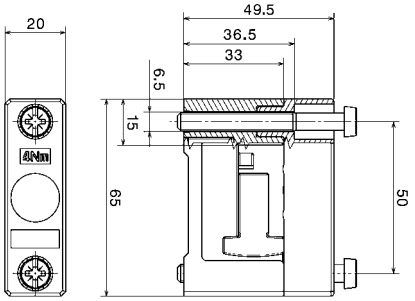


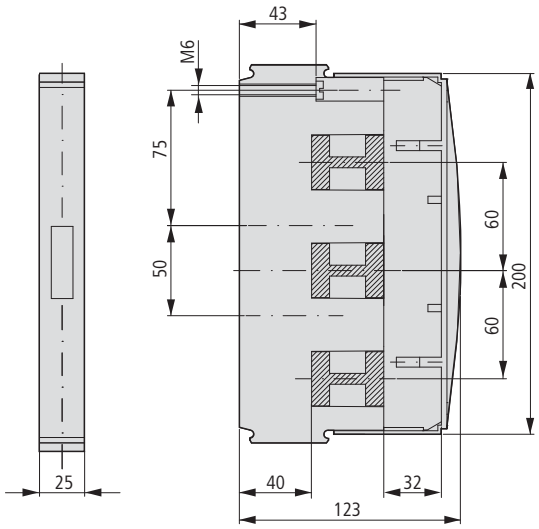
BBS-1/FL



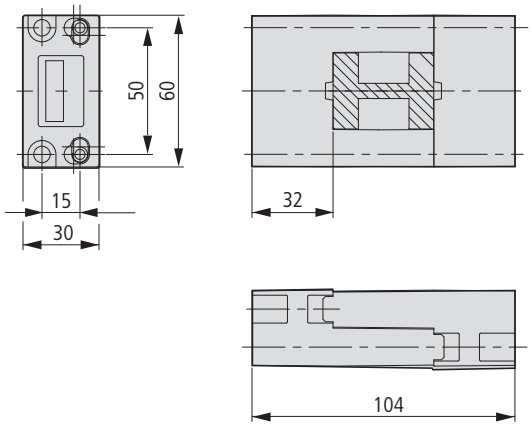
BBS, ES-BBS, BBC

Busbar supports

BBS-3/PR

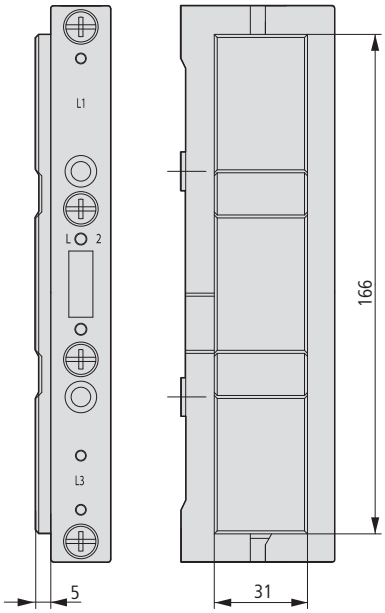


BBS-1/PR

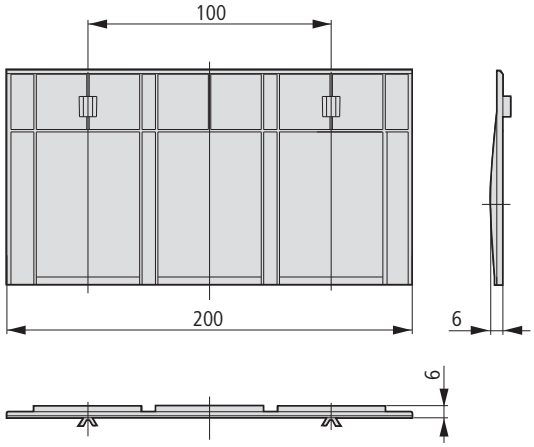


Terminal shroud

ES-BBS-3/FL

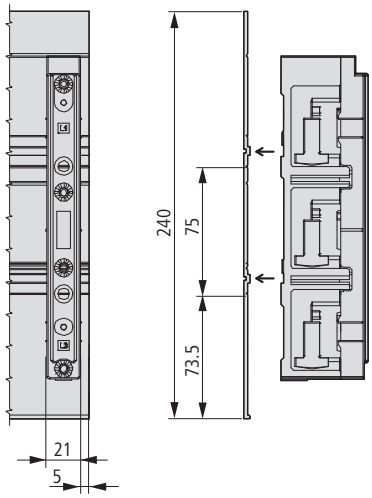


ES-BBS-3/PR



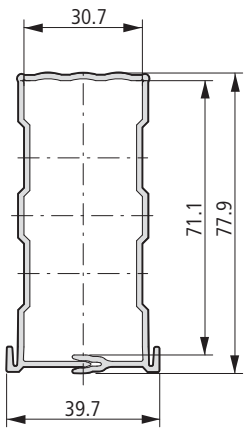
UL bottom plate

BBC-BT-NA



Busbar shroud

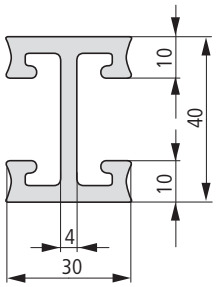
BBC-CU-BAR/PR



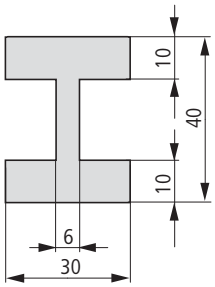
CU-BAR, AM, BBC-CS

Profiled busbars

CU-BAR-500/T

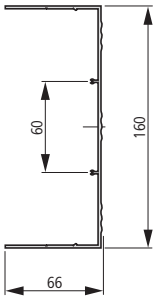


CU-BAR-720/T

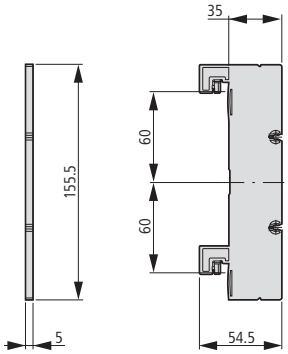


Spare covers

BBC-RCOV1

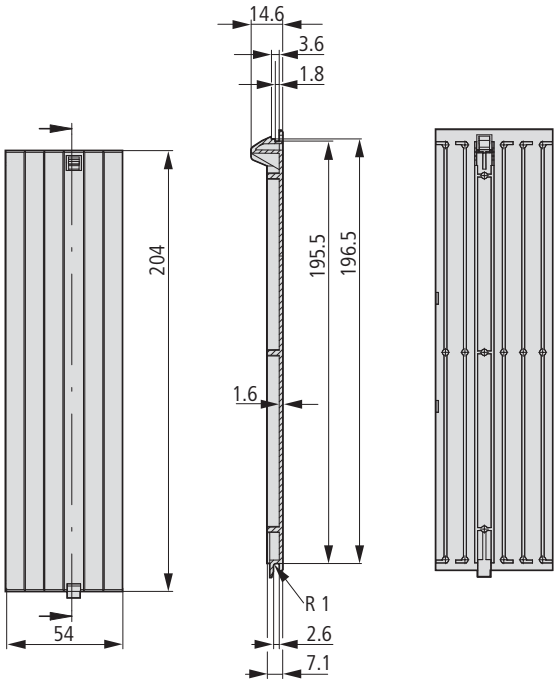


BBC-MRCOV1



Spare covers

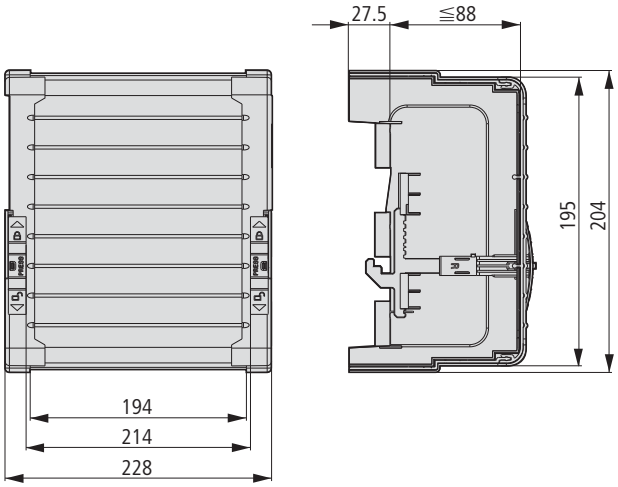
AM-195/54



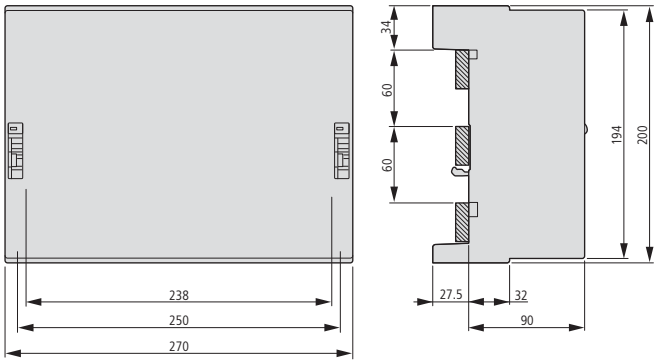
System covers

BBC-CS1

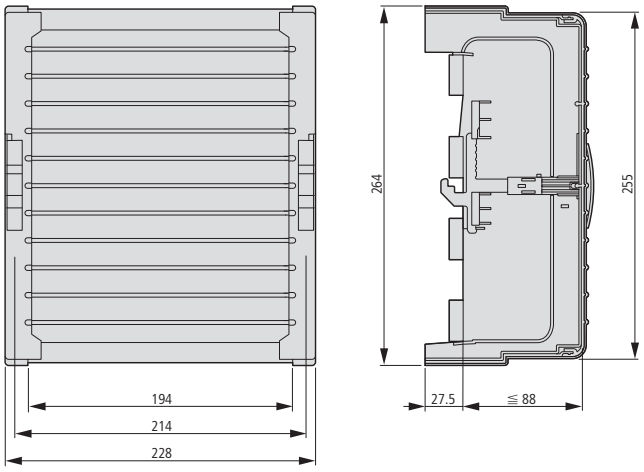
BBC-CS2-...



BBC-CS3



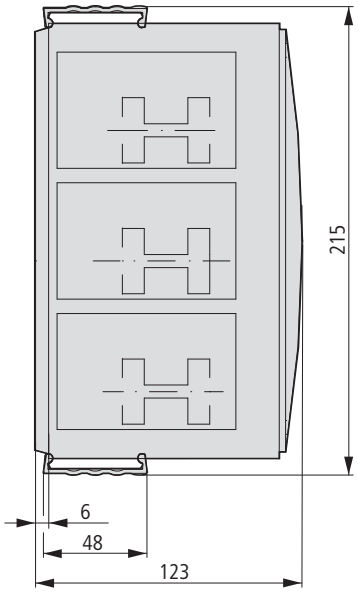
BBC-CS4



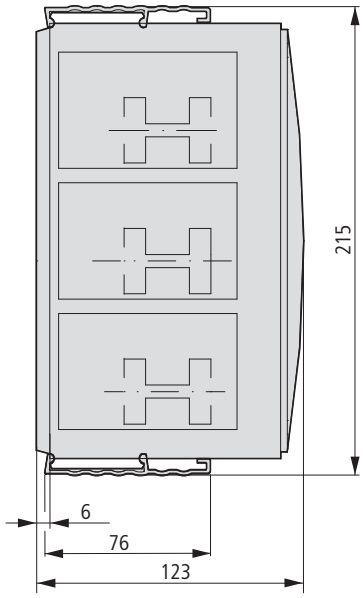
BBC-CS, BBA-TP

System covers

BBC-CS48/PR

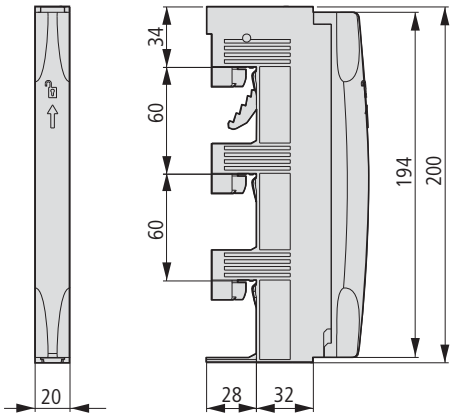


BBC-CS76/PR

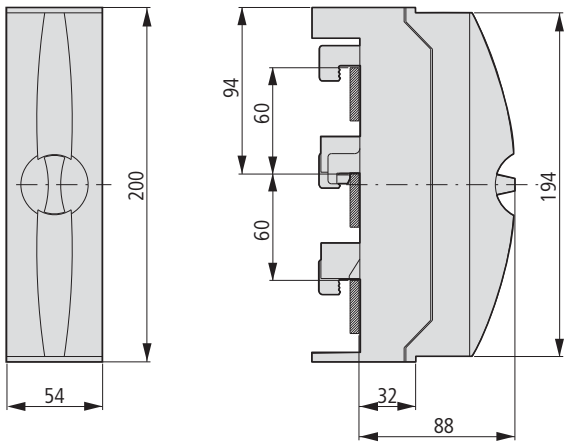


Terminal plates

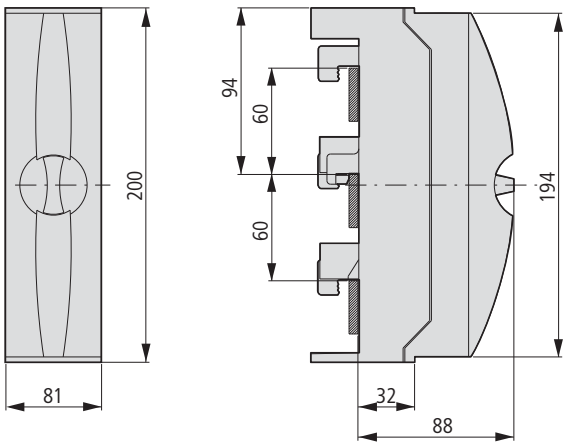
BBA-TP3/16



BBA-TP3/50



BBA-TP3/120

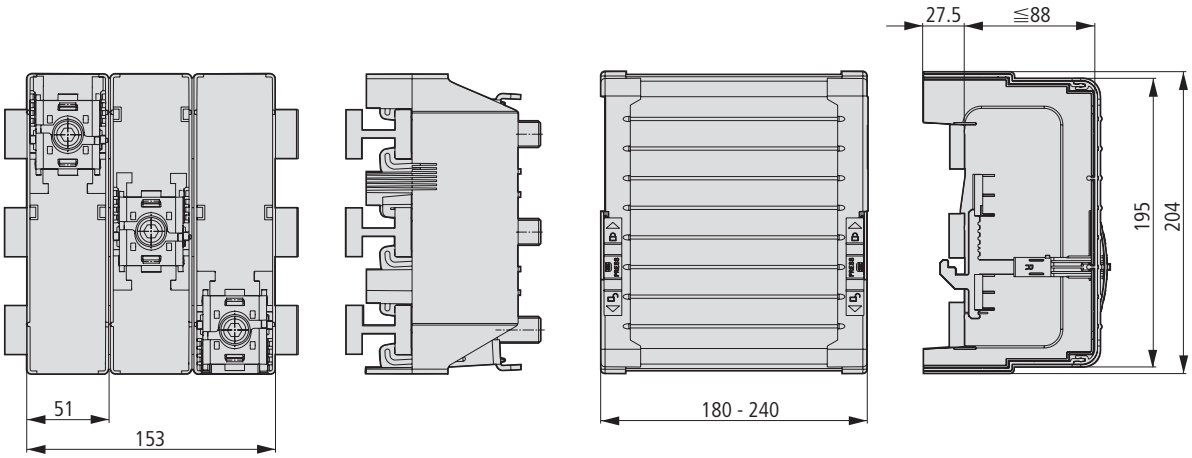


BBA-TP

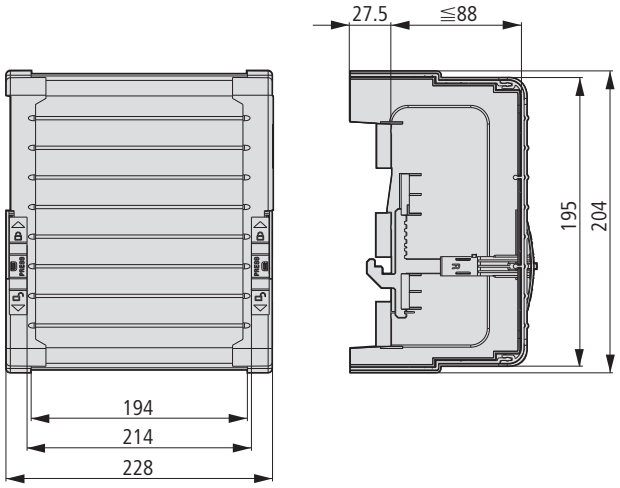
Terminal kits

BBA-TP3/300

BBA-TP3/CU-BAND

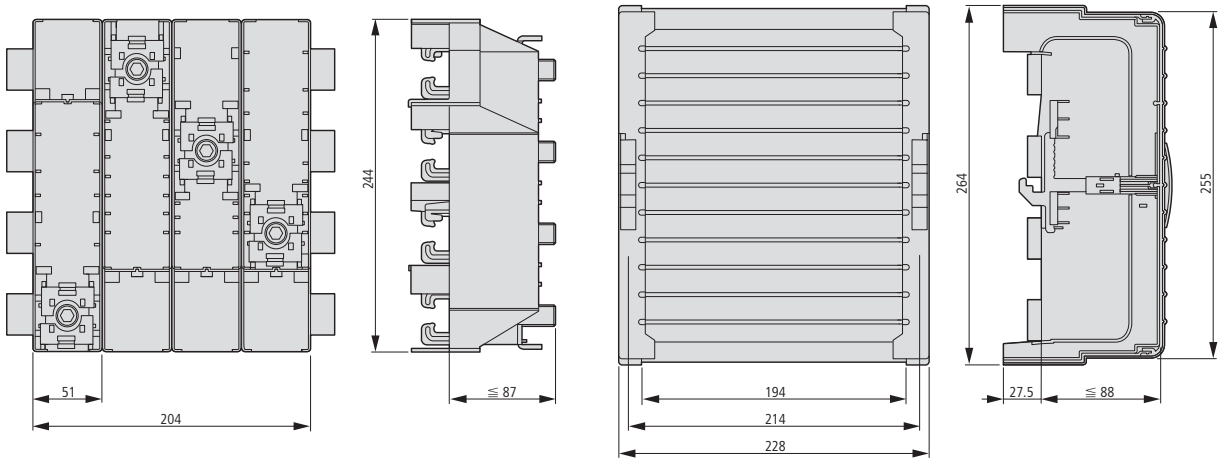


CU-BAND BBA-TP3/1000



BBA-TP4/300

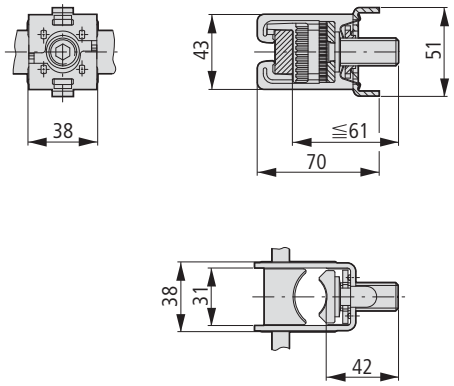
BBA-TP4/CU-BAND



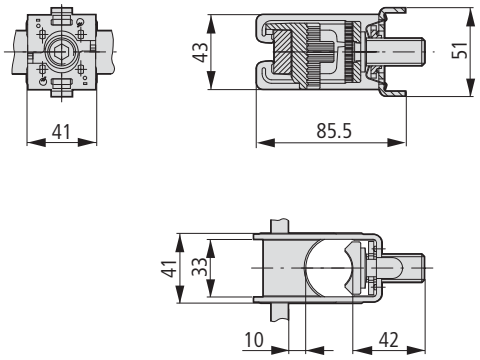
AKS, AKP

Expansion terminals

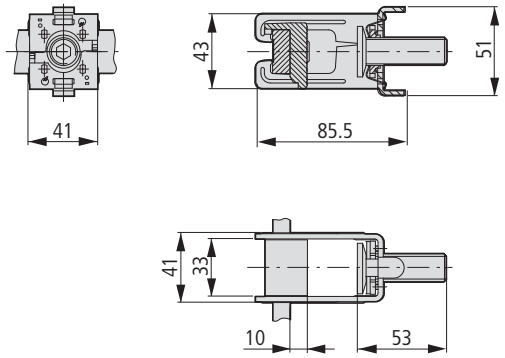
AKS185



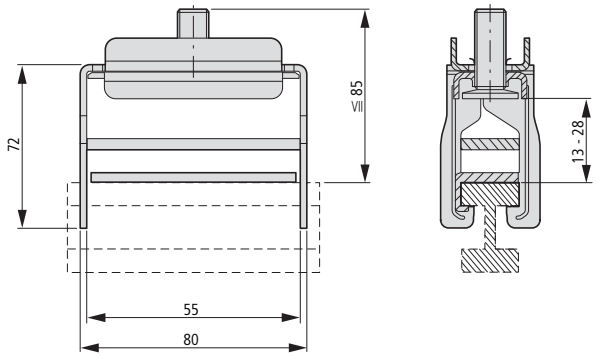
AKS300



AKS CU-BAND

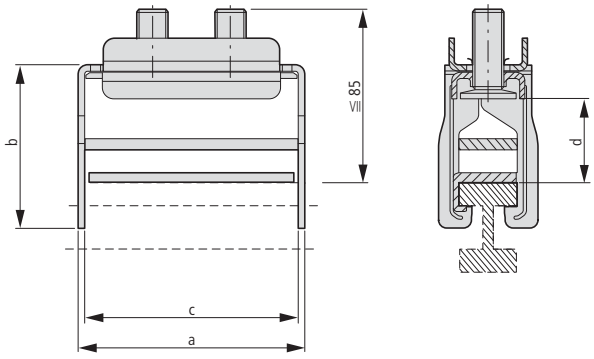


AKS1000



AKS1200

AKS2000

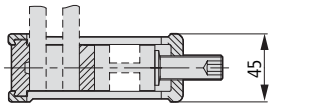


Part no.	a	b	c	d
AKS1200	85	80	68	13-38
AKS2000	122	80	105	13-38

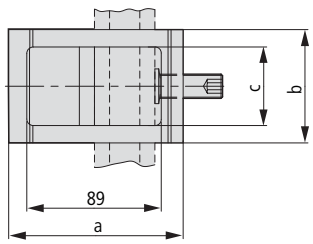
Profile terminals

AKP800

AKP1000



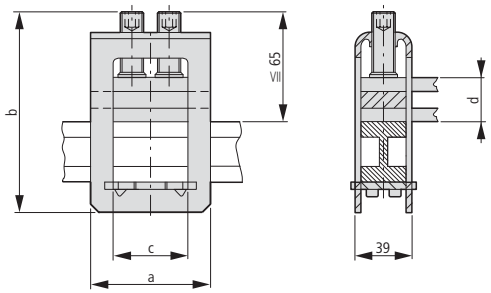
Part no.	a	b	c
AKP800	118	72	41
AKP1000	103	94	64



AKP, AKU

Profile terminals

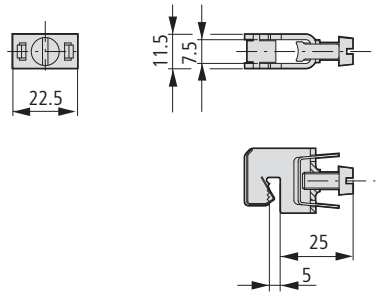
AKP750
AKP900
AKP1200
AKP1600
AKP2000
AKP3600



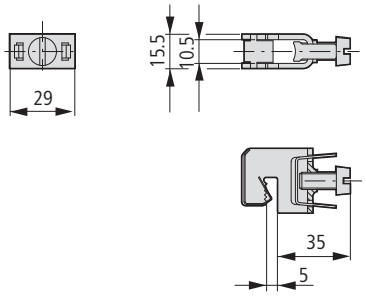
Part no.	a	b	c	d
AKP750	82	103	51	5-28
AKP900	94	103	64	5-28
AKP1200	94	118	64	20-42
AKP1600	112	118	81	20-42
AKP2000	132	118	101	20-42
AKP3600	132	154	101	23-45

Universal conductor connection terminals

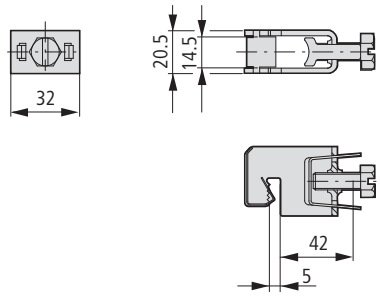
AKU16/5



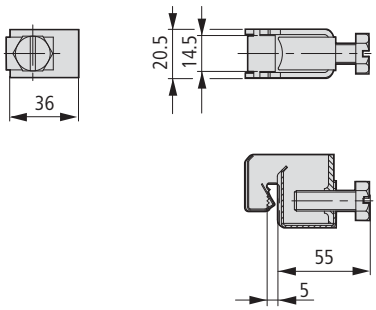
AKU35/5



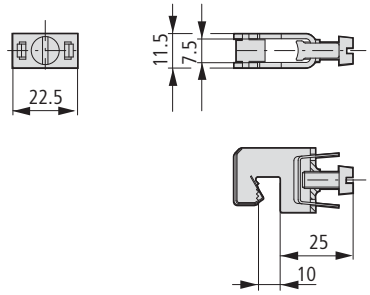
AKU70/5



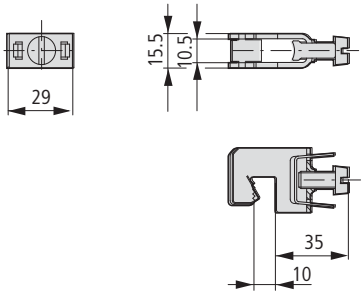
AKU120/5



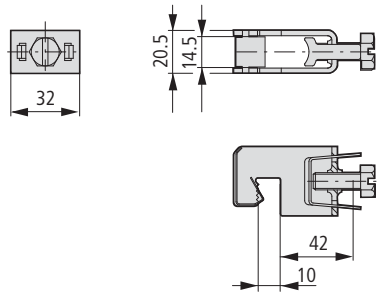
AKU16/10



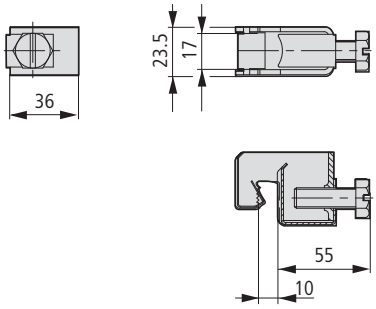
AKU35/10



AKU70/10



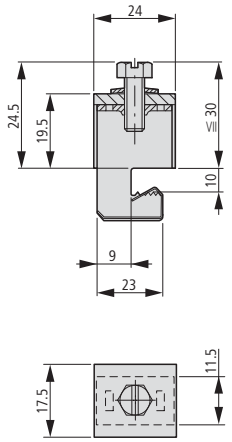
AKU120/10



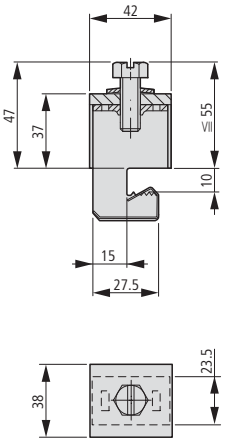
BBT-CU

Universal conductor connection terminals

AKUM8/10

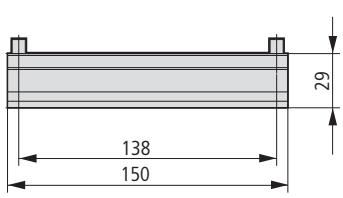


AKUM10/10

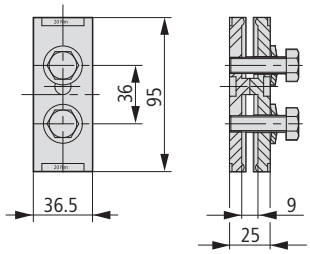


End-to-end busbar connectors

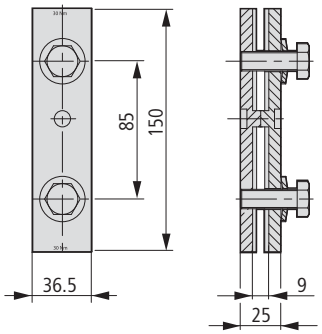
BBT-CU12-20X5/10-150



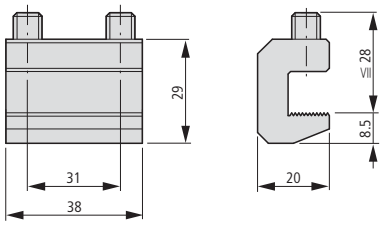
BBT-CU20-30X5/10-95



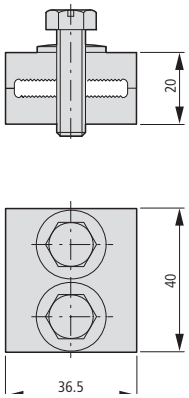
BBT-CU20-30X5/10-150



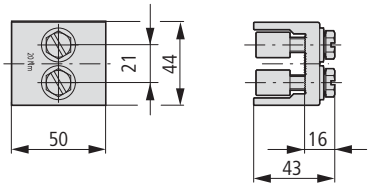
BBT-CU12-20X5/10-38



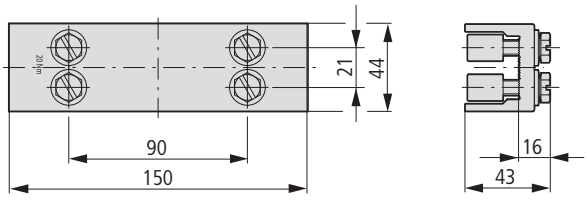
BBT-CU20-30X5/10-40



BBT-CU-BAR500/720-50

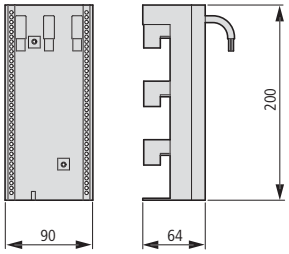


BBT-CU-BAR500/720-150

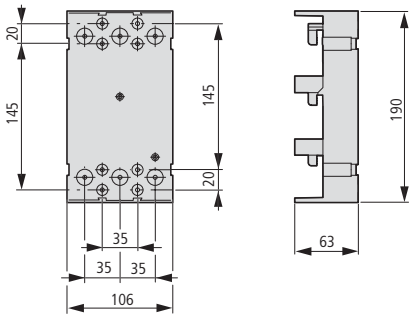


Component adapters for circuit-breakers and switch-disconnectors

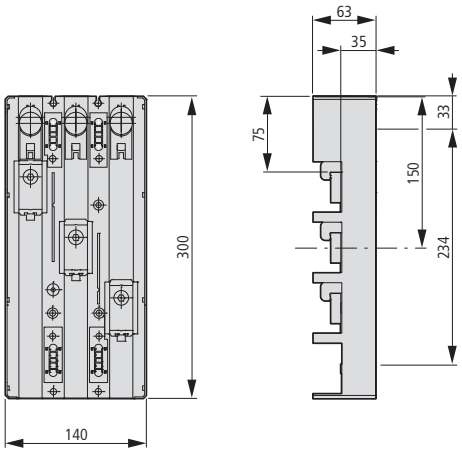
NZM1-XAD160



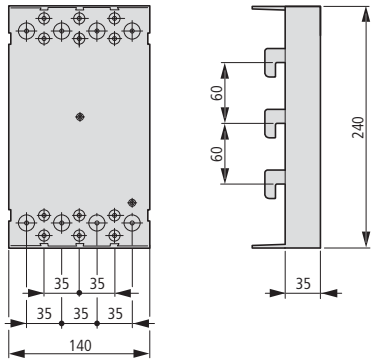
NZM2-XAD250



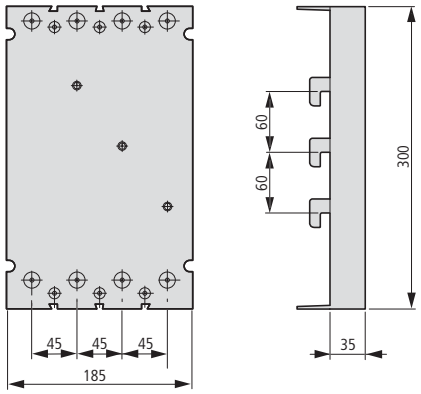
NZM3-XAD630



NZM2-4-XAD250

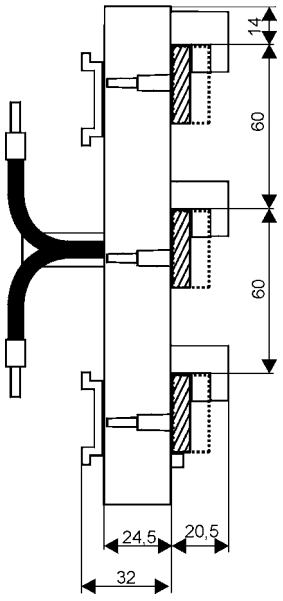


NZM3-4-XAD630



Double adapters

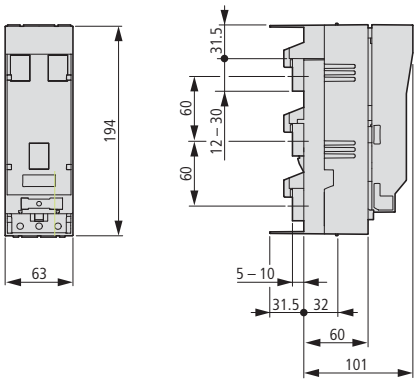
Z-SS-60-ADD/6...



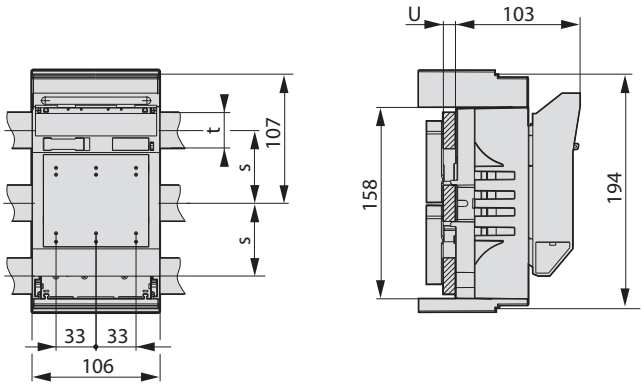
LTS, GST

LV h.b.c. fuse switch-disconnectors

LTS-100/C00/3-R

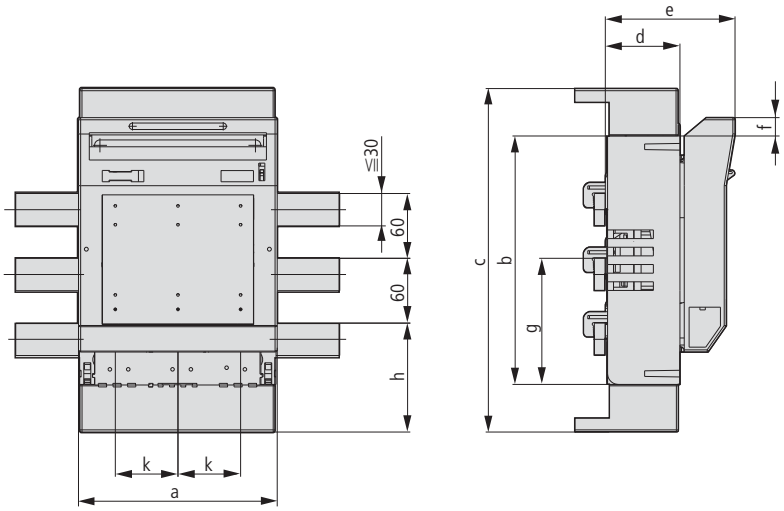


GST00-160-40-60-AOU



Part no.	s	t	u
GST0-160-40-60-AOU	40	12	5-10
	50	20	5-15
	60	20-30	5-10

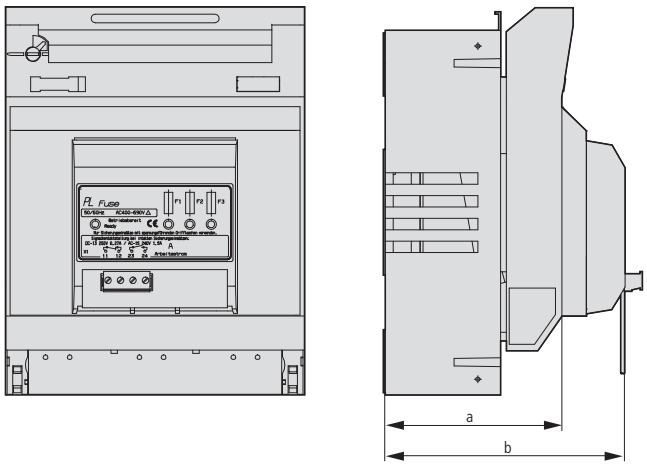
GST1-A...
GST2-A...
GST3-A...



Part no.	a	b	c	d	e	f	g	h	k
GST1-A...	184	230	322	70	121	16.5	115	104	58
GST2-A...	210	256	408	83	135	16.5	128	145	66
GST3-A...	254	270	434	98	149	9	135	156	82

Cover with fuse monitoring for fuse switch-disconnectors

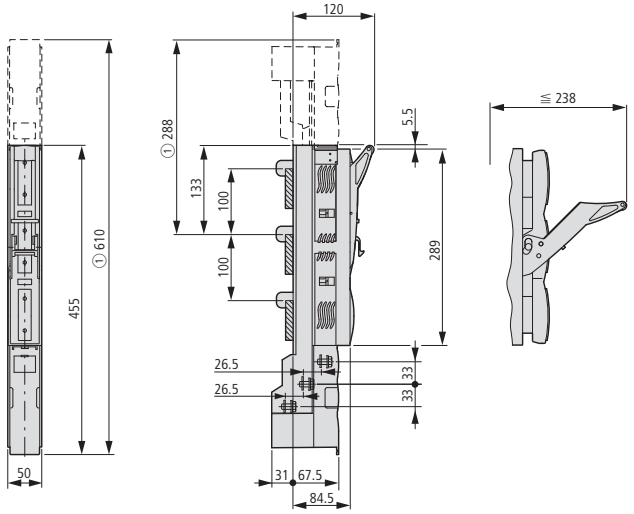
GST...-DSI



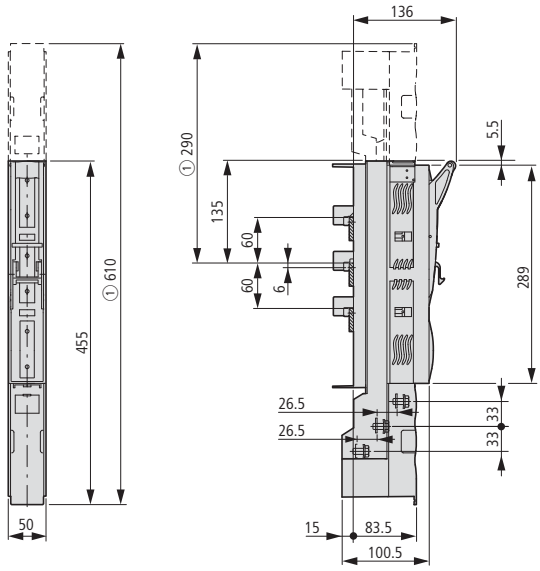
Part no.	Size	a	b
GST00...	NH00	90	123
GST1...	NH1	120	151
GST2...	NH2	135	166
GST3...	NH3	145	176

LV h.b.c. fuse switches

NH-SLS-00/160
NH-SLS-00/160-SI

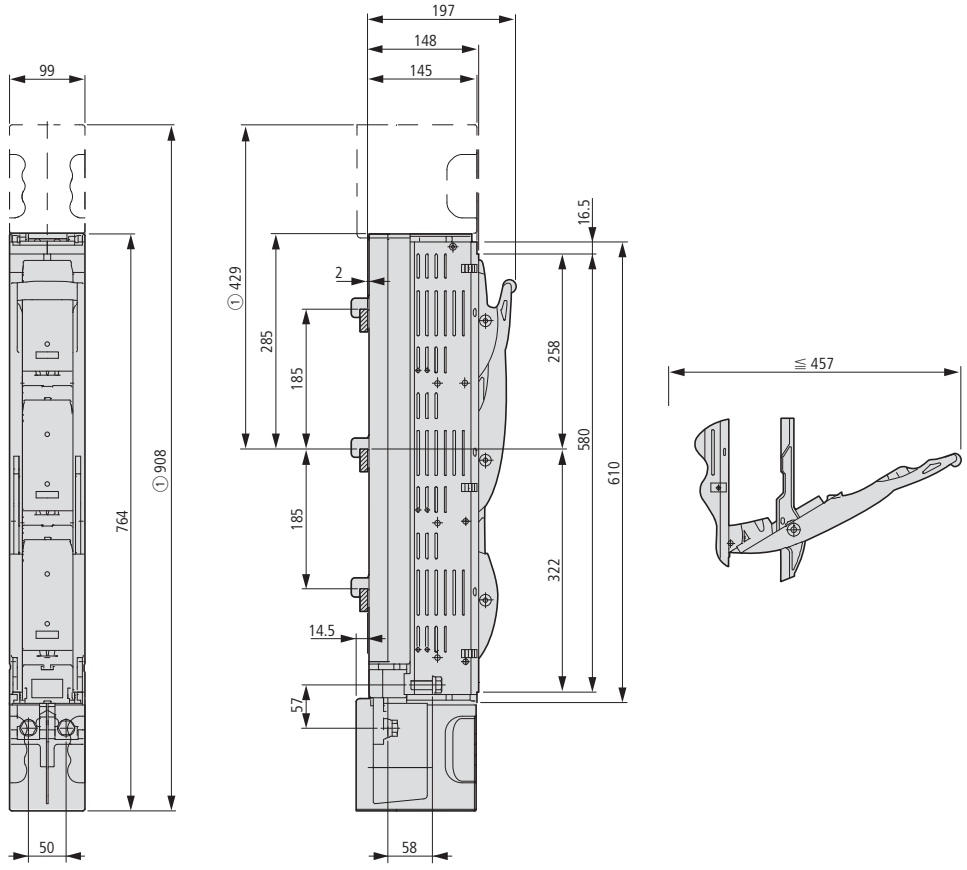


NH-SLS-00/160-60
NH-SLS-00/160-60-SI



NH-SLS-1/250
NH-SLS-1/250-SI
NH-SLS-2/400
NH-SLS-2/400-SI
NH-SLS-3/630
NH-SLS-3/630-SI

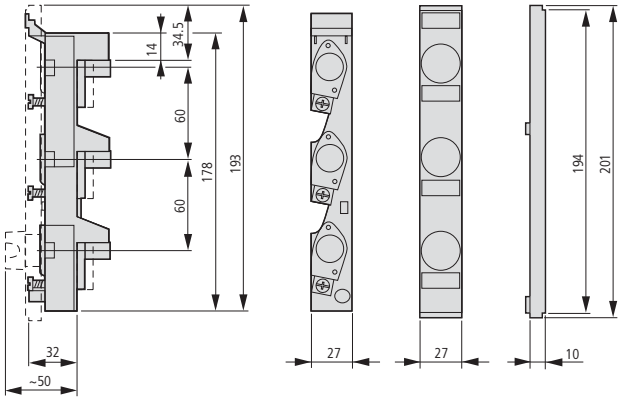
① NH-SLS-...-SI
(with fuse monitoring)



D02, DII, DIII

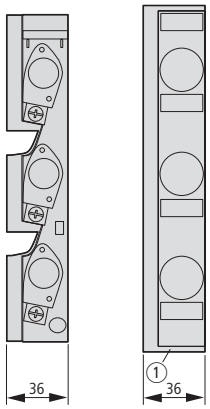
D busbar mounting fuse devices

D02-SO/63/3-R-27

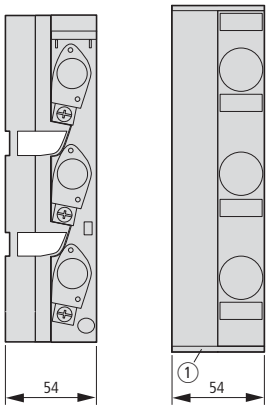


① Front plate support

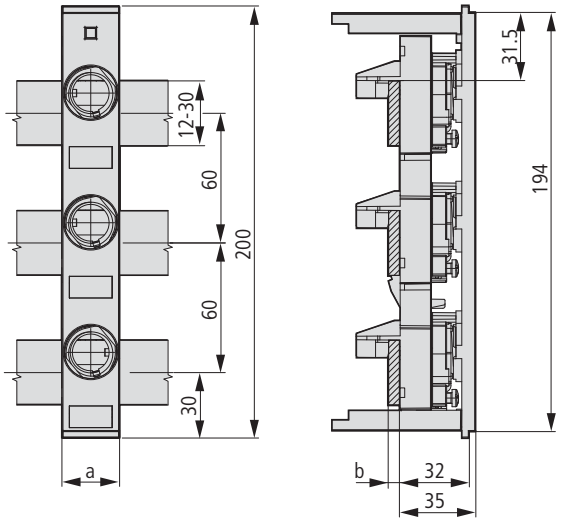
Z-D02/R/3-36



Z-D02/R/3-54

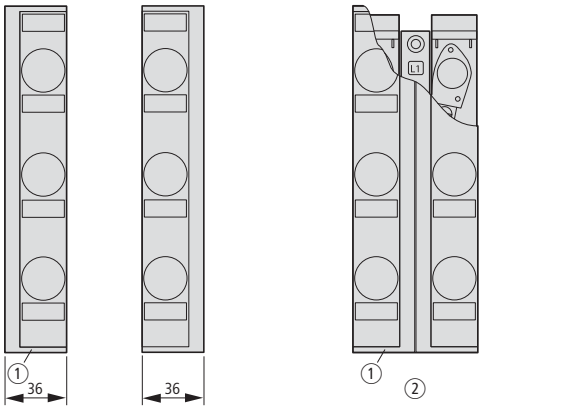


DII-SO/25/3-R(-PS)
DIII-SO/63/3-R(-PS)



Part no.	a	b
DII-SO/25/3-R(-PS)	45	5-10
DIII-SO/63/3-R(-PS)	54	5-10

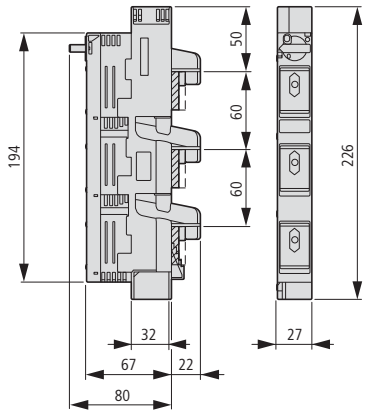
Z-D02-S-AB-SET



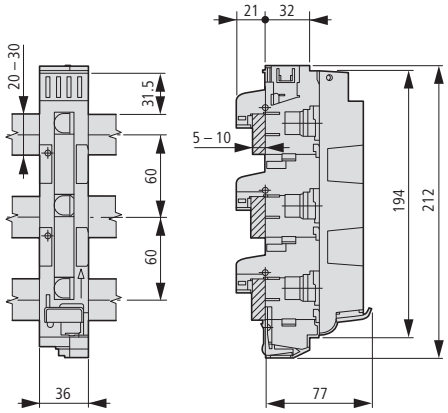
① Front plate support
② Covered busbar support

D fuse switch-disconnector

D02-LTS/63/3-R(-HK)

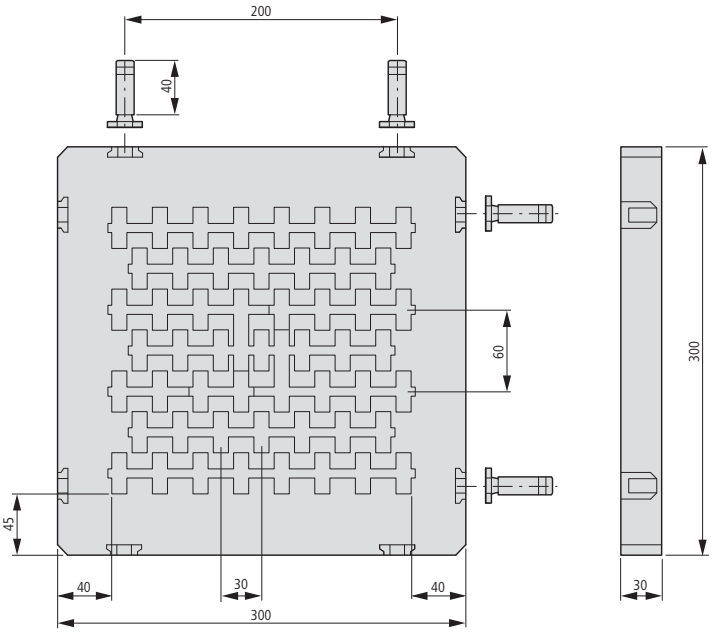


D02-S/63/3-RS

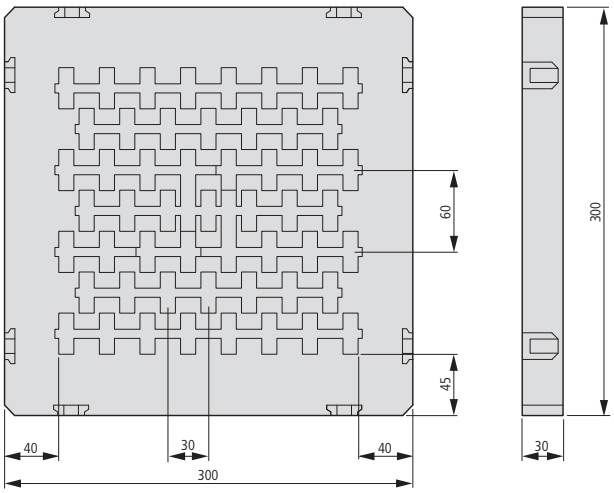


Busbar supports

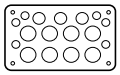
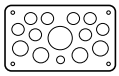
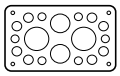
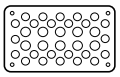
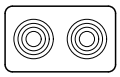
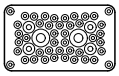
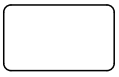
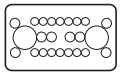
KSX-34P-EXT

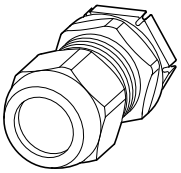


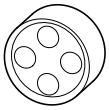
KSX-34P-MID



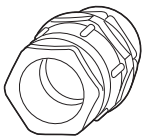
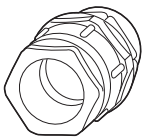
Ordering

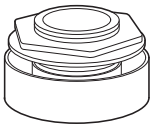
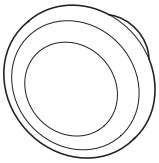
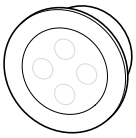
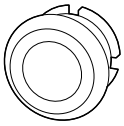
	Material	Features	Cable entry	Part no. Article no.	Price See price list	Std. pack
Flanges						
• With captive, sponge-rubber gasket • RAL 7035						
	Insulating material	Blank plate	-	**F3A-0** 074182		10 off
	Insulating material	With metric cable entry knockouts	6 x M25/16 8 x M32/20, 4 x M16	**F3A-4** 081301		10 off
	Insulating material	With metric cable entry knockouts	2 x M20 8 x M25/16 4 x M32/20 1 x M50/32	**F3A-8** 091468		10 off
	Insulating material	With metric cable entry knockouts	12 x M20, 2 x M16 2 x M40/25 2 x M50/32	**F3A-12** 076555		10 off
	Insulating material	With metric cable entry knockouts	24 x M16 13 x M20	**F3A-34** 078928		10 off
	Insulating material	With cable grommets	2 cables up to 70 mm ∅	**F3A-KTD** 083674		5 off
	Insulating material	Sponge-rubber flange	40 cables, 10 – 13 mm ∅ 4 cables, 17 - 21 mm ∅ 2 cables, 27 - 30 mm ∅	**F3A-D** 010145		10 off
	Sheet steel	Blank plate 2 mm, powder-spray painted RAL 7035	-	**F3A-XP** 113426		1 off
	Insulating material	Diaphragm flange for push-fitting cables, base RAL 9016, white For cutouts 195 x 64 mm	14 x 11 mm ∅ 8 x 15 mm ∅ 2 x 28 mm ∅	**ZSD-2K/FLA** 272166		1 off

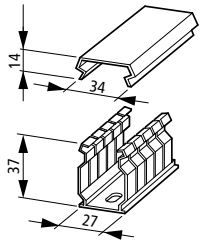
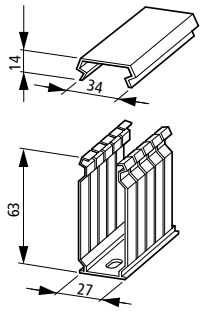
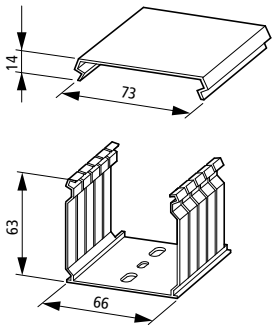
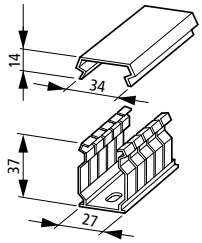
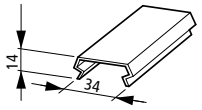
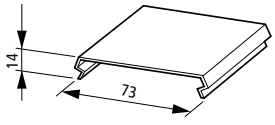
	Cable entry	Drilling dimensions mm	External diameter of cable mm	For use with NYM/NYY cables, 4-core mm²	Part no. Article no.	Price See price list	Std. pack
Metric cable glands to EN 50262							
• With lock nut and built-in strain relief • IP68 up to 5 bar, polyamide, halogen-free • Flammability classification V2 according to UL94 • Color RAL 7035							
Cable screw gland							
	M12	12.5	3 - 7	H03VV-F3 x 0.75 mm², NYM 1 x 2.5 mm²	**V-M12** 215078		20 off
	M16	16.5	4.5 - 10	H05VV-F3 x 1.5 mm², NYM 1 x 16/3 x 1.5 mm²	**V-M16** 215077		20 off
	M20	20.5	6 - 13	H05VV-F4 x 2.5/3 x 4 mm², NYM 5 x 1.5/5 x 2.5 mm²	**V-M20** 206910		20 off
	M25	25.5	9 - 17	H05VV-F5 x 2.5/5 x 4 mm², NYM 5 x 2.5/5 x 6 mm²	**V-M25** 206911		20 off
	M32	32.5	13 - 21	NYM 5 x 10 mm²	**V-M32** 206912		10 off
	M40	40.5	16 - 28	NYM 5 x 16 mm²	**V-M40** 209668		10 off
	M50	50.5	21 - 35	NYM 4 x 35/5 x 25 mm²	**V-M50** 206913		5 off
	M63	63.5	34 - 48	NYM 4 x 35 mm²	**V-M63** 214835		3 off

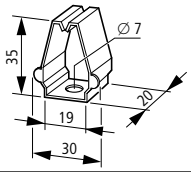
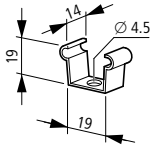
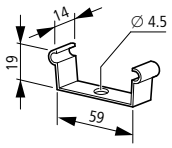
	Cable entry	External diameter of cable mm	For use with NYM/NYY cables, 4-core mm²	**Part no.** Article no.	**Price** See price list	Std. pack
Multiple gaskets for cable glands V-M... , metric						
	M25	4 x 5 - 6	H03VV-F2 x 0.75/3 x 0.75 mm²	**MFD25** 215451		50 off
	M32	4 x 3.5 - 7	H03VV-F4 x 0.75 mm²	**MFD32** 215452		25 off
Stoppers for unused openings in multiple gaskets MFD...						
	M25	6	–	**MFV25-6** 215453		50 off
	M32	7	–	**MFV32-7** 215454		50 off

	Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**
PG cable glands • Conduit union and lock nut with grouding screw • Suitable for standard commercial conduit • Suitable for all enclosures CI…-NA → Page 20/9				
½ "	**STB1/2ZOLL** 045878		1 off	Product Standards: UL 467; UL 514B; CSA-C22.2 No. 18 UL File No.: E23018, E3060 UL CCN: DWTT, KDER CSA File No.: LR 2884 CSA Class No.: 4412-03, 4414-04 NA Certification: UL Listed, CSA certified Conditions of Acceptability: Only used in combination with CI-…-NA enclosures Specially designed for NA: Yes Suitable for: Conduit, Tubing, and Cable Fittings, Grounding and Bonding Equipment Degree of Protection: Refer to main component information See also: Refer to basic component information
¾ "	**STB3/4ZOLL** 060116			
1 "	**STB1ZOLL** 052997			
1 ¼ "	**STB1-1/4ZOLL** 043505			
1 ½ "	**STB1-1/2ZOLL** 041132			
2 "	**STB2ZOLL** 002203			

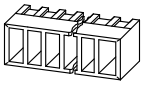
	Cable entry	Drilling dimensions mm	External diameter of cable mm	For use with NYM/NYY cables, 4-core mm²	**Part no.** Article no.	**Price** See price list	Std. pack
Ventilation cable glands • Color RAL 7035							
Ventilation cable gland IP69							
	M20	20.5	6 - 13	H05VV-F 4 x 2.5/3 x 4 mm², NYM 5 x 1.5/5 x 2.5 mm2	**V-M20-VENT** 120814		1 off
Ventilation cable glands IP56 • Permeable to air, impermeable to dust • For the prevention of condensation For use in the enclosure bottom or sides, polyamide, halogen-free							
	M20	20.5	–	–	**STB-M20F** 224557		20 off
	M25	25.5	–	–	**STB-M25F** 224558		20 off

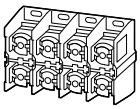
	Cable entry	Drilling dimensions mm	External diameter of cable mm	For use with NYM/NYY cables, 4-core mm²	**Part no.** Article no.	**Price** See price list	Std. pack
Pressure compensating plug							
Pressure compensating plug, IP66, metric Color RAL 7035							
	M40 x 1.5	–	–	–	**DAV-M40** 107225		2 off
Pressure compensating plug, IP66, PG Color RAL 7032							
	PG29	–	–	–	**DA412** 079219		2 off
Cable grommets, metric							
• IP66, with integrated push-through diaphragm • PE and thermoplastic elastomer, halogen-free • Color RAL 7035							
	M16	16.5	1 - 9	H03VV-F3 x 0.75 mm², NYM 1 x 16/3 x 1.5 mm²	**KT-M16** 216983		100 off
	M20	20.5	1 - 13	H03VV-F3 x 0.75 mm², NYM 5 x 1.5/5 x 2.5 mm²	**KT-M20** 207602		100 off
	M25	25.5	1 - 18	H03VV-F3 x 0.75 mm², NYM 4 x 10 mm²	**KT-M25** 207603		100 off
	M32	32.5	1 - 25	H03VV-F3 x 0.75 mm², NYM 4 x 16/5 x 10 mm²	**KT-M32** 207604		100 off
PG cable grommets							
• For wall thickness 2 - 8 mm • Soft PVC, cadmium- and lead-free • Color similar to RAL 7035							
	PG13.5	21.5	7 - 16	1.5 - 4	**KT13.5** 019658		100 off
	PG16	23.5	7 - 17	1.5 - 10	**KT16** 022031		100 off
	PG21	29.5	12.5 - 20	1.5 - 16	**KT21** 026777		100 off
	PG29	38	12.5 - 31	1.5 - 35	**KT29** 029150		50 off
	PG36	48	18 - 40	10 - 70	**KT36** 033896		20 off
	PG42	55	18 - 47	10 - 95	**KT42** 038642		10 off
Stepped cable grommets							
• For wall thickness 2 - 3 mm, • PVC • Color RAL 7035							
	–	58	14 - 54	–	**KT3** 031523		2 off
	–	75	14 - 68	–	**KT4** 036269		3 off
Pressure compensating grommets							
• Ventilation grommet with filter disc • Fitting below or on side of enclosure • PE and PVC • Color RAL 7035 • Metric and P6							
	M25	25.5	–	–	**KT-M25F** 224556		100 off
	PG16	23.5	–	–	**KT16F** 024404		100 off

	Length	Capacity: max. no. of cables (approx.)	Type and cross-section		**Part no.** Article no.	**Price** See price list	Std. pack
			H 0… V-K	H 0… V-K			
	mm		mm²	AWG			
Cable ducts							
For screw-fitting							
	1500	60 40 25 15	0.75 1.5 2.5 4	- 16 14 12	**KL25/35** 012531		60 off
	1500	100 70 45 30 25	0.75 1.5 2.5 4 6	- 16 14 12 10	**KL25/60** 017277		40 off
	1500	260 180 120 80 65	0.75 1.5 2.5 4 6	- 16 14 12 10	**KL60/60** 029142		20 off
Self-adhesive Max. ambient temperature +55 °C							
	650	60 40 25 15	0.75 1.5 2.5 4	- 16 14 12	**KL25/35K** 014904		50 off
Cable duct cover Supplied as spares							
	1500	–	–	–	**KD25** 019649		200 off
	1500	–	–	–	**KD60** 024395		100 off

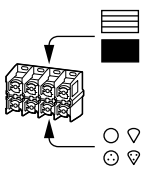
	Length	Capacity: max. no. of cables (approx.)	Type and cross-section		Part no. Article no.	Price See price list	Std. pack
			H 0… V-K	H 0… V-K			
	mm		mm²	AWG			
Cable support brackets for cable ducts							
• Can be used in cable ducts KL25/35 (K) • Screw-fitting							
	–	15	4	–	**KH25/35** 078974		20 off
Clamping brackets for cable ducts							
KL25/...: fixing interval: ≦ 500 mm							
	–	–	–	–	**KK25** 081347		100 off
K60/60: fixing interval: ≦ 300 mm							
	–	–	–	–	**KK60** 083720		100 off

	Features	Length	Width	Bundle area	Tensile strength	Part no. Article no.	Price See price list	Std. pack
		mm	mm	mm	N			
ITB Industrial cable binders								
• For bundling and fastening cables, cable looms, hoses, pipes etc. • Continuous ribbing up to tip • Temperature-resistant from -40 to +85 °C • Material PO 6.6, color natural, flame resistant to UL 94 V2 • Resistant to oils, petrol/gasoline, salt water, solvent, mold								
	1000 off	98	2.5	21	8	**ITB1** 083550		1 off
	1000 off	140	3.6	35	13	**ITB2** 085923		1 off
	With 4.8 mm fixing eyelet 100 off	205	4.2	60	220	**ITB3** 088296		1 off

	For use with	Part no. Article no.	Price See price list	Std. pack
Conductor supports for copper strip, insulated				
Section strip				
	Latch fastener	**BZ248** 076516		10 off
Latch fastener for section strip				
	3 x 9 x 0.8 + BZ248 6 x 9 x 0.8 + BZ248	**BZ249** 078889		10 off
	4 x 16 x 0.8 + BZ248 6 x 16 x 0.8 + BZ248 10 x 16 x 0.8 + BZ248	**BZ251** 081262		10 off
	11 x 21 x 1 + BZ248	**BZ252** 083635		10 off

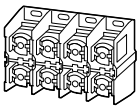
	Rated operational current I_e A	Poles	Terminal capacities[1] Cu ⊙▽○▽ Al ▽ Al ○▽		Terminal capacities[1] ▤ Copper strip mm	■ Copper bar mm	**Part no.** Article no.	**Price** See price list	Std. pack
Terminals 160 - 1000 A									
Includes labels for terminal marking U, V, W - X, Y, Z - L 1, L 2, L3 - T 1, T 2, T 3 - PE, N, PEN, ⏚ U_i = 1000 V AC Assignment of rated current → Terminal capacities to IEC/EN 60439, VDE 0660 Part 500 or EN 50021 Outer terminal for round or sectoral conductor, other side for copper strip. Conversion kits for converting flat strip terminal to cable terminal → Page 16/69, terminal shroud → Page 16/69									
	160	1	1 x 16 - 95	1 x 35 - 70	3 x 9 x 0.8 - 6 x 9 x 0.8	18 x 4	**K95/1N** 010773		1 off
		3					**K95/3** 025017		
		4					**K95/4** 027390		
		5					**K95/5** 029763		
		1			–	–	**K95/1N/BR** 012336		
	250	1	1 x 35 - 150 2 x 16 - 70	1 x 50 - 120 2 x 35 - 50	1 x 4 x 16 x 0.8 - 2 x 6 x 16 x 0.8	18 x 4	**K150/1** 089085		1 off
		3					**K150/3** 032136		
		4					**K150/4** 034509		
		5					**K150/5** 036882		
		1			–	–	**K150/1/BR** 014709		
	400	1	1 x 50 - 240 2 x 25 - 120	1 x 95 - 185 2 x 50 - 95	6 x 16 x 0.8 - 10 x 16 x 0.8	25 x 15	**K240/1** 091458		1 off
		3					**K240/3** 039255		
		4					**K240/4** 041628		
		5					**K240/5** 044001		
		1			–	–	**K240/1/BR** 017082		
	630	1	1 x 150 - 300 2 x 50 - 240	1 x 150 - 240 2 x 95 - 185	10 x 16 x 0.8 - 11 x 21 x 1	40 x 15	**K2X240/1** 093831		1 off
		3					**K2X240/3** 046374		
		4					**K2X240/4** 048747		
		5					**K2X240/5** 051120		
		1			–	18 x 4	**K2X240/1/BR** 019455		

Notes

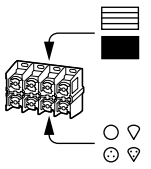


[1] ▤ Copper strip
■ Copper bar
○ Round conductor, solid
⊙ Round conductor, stranded
▽ Sectoral conductor, solid
▽ Sectoral conductor, stranded

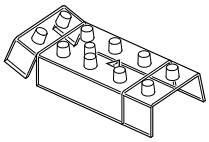
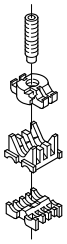
Part nos. K95/1N/BR, K150/1/BR, K240/1/BR and K2X240/1/BR
= suitable for connection of round and sectoral conductors at both sides

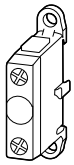
	Rated operational current I_e A	Poles	Terminal capacities[1] Cu ○▽○▽ Al ▽ Al ○▽	Terminal capacities[1] Copper strip mm	Copper bar mm	**Part no.** Article no.	**Price** See price list	Std. pack
Terminals 160 - 1000 A								
Includes labels for terminal marking U, V, W - X, Y, Z - L 1, L 2, L3 - T 1, T 2, T 3 - PE, N, PEN, ⏚ U_i = 1000 V AC Assignment of rated current → Terminal capacities to IEC/EN 60439, VDE 0660 Part 500 or EN 50021 Outer terminal for round or sectoral conductor, other side for copper strip. Conversion kits for converting flat strip terminal to cable terminal → Page 16/69, terminal shroud → Page 16/69								
	800	1	2 x 120 - 240 3 x 50 - 185	2 x 150 - 185 3 x 95 - 150	2 x (11 x 21 x 1)	50 x 20	**K3X185/1** 062985	1 off
		3					**K3X185/3** 065358	
		4					**K3X185/4** 067731	
		5					**K3X185/5** 070104	
	1000	1	2 x 150 - 300 3 x 50 - 240	2 x 150 - 240 3 x 150 - 185	2 x 150 - 240 3 x 150 - 185	60 x 15	**K3X240/1** 060612	1 off
		3					**K3X240/3** 058239	
		4					**K3X240/4** 055866	
		5					**K3X240/5** 053493	
		1	2 x 150 - 300 4 x 50 - 185	2 x 240 4 x 120 - 150	2 x 240 4 x 120 - 150		**K4X185/1** 079596	
		3					**K4X185/3** 077223	
		4					**K4X185/4** 074850	
		5					**K4X185/5** 072477	

Notes

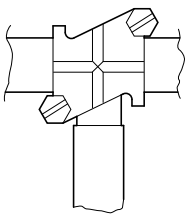


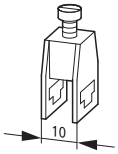
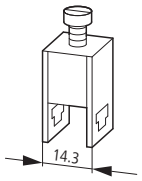
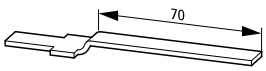
[1] ▭ Copper strip
■ Copper bar
○ Round conductor, solid
⍥ Round conductor, stranded
▽ Sectoral conductor, solid
▽ Sectoral conductor, stranded

	For use with	Rated uninterrupted current I_u A	**Part no.** Article no.	**Price** See price list	Std. pack
Terminal shrouds, 5 pole					
Including warning label To DIN (lightning symbol) Break off end sections for 3- and 4 pole terminal shrouds					
	K95/3, K95/4, K95/5	–	**H-K95/5** 036888		4 off
	K150/3, K150/4, K150/5	–	**H-K150/5** 039261		1 off
	K240/3, K240/4, K240/5	–	**H-K240/5** 041634		
	K2X240/3, K2X240/4, K2X240/5	–	**H-K2X240/5** 044007		
	K3X185/3, K3X185/4, K3X185/5	–	**H-K3X185/5** 048753		
	K3X240/3, K3X240/4, K3X240/5	–	**H-K3X240/5** 046380		
	K4X185/3, K4X185/4, K4X185/5	–	**H-K4X185/5** 051126		
Conversion kits for terminals 160 – 1000 A					
For one conductor To convert from flat strip terminal to cable terminal					
	K95/…	160	**D-K95** 020277		1 off
	K150/…	250	**D-K150** 022650		
	K240/…	400	**D-K240** 025023		
	K2X240/…	630	**D-K2X240** 027396		
	K3X185/…	800	**D-K3X185** 032142		
	K3X240/…	1000	**D-K3X240** 029769		
	K4X185/…	1000	**D-K4X185** 034515		
For one control circuit cable M4 screw with pressure plate Terminal capacity 0.5 - 2.5 mm²					
	K95/... + K150/...	–	**HK-K95-K150** 001916		1 off
	K240/…	–	**HK-K240** 098585		
	K2X240/…	–	**HK-K2X240** 010785		
	K3X185/…	–	**HK-K3X185** 015531		
	K3X240/…	–	**HK-K3X240** 013158		
	K3X240/... + K4X185/...	–	**HK-K3X240-K4X185** 001917		

	Circuit	Rated uninterrupted current I_u A	Terminal capacities[1] Terminal capacities for round conductors mm²	Terminal capacities for flat conductors mm	**Part no.** Article no.	**Price** See price list	Std. pack
Insulated individual terminals 32 - 100 A							
• With adhesive labels • Can be screwed onto mounting plates and stacking mandrels of enclosures CI and CI-K • For snap-fitting to mounting rails to IEC/EN 60715 • Terminal capacities to IEC/EN 60947-1, VDE 0609 Part 1 • Rated insulation voltage U_i = 1000 V AC							
With two connections							
		32	○ 1.5 - 10 ⊙ 1.5 - 6	–	**K10/1** 093827		10 off
		63	○ 4 - 16 ⊙ 16 - 25 ⊙ 6 - 16	–	**K25/1** 096200		10 off
		100	○ 10 - 16 ⊙ 16 - 50 ⊙ 10 - 35	▤ 3 x 9 x 0.8	**K50/1** 098573		10 off

Notes [1] ○ Solid
⊙ Stranded
⊙ Flexible with ferrule
▤ Copper strip

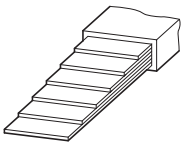
	For use with busbars mm	Terminal capacities for flat conductors mm	Rated operational current, flat conductor I_e A	Terminal capacities, round conductors Type: ○ solid ⊙ flexible with ferrule mm²	**Part no.** Article no.	**Price** See price list	Std. pack
Ultra-flat busbar terminals 100 - 800 A							
	Cu 12 x 5	3 x 9 x 0.8 6 x 9 x 0.8 4 x 16 x 0.8 6 x 16 x 0.8	100 160 200 250	○ 1.5 - 10 ⊙ 1.5 - 6	**K12X5/25** 002324		10 off
	Cu 20 x 5	3 x 9 x 0.8 6 x 9 x 0.8 4 x 16 x 0.8 6 x 16 x 0.8	100 160 200 250	○ 1.5 - 10 ⊙ 1.5 - 6	**K20X5/25** 002327		10 off
	Cu 20 x 5 Cu 20 x 10	3 x 9 x 0.8 6 x 9 x 0.8 4 x 16 x 0.8 6 x 16 x 0.8 10 x 16 x 0.8	100 160 200 250 400	○ 1.5 - 10 ⊙ 1.5 - 6	**K20X10/35** 002325		10 off
	Cu 20 x 5 Cu 20 x 10	3 x 9 x 0.8 6 x 9 x 0.8 4 x 16 x 0.8 6 x 16 x 0.8 10 x 16 x 0.8	100 160 200 250 400	○ 1.5 - 10 ⊙ 1.5 - 6	**K20X15/40** 002285		10 off
	Cu 20 x 10 Cu 20 x 15	3 x 9 x 0.8 6 x 9 x 0.8 4 x 16 x 0.8 6 x 16 x 0.8 10 x 16 x 0.8 11 x 21 x 1	100 160 200 250 400 630	○ 1.5 - 10 ⊙ 1.5 - 6			
	Cu 20 x 15	11 x 21 x 1 2 x (11 x 21 x 1)	630 800	○ 1.5 - 10 ⊙ 1.5 - 6	**K20X15/50** 002326		5 off

	For use with busbars	Terminal capacities for flat conductors	Terminal capacities, round conductors Type: ○ solid ⊙ stranded ⊛ flexible with ferrule	**Part no.** Article no.	**Price** See price list	Std. pack
	mm	mm	mm^2			
Terminal expansions for ultra-flat busbar terminals						
Expansion terminals for tongue						
	Cu 10 x 3	–	○ ⊙ 1.5 - 16 ⊛ 0.75 - 16	**AK16** 079336		50 off
	Cu 10 x 3	–	○ 6 - 16 ⊙ 6 - 25 ⊛ 4 - 25	**AK35** 079614		50 off
Tongue for expansion terminal AK… in conjunction with busbar terminals K…						
	–	–	–	**L-KL-R** 079269		50 off

Copper strip

Copper strip insulated

- Laminated E-Cu conductor, tin-plated
- Rated operating voltage 690 V AC
- UL approved up to 600 V AC
- Dielectric strength 20 kV/mm
- Insulating material heat resistant up to +105 °C
- Self-extinguishing to UL 94 V 0
- 2000 mm long, black (BK), blue (BU) and green/yellow (GNYE).



Rated operational current[1] I_e A	Dimensions (number of layers × width × layer thickness) mm	Cross-section[2] mm²	Cu factor[3]	Color	**Part no.** Article no.	**Price** See price list	Std. pack
100	3 x 9 x 0.8	21.6	0.41	Black	**CU-BAND3X9X0.8-BK** 081167		20 off
100	3 x 9 x 0.8	21.6	0.41	Yellow/green	**CU-BAND3X9X0.8-GNYE** 081006		20 off
100	3 x 9 x 0.8	21.6	0.41	Blue	**CU-BAND3X9X0.8-BU** 080960		20 off
160	6 x 9 x 0.8	43.2	0.83	Black	**CU-BAND6X9X0.8-BK** 081414		10 off
160	6 x 9 x 0.8	43.2	0.83	Yellow/green	**CU-BAND6X9X0.8-GNYE** 081367		10 off
160	6 x 9 x 0.8	43.2	0.83	Blue	**CU-BAND6X9X0.8-BU** 081344		10 off
200	9 x 9 x 0.8	64.8	1.24	Black	**CU-BAND9X9X0.8-BK** 081515		10 off
200	9 x 9 x 0.8	64.8	1.24	Yellow/green	**CU-BAND9X9X0.8-GNYE** 081485		10 off
200	9 x 9 x 0.8	64.8	1.24	Blue	**CU-BAND9X9X0.8-BU** 081436		10 off
250	6 x 16 x 0.8	74.4	1.43	Black	**CU-BAND6X16X0.8-BK** 081310		10 off
250	6 x 16 x 0.8	74.4	1.43	Yellow/green	**CU-BAND6X16X0.8-GNYE** 081275		10 off
250	6 x 16 x 0.8	74.4	1.43	Blue	**CU-BAND6X16X0.8-BU** 081222		10 off
400	5 x 24 x 1	120	2.14	Black	**CU-BAND5X24X1-BK** 119032		5 off
400	10 x 16 x 0.8	124	2.38	Black	**CU-BAND10X16X0,8-BK** 080739		5 off
400	10 x 16 x 0.8	124	2.38	Yellow/green	**CU-BAND10X16X0,8-GNYE** 080698		5 off
400	10 x 16 x 0.8	124	2.38	Blue	**CU-BAND10X16X0,8-BU** 079736		5 off
630	5 x 32 x 1	160	2.85	Black	**CU-BAND5X32X1-BK** 119035		5 off
630	8 x 24 x 1	192	3.42	Black	**CU-BAND8X24X1-BK** 119033		5 off
630	10 x 24 x 1	240	4.28	Black	**CU-BAND10X24X1-BK** 119034		5 off
630	11 x 21 x 1	231	4.44	Black	**CU-BAND11X21X1-BK** 080923		5 off
630	11 x 21 x 1	231	4.44	Yellow/green	**CU-BAND11X21X1-GNYE** 080836		5 off
630	11 x 21 x 1	231	4.44	Blue	**CU-BAND11X21X1-BU** 080769		5 off
800	10 x 32 x 1	320	5.70	Black	**CU-BAND10X32X1-BK** 119036		3 off
1000	10 x 40 x 1	400	7.12	Black	**CU-BAND10X40X1-BK** 119037		3 off
1250	10 x 50 x 1	500	8.90	Black	**CU-BAND10X50X1-BK** 119038		2 off
1600	10 x 80 x 1	800	14.25	Black	**CU-BAND10X80X1-BK** 119039		1 off

Notes

[1] Rated operational current: conforms to VDE 0281
[2] Observe component wiring instructions (e.g. min. terminal capacities in mm²)
[3] Calculation of material surcharge → Page 23/3

Information relevant for export to North America

Product Standards	UL 758; EN 60439-1, -3; CE marking
UL File No.	E248096
UL CCN	AVLV2
CSA File No.	UL report applies to both US and Canada
CSA Class No.	–
NA Certification	UL Listed, certified by UL for use in Canada
Conditions of Acceptability	max. 105 °C
Suitable for	Appliance Wiring Material - Component
Max. Voltage Rating	600 V AC, 750 V DC

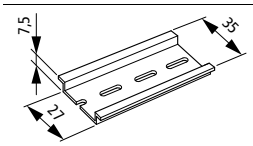
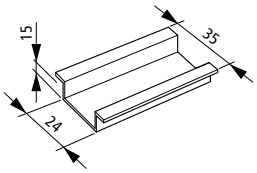
Flat copper bars

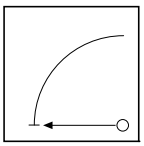
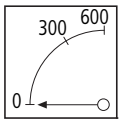
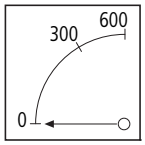
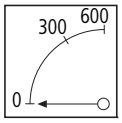
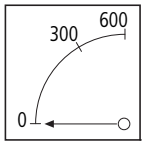
		Rated operational current I_e A	Dimensions mm		**Part no.** Article no.	**Price** See price list	Std. pack
	Tinned	160	12 x 5 x supplied in lengths of 1500		**CU12X5** 034121		10 off
	Tinned	160	12x 5 x supplied in lengths of 2250		**CU12X5-2250** 005093		10 off
	Tinned	240	12 x 10 x supplied in lengths of 1500		**CU12X10** 215269		5 off
	Tinned	310	15 x 5 x supplied in lengths of 1500		**CU15X5** 215270		10 off
	Tinned	360	15 x 10 x supplied in lengths of 1500		**CU15X10** 215271		5 off
	Tinned	250	20 x 5 x supplied in lengths of 1500		**CU20X5** 044092		10 off
	Tinned	250	20 x 5 x supplied in lengths of 2250		**CU20X5-2250** 007466		10 off
	Tinned	250	20 x 5 x supplied in lengths of 2500		**CU20X5-2500** 032703		1 off
	Tinned	400	12 x 10 x supplied in lengths of 1500		**CU20X10** 041719		5 off
	Tinned	400	20 x 10 x supplied in lengths of 2250		**CU20X10-2250** 009839		5 off
	Untreated	630	30 x 10 x supplied in lengths of 1500		**CU30X10** 051211		1 off
	Untreated	850	40 x 10 x supplied in lengths of 1500		**CU40X10** 063076		3 off

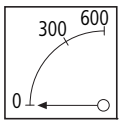
Flat copper busbars, predrilled

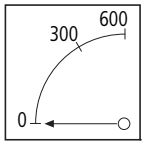
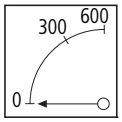
	Rated operational current I_e A	Thread	Dimensions mm	**Part no.** Article no.	**Price** See price list	Std. pack
	218	M6	15 x 5 x supplied in lengths of 1000	**BPZ-BB/T-15/5/1000** 289861		4 off
	274	M6	20 x 5 x supplied in lengths of 1000	**BPZ-BB/T-20/5/1000** 289862		4 off
	400	M6	32 x 5 x supplied in lengths of 1000	**BPZ-BB/T-32/5/1000** 289863		1 off
	218	M6	15 x 5 x supplied in lengths of 2000	**BPZ-BB/T-15/5/2000** 289864		1 off
	274	M6	20 x 5 x supplied in lengths of 2000	**BPZ-BB/T-20/5/2000** 289865		1 off
	427	M8	20 x 10 x supplied in lengths of 1000	**BPZ-BB/T-20/10/1000** 289866		1 off
	573	M8	30 x 10 x supplied in lengths of 1000	**BPZ-BB/T-30/10/1000** 289867		1 off

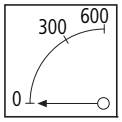
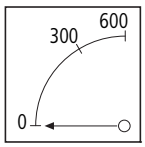
DIN-rails

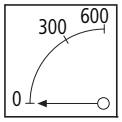
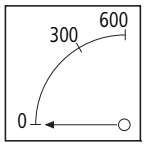
		Part no. Article no.	**Price** See price list	Std. pack
	To IEC/EN 60715 35 x 7.5 mm Short-circuit rating as PE conductor corresponds to 16 mm² copper conductor to IEC/EN 60439-1 Supplied in lengths of 2 m	**TS35X7.5** 053030		20 off
	To IEC/EN 60715 35 x 15 mm Short-circuit rating as PE conductor corresponds to 50 mm² copper conductor to IEC/EN 60439-1 Supplied in lengths of 2 m	**TS35X15** 050657		10 off

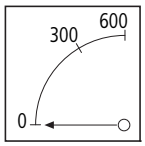
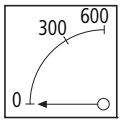
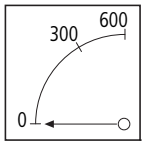
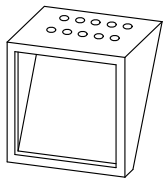
	Measuring range A	Measuring range V	**Part no.** Article no.	**Price** See price list	Std. pack
Power factor (p. f.) meters					
• Rated operational voltage 3 × 400 V AC • Current through transformer secondary winding 5 A/VA • Scale division 0.5 capacitive - 1 - 0.5 inductive					
	0 - 10/20	–	**LWQ96** 086856		1 off
Voltmeters, class 1.5					
• To DIN 43780 and VDE 410 • Enclosure to DIN 43700 • Narrow version to DIN 43718 • Quadrant scale DIN 43802 (dual scale) • Terminals protected against accidental contact • Vertical operating position • Snap fitting for EQ72 and EQ96 • Class 1.5 • Direct connection					
Unshielded					
EQ45 • 45 x 45 mm 	–	0 - 250	**EQ45C-250V** 057968		1 off
	–	0 - 500	**EQ45C-500V** 060341		1 off
EQ72 • 72 x 72 mm 	–	0 - 250	**EQ72-250V** 033051		1 off
	–	0 - 500	**EQ72-500V** 033052		
	–	0 - 600	**EQ72-600V** 033053		
	–	0 - 800	**EQ72-800V** 033054		
EQ96 • 96 x 96 mm 	–	0 - 250	**EQ96-250V** 033047		1 off
	–	0 - 500	**EQ96-500V** 033048		
	–	0 - 600	**EQ96-600V** 033049		
	–	0 - 800	**EQ96-800V** 033050		
Shielded 4 mT					
EQ72 • 72 x 72 mm 	–	0 - 250	**EQ72S-250V** 038581		1 off
	–	0 - 500	**EQ72S-500V** 045700		4 off
	–	0 - 600	**EQ72S-600V** 052819		1 off
EQ96 • 96 x 96 mm 	–	0 - 250	**EQ96S-250V** 071803		1 off
	–	0 - 500	**EQ96S-500V** 078922		4 off
	–	0 - 600	**EQ96S-600V** 086041		1 off
	–	0 - 800	**EQ96S-800V** 088414		1 off

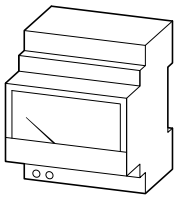
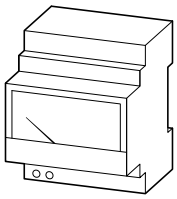
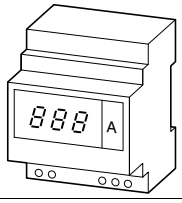
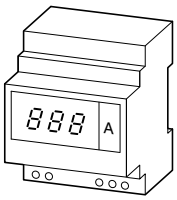
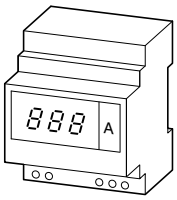
	Measuring range A	Part no. Article no.	Price See price list	Std. pack
Ammeters, class 1.5				
• To DIN 43780 and VDE 410 • Enclosure to DIN 43700 • Narrow version to DIN 43718 • Quadrant scale DIN 43802 (dual scale) • Terminals protected against accidental contact • Vertical operating position • Snap fitting for EQ72 and EQ96 • Class 1.5 • For 5 A transformer connection • Power consumption 0.7 VA				
Unshielded				
EQ45 • 45 x 45 mm 	0 - 50	**EQ45C-50/5** 043730		1 off
	0 - 100	**EQ45C-100/5** 046103		
	0 - 200	**EQ45C-200/5** 048476		
	0 - 250	**EQ45C-250/5** 050849		
	0 - 400	**EQ45C-400/5** 053222		
	0 - 600	**EQ45C-600/5** 055595		
EQ48 • 48 x 48 mm 	0 - 10	**EQ48-10-5** 033006		
	0 - 50	**EQ48-50-5** 033007		
	0 - 150	**EQ48-150-5** 033008		
	0 - 200	**EQ48-200-5** 033009		
	0 - 250	**EQ48-250-5** 033010		
	0 - 400	**EQ48-400-5** 033011		
	0 - 600	**EQ48-600-5** 033012		
EQ72 • 72 x 72 mm 	0 - 50	**EQ72-50-5** 032989		1 off
	0 - 100	**EQ72-100-5** 032990		
	0 - 200	**EQ72-200-5** 032991		
	0 - 250	**EQ72-250-5** 032992		
	0 - 400	**EQ72-400-5** 032993		
	0 - 600	**EQ72-600-5** 032994		
	0 - 800	**EQ72-800-5** 032995		
	0 - 1000	**EQ72-1000-5** 032996		
	0 - 1250	**EQ72-1250-5** 032997		
	0 - 1600	**EQ72-1600-5** 032998		
	0 - 2000	**EQ72-2000-5** 032999		
	0 - 2500	**EQ72-2500-5** 033000		
	0 - 3000	**EQ72-3000-5** 033001		
	0 - 3200	**EQ72-3200-5** 033002		
	0 - 4000	**EQ72-4000-5** 033003		
	0 - 5000	**EQ72-5000-5** 033004		
	0 - 6300	**EQ72-6300-5** 209675		

	Measuring range A	Part no. Article no.	Price See price list	Std. pack
EQ96 • 96 x 96 mm 	0 - 50	**EQ96-50-5** 032972		1 off
	0 - 100	**EQ96-100-5** 032973		
	0 - 200	**EQ96-200-5** 032974		
	0 - 250	**EQ96-250-5** 032975		
	0 - 400	**EQ96-400-5** 032976		
	0 - 600	**EQ96-600-5** 032977		
	0 - 800	**EQ96-800-5** 032978		
	0 - 1000	**EQ96-1000-5** 032979		
	0 - 1250	**EQ96-1250-5** 032980		
	0 - 1600	**EQ96-1600-5** 032981		
	0 - 2000	**EQ96-2000-5** 032982		
	0 - 2500	**EQ96-2500-5** 032983		
	0 - 3000	**EQ96-3000-5** 032984		
	0 - 3200	**EQ96-3200-5** 032985		
	0 - 4000	**EQ96-4000-5** 032986		
	0 - 5000	**EQ96-5000-5** 032987		
	0 - 6300	**EQ96-6300-5** 209676		
Shielded 4 mT				
EQ48 • 48 x 48 mm 	0 - 10	**EQ48S-10/5** 076469		1 off
	0 - 50	**EQ48S-50/5** 076489		
	0 - 100	**EQ48S-100/5** 076490		
	0 - 200	**EQ48S-200/5** 076491		
	0 - 250	**EQ48S-250/5** 076492		
	0 - 400	**EQ48S-400/5** 076532		
	0 - 600	**EQ48S-600/5** 076583		
EQ72 • 72 x 72 mm 	0 - 10	**EQ72S-10** 024343		1 off
	0 - 15	**EQ72S-15** 029089		
	0 - 25	**EQ72S-25** 033835		
	0 - 40	**EQ72S-40** 040954		
	0 - 60	**EQ72S-60** 048073		
	0 - 50	**EQ72S-50/5** 033567		
	0 - 100	**EQ72S-100/5** 026716		
	0 - 200	**EQ72S-200/5** 031462		
	0 - 250	**EQ72S-250/5** 036208		
	0 - 400	**EQ72S-400/5** 043327		
	0 - 600	**EQ72S-600/5** 050446		

	Measuring range A	Part no. Article no.	Price See price list	Std. pack
EQ72 • 72 x 72 mm 	0 - 800	**EQ72S-800/5** 074118		1 off
	0 - 1000	**EQ72S-1000/5** 074119		1 off
	0 - 1250	**EQ72S-1250/5** 074301		1 off
	0 - 1600	**EQ72S-1600/5** 074302		1 off
	0 - 2000	**EQ72S-2000/5** 074303		1 off
	0 - 2500	**EQ72S-2500/5** 074304		1 off
	0 - 3200	**EQ72S-3200/5** 074405		1 off
	0 - 4000	**EQ72S-4000/5** 074562		1 off
	0 - 5000	**EQ72S-5000/5** 074563		1 off
	0 - 6300	**EQ72S-6300/5** 209671		1 off
EQ96 • 96 x 96 mm 	0 - 10	**EQ96S-10** 057565		1 off
	0 - 15	**EQ96S-15** 062311		1 off
	0 - 25	**EQ96S-25** 067057		1 off
	0 - 40	**EQ96S-40** 074176		1 off
	0 - 50	**EQ96S-50/5** 038984		1 off
	0 - 60	**EQ96S-60** 081295		1 off
	0 - 100	**EQ96S-100/5** 059938		1 off
	0 - 200	**EQ96S-200/5** 064684		1 off
	0 - 250	**EQ96S-250/5** 069430		1 off
	0 - 400	**EQ96S-400/5** 076549		6 off
	0 - 600	**EQ96S-600/5** 083668		1 off
	0 - 800	**EQ96S-800/5** 067460		1 off
	0 - 1000	**EQ96S-1000/5** 069833		1 off
	0 - 1250	**EQ96S-1250/5** 072206		1 off
	0 - 1600	**EQ96S-1600/5** 074579		1 off
	0 - 2000	**EQ96S-2000/5** 076952		1 off
	0 - 2500	**EQ96S-2500/5** 079325		1 off
	0 - 3000	**EQ96S-3000/5** 081698		1 off
	0 - 3200	**EQ96S-3200/5** 098920		1 off
	0 - 4000	**EQ96S-4000/5** 084071		1 off
	0 - 5000	**EQ96S-5000/5** 076621		1 off
	0 - 6300	**EQ96S-6300/5** 209672		1 off

	Measuring range A	Part no. Article no.	Price See price list	Std. pack
Maximum demand (bimetal) ammeters for C.T. connection, class 3				
• With maximum-demand indicator • With instantaneous value indication (moving-iron measuring element) • Class 3 • Moving-iron ammeter accuracy class 1.5 • Overload 1.2 times • Power consumption 4.8 VA • Time setting of bimetal: 8 min				
Unshielded				
BIEQ72 • 72 x 72 mm 	0 - 50	**BIEQ72-50-5** 033030		1 off
	0 - 100	**BIEQ72-100-5** 033031		
	0 - 200	**BIEQ72-200-5** 033032		
	0 - 250	**BIEQ72-250-5** 033033		
	0 - 400	**BIEQ72-400-5** 033034		
	0 - 600	**BIEQ72-600-5** 033035		
	0 - 800	**BIEQ72-800-5** 033036		
	0 - 1000	**BIEQ72-1000-5** 033037		
	0 - 1250	**BIEQ72-1250-5** 033038		
	0 - 1600	**BIEQ72-1600-5** 033039		
	0 - 2000	**BIEQ72-2000-5** 033040		
	0 - 2500	**BIEQ72-2500-5** 033041		
	0 - 3000	**BIEQ72-3000-5** 033042		
	0 - 3200	**BIEQ72-3200-5** 033043		
	0 - 4000	**BIEQ72-4000-5** 033044		
	0 - 5000	**BIEQ72-5000-5** 033045		
	0 - 6300	**BIEQ72-6300-5** 209677		
BIEQ96 • 96 x 96 mm 	0 - 50	**BIEQ96-50-5** 033013		1 off
	0 - 100	**BIEQ96-100-5** 033014		
	0 - 200	**BIEQ96-200-5** 033015		
	0 - 250	**BIEQ96-250-5** 033016		
	0 - 400	**BIEQ96-400-5** 033017		
	0 - 600	**BIEQ96-600-5** 033018		
	0 - 800	**BIEQ96-800-5** 033019		
	0 - 1000	**BIEQ96-1000-5** 033020		
	0 - 1250	**BIEQ96-1250-5** 033021		
	0 - 1600	**BIEQ96-1600-5** 033022		
	0 - 2000	**BIEQ96-2000-5** 033023		
	0 - 2500	**BIEQ96-2500-5** 033024		
	0 - 3000	**BIEQ96-3000-5** 033025		
	0 - 3200	**BIEQ96-3200-5** 033026		

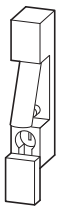
	For use with	Measuring range A	Part no. Article no.	Price See price list	Std. pack
BIEQ96 • 96 x 96 mm 		0 - 4000	**BIEQ96-4000-5** 033027		1 off
		0 - 5000	**BIEQ96-5000-5** 033028		
		0 - 6300	**BIEQ96-6300-5** 209678		
Shielded 4 mT					
BIEQ72 • 72 x 72 mm 		0 - 800	**BIEQ72S-800/5** 074565		1 off
		0 - 1000	**BIEQ72S-1000/5** 074566		
		0 - 1250	**BIEQ72S-1250/5** 074567		
		0 - 1600	**BIEQ72S-1600/5** 074568		
		0 - 2000	**BIEQ72S-2000/5** 074569		
		0 - 2500	**BIEQ72S-2500/5** 074988		
		0 - 3200	**BIEQ72S-3200/5** 076098		
		0 - 4000	**BIEQ72S-4000/5** 076195		
		0 - 5000	**BIEQ72S-5000/5** 076261		
		0 - 6300	**BIEQ72S-6300/5** 209673		
BIEQ96 • 96 x 96 mm 		0 - 100	**BIEQ96S-100/5** 098308		1 off
		0 - 200	**BIEQ96S-200/5** 010508		
		0 - 250	**BIEQ96S-250/5** 012881		
		0 - 400	**BIEQ96S-400/5** 015254		
		0 - 600	**BIEQ96S-600/5** 017627		
		0 - 800	**BIEQ96S-800/5** 020000		
		0 - 1000	**BIEQ96S-1000/5** 022373		
		0 - 1250	**BIEQ96S-1250/5** 024746		
		0 - 1600	**BIEQ96S-1600/5** 027119		
		0 - 2000	**BIEQ96S-2000/5** 029492		
		0 - 2500	**BIEQ96S-2500/5** 031865		
		0 - 3000	**BIEQ96S-3000/5** 034238		
		0 - 3200	**BIEQ96S-3200/5** 098921		
		0 - 4000	**BIEQ96S-4000/5** 036611		
		0 - 5000	**BIEQ96S-5000/5** 076692		
		0 - 6300	**BIEQ96S-6300/5** 209674		
Retaining frames					
• For measuring instruments EQ • For door mounted devices • Color RAL 7035 	EQ72 (72 x 72 mm)		**BT434** 088379		10 off
	EQ96 (96 x 96 mm)		**BT435** 090752		10 off

	Features	Measuring range A	Measuring range V	**Part no.** Article no.	**Price** See price list	Std. pack
Meters for DIN-rail, analog						
• For measuring single-phase AC voltages and currents • Moving-iron measuring element						
Voltmeters						
	–	–	0 - 250	**Z-MG/VA-250** 248223		1 off
	–	–	0 - 500	**Z-MG/VA-500** 248224		1 off
Ammeters						
	–	0 - 10	–	**Z-MG/AA-10** 248228		1 off
	–	0 - 40	–	**Z-MG/AA-40** 248229		1 off
Meters for DIN-rail, digital						
• For measuring single-phase AC voltages and currents • Digital display, green LEDs • LED overload indication						
Voltmeters						
	–	–	0 - 600	**Z-MG/VD-600** 248222		1 off
Ammeters						
	–	0 - 20	–	**Z-MG/AD-20** 248225		1 off
	12 adjustable transformer ratios	0 - 999 A, x/5A	–	**Z-MG/AD-999** 248226		1 off
Voltmeters and ammeter						
	–	0 - 8 kA, x/5 A	0 - 600	**Z-MG/VD+AD** 263140		1 off
	With 2 programmable switch contacts	0 - 8 kA, x/5 A	0 - 600	**Z-MG/VD+AD+S** 263141		1 off

Closing and locking systems

Comfort hinged handle

- Lever made from high-grade, impact-resistant pressure-cast zinc
- Ergonomically designed lever
- For XVTL, Profi Plus floor standing distribution boards
- Color black, powder-spray painted



Description	For lock mechanism	Features	Part no. Article no.	Price See price list	Std. pack
–	Europrofile single cylinder lock	With pushbutton	**DH-COMF** 133107		1 off

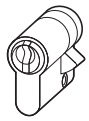
Comfort rotary handle

- Rotary handle for taking europrofile cylinders
- With integrated “locked” indication
- As retrofitting or complete kit
- Handle made from high-grade, impact-resistant pressure-cast zinc
- Suitable for all universal locks LC-...
- For standardized door cutouts 22.5 × 20.4 mm
- Color dusty grey RAL 7037, powder-coated
- Order lock cylinders separately

Description	For lock mechanism	Features	Part no. Article no.	Price See price list	Std. pack
Complete kit	Europrofile single cylinder lock	–	**PHZ-A-COMP** 133105		1 off
Retrofitting kit	Europrofile single cylinder lock	–	**PHZ-A-ADD-ON** 133106		1 off

Cylinder locks for comfort handles

- For comfort rotary and hinged handles
- Lock cylinder designed to DIN 18252 and DIN EN 1303
- Cylinder locks 10/30 with nickel silver pin tumblers
- Lock bit with eight adjustment positions, five pin pairs
- Keyed alike or individually keyed mechanism
- One key included per cylinder



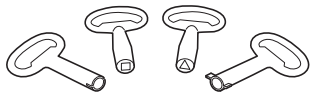
Description	For lock mechanism	Features	Part no. Article no.	Price See price list	Std. pack
Keyed alike	–	–	**PHZ-E10/30-GS** 138574		1 off
Individually keyed mechanism	–	–	**PHZ-E10/30-VS** 138575		1 off

Spare keys for cylinder locks

- For cylinder locks PHZ-E…-GS

Description	For lock mechanism	Features	Part no. Article no.	Price See price list	Std. pack
Keyed alike	Europrofile single cylinder lock	–	**KEY-E10/30-GS** 138576		4 off

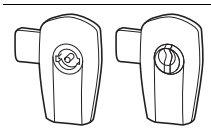
Key for lock mechanisms



Description	For lock mechanism	Features	Part no. Article no.	Price See price list	Std. pack
–	–	3 mm double ward key	**NWS-SL/DLB/3** 255317		1 off
–	–	5 mm double ward key	**NWS-SL/DLB/5** 255318		1 off

Universal locks

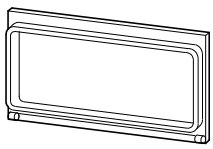
- Escutcheon made from high-grade, impact-resistant pressure-cast zinc
- Metal lock mechanisms and bolts
- Color dusty grey RAL 7037, powder-coated
- For indoor and outdoor use
- Metal lock nut, notched
- Compatible with standard bolts
- For standardized door cutouts 22.5 × 20.4 mm

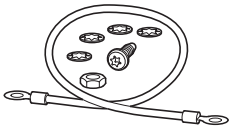
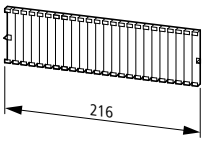
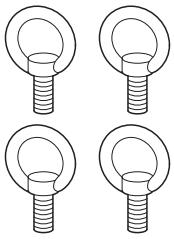
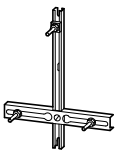


Description	For lock mechanism	Features	Part no. Article no.	Price See price list	Std. pack
–	–	3 mm double ward key	**LC-DBIT3-CS** 133102		1 off
–	–	5 mm double ward key	**LC-DBIT5-CS** 133103		
Keyed alike	–	Cylinder lock with two keys	**LC-ZSBIT-CS** 133104		

	Features	Part no. Article no.	Price See price list	Std. pack
Circuit diagram pockets, insulating material				
• Made of plastic with self-adhesive back • RAL 7035 light grey				
	DIN A4 landscape	**SPT4** 002275		10 off
	DIN A5 landscape	**SPT5** 002276		10 off
	DIN A6 landscape	**SPT6** 002277		10 off
Circuit diagram pocket, metal				
• For fitting to door porfile with M5 bolts				
	DIN A6 landscape	**XVTL-SPT6** 115247		1 off

	Description	Part no. Article no.	Price See price list	Std. pack
Control panel illumination				
Control panel lights				
	–	**XVTL-SRL/S** 116892		1 off
	With switches, socket and magnetic holder	**NWS-SRL/S/ST/MG** 255355		1 off
Door contact switches				
	–	**NWS-TKT** 255420		1 off
	Mounted on retaining bracket	**NWS-TKT/M** 285046		

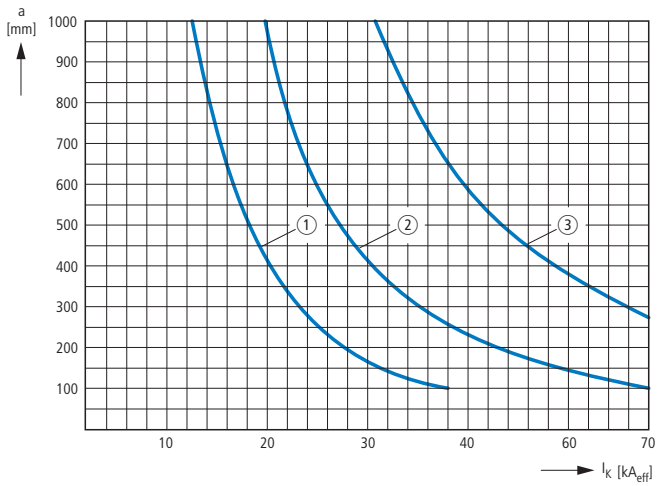
	For use with	Part no. Article no.	Price See price list	Std. pack
Hinged flaps				
• For positioning on cover, change as required • Degree of protection IP55 • Opening angle up to 180° • Hinge on one side cannot be changed • Transparent				
	145 x 80 mm	**K-A** 043372		1 off
	185 x 90 mm	**KG-A** 055244		1 off

	Features	Description	**Part no.** Article no.	**Price** See price list	Std. pack
Door grouding set					
• Cross-section 6 mm² • Includes installation accessories					
	–	–	**BFZ-DES** 101665		1 off
Touch-up paint					
• Brush bottle • For repairing paint damage					
	RAL 7035	–	**BPZ-CPS-7035** 286771		1 off
	RAL 9010	–	**PAINT-RAL9010** 288947		
	RAL 9016	–	**PAINT-RAL9016** 288948		
Spray	RAL 7035	–	**BPZ-SPRAY-7035** 116678		
Blanking strips					
For blanking off unused slots					
	For 12 space units	–	**VST12** 002322		10 off
Eye bolts					
One set consists of 4 lifting eyelets					
	–	M10	**XAT** 283855		1 off
Meter rail					
	To DIN 43853, Including 3 fixing screws with nuts to DIN 46300. For fixing on mounting plates, tamper seal, → Page 20/22 → Page 20/28	–	**ZK1** 001892		5 off

Engineering

Conductor supports for insulated copper strip, with section strip and latch fastener

BZ249, BZ251, BZ252



① BZ249
② BZ251
③ BZ252
I_K = short-circuit current
a = busbar support spacing

Technical data

	KT-M...	V-M...	MFD...	MFV...	KT-M25F	STB-M...F
Material	Polyethylene and thermoplastic elastomer	Polyamide, halogen-free	Thermoplastic elastomer	Polyamide	PVC and polyethylene	Glass-fiber reinforced polyamide with flame retardant, self-extinguishing
Color	Gray, RAL 7035	Gray, RAL 7035	Black, similar to RAL 9005	Red	Grey, RAL 7032 + white	Gray, RAL 7035
Degree of protection	Up to IP66	IP68 up to 5 bar (30 min)	IP66	–	Up to IP50	IP56, mounting only on enclosure underside
Chemical resistance	Resistant to: alcohol, animal and plant fats, weak alkalis, light acids, water	Resistant to: acetone, petrol, paraffin, diesel oil, greases, oils, paint solvents	–	–	Resistant to: diluted non-oxidizing acids, alkalis and salt, alcohol, aromatic and halogenated hydrocarbons, surfactants.	Resistant to: acetone, petrol/gasoline, paraffin, diesel oil, greases, oils, paint solvents
Danger of stress fracture	Relatively high	Low	–	–	Relatively high	Low
Temperature resistance	-40 °C - 80 °C, up to about 100 °C for short periods	-20 °C - 100 °C, up to about 120 °C for short periods	-25 °C - 100 °C, up to about 120 °C for short periods	-25 °C - 80 °C, up to about 120 °C for short periods	0 °C - 60 °C, up to about 80 °C for short periods	-40 °C - 100 °C, up to about 150 °C for short periods
Flame resistance	–	Glow wire test 750 °C according to EN 60695-2-11	–	–	–	Glow wire test 750 °C according to EN 60695-2-11
Flammability to UL94	–	V2	–	–	–	–

Analog devices			Z-MG/VA-250	Z-MG/VA-500	Z-MG/AA-10	Z-MG/AA-40
Electrical						
Rated voltage	U_n	V AC	250	500	–	–
Rated current	I_n	A	–	–	10	40
Input signal			Symmetrical, sinusoidal, harmonic factor 1.11			
Rated frequency		Hz	50	50	50	50
Operating frequency		Hz	45 - 65	45 - 65	45 - 65	45 - 65
Measuring accuracy class			1.5	1.5	1.5	1.5
Measuring range			0 - U_n	0 - U_n	0 - I_n	0 - I_n
Intrinsic consumption		VA	< 3	< 3	< 1.1	< 1.1
Measuring range overshoot						
Continuous			1.2 x U_n	1.2 x U_n	1.2 x I_n	1.2 x I_n
Momentary			2 x U_n/5 s	2 x U_n/5 s	10 x I_n/5 s	10 x I_n/5 s
Rated insulation voltage		kV	0.6	0.6	0.6	0.6
Test voltage 50 Hz/1 min.		kV	2	2	2	2
Mechanical						
Standard front dimension		mm	45	45	45	45
Size of device base		mm	89	89	89	89
Built-in width		mm	70	70	70	70
Weight		kg	0.13	0.13	0.13	0.13
Mounting			Quick attachment for top-hat rail IEC/EN 60715			
Degree of protection when fitted			IP50	IP50	IP50	IP50
Terminals top and bottom			Lift terminals	Lift terminals	Lift terminals	Lift terminals
Terminal capacity		mm^2	4	4	4	8
Tightening torque of terminal screws		Nm	1	1	1	1.8
Admissible relative humidity		%	65	65	65	65
Temperature range		°C	-25 - +50	-25 - +50	-25 - +50	-25 - +50
Flammability classification according to UL94			V1	V1	V1	V1

Z-MG

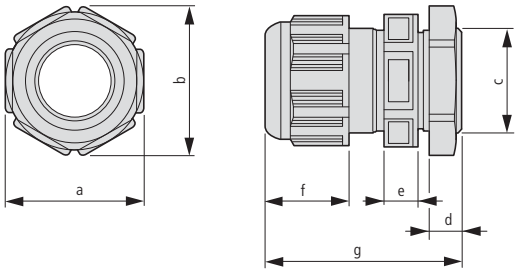
Digital devices				Z-MG/VD-600	Z-MG/AD-20	Z-MG/AD-999	Z-MG/VD+AD	Z-MG/VD+AD+S
Electrical								
Rated voltage		U_n	V AC	600	–	–	500	500
Rated current		I_n	A	–	20	5	5	5
Auxilliary voltage				230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz	230 V, 50 Hz
Intrinsic consumption, auxiliary voltage input			VA	< 4.5	< 4.5	< 4.5	≤ 2.5	≤ 2.5
Input signal				Symmetrical, sinusoidal, harmonic factor 1.11				
Rated frequency			Hz	50	50	50	50	50
Operating frequency			Hz	45 - 65	45 - 65	45 - 65	47 - 63	47 - 63
Measuring accuracy				± 1 % + 1 digit	± 1 % + 1 digit	± 1 % + 1 digit	± 1 % + 1 digit	± 1 % + 1 digit
Resolution				1 digit	1 digit	1 digit	1 V/0.01 - 10 A	1 V/0.01 - 10 A
Number of measurements per second				3	3	3	0.67	0.67
Measuring range				0 - U_n	0 - I_n	0 - I_n	0 - 500 V/01 - 6 A	0 - 500 V/01 - 6 A
Intrinsic consumption								
Voltage input			VA	–	–	–	≤ 0.1	≤ 0.1
Current input			VA	–	< 1.1	< 1.1	≤ 0.6	≤ 0.6
Input impedance				> 1 MΩ	–	–	–	–
Measuring range overshoot								
Continuous				1.1 x U_n	2 x I_n	2 x I_n	1.2 x U_n/1.2 x I_n	1.2 x U_n/1.2 x I_n
Momentary				–	2.5 x I_n/5 s	10 x I_n/5 s	2 x I_n/5 s	2 x I_n/5 s
Insulation voltage			kV	0.66	0.66	0.66	0.66	0.66
Test voltage 50 Hz/1 min.			kV	2	2	2	3	3
Alarm contacts				–	–	–	–	2, programmable
Type				–	–	–	–	Min. and/or max.
Setpoint				–	–	–	–	0 - 120 %
Hysteresis				–	–	–	–	0 - setpoint value
Delay				–	–	–	–	0 - 60 s (1 s steps)
Relay position				–	–	–	–	Active/passive
Contact rating				–	–	–	–	5 A/250 V AC
Mechanical								
Standard front dimension			mm	45	45	45	45	45
Size of device base			mm	89.5	89.5	89.5	89.5	89.5
Built-in width			mm	71.2	71.2	71.2	71.2	71.2
Maximum display				999	999	999	999	999
Digit height			mm	14	14	14	14	14
Weight			kg	0.3	0.3	0.3	0.25	0.27
Mounting				Quick attachment for top-hat rail IEC/EN 60715				
Degree of protection when fitted				IP50	IP50	IP50	IP50	IP50
Terminals top and bottom				Lift terminals	Lift terminals	Lift terminals	Lift terminals	Lift terminals
Terminal capacity			mm^2	4	4	4	4	4
Tightening torque of terminal screws			Nm	0.6	0.6	0.6	0.6	0.6
Admissible relative humidity			%	95	95	95	20 - 80	20 - 80
Temperature range			°C	-10 - +55	-10 - +55	-10 - +55	-5 - +55	-5 - +55
Flammability classification according to UL94				V1	V1	V1	V1	V1

	Z-MG/VD+AD Z-MG/VD+AD+S												
Measuring range, resolution													
Range	–	–	–	–	–	–	–	–	5 A	–	–	–	–
Indication	–	–	–	–	–	–	–	–	5.00	–	–	–	–
Resolution	10 mA												
Range	10 A	–	15 A	–	20 A	25 A	30 A	40 A	50 A	60 A	70 A	75 A	80 A
Indication	10.0	–	15.0	–	20.0	25.0	30.0	40.0	50.0	60.0	70.0	75.0	80.0
Resolution	100 mA												
Range	100 A	120 A	150 A	160 A	200 A	250 A	300 A	400 A	500 A	600 A	700 A	750 A	800 A
Indication	100	120	150	160	200	250	300	400	500	600	700	750	800
Resolution	1 A												
Range	1 kA	1.2 kA	1.5 kA	1.6 kA	2 kA	2.5 kA	3 kA	4 kA	5 kA	6 kA	7 kA	7.5 kA	8 kA
Indication	1.00	1.20	1.50	1.60	2.00	2.50	3.00	4.00	5.00	6.00	7.00	7.50	8.00
Resolution	10 A												

Dimensions

Cable glands, metric

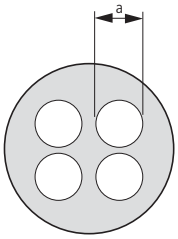
V-M…



Part no.	a	b	c	d	e	f	g
V-M12	16	18	M12x1.5	9	5.3	14	29 … 34
V-M16	20	22	M16x1.5	9	5.5	16.5	31 … 37
V-M20	24	27	M20x1.5	10	6.1	20	36 … 45
V-M25	29	32	M25x1.5	10	8.1	20	38 … 47
V-M32	36	40	M32x1.5	12	10.1	20	42 … 51
V-M40	46	51	M40x1.5	12	11.1	29	52 … 65
V-M50	55	61	M50x1.5	14	12.1	33	59 … 72
V-M63	68	75	M63x1.5	15	12.1	36.5	64 … 78

Multiple gaskets

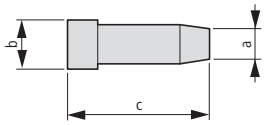
MFD…



Part no.	a
MFD25	5.0 - 6.0
MFD32	3.5 - 7.0

Sealing plugs

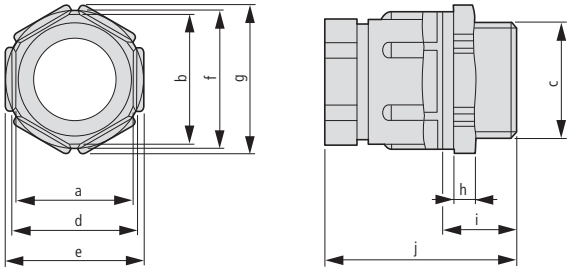
MFV…



Part no.	a	b	c
MFV25-6	5.5	6	20
MFV32-7	7	8	20

Cable screw glands

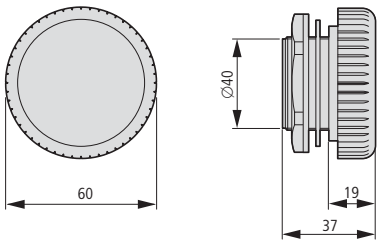
STB-M…F



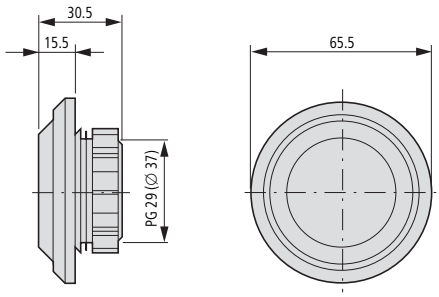
Part no.	c	h	l	j	g	f	b	a	d	e
STB-M20F	20	5	15	40	29	27	23	21	24	27
STB-M25F	25	6	15	45	35.5	35.5	33.4	30	33	32

Pressure compensating plugs

DAV-M40

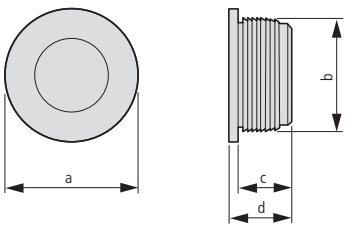


DA412



Diaphragm grommets, metric

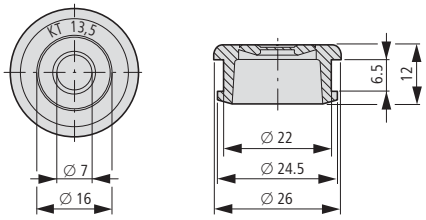
KT-M…



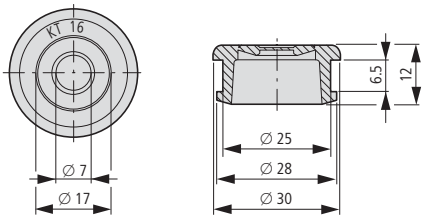
Part no.	a	b	c	d
KT-M16	21.2	16	9.5	11
KT-M20	25.2	20	9.5	11
KT-M25	30.2	25	9.5	11
KT-M32	37.2	32	9.5	11

PG cable grommets

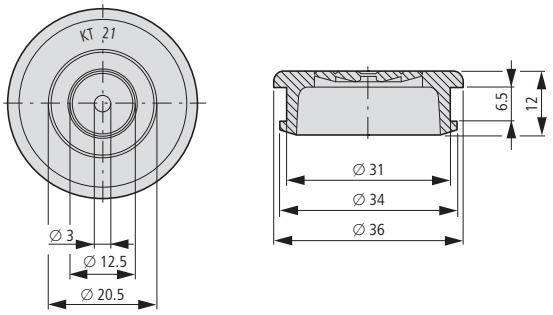
KT13.5



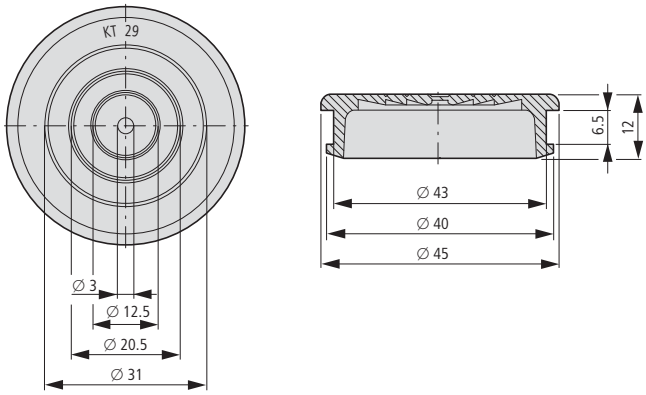
KT16



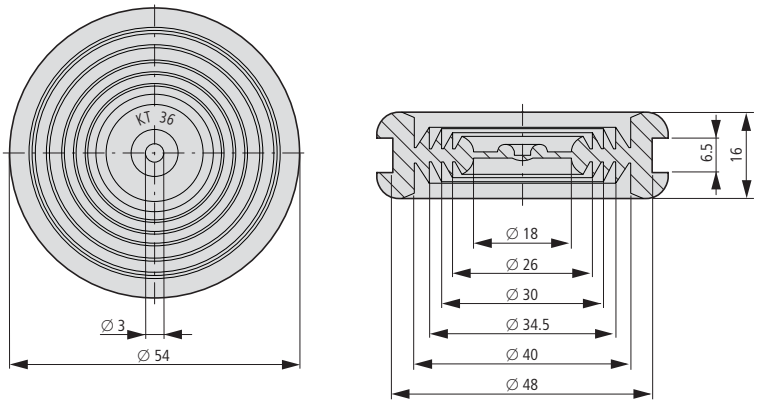
KT21



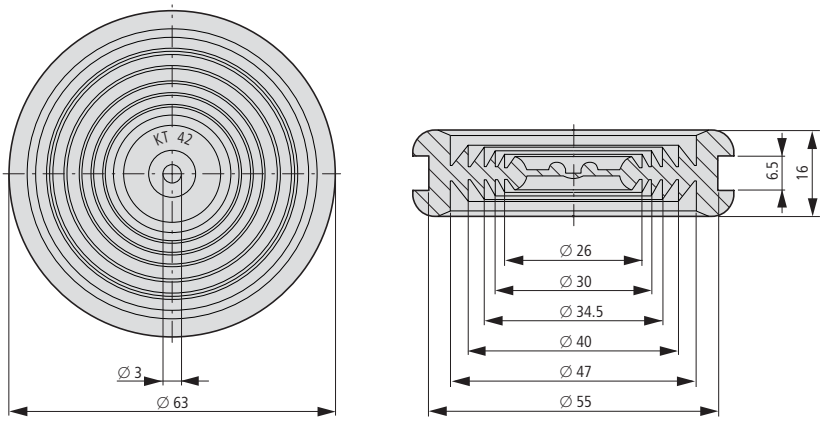
KT29



KT36

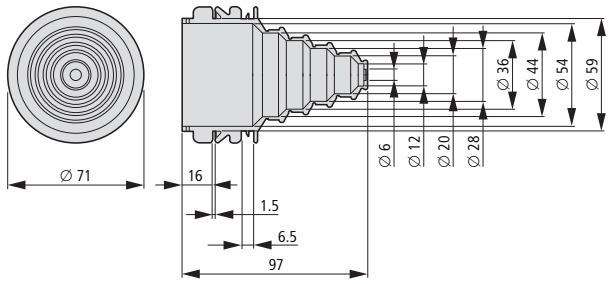


KT42

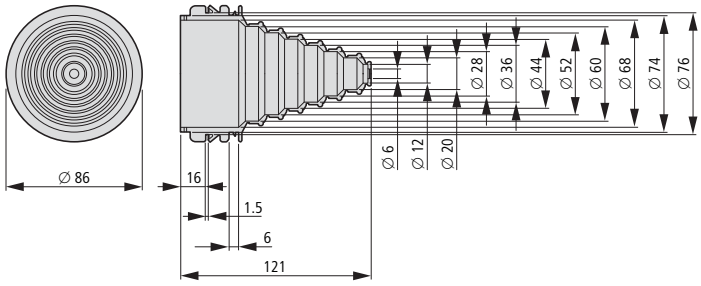


Stepped cable grommets

KT3

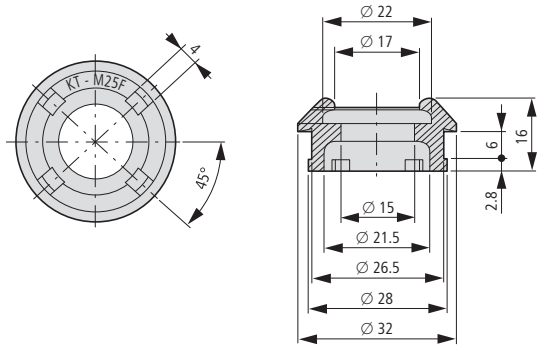


KT4

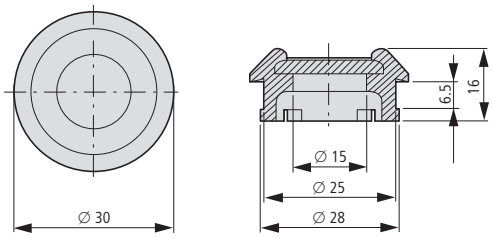


Pressure compensating grommets

KT-M25F

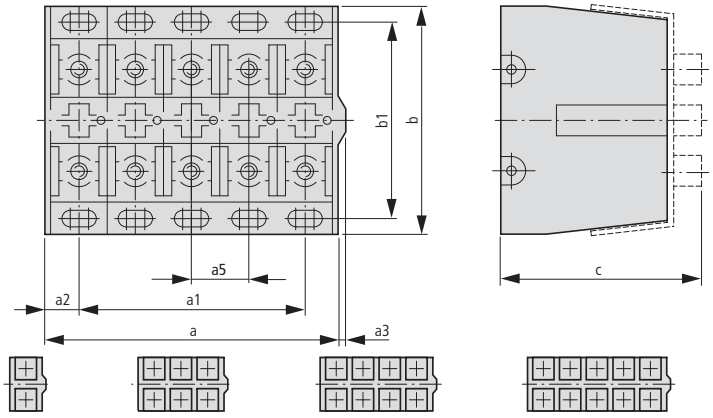


KT16F



Terminals 160 - 1000 A

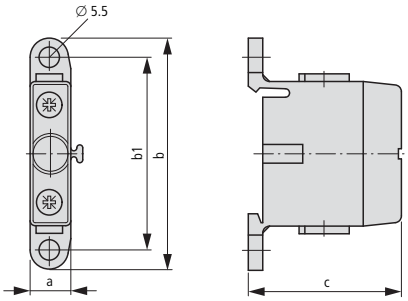
K...



Part no.	a	a1	a2	a3	b	b1	c	a5	l
K95/1	37	-	18.5	3	115	100	88	-	13
K95/3	99	75	12					31	
K95/4	130	100	15						
K95/5	161	125	18						
K150/1	37	-	18.5				105	-	13
K150/3	99	75	12					31	
K150/4	130	100	15						
K150/5	161	125	18						
K240/1	52	-	26				120	-	12
K240/3	144	100	22					46	
K240/4	190	150	20						
K240/5	236	175	30.5						
K2X240/1	68	-	34	4	140	125	127	-	15
K2X240/3	192	125	33.5					62	
K2X240/4	254	200	27						
K2X240/5	316	250	33						
K3X185/1	78	-	39				166	-	15
K3X185/3	222	150	36					72	
K3X185/4	294	225	34.5						
K3X185/5	366	300	33						
K3X240/1	88	-	44	4	165	150	196	-	20
K3X240/3	252	175	39					82	
K3X240/4	334	250	42						
K3X240/5	416	325	45.5						
K4X185/1	88	-	44					-	20
K4X185/3	252	175	39					82	
K4X185/4	334	250	42						
K4X185/5	416	325	45.5						

Insulated individual terminals 32 - 100 A

K…/1

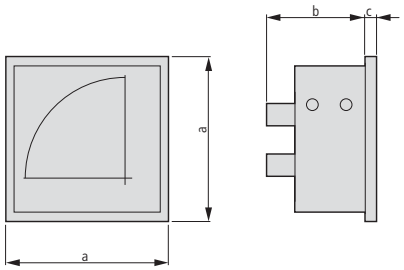


Part no.	a	b	b1	c
K10/1	11	60	50	30
K25/1	14	60	50	33
K50/1	18	60	50	36

Ammeters, voltmeters

EQ

BIEQ

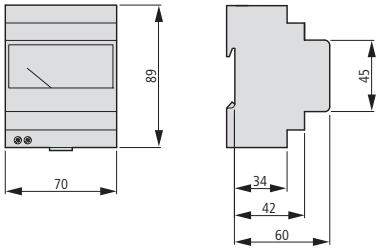


		a	b	c
EQ	45	45	47	5
EQ	48 DIN	48	53	5
EQ, BIEQ	72	72	64	5
EQ, BIEQ	96	96	64	5

Meters for DIN rails, analog

Z-MG/VA...

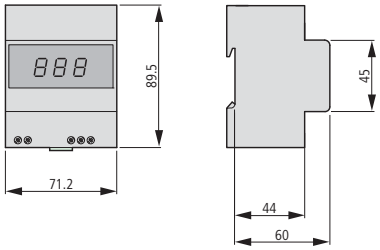
Z-MG/AA...



Meters for DIN rails, digital

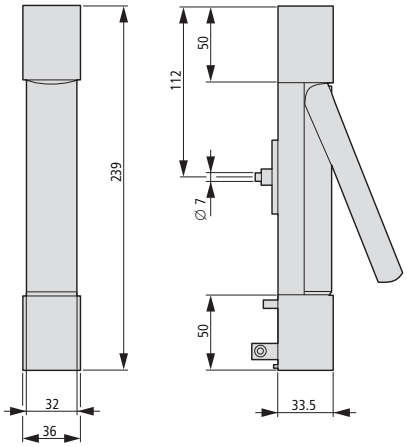
Z-MG/VD...

Z-MG/AD...

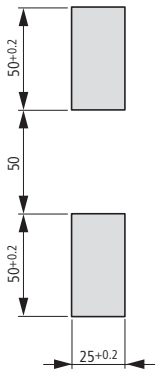


Comfort hinged handle

DH-COMF

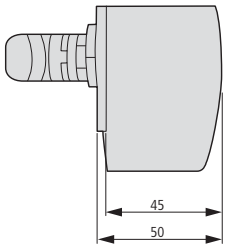


Mounting hole

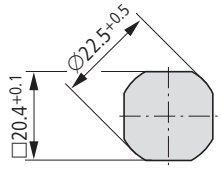


Comfort rotary handles

PHZ-A-...



Mounting hole



Notes

Compact circuit-breaker NZM up to 1600 A
Compact switch-disconnectors N, PN up to 1600 A

Safe energy control, switching and control in industrial settings, buildings and machinery construction: innovative protection concept coupled with diagnostic and communication functions make it possible.

The NZM circuit-breaker assortment offers an interface for the SmartWire-Darwin communication system. → Page 17/140

Model series NZM1 – NZM4
Only four compact switches cover all applications +++ 3- and 4-pole +++ Flexible mounting through modular functions groups +++ Complete nominal current up to 50 °C ambient temperature +++ Suitable for use worldwide → Page 17/4

Door coupling rotary handles
Very wide range of variants for each application +++ All applications have identical drilling template +++ Automatic centering +++ Shaft support for years of operational safety +++ Sidewall installation for space-saving main switch installation → Page 17/118

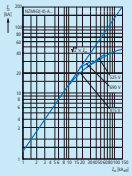
Standard auxiliary contacts, trip-indicator auxiliary contacts from the Eaton command device program.
Favorably priced identical parts from the Titan program reduce variety of types and stockkeeping +++ Installation from front to same position +++ Easy clip-in reduces assembling costs → Page 17/106

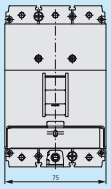
Remote operators
Unified functions concept for all variants +++ Small closing delays from 60 – 100 ms +++ Can be locked and sealed to provide safety → Page 17/134

Diagnostics software NZM-XPC-SOFT
Diagnostics in fault scenario +++ Error-free commissioning +++ Load analysis in operation → Page 17/138

Eaton After Sales Service
Testing switching devices in compliance with regulations applicable to this technology → S22/2

Compact circuit-breakers and switch-disconnectors up to 1600 A





xEnergy is a freely combinable range of system products for energy distribution systems – specially designed for infrastructures in buildings and industrial applications up to 4000 A. The Moeller xEnergy system – consisting of switching and protective devices, the mounting system, the switchboard, as well as the planning and calculation tool – is optimally tailored for safe and reliable energy distribution.

The optimum mechanical adaption of the switchboard components to the Moeller switchgear keeps mounting times short and ensures a high level of flexibility. Type-testing of the complete switchgear–mounting system–switchboard assemblies to IEC EN 60 439 ensures a high level of safety.

Moeller Configurator

Moeller Configurator

The software tool offers you the support you need for configuring the required xEnergy switchgear assembly simply and quickly. You can thus create your quotations and generate the exact parts list at the click of a mouse.

xEnergy Product features

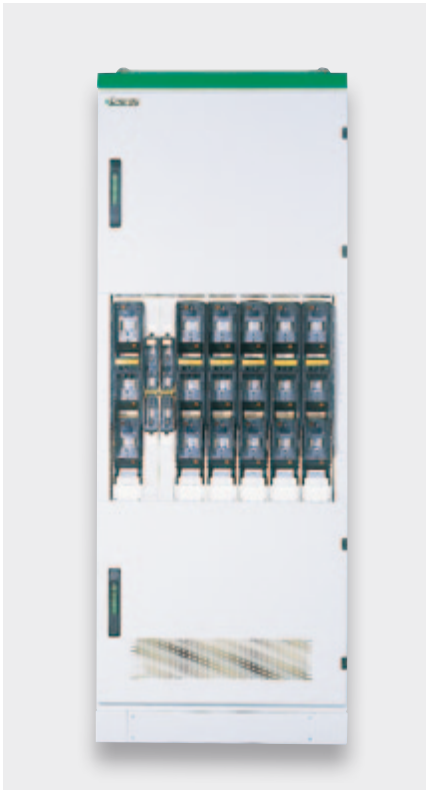
- Enclosures for combination- and separate mounting
- Protection type IP 31 or 55
- Main busbars up to 4000 A
- 2 main busbar systems can be integrated in each section
- Clear separation into functional areas to Form 1 up to Form 4b for increased personal and system protection
- Widths 425, 600, 800, 1000 und 1200 mm
- Height 2000 mm
- Color RAL 7035 (others possible)
- Mains system types TN-C, TN-C-S, TN-S, TT, IT
- Type-tested switchgear assembly (TSK) according to IEC/EN 60439-1
- Optimized for 3 and 4 pole switchgear from Moeller

IZM and NZM circuit-breakers for xEnergy XPower sections

- Clear and symmetrical design reduces the number of busbar connections and saves mounting time
- Simple installation with cable terminal system for drill-free connection in section width

NZM and PKZ circuit-breakers for xEnergy XFixed sections

- High packing density with up to 38 modules in one section thus optimum component utilization
- Flexible module mounting to Form 4 with individual swing front panels
- Simple module mounting to Form 2 on one mounting level
- Flexible combination of functional areas and busbars to IEC/EN 60439 and national installation practices



Prefabricated energy and control distributions
Our system partner operate prefabricated energy and control distributions worldwide.

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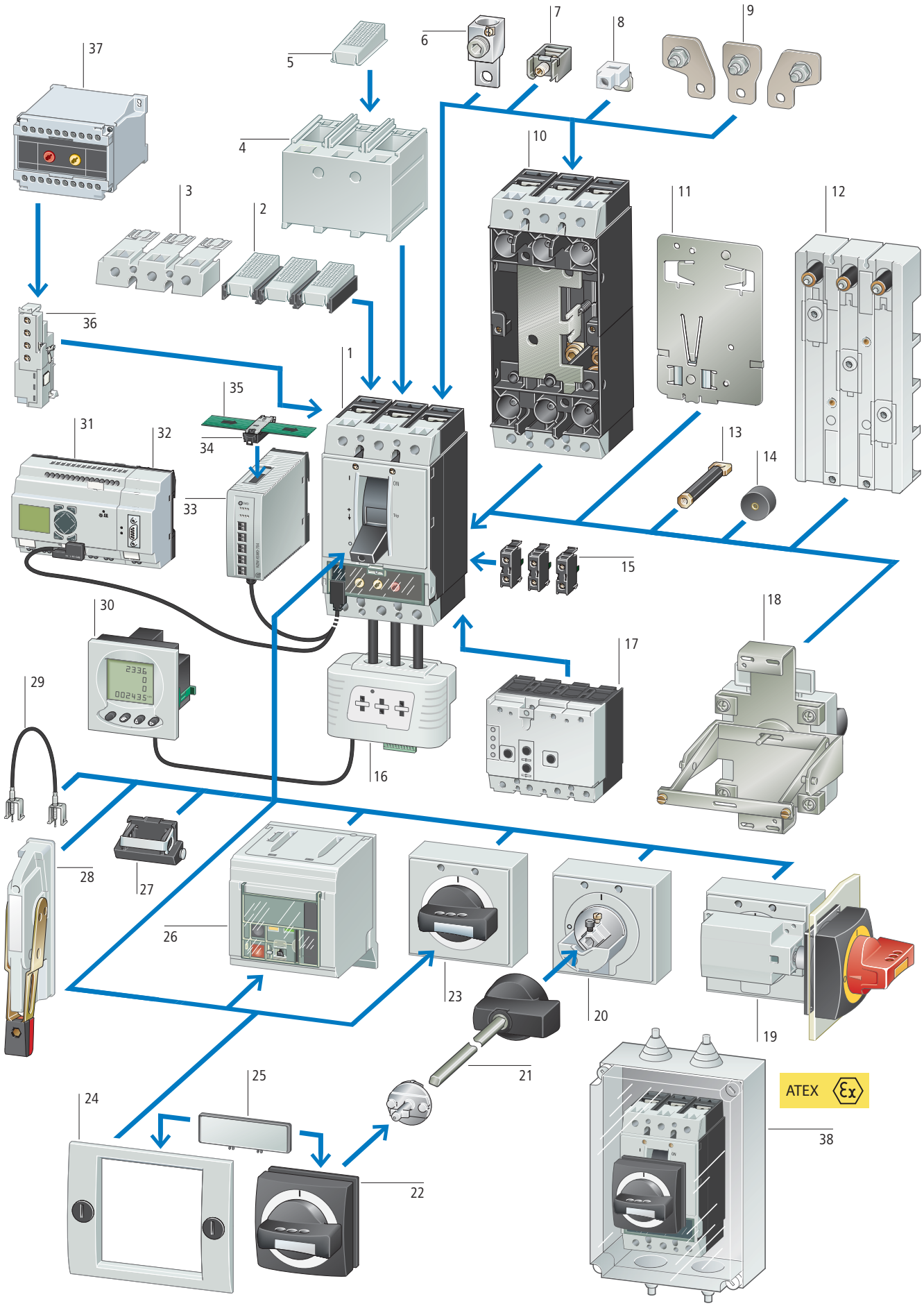
Moeller Systempartner Schaltanlagen

NZM

System overview



Basic devices

Circuit-breakers 1
Rated uninterrupted current up to 1600 A
Switching capacity 25, 36, 50, 150 kA at 415 V
Adjustable releases for overload and short-circuit
Adjustable time selectivity
Protection of systems, cables, motors, generators
3 and 4 pole; IEC/EN 60947
→ Page 17/8

Switch-disconnectors 1
Rated uninterrupted current up to 1600 A
Can be tripped remotely with undervoltage or shunt release
3 and 4 pole; IEC/EN 60947
→ Page 17/42

Circuit-breakers for North America 1
Rated uninterrupted current up to 1200 A
Switching capacity 25, 35, 100 kA at 480 V
Adjustable release for overload and short-circuit
Adjustable time selectivity
Protection of systems, cables, motors, generators
3 and 4 pole, UL 489/CSA 22.2 no. 5.1, IEC/EN 60947
→ Page 17/54

Molded case switches for North America 1
Rated uninterrupted current up to 1200 A
Can be tripped remotely with undervoltage or shunt release
3 pole, UL489/CSA 22.2 no. 5.1
→ Page 17/80

Add-on functions

Standard auxiliary contacts (HIV) 15
Switches with the main contacts.
Performs signalling and interlock functions
→ Page 17/106

Trip-indicating auxiliary contacts (HIA) 15
General trip indication '+', when tripped by voltage release, overload release or short-circuit release
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Early-make auxiliary contacts 36
For interlock and load-shedding circuits
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Voltage releases 15
Undervoltage releases
Shunt releases
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Insulated enclosures 38
Safety switches (maintenance and manual override switches) approved for use in potentially explosive areas in Zone 22.
Degree of protection IP66
ATEX
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Delay unit for undervoltage releases 37
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Rear-mounted drives 18
→ Page 17/127

Door coupling rotary handles 20 22
- Lockable
- With door interlock

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Main switch rotary handles for side wall installation 19
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Can be cut to required length
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Rotary handles 23
Lockable
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For remote switching of circuit-breakers and switch-disconnectors
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Residual-current protection device 17
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Toggle lever locking device 27
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Communication module NZM for SmartWire-Darwin 33
For reading status data, current values, switch model and set values
→ Page 17/140

Measuring and communication module 16
For reading current, voltage, power and energy
MODBUS interface on board
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Display 30
Connectable to modules NZM…XMC-MB
With templates for viewing XMC readings
Indication of min. and max. values
→ Page 17/141

Data management interface (DMI module) 31
Access to diagnostics and operational data
Acquisition of current values
Motor starter function
Parameterization and control of circuit-breakers with electronic releases
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PROFIBUS-DP interface 32
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Connection width extensions 9
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For two terminal locations at top or bottom
NZM1 → Page 17/84
NZM2 → Page 17/88
NZM3 → Page 17/84
NZM4 → Page 17/104

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Standard with control circuit terminal
NZM1 → Page 17/82
NZM2 → Page 17/86
NZM3 → Page 17/94
NZM4 → Page 17/102

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Standard equipment on construction size 1
Flush mounting within the switch housing
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Protection against direct contact where cable lugs, bars or tunnel terminals are used
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NZM3 → Page 17/98
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NZM1-XC35 for 35-mm-top-hat rail
NZM2-XC75 for 75-mm-top-hat rail
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Plug-in units and withdrawable units 10
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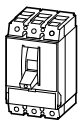
IP2X protection against contact with finger 5
For covers
NZM1 → Page 17/84
NZM2 → Page 17/88
NZM3 → Page 17/98

Circuit-breakers

With main switch characteristics to IEC/EN 60204 and Isolator characteristics to IEC/EN 60947, VDE 0660



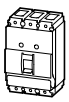
Rated uninterrupted current I_u = Rated current I_n Adjustable overload releases I_r Adjustable short-circuit releases I_i Delayed short-circuit releases I_{sd}	**Thermomagnetic releases** **System and cable protection**					**Motor protection**			
	I_u A	I_u A	I_o A	I_r A	I_i A	I_u A	I_u A	I_r A	I_i A
Ambient temperature at 100% I_u min./max. -25/+50 °C	20	20		0.8 – 1 × I_n	350		20	0.8 – 1 × I_n	350
	25	25					25		
	32	32					32		10 – 14 × I_n
	40	40			8 – 10 × I_n	40	40		8 – 14 × I_n
	50	50			6 – 10 × I_n	50	50		
	63	63				63	63		
	80	80				80	80		
	100	100				**100**	100		NZM1: 8 – 12.5 × I_n NZM2: 8 – 14 × I_n
	125	125					125		8 – 14 × I_n
	160	160			NZM1:8 × I_n 6 – 10 × I_n		160		
		200					**200**		
		250							
			320						
			400						
			500						

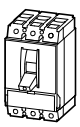
Basic switching capacity		**NZMB1-A...**		**NZMB2-A...**						**NZMB1-M...**		**NZMB2-M...**			
400/415 V	kA/p.f	25	0.25	25	0.25					25	0.25	25	0.25		
440 V	kA/p.f	25	0.25	25	0.25					25	0.25	25	0.25		
Comfort switching capacity		**NZMC1-A...**		**NZMC2-A...**		**NZMC3-A...**									
400/415 V	kA/p.f	36	0.25	36	0.25	36	0.25								
440 V	kA/p.f	30	0.25	30	0.25	30	0.25								
525 V	kA/p.f	12	0.5	12	0.5	12	0.5								
690 V	kA/p.f	8	0.5	8	0.5	8	0.5								
Normal switching capacity		**NZMN1-A...**		**NZMN2-A...**		**NZMN3-A...**				**NZMN1-M...**		**NZMN2-M...**			
400/415 V	kA/p.f	50	0.25	50	0.25	50	0.25			50	0.25	50	0.25		
440 V	kA/p.f	35	0.25	35	0.25	35	0.25			35	0.25	35	0.25		
525 V	kA/p.f	20	0.30	25	0.25	25	0.25			20	0.30	25	0.25		
690 V	kA/p.f	10	0.50	20	0.30	20	0.30			10	0.50	20	0.30		
High switching capacity		**NZMH1-A-...**		**NZMH2-A-...**		**NZMH3-A-...**						**NZMH2-M...**			
400/415 V	kA/p.f	100	0.20	150	0.20	150	0.20					150	0.20		
440 V	kA/p.f	35	0.25	130	0.20	130	0.20					130	0.20		
525 V	kA/p.f	20	0.30	50	0.25	65	0.20					50	0.25		
690 V	kA/p.f	10	0.50	20	0.30	35	0.25					20	0.30		

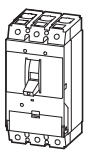
Notes **The stated switching capacity values are rated ultimate short-circuit breaking capacities (I_{cu})**

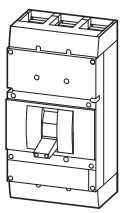
Switch-disconnectors

With main switch characteristics to IEC/EN 60204 and VDE 0113
Isolating characteristics to IEC/EN 60947, VDE 0660
without overload and short-circuit release

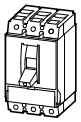
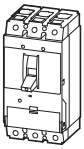
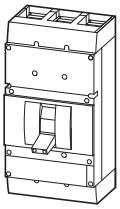








Rated uninterrupted current I_u = Rated current I_n		63 – **160**		160 – **250**		400 – **630**		630 – **1600**
Type N can be triggered with U/A shunt release		**PN1-...**	**N1-...**	**PN2-...**	**N2-...**	**PN3-...**	**N3-...**	**N4-...**
Rated short-circuit making capacity I_{cm}	kA	2.8	2.8	5.5	5.5	25	25	53
Rated short-time withstand current I_{cw} (1s-current$_{rms}$)	kA	2	2	3.5	3.5	12	12	25

Electronic releases

Systems, cable, selectivity and generator protection

I_u A	I_u A	I_u A	I_r A	I_{sd} A	I_i A
100	250		0.5 – 1 × I_n	2 – 10 × I_r	2 – 12 × I_n
160	400				
250	**630**	630			
		800			
		1000			
		1250		2 – 6 × I_r	2 – 8 × I_r
		1600			

Motor protection

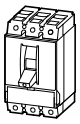
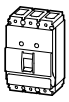
I_u A	I_r A	I_i A
90	0.5 – 1 × I_n	2 – 14 × I_r
140		
220		
350		
450		
550		
875		
1400		

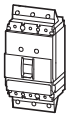
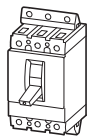
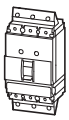
NZMN2-...E...		**NZMN3-...E...**		**NZMN4-...E...**		**NZMN2-ME...**		**NZMN3-ME...**		**NZMN4-ME...**	
50	0.25	50	0.25	50	0.25	50	0.25	50	0.25	50	0.25
35	0.25	35	0.25	35	0.25	35	0.25	35	0.25	35	0.25
25	0.25	25	0.25	25	0.25	25	0.25	25	0.25	25	0.25
20	0.30	20	0.30	20	0.30	20	0.30	20	0.30	20	0.30
NZMH2-...E...		**NZMH3-...E...**		**NZMH4-...E...**		**NZMH2-ME...**		**NZMH3-ME...**		**NZMH4-ME...**	
150	0.20	150	0.20	85[1)]	0.20	150	0.20	150	0.20	85[1)]	0.20
130	0.20	130	0.20	85	0.20	130	0.20	130	0.20	85	0.20
50	0.25	65	0.20	65	0.20	50	0.25	65	0.20	65	0.20
20	0.30	35	0.30	50	0.25	20	0.30	35	0.30	50	0.25

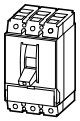
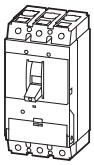
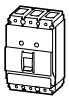
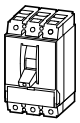
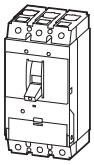
A selection of approved circuit-breakers and switch-disconnectors for world-wide use → Page 17/54

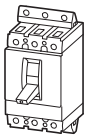
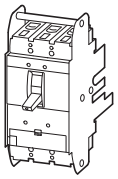
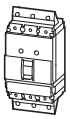
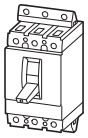
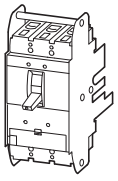
[1)] For higher switching capacity please inquire

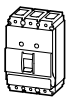
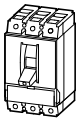
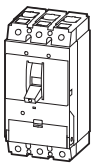
Ordering

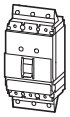
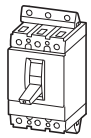
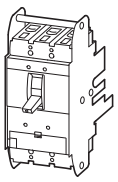
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		**Fixed mounting** with screw terminals		
			Overload releases	Short-circuit releases	**Part no.** Article no.	**Price** See price list	
				Non-delayed			
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	A	A				
							
System and cable protection							
Basic switching capacity							
	**25**	20	15-20	350 A fixed	Screw terminals as accessories		
		25	20-25	350 A fixed			
		32	25-32	350 A fixed			
		40	32-40	8-10			
		50	40-50	6-10			
		63	50-63	6-10			
		80	63-80	6-10			
		100	80-100	6-10			
		125	100-125	6-10			
		160	125-160	1280 A fixed			
		160	125-160	6-10	**NZMB2-A160** 259088		S
		200	160-200	6-10	**NZMB2-A200** 259089		S
		250	200-250	6-10	**NZMB2-A250** 259090		S
		300	240-300	6-10	**NZMB2-A300** 107518		S
Comfort switching capacity							
	**36**	20	15-20	350 A fixed	Screw terminals as accessories		
		25	20-25	350 A fixed			
		32	25-32	350 A fixed			
		40	32-40	8-10			
		50	40-50	6-10			
		63	50-63	6-10			
		80	63-80	6-10			
		100	80-100	6-10			
		125	100-125	6-10			
		160	125-160	1280 A fixed			

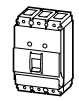
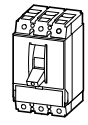
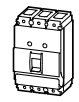
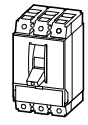
Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no. Order base separately	**Price** See price list		Std. pack	**Notes**
								B = box terminals **S = screw terminals** For further terminal types see accessories
NZMB1-A20 280987		B		**NZMB1-A20-SVE** 112733			1 off	IEC/EN 60947-2
NZMB1-A25 280988		B		**NZMB1-A25-SVE** 112734				
NZMB1-A32 280989		B		**NZMB1-A32-SVE** 112735				
NZMB1-A40 259075		B		**NZMB1-A40-SVE** 112703				
NZMB1-A50 259076		B		**NZMB1-A50-SVE** 112704				
NZMB1-A63 259077		B		**NZMB1-A63-SVE** 112705				
NZMB1-A80 259078		B		**NZMB1-A80-SVE** 112706				
NZMB1-A100 259079		B		**NZMB1-A100-SVE** 112707				
NZMB1-A125 259080		B		**NZMB1-A125-SVE** 112708				
NZMB1-A160 281230		B		–				
NZMB2-A160-BT 110215		B		**NZMB2-A160-SVE** 113193				
NZMB2-A200-BT 110216		B		**NZMB2-A200-SVE** 113194				
NZMB2-A250-BT 110217		B		**NZMB2-A250-SVE** 113195				
NZMB2-A300-BT 110214		B		–				
NZMC1-A20 283293		B		**NZMC1-A20-SVE** 112753			1 off	IEC/EN 60947-2
NZMC1-A25 283294		B		**NZMC1-A25-SVE** 112754				
NZMC1-A32 283295		B		**NZMC1-A32-SVE** 112755				
NZMC1-A40 271392		B		**NZMC1-A40-SVE** 112737				
NZMC1-A50 271393		B		**NZMC1-A50-SVE** 112738				
NZMC1-A63 271394		B		**NZMC1-A63-SVE** 112739				
NZMC1-A80 271395		B		**NZMC1-A80-SVE** 112740				
NZMC1-A100 271396		B		**NZMC1-A100-SVE** 112741				
NZMC1-A125 271397		B		**NZMC1-A125-SVE** 112742				
NZMC1-A160 283296		B		–				

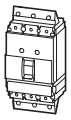
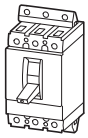
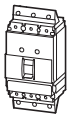
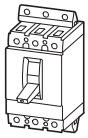
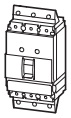
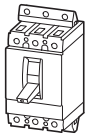
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		**Fixed mounting** with screw terminals		
			Overload releases	Short-circuit releases	**Part no.** Article no.	**Price** See price list	
				Non-delayed			
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	A	A				
				$I>$			
System and cable protection							
Comfort switching capacity							
	**36**	160	125-160	6-10	**NZMC2-A160** 271421		S
		200	160-200	6-10	**NZMC2-A200** 271422		S
		250	200-250	6-10	**NZMC2-A250** 271423		S
		300	240-300	6-10	**NZMC2-A300** 107519		S
		320	250-320	6-10	**NZMC3-A320** 109665		S
		400	320-400	6-10	**NZMC3-A400** 109666		S
		500	400-500	6-10	**NZMC3-A500** 109667		S
Normal switching capacity							
	**50**	20	15-20	350 A fixed	Screw terminals as accessories		
		25	20-25	350 A fixed			
		32	25-32	350 A fixed			
		40	32-40	8-10			
		50	40-50	6-10			
		63	50-63	6-10			
		80	63-80	6-10			
		100	80-100	6-10			
		125	100-125	6-10			
		160	125-160	1280 A fixed			
		160	125-160	6-10	**NZMN2-A160** 259092		S
		200	160-200	6-10	**NZMN2-A200** 259093		S
		250	200-250	6-10	**NZMN2-A250** 259094		S
		300	240-300	6-10	**NZMN2-A300** 107580		S
		320	250-320	6-10	**NZMN3-A320** 109669		S
		400	320-400	6-10	**NZMN3-A400** 109670		S
		500	400-500	6-10	**NZMN3-A500** 109671		S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no. Order base separately	**Price** See price list		Std. pack	**Notes**
								B = box terminals **S = screw terminals** For further terminal types see accessories
NZMC2-A160-BT 110219		B		**NZMC2-A160-SVE** 113220			1 off	IEC/EN 60947-2
NZMC2-A200-BT 110280		B		**NZMC2-A200-SVE** 113221				
NZMC2-A250-BT 110281		B		**NZMC2-A250-SVE** 113222				
NZMC2-A300-BT 110218		B		–				
NZMC3-A320-BT 110299		B		**NZMC3-A320-AVE** 113509				
NZMC3-A400-BT 110300		B		**NZMC3-A400-AVE** 113510				
NZMC3-A500-BT 110301		B		**NZMC3-A500-AVE** 113511				
NZMN1-A20 281231		B		**NZMN1-A20-SVE** 112776			1 off	IEC/EN 60947-2
NZMN1-A25 281232		B		**NZMN1-A25-SVE** 112777				
NZMN1-A32 281233		B		**NZMN1-A32-SVE** 112778				
NZMN1-A40 259081		B		**NZMN1-A40-SVE** 112757				
NZMN1-A50 259082		B		**NZMN1-A50-SVE** 112758				
NZMN1-A63 259083		B		**NZMN1-A63-SVE** 112759				
NZMN1-A80 259084		B		**NZMN1-A80-SVE** 112760				
NZMN1-A100 259085		B		**NZMN1-A100-SVE** 112761				
NZMN1-A125 259086		B		**NZMN1-A125-SVE** 112762				
NZMN1-A160 281234		B		–				
NZMN2-A160-BT 110283		B		**NZMN2-A160-SVE** 113244				IEC/EN 60947-2
NZMN2-A200-BT 110284		B		**NZMN2-A200-SVE** 113245				
NZMN2-A250-BT 110285		B		**NZMN2-A250-SVE** 113246				
NZMN2-A300-BT 110282		B		–				
NZMN3-A320-BT 110302		B		**NZMN3-A320-AVE** 110858				
NZMN3-A400-BT 110303		B		**NZMN3-A400-AVE** 110859				
NZMN3-A500-BT 110304		B		**NZMN3-A500-AVE** 110860				

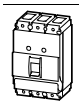
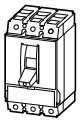
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
			Overload releases	Short-circuit releases			
				Non-delayed			
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	A	A				
				$I>$			
System and cable protection							
High switching capacity							
	**100**	20	15-20	350 A fixed	Screw terminals as accessories		
		25	20-25	350 A fixed			
		32	25-32	350 A fixed			
		40	32-40	8-10			
		50	40-50	6-10			
		63	50-63	6-10			
		80	63-80	6-10			
		100	80-100	6-10			
		125	100-125	6-10			
		160	125-160	1280 A fixed			
	**150**	20	15-20	350 A fixed	**NZMH2-A20** 281281		S
		25	20-25	6-10	**NZMH2-A25** 281282		S
		32	25-32	350 A fixed	**NZMH2-A32** 281283		S
		40	32-40	8-10	**NZMH2-A40** 259095		S
		50	40-50	6-10	**NZMH2-A50** 259096		S
		63	50-63	6-10	**NZMH2-A63** 259097		S
		80	63-80	6-10	**NZMH2-A80** 259098		S
		100	80-100	6-10	**NZMH2-A100** 259099		S
		125	100-125	6-10	**NZMH2-A125** 259100		S
		160	125-160	6-10	**NZMH2-A160** 259101		S
		200	160-200	6-10	**NZMH2-A200** 259102		S
		250	200-250	6-10	**NZMH2-A250** 259103		S
		300	240-300	6-10	**NZMH2-A300** 107581		S
		320	250-320	6-10	**NZMH3-A320** 109673		S
		400	320-400	6-10	**NZMH3-A400** 109674		S
		500	400-500	6-10	**NZMH3-A500** 109675		S

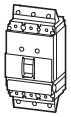
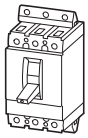
Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no. Order base separately	**Price** See price list		Std. pack	**Notes**
								B = box terminals **S = screw terminals** For further terminal types see accessories
NZMH1-A20 284376		B		**NZMH1-A20-SVE** 112795			1 off	IEC/EN 60947-2
NZMH1-A25 284377		B		**NZMH1-A25-SVE** 112796				
NZMH1-A32 284378		B		**NZMH1-A32-SVE** 112797				
NZMH1-A40 284379		B		**NZMH1-A40-SVE** 112798				
NZMH1-A50 284410		B		**NZMH1-A50-SVE** 112799				
NZMH1-A63 284411		B		**NZMH1-A63-SVE** 112800				
NZMH1-A80 284412		B		**NZMH1-A80-SVE** 112801				
NZMH1-A100 284413		B		**NZMH1-A100-SVE** 112802				
NZMH1-A125 284414		B		**NZMH1-A125-SVE** 112803				
NZMH1-A160 284415		B		–				
NZMH2-A20-BT 110296		B		**NZMH2-A20-SVE** 113351			1 off	
NZMH2-A25-BT 110297		B		**NZMH2-A25-SVE** 113352				
NZMH2-A32-BT 110298		B		**NZMH2-A32-SVE** 113353				
NZMH2-A40-BT 110287		B		**NZMH2-A40-SVE** 113328				
NZMH2-A50-BT 110288		B		**NZMH2-A50-SVE** 113329				
NZMH2-A63-BT 110289		B		**NZMH2-A63-SVE** 113330				
NZMH2-A80-BT 110290		B		**NZMH2-A80-SVE** 113331				
NZMH2-A100-BT 110291		B		**NZMH2-A100-SVE** 113332				
NZMH2-A125-BT 110292		B		**NZMH2-A125-SVE** 113333				
NZMH2-A160-BT 110293		B		**NZMH2-A160-SVE** 113334				
NZMH2-A200-BT 110294		B		**NZMH2-A200-SVE** 113335				
NZMH2-A250-BT 110295		B		**NZMH2-A250-SVE** 113336				
NZMH2-A300-BT 110286		B		–				
NZMH3-A320-BT 110305		B		**NZMH3-A320-AVE** 110861				
NZMH3-A400-BT 110306		B		**NZMH3-A400-AVE** 110862				
NZMH3-A500-BT 110307		B		**NZMH3-A500-AVE** 110863				

	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		Rated operational power AC-3 50/60 Hz	Rated operational current	**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
			Overload releases	Short-circuit releases Non-delayed					
					400 V	400 V			
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	P	I_e			
	kA	A	A		kW	A			
Motor protection									
• NZM...1-M...: with phase failure sensitivity • Tripping class 10 A									
Basic switching capacity									
	**25**	40	32-40	8-14	18.5	36	Screw terminals as accessories		
		50	40-50	8-14	22	41			
		63	50-63	8-14	30	55			
		80	63-80	8-14	37	68			
		100	80-100	8-12.5	45	81			
		125	100-125	8-14	45	99	**NZMB2-M125** 265715		S
		160	125-160	8-14	75	134	**NZMB2-M160** 265716		S
		200	160-200	8-14	110	196	**NZMB2-M200** 265717		S
Comfort switching capacity									
	**36**	40	32-40	8-14	18.5	36	Screw terminals as accessories		
		50	40-50	8-14	22	41			
		63	50-63	8-14	30	55			
		80	63-80	8-14	37	68			
		100	80-100	8-12.5	45	81			
		125	100-125	8-14	45	99	**NZMC2-M125** 271424		S
		160	125-160	8-14	75	134	**NZMC2-M160** 271425		S
		200	160-200	8-14	110	196	**NZMC2-M200** 271426		S
Normal switching capacity									
	**50**	40	32-40	8-14	18.5	36	Screw terminals as accessories		
		50	40-50	8-14	22	41			
		63	50-63	8-14	30	55			
		80	63-80	8-14	37	68			
		100	80-100	8-12.5	45	81			
		125	100-125	8-14	45	99	**NZMN2-M125** 265723		S
		160	125-160	8-14	75	134	**NZMN2-M160** 265724		S
		200	160-200	8-14	110	196	**NZMN2-M200** 265725		S

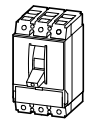
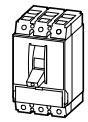
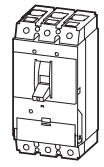
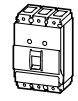
Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no. Order base separately	**Price** See price list		Std. pack	**Notes**
								B = box terminals **S = screw terminals** For further terminal types see accessories
NZMB1-M40 265710		B		**NZMB1-M40-SVE** 112709			1 off	IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breakers fulfill all requirements for utilization category AC-3.
NZMB1-M50 265711		B		**NZMB1-M50-SVE** 112720				
NZMB1-M63 265712		B		**NZMB1-M63-SVE** 112721				
NZMB1-M80 265713		B		**NZMB1-M80-SVE** 112722				
NZMB1-M100 265714		B		**NZMB1-M100-SVE** 112723				
Terminals as accessory				**NZMB2-M125-SVE** 113196				
				NZMB2-M160-SVE 113197				
				NZMB2-M200-SVE 113198				
NZMC1-M40 271398		B		**NZMC1-M40-SVE** 112743			1 off	
NZMC1-M50 271399		B		**NZMC1-M50-SVE** 112744				
NZMC1-M63 271400		B		**NZMC1-M63-SVE** 112745				
NZMC1-M80 271401		B		**NZMC1-M80-SVE** 112746				
NZMC1-M100 271402		B		**NZMC1-M100-SVE** 112747				
Terminals as accessory				**NZMC2-M125-SVE** 113223				
				NZMC2-M160-SVE 113224				
				NZMC2-M200-SVE 113225				
NZMN1-M40 265718		B		**NZMN1-M40-SVE** 112763			1 off	
NZMN1-M50 265719		B		**NZMN1-M50-SVE** 112764				
NZMN1-M63 265720		B		**NZMN1-M63-SVE** 112765				
NZMN1-M80 265721		B		**NZMN1-M80-SVE** 112766				
NZMN1-M100 265722		B		**NZMN1-M100-SVE** 112767				
Terminals as accessory				**NZMN2-M125-SVE** 113250				
				NZMN2-M160-SVE 113251				
				NZMN2-M200-SVE 113252				

Tripping class	**Tripping time T_p with load on all poles of 7.2 times set current value.**
10 A	$2 s < T_p \leqq 10 s$
10	$4 s < T_p \leqq 10 s$
20	$6 s < T_p \leqq 20 s$
30	$9 s < T_p \leqq 30 s$

	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		Rated operational power AC-3 50/60 Hz	Rated operational current	**Fixed mounting** with screw terminals		
			Overload releases	Short-circuit releases Non-delayed			**Part no.** Article no.	**Price** See price list	
					400 V	400 V			
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	P	I_e			
	kA	A	A		kW	A			
Motor protection									
• NZM...1-M...: with phase failure sensitivity • Tripping class 10 A									
High switching capacity									
	**100**	40	32-40	8-14	18.5	36	Screw terminals as accessories		
		50	40-50	8-14	22	41			
		63	50-63	8-14	30	55			
		80	63-80	8-14	37	68			
		100	80-100	8-12.5	45	81			
	**150**	20	16-20	350 A fixed	7.5	16	**NZMH2-M20** 281299		S
		25	20-25	350 A fixed	11	21.7	**NZMH2-M25** 281300		S
		32	25-32	10-14	15	29.3	**NZMH2-M32** 281301		S
		40	32-40	8-14	18.5	36	**NZMH2-M40** 281302		S
		50	40-50	8-14	22	41	**NZMH2-M50** 281303		S
		63	50-63	8-14	30	55	**NZMH2-M63** 281304		S
		80	63-80	8-14	37	68	**NZMH2-M80** 281305		S
		100	80-100	8-14	45	81	**NZMH2-M100** 281306		S
		125	100-125	8-14	45	99	**NZMH2-M125** 281307		S
		160	125-160	8-14	75	134	**NZMH2-M160** 281308		S
		200	160-200	8-14	110	196	**NZMH2-M200** 281309		S

Fixed mounting with box terminals				**Plug-in units**				
Part no. Article no.	**Price** See price list			**Part no.** Article no. Order base separately	**Price** See price list		Std. pack	**Notes**
								B = box terminals **S = screw terminals** For further terminal types see accessories
NZMH1-M40 115450		B		**NZMH1-M40-SVE** 115790			1 off	IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breakers fulfill all requirements for utilization category AC-3.
NZMH1-M50 115451		B		**NZMH1-M50-SVE** 115791				
NZMH1-M63 115452		B		**NZMH1-M63-SVE** 115792				
NZMH1-M80 115453		B		**NZMH1-M80-SVE** 115793				
NZMH1-M100 115454		B		**NZMH1-M100-SVE** 115794				
Terminals as accessory				**NZMH2-M20-SVE** 113354				
				NZMH2-M25-SVE 113355				
				NZMH2-M32-SVE 113356				
				NZMH2-M40-SVE 113357				
				NZMH2-M50-SVE 113358				
				NZMH2-M63-SVE 113359				
				NZMH2-M80-SVE 113360				
				NZMH2-M100-SVE 113361				
				NZMH2-M125-SVE 113362				
				NZMH2-M160-SVE 113363				
				NZMH2-M200-SVE 113364				

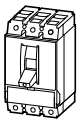
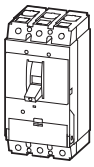
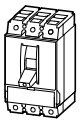
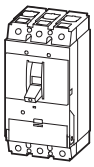
Tripping class	**Tripping time T_p with load on all poles of 7.2 times set current value.**
10 A	2 s < T_p ≦ 10 s
10	4 s < T_p ≦ 10 s
20	6 s < T_p ≦ 20 s
30	9 s < T_p ≦ 30 s

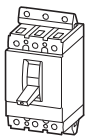
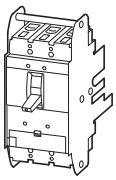
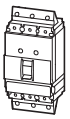
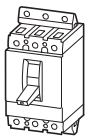
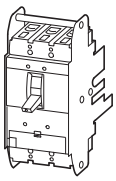
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range	Rated operational power AC-3 50/60 Hz	Rated operational current AC-3 50/60 Hz	**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
			Short-circuit releases	400 V	400 V			
	I_{cu}	$I_n = I_u$	Non-delayed	P	I_e			
	kA	A	$I_i = I_n$ x ...	kW	A			
			$I>$					
Short-circuit protection								
Motor protection in conjunction with overload relay • With short-circuit releases • Without overload releases I_r								
Basic switching capacity								
	**25**	40	8-14	18.5	max. 36	Screw terminals as accessories		
		50	8-14	22	max. 41			
		63	8-14	30	max. 55			
		80	8-14	37	max. 68			
		100	8-12.5	45	max. 99			
		125	8-14	45	max. 99	**NZMB2-S125** 265736		S
		160	8-14	75	max. 134	**NZMB2-S160** 265737		S
		200	8-12.5	110	max. 196	**NZMB2-S200** 265738		S
Comfort switching capacity								
	**36**	40	8-14	18.5	max. 36	Screw terminals as accessories		
		50	8-14	22	max. 41			
		63	8-14	30	max. 55			
		80	8-14	37	max. 68			
		100	8-12.5	45	max. 99			
		125	8-14	45	max. 99	**NZMC2-S125** 271427		S
		160	8-14	75	max. 134	**NZMC2-S160** 271428		S
		200	8-12.5	110	max. 196	**NZMC2-S200** 271429		S
		250	8-14	132	max. 231	**NZMC3-S250** 109676		S
		320	8-14	160	max. 279	**NZMC3-S320** 109677		S
		400	6-10	200	max. 349	**NZMC3-S400** 109678		S
		500	6-10	250	max. 437	**NZMC3-S500** 109679		S
Normal switching capacity								
	**50**	40	8-14	18.5	max. 36	Screw terminals as accessories		
		50	8-14	22	max. 41			
		63	8-14	30	max. 55			
		80	8-14	37	max. 68			
		100	8-12.5	45	max. 99			

Fixed mounting with box terminals			**Plug-in/withdrawable units**			
Part no. Article no.	**Price** See price list		**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
			Order base separately			
						B = box terminals **S = screw terminals** For further terminal types see accessories
NZMB1-S40 265726		B	**NZMB1-S40-SVE** 112724		1 off	IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breakers fulfill all requirements for utilization category AC-3.
NZMB1-S50 265727		B	**NZMB1-S50-SVE** 112725			
NZMB1-S63 265728		B	**NZMB1-S63-SVE** 112726			
NZMB1-S80 265729		B	**NZMB1-S80-SVE** 112727			
NZMB1-S100 265730		B	**NZMB1-S100-SVE** 112728			
Terminals as accessory			**NZMB2-S125-SVE** 113199			
			NZMB2-S160-SVE 113200			
			NZMB2-S200-SVE 113201			
NZMC1-S40 271403		B	**NZMC1-S40-SVE** 112748		1 off	Selection of circuit-breakers without overload release when combining for instance with ZEV electronic motor-protective relays: The tripping response of the motor-protective relay is matched by setting the tripping class to match the starting behavior of the motor to be protected.
NZMC1-S50 271404		B	**NZMC1-S50-SVE** 112749			
NZMC1-S63 271405		B	**NZMC1-S63-SVE** 112750			
NZMC1-S80 271406		B	**NZMC1-S80-SVE** 112751			
NZMC1-S100 271407		B	**NZMC1-S100-SVE** 112752			
Terminals as accessory			**NZMC2-S125-SVE** 113226			
			NZMC2-S160-SVE 113227			
			NZMC2-S200-SVE 113228			
			NZMC3-S250-AVE 113512			
			NZMC3-S320-AVE 113513			
			NZMC3-S400-AVE 113514			
			NZMC3-S500-AVE 113515			
NZMN1-S40 265731		B	**NZMN1-S40-SVE** 112768		1 off	
NZMN1-S50 265732		B	**NZMN1-S50-SVE** 112769			
NZMN1-S63 265733		B	**NZMN1-S63-SVE** 112770			
NZMN1-S80 265734		B	**NZMN1-S80-SVE** 112771			
NZMN1-S100 265735		B	**NZMN1-S100-SVE** 112772			

Tripping class	**Tripping time T_p with load on all poles of 7.2 times set current value.**
10 A	$2\ s < T_p \leqq 10\ s$
10	$4\ s < T_p \leqq 10\ s$
20	$6\ s < T_p \leqq 20\ s$
30	$9\ s < T_p \leqq 30\ s$

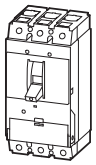
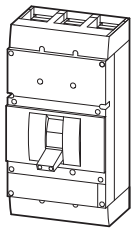
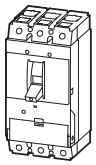
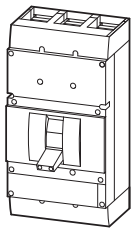
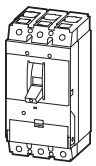
	I_n in A	**Maximum permissible tripping class**
NZM...1-S...	40	30
	50	30
	63	30
	80	20
	100	15
NZM...2-S...	40	30
	50	30
	63	30
	80	30
	100	30
	125	30
	160	20
	200	10
NZM...3-S...	250	30
	320	30
	400	30
	500	20

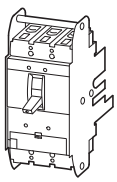
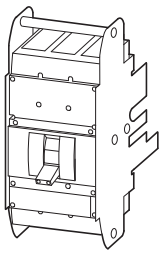
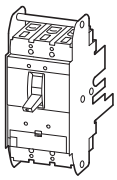
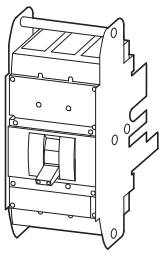
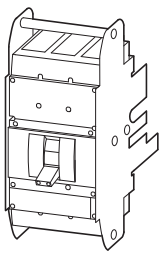
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range	Rated operational power AC-3 50/60 Hz	Rated operational current AC-3 50/60 Hz	**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
			Short-circuit releases	400 V	400 V			
	I_{cu}	$I_n = I_u$	Non-delayed	P	I_e			
	kA	A	$I_i = I_n$ x …	kW	A			
			$I>$					
Short-circuit protection								
Motor protection in conjunction with overload relay • With short-circuit release • Without overload release I_r								
Normal switching capacity								
	**50**	125	8-14	45	max. 99	**NZMN2-S125** 265739		S
		160	8-14	75	max. 134	**NZMN2-S160** 265740		S
		200	8-12.5	110	max. 196	**NZMN2-S200** 265741		S
		250	8-14	132	max. 231	**NZMN3-S250** 109680		S
		320	8-14	160	max. 279	**NZMN3-S320** 109681		S
		400	6-10	200	max. 349	**NZMN3-S400** 109682		S
		500	6-10	250	max. 437	**NZMN3-S500** 109683		S
High switching capacity								
	**100**	40	8-14	18.5	max. 36	Screw terminals as accessories		
		50	8-14	22	max. 41			
		63	8-14	30	max. 55			
		80	8-14	37	max. 68			
		100	8-12.5	45	max. 99			
	**150**	40	8-14	18.5	max. 36	**NZMH2-S40** 265742		S
		50	8-14	22	max. 41	**NZMH2-S50** 265743		S
		63	8-14	30	max. 55	**NZMH2-S63** 265744		S
		80	8-14	37	max. 68	**NZMH2-S80** 265745		S
		100	8-14	45	max. 99	**NZMH2-S100** 265746		S
		125	8-14	45	max. 99	**NZMH2-S125** 265747		S
		160	8-14	75	max. 134	**NZMH2-S160** 265748		S
		200	8-12.5	110	max. 196	**NZMH2-S200** 265749		S
		250	8-14	132	max. 231	**NZMH3-S250** 109684		S
		320	8-14	160	max. 279	**NZMH3-S320** 109685		S
		400	6-10	200	max. 349	**NZMH3-S400** 109686		S
		500	6-10	250	max. 437	**NZMH3-S500** 109687		S

Fixed mounting with box terminals			**Plug-in/withdrawable units**			
Part no. Article no.	**Price** See price list		**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
			Order base separately			**B = box terminals** **S = screw terminals** For further terminal types see accessories
Terminals as accessory			**NZMN2-S125-SVE** 113253		1 off	IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breakers fulfill all requirements for utilization category AC-3.
			NZMN2-S160-SVE 113254			
			NZMN2-S200-SVE 113255			
			**NZMN3-S250-AVE** 113523			
			NZMN3-S320-AVE 113524			
			NZMN3-S400-AVE 113525			
			NZMN3-S500-AVE 113526			
NZMH1-S40 284436		B 	**NZMH1-S40-SVE** 112805		1 off	Selection of circuit-breakers without overload release when combining for instance with ZEV electronic motor-protective relays: The tripping response of the motor-protective relay is matched by setting the tripping class to match the starting behavior of the motor to be protected.
NZMH1-S50 284437		B	**NZMH1-S50-SVE** 112806			
NZMH1-S63 284438		B	**NZMH1-S63-SVE** 112807			
NZMH1-S80 284439		B	**NZMH1-S80-SVE** 112808			
NZMH1-S100 284440		B	**NZMH1-S100-SVE** 112809			
Terminals as accessory			**NZMH2-S40-SVE** 113340			
			NZMH2-S50-SVE 113341			
			NZMH2-S63-SVE 113342			
			NZMH2-S80-SVE 113343			
			NZMH2-S100-SVE 113344			
			NZMH2-S125-SVE 113345			
			NZMH2-S160-SVE 113346			
			NZMH2-S200-SVE 113347			
			**NZMH3-S250-AVE** 113566			
			NZMH3-S320-AVE 113567			
			NZMH3-S400-AVE 113568			
			NZMH3-S500-AVE 113569			

	I_n in A	**Maximum permissible tripping class**
NZM...1-S...	40	30
	50	30
	63	30
	80	20
	100	15
NZM...2-S...	40	30
	50	30
	63	30
	80	30
	100	30
	125	30
	160	20
	200	10
NZM...3-S...	250	30
	320	30
	400	30
	500	20

Tripping class	**Tripping time T_p with load on all poles of 7.2 times set current value.**
10 A	$2\ s < T_p \leqq 10\ s$
10	$4\ s < T_p \leqq 10\ s$
20	$6\ s < T_p \leqq 20\ s$
30	$9\ s < T_p \leqq 30\ s$

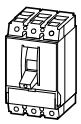
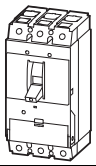
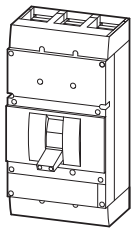
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		**Fixed mounting** with screw terminals		
			Overload releases	Short-circuit releases Non-delayed	**Part no.** Article no.	**Price** See price list	
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	A	A				
				$I>$			
System and cable protection							
Normal switching capacity							
	**50**	630	315-630	2-8	**NZMN3-AE630** 259115		S
	**50**	630	315-630	2-12	**NZMN4-AE630** 265758		S
		800	400-800	2-12	**NZMN4-AE800** 265759		S
		1000	500-1000	2-12	**NZMN4-AE1000** 265760		S
		1250	630-1250	2-12	**NZMN4-AE1250** 265761		S
		1600	800-1600	2-12	**NZMN4-AE1600** 265762		S
High switching capacity							
	**150**	630	315-630	2-8	**NZMH3-AE630** 259118		S
	**85**	630	315-630	2-12	**NZMH4-AE630** 265763		S
		800	400-800	2-12	**NZMH4-AE800** 265764		S
		1000	500-1000	2-12	**NZMH4-AE1000** 265765		S
		1250	630-1250	2-12	**NZMH4-AE1250** 265766		S
		1600	800-1600	2-12	**NZMH4-AE1600** 265767		S
Earth fault protection							
	**50**	250	125-250	2-11	**NZMN3-AE250-T** 110888		S
		400	200-400	2-11	**NZMN3-AE400-T** 110889		S
		630	315-630	2-8	**NZMN3-AE630-T** 110890		S
	150	250	125-250	2-11	**NZMH3-AE250-T** 110894		S
		400	200-400	2-11	**NZMH3-AE400-T** 110895		S
		630	315-630	2-8	**NZMH3-AE630-T** 110896		S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list		**Withdrawable units** **Part no.** Article no. Order base separately	**Price** See price list	Std. pack	**Notes**
						B = box terminals **S = screw terminals** For further terminal types see accessories
NZMN3-AE630-BT 111656		B 	**NZMN3-AE630-AVE** 110842		1 off	IEC/EN 60947-2 R.m.s. value measurement and "thermal memory"
Terminals as accessory			Withdrawable units as accessories			
Terminals as accessory			**NZMH3-AE630-AVE** 110851		1 off	
			Withdrawable units as accessories			
Terminals as accessory			**NZMN3-AE250-T-AVE** 113527 **NZMN3-AE400-T-AVE** 113528 **NZMN3-AE630-T-AVE** 113093 **NZMH3-AE250-T-AVE** 113570 **NZMH3-AE400-T-AVE** 113571 **NZMH3-AE630-T-AVE** 113572		1 off	

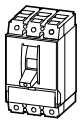
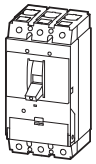
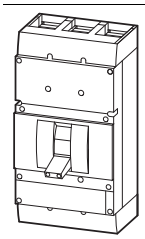
Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range			**Fixed mounting** with screw terminals		
		Overload releases	Short-circuit releases		**Part no.** Article no.	**Price** See price list	
			Non-delayed	Delayed			
I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	$I_{sd} = I_r$ x ...			
kA	A	A					

Systems protection, cable protection, selectivity, generator protection

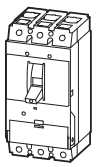
Normal switching capacity

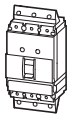
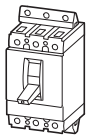
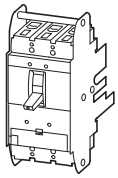
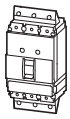
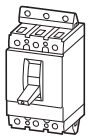
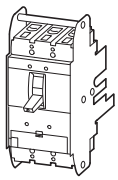
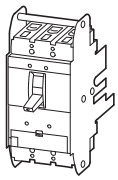
	**50**	100	50-100	1200 A fixed	2-10	**NZMN2-VE100** 259122	S
		160	80-160	1920 A fixed	2-10	**NZMN2-VE160** 259123	S
		250	125-250	3000 A fixed	2-10	**NZMN2-VE250** 259124	S
		250	125-250	2-11	2-10	**NZMN3-VE250** 259131	S
		400	200-400	2-11	2-10	**NZMN3-VE400** 259132	S
		630	315-630	2-8	1.5-7	**NZMN3-VE630** 259133	S
		630	315-630	2-12	1.5-7	**NZMN4-VE630** 265768	S
		800	400-800	2-12	2-10	**NZMN4-VE800** 265769	S
		1000	500-1000	2-12	2-10	**NZMN4-VE1000** 265770	S
		1250	630-1250	2-12	2-10	**NZMN4-VE1250** 265771	S
		1600	800-1600	2-12	2-10	**NZMN4-VE1600** 265772	S

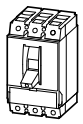
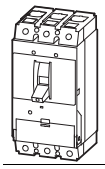
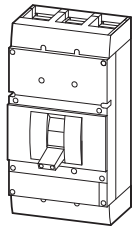
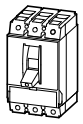
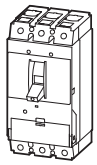
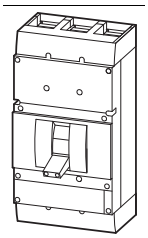
High switching capacity

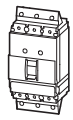
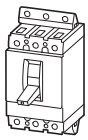
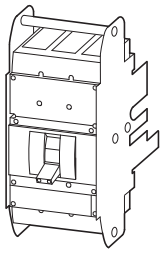
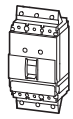
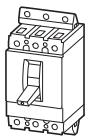
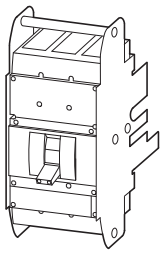
	**150**	100	50-100	1200 A fixed	2-10	**NZMH2-VE100** 259125	S
		160	80-160	1920 A fixed	2-10	**NZMH2-VE160** 259126	S
		250	125-250	3000 A fixed	2-10	**NZMH2-VE250** 259127	S
		250	125-250	2-11	2-10	**NZMH3-VE250** 259134	S
		400	200-400	2-11	2-10	**NZMH3-VE400** 259135	S
		630	315-630	2-8	1.5-7	**NZMH3-VE630** 259136	S
	**85**	630	315-630	2-12	1.5-7	**NZMH4-VE630** 265773	S
		800	400-800	2-12	2-10	**NZMH4-VE800** 265774	S
		1000	500-1000	2-12	2-10	**NZMH4-VE1000** 265775	S
		1250	630-1250	2-12	2-10	**NZMH4-VE1250** 265776	S
		1600	800-1600	2-12	2-10	**NZMH4-VE1600** 265777	S

Earth fault protection

	**50**	250	125-250	2-11	2-10	**NZMN3-VE250-T** 110891	S
		400	200-400	2-11	2-10	**NZMN3-VE400-T** 110892	S
		630	315-630	2-8	1.5-7	**NZMN3-VE630-T** 110893	S
	150	250	125-250	2-11	2-10	**NZMH3-VE250-T** 110897	S
		400	200-400	2-11	2-10	**NZMH3-VE400-T** 110898	S
		630	315-630	2-8	1.5-7	**NZMH3-VE630-T** 110899	S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in/withdrawable units** **Part no.** Article no. Order base separately	**Price** See price list	Std. pack	**Notes**
							B = box terminals **S = screw terminals** For further terminal types see accessories
Terminals as accessory				**NZMN2-VE100-SVE** 113247 **NZMN2-VE160-SVE** 113248 **NZMN2-VE250-SVE** 113249 **NZMN3-VE250-AVE** 110843		1 off	IEC/EN 60947-2 R.m.s. value measurement and "thermal memory" Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release) Adjustable delay t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable
NZMN3-VE400-BT 111659	**1,467.37** 43	B		**NZMN3-VE400-AVE** 110844			
NZMN3-VE630-BT 111730	**1,914.22** 43	B		**NZMN3-VE630-AVE** 110845			
Terminals as accessory				Withdrawable units as accessories			
Terminals as accessory				**NZMH2-VE100-SVE** 113337 **NZMH2-VE160-SVE** 113338 **NZMH2-VE250-SVE** 113339 **NZMH3-VE250-AVE** 110852		1 off	
NZMH3-VE400-BT 111731	**1,668.52** 43	B		**NZMH3-VE400-AVE** 110853			
NZMH3-VE630-BT 111732	**2,079.92** 43	B		**NZMH3-VE630-AVE** 110854			
Terminals as accessory				Withdrawable units as accessories			
Terminals as accessory				**NZMN3-VE250-T-AVE** 113529 **NZMN3-VE400-T-AVE** 113530 **NZMN3-VE630-T-AVE** 113531 **NZMH3-VE250-T-AVE** 113573 **NZMH3-VE400-T-AVE** 113574 **NZMH3-VE630-T-AVE** 113575		1 off	

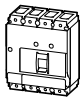
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range		Rated operational power AC-3 50/60 Hz		Rated operational current AC-3 50/60 Hz		**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
			Overload releases	Short-circuit releases							
				Non-delayed	400 V	690 V	400 V	690 V			
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	P	P	I_e	I_e			
	kA	A	A		kW	kW	A	A			
Motor protection											
With phase-failure sensitivity											
Normal switching capacity											
	**50**	90	45-90	2-14	45	75	81	78	**NZMN2-ME90** 265778		S
		140	70-140	2-14	75	132	134	134	**NZMN2-ME140** 265779		S
		220	110-220	2-14	110	200	196	202	**NZMN2-ME220** 265780		S
		220	110-220	2-14	110	200	196	202	**NZMN3-ME220** 265781		S
		350	175-350	2-14	200	315	349	316	**NZMN3-ME350** 265782		S
		450	225-450	2-12	250	450	437	446	**NZMN3-ME450** 284468		S
		550	275-550	2-14	315	560	544	550	**NZMN4-ME550** 265783		S
		875	438-875	2-14	500	600	820	588	**NZMN4-ME875** 265784		S
		1400	700-1400	2-14	630	600	1066	588	**NZMN4-ME1400** 265785		S
High switching capacity											
	**150**	90	45-90	2-14	45	45	81	78	**NZMH2-ME90** 265786		S
		140	70-140	2-14	75	132	134	134	**NZMH2-ME140** 265787		S
		220	110-220	2-14	110	200	196	202	**NZMH2-ME220** 265788		S
		220	110-220	2-14	110	200	196	202	**NZMH3-ME220** 265789		S
		350	175-350	2-14	200	315	349	316	**NZMH3-ME350** 265790		S
		450	225-450	2-12	250	450	437	446	**NZMH3-ME450** 284469		S
	**85**	550	275-550	2-14	315	560	544	550	**NZMH4-ME550** 265791		S
		875	438-875	2-14	500	600	820	588	**NZMH4-ME875** 265792		S
		1400	700-1400	2-14	630	600	1066	588	**NZMH4-ME1400** 265793		S

	Plug-in units **Part no.** Article no. Order base separately	**Price** See price list	Std. pack	**Notes**
				B = box terminals **S = screw terminals** For further terminal types see accessories
	**NZMN2-ME90-SVE** 113256		1 off	IEC/EN 60947-4-1, IEC/EN 60947-2 The circuit-breakers fulfill all requirements for utilization category AC-3. R.m.s. value measurement and “thermal memory” Adjustable delay setting t_r • 2 – 20 s at 6 x I_r, and infinite (without overload release)
	NZMN2-ME140-SVE 113257			
	NZMN2-ME220-SVE 113258			
	**NZMN3-ME220-AVE** 110846			
	NZMN3-ME350-AVE 110847			
	NZMN3-ME450-AVE 110848			
	Withdrawable units as accessories			
	**NZMH2-ME90-SVE** 113348		1 off	
	NZMH2-ME140-SVE 113349			
	NZMH2-ME220-SVE 113350			
	**NZMH3-ME220-AVE** 110855			
	NZMH3-ME350-AVE 110856			
	NZMH3-ME450-AVE 110857			
	Withdrawable units as accessories			

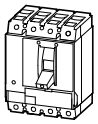
Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range			**Fixed mounting** with screw terminals		
			Overload releases		Short-circuit releases	**Part no.** Article no.	**Price** See price list	
	Phase conductors	Neutral conductor		Phase conductors	Non-delayed			
I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x ...			
kA	A	%	A	A				

System and cable protection

Basic switching capacity

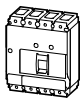


25	20	100	15-20	15…20	350 A fixed	Screw terminals as accessories		
	25	100	20-25	20…25	350 A fixed			
	32	100	25-32	25…32	350 A fixed			
	40	100	32-40	32…40	8-10			
	50	100	40-50	40…50	6-10			
	63	100	50-63	50…63	6-10			
	80	100	63-80	63…80	6-10			
	100	100	80-100	80…100	6-10			
	125	100	100-125	100…125	6-10			
	160	100	125-160	125…160	1280 A fixed			

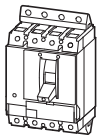


160	100	125-160	125…160	6-10	**NZMB2-4-A160** 265849		S
160	60	125-160	80…100	6-10	**NZMB2-4-A160/100** 265850		S
200	100	160-200	160…200	6-10	**NZMB2-4-A200** 265852		S
200	60	160-200	100…125	6-10	**NZMB2-4-A200/125** 265853		S
250	100	200-250	200…250	6-10	**NZMB2-4-A250** 265855		S
250	60	200-250	125…160	6-10	**NZMB2-4-A250/160** 265856		S
300	100	240-300	240…300	6-10	**NZMB2-4-A300** 107582		S
300	60	240-300	160…200	6-10	**NZMB2-4-A300/200** 107583		S

Comfort switching capacity

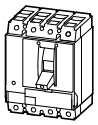
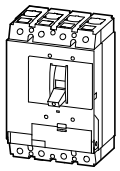
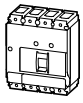


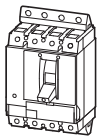
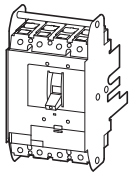
36	20	100	15-20	15…20	350 A fixed	Screw terminals as accessories	
	25	100	20-25	20…25	350 A fixed		
	32	100	25-32	25…32	350 A fixed		
	40	100	32-40	32…40	8-10		
	50	100	40-50	40…50	6-10		
	63	100	50-63	50…63	6-10		
	80	100	63-80	63…80	6-10		
	100	100	80-100	80…100	6-10		
	125	100	100-125	100…125	6-10		
	160	100	125-160	125…160	1280 A fixed		

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
				Order base separately			
							B = box terminals **S = screw terminals** For further terminal types see accessories
NZMB1-4-A20 281237		B	–	–		1 off	IEC/EN 60947-2 Set value for neutral conductor is same as set value I_r for main pole.
NZMB1-4-A25 281239		B		–			
NZMB1-4-A32 281241		B		–			
NZMB1-4-A40 265799		B		–			
NZMB1-4-A50 265801		B		–			
NZMB1-4-A63 265803		B		–			
NZMB1-4-A80 265805		B		–			
NZMB1-4-A100 265807		B		–			
NZMB1-4-A125 265809		B		–			
NZMB1-4-A160 281243		B		–			
Terminals as accessory				**NZMB2-4-A160-SVE** 113209			
				NZMB2-4-A160/100-SVE 113210			
				NZMB2-4-A200-SVE 113212			
				NZMB2-4-A200/125-SVE 113213			
				NZMB2-4-A250-SVE 113215			
				NZMB2-4-A250/160-SVE 113216			
				–			
				–			
NZMC1-4-A20 283300		B	–	–		1 off	
NZMC1-4-A25 283302		B		–			
NZMC1-4-A32 283304		B		–			
NZMC1-4-A40 271408		B		–			
NZMC1-4-A50 271410		B		–			
NZMC1-4-A63 271412		B		–			
NZMC1-4-A80 271414		B		–			
NZMC1-4-A100 271416		B		–			
NZMC1-4-A125 271418		B		–			
NZMC1-4-A160 283306		B		–			

Circuit-breakers, thermomagnetic releases, 4 pole

NZM...-4-A

	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range			**Fixed mounting** with screw terminals		
				Overload releases		Short-circuit releases	**Part no.** Article no.	**Price** See price list	
		Phase conductors	Neutral conductor		Phase conductors	Non-delayed			
	I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x ...			
	kA	A	%	A	A				
						$I>$			
System and cable protection									
Comfort switching capacity									
	**36**	125	100	100-125	100…125	6-10	**NZMC2-4-A125** 271430		S
		160	100	125-160	125…160	6-10	**NZMC2-4-A160** 271432		S
		160	60	125-160	80…100	6-10	**NZMC2-4-A160/100** 271433		S
		200	100	160-200	160…200	6-10	**NZMC2-4-A200** 271435		S
		200	60	160-200	100…125	6-10	**NZMC2-4-A200/125** 271436		S
		250	100	200-250	200…250	6-10	**NZMC2-4-A250** 271438		S
		250	60	200-250	125…160	6-10	**NZMC2-4-A250/160** 271439		S
		300	100	240-300	240…300	6-10	**NZMC2-4-A300** 107584		S
		300	60	240-300	160…200	6-10	**NZMC2-4-A300/200** 107585		S
		320	100	250-320	250…320	6-10	**NZMC3-4-A320** 109688		S
		320	60	250-320	160…200	6-10	**NZMC3-4-A320/200** 109689		S
		400	100	320-400	320…400	6-10	**NZMC3-4-A400** 109690		S
		400	60	320-400	200…250	6-10	**NZMC3-4-A400/250** 109691		S
		500	100	400-500	400…500	6-10	**NZMC3-4-A500** 109692		S
		500	60	400-500	250…320	6-10	**NZMC3-4-A500/320** 109693		S
Normal switching capacity									
	**50**	20	100	15-20	15…20	350 A fixed	Screw terminals as accessories		
		25	100	20-25	20…25	350 A fixed			
		32	100	25-32	25…32	350 A fixed			
		40	100	32-40	32…40	8-10			
		50	100	40-50	40…50	6-10			
		63	100	50-63	50…63	6-10			
		80	100	63-80	63…80	6-10			
		100	100	80-100	80…100	6-10			
		125	100	100-125	100…125	6-10			
		160	100	125-160	125…160	1280 A fixed			

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no. Order base separately	**Price** See price list		Std. pack	**Notes**
								B = box terminals **S = screw terminals** For further terminal types see accessories
Terminals as accessory				**NZMC2-4-A125-SVE** 113231			1 off	IEC/EN 60947-2 Set value for neutral conductor is same as set value I_r for main pole.
				NZMC2-4-A160-SVE 113233				
				NZMC2-4-A160/100-SVE 113234				
				NZMC2-4-A200-SVE 113236				
				NZMC2-4-A200/125-SVE 113237				
				NZMC2-4-A250-SVE 113239				
				NZMC2-4-A250/160-SVE 113240				
				–				
				–				
				**NZMC3-4-A320-AVE** 113516				
				NZMC3-4-A320/200-AVE 113517				
				NZMC3-4-A400-AVE 113518				
				NZMC3-4-A400/250-AVE 113519				
				NZMC3-4-A500-AVE 113520				
				NZMC3-4-A500/320-AVE 113521				
NZMN1-4-A20 281245		B	–	–			1 off	
NZMN1-4-A25 281247		B		–				
NZMN1-4-A32 281249		B		–				
NZMN1-4-A40 265811		B		–				
NZMN1-4-A50 265813		B		–				
NZMN1-4-A63 265815		B		–				
NZMN1-4-A80 265817		B		–				
NZMN1-4-A100 265819		B		–				
NZMN1-4-A125 265821		B		–				
NZMN1-4-A160 281251		B		–				

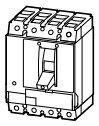
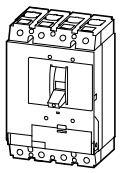
Circuit-breakers, thermomagnetic releases, 4 pole

NZM...-4-A

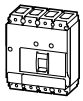
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range			**Fixed mounting** with screw terminals		
				Overload releases		Short-circuit releases	**Part no.** Article no.	**Price** See price list	
		Phase conductors	Neutral conductor		Phase conductors	Non-delayed			
	I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x ...			
	kA	A	%	A	A				

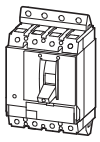
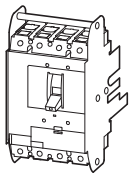
System and cable protection

Normal switching capacity

	**50**	160	100	125-160	125…160	6-10	**NZMN2-4-A160** 265860		S
		160	60	125-160	80…100	6-10	**NZMN2-4-A160/100** 265861		S
		200	100	160-200	160…200	6-10	**NZMN2-4-A200** 265863		S
		200	60	160-200	100…125	6-10	**NZMN2-4-A200/125** 265864		S
		250	100	200-250	200…250	6-10	**NZMN2-4-A250** 265866		S
		250	60	200-250	125…160	6-10	**NZMN2-4-A250/160** 265867		S
		300	100	240-300	240…300	6-10	**NZMN2-4-A300** 107586		S
		300	60	240-300	160…200	6-10	**NZMN2-4-A300/200** 107587		S
		320	100	250-320	250…320	6-10	**NZMN3-4-A320** 109694		S
		320	60	250-320	160…200	6-10	**NZMN3-4-A320/200** 109695		S
		400	100	320-400	320…400	6-10	**NZMN3-4-A400** 109696		S
		400	60	320-400	200…250	6-10	**NZMN3-4-A400/250** 109697		S
		500	100	400-500	400…500	6-10	**NZMN3-4-A500** 109698		S
		500	60	400-500	250…320	6-10	**NZMN3-4-A500/320** 109699		S

High switching capacity

	**100**	20	100	15-20	15…20	350 A fixed	Screw terminals as accessories		
		25	100	20-25	20…25	350 A fixed			
		32	100	25-32	25…32	350 A fixed			
		40	100	32-40	32…40	8-10			
		50	100	40-50	40…50	6-10			
		63	100	50-63	50…63	6-10			
		80	100	63-80	63…80	6-10			
		100	100	80-100	80…100	6-10			
		125	100	100-125	100…125	6-10			
		160	100	125-160	125…160	1280 A fixed			

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Plug-in units** **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
				Order base separately			
							B = box terminals **S = screw terminals** For further terminal types see accessories
Terminals as accessory				**NZMN2-4-A160-SVE** 113266		1 off	IEC/EN 60947-2 Set value for neutral conductor is same as set value I_r for main pole.
				NZMN2-4-A160/100-SVE 113267			
				NZMN2-4-A200-SVE 113269			
				NZMN2-4-A200/125-SVE 113270			
				NZMN2-4-A250-SVE 113272			
				NZMN2-4-A250/160-SVE 113273			
				–			
				–			
				**NZMN3-4-A320-AVE** 113532			
				NZMN3-4-A320/200-AVE 113533			
				NZMN3-4-A400-AVE 113534			
				NZMN3-4-A400/250-AVE 113535			
				NZMN3-4-A500-AVE 113536			
				NZMN3-4-A500/320-AVE 113537			
NZMH1-4-A20 284416		B	–	–		1 off	
NZMH1-4-A25 284418		B		–			
NZMH1-4-A32 284420		B		–			
NZMH1-4-A40 284422		B		–			
NZMH1-4-A50 284424		B		–			
NZMH1-4-A63 284426		B		–			
NZMH1-4-A80 284428		B		–			
NZMH1-4-A100 284430		B		–			
NZMH1-4-A125 284432		B		–			
NZMH1-4-A160 284434		B		–			

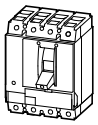
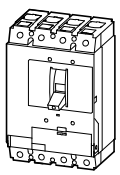
Circuit-breakers, thermomagnetic releases, 4 pole

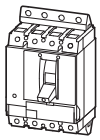
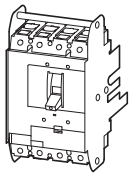
NZM...-4-A

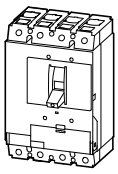
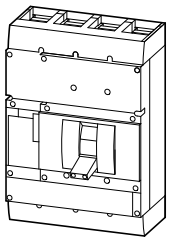
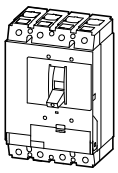
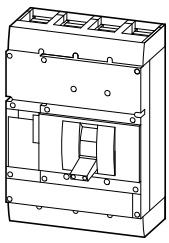
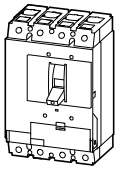
	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range			**Fixed mounting** with screw terminals		
				Overload releases		Short-circuit releases	**Part no.** Article no.	**Price** See price list	
		Phase conductors	Neutral conductor		Phase conductors	Non-delayed			
	I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x ...			
	kA	A	%	A	A				

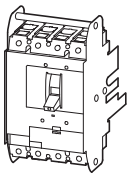
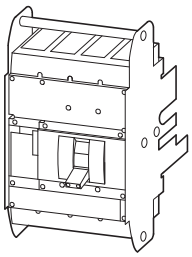
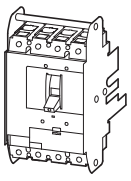
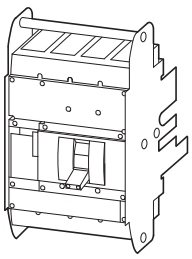
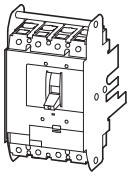
System and cable protection

High switching capacity

	**150**	20	100	15-20	15…20	350 A fixed	**NZMH2-4-A20** 281287		S
		25	100	20-25	20…25	350 A fixed	**NZMH2-4-A25** 281289		S
		32	100	25-32	25…32	350 A fixed	**NZMH2-4-A32** 281291		S
		40	100	32-40	32…40	6-10	**NZMH2-4-A40** 265823		S
		50	100	40-50	40…50	6-10	**NZMH2-4-A50** 265825		S
		63	100	50-63	50…63	6-10	**NZMH2-4-A63** 265827		S
		80	100	63-80	63…80	6-10	**NZMH2-4-A80** 265829		S
		100	100	80-100	80…100	6-10	**NZMH2-4-A100** 265831		S
		125	100	100-125	100…125	6-10	**NZMH2-4-A125** 265833		S
		160	100	125-160	125…160	6-10	**NZMH2-4-A160** 265871		S
		160	60	125-160	80…100	6-10	**NZMH2-4-A160/100** 265872		S
		200	100	160-200	160…200	6-10	**NZMH2-4-A200** 265874		S
		200	60	160-200	100…125		**NZMH2-4-A200/125** 265875		S
		250	100	200-250	200…250	6-10	**NZMH2-4-A250** 265877		S
		250	60	200-250	125…160	6-10	**NZMH2-4-A250/160** 265878		S
		300	100	240-300	240…300	6-10	**NZMH2-4-A300** 107588		S
		300	60	240-300	160…200	6-10	**NZMH2-4-A300/200** 107589		S
	**150**	320	100	250-320	250…320	6-10	**NZMH3-4-A320** 109700		S
		320	60	250-320	160…200	6-10	**NZMH3-4-A320/200** 109701		S
		400	100	320-400	320…400	6-10	**NZMH3-4-A400** 109702		S
		400	60	320-400	200…250	6-10	**NZMH3-4-A400/250** 109703		S
		500	100	400-500	400…500	6-10	**NZMH3-4-A500** 109704		S
		500	60	400-500	250…320	6-10	**NZMH3-4-A500/320** 109705		S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list		**Plug-in units** **Part no.** Article no. Order base separately	**Price** See price list	Std. pack	**Notes**
						B = box terminals **S = screw terminals** For further terminal types see accessories
Terminals as accessory			**NZMH2-4-A20-SVE** 113396		1 off	IEC/EN 60947-2 Set value for neutral conductor is same as set value I_r for main pole.
			NZMH2-4-A25-SVE 113398			
			NZMH2-4-A32-SVE 113400			
			NZMH2-4-A40-SVE 113367			
			NZMH2-4-A50-SVE 113369			
			NZMH2-4-A63-SVE 113371			
			NZMH2-4-A80-SVE 113373			
			NZMH2-4-A100-SVE 113375			
			NZMH2-4-A125-SVE 113377			
			NZMH2-4-A160-SVE 113379			
			NZMH2-4-A160/100-SVE 113380			
			NZMH2-4-A200-SVE 113382			
			NZMH2-4-A200/125-SVE 113383			
			NZMH2-4-A250-SVE 113385			
			NZMH2-4-A250/160-SVE 113386			
			–			
			–			
			**NZMH3-4-A320-AVE** 113578		1 off	
			NZMH3-4-A320/200-AVE 113579			
			NZMH3-4-A400-AVE 113580			
			NZMH3-4-A400/250-AVE 113581			
			NZMH3-4-A500-AVE 113582			
			NZMH3-4-A500/320-AVE 113583			

	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range Overload releases		Short-circuit releases		**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
		Phase conductors	Neutral conductor		Phase conductors	Non-delayed	Delayed			
	I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x …	$I_{sd} = I_r$ x …			
	kA	A	%	A	A					
System and cable protection										
Normal switching capacity										
	**50**	630	100	315-630	315…630	2-8	–	**NZMN3-4-AE630** 265894		S
		630	60	315-630	200…400	2-8	–	**NZMN3-4-AE630/400** 265895		S
		800	100	400-800	400…800	2-12	–	**NZMN4-4-AE800** 265909		S
		800	60	400-800	250…500	2-12	–	**NZMN4-4-AE800/500** 265910		S
		1000	100	500-1000	500…1000	2-12	–	**NZMN4-4-AE1000** 265912		S
		1000	60	500-1000	315…630	2-12	–	**NZMN4-4-AE1000/630** 265913		S
		1250	100	630-1250	630…1250	2-12	–	**NZMN4-4-AE1250** 265915		S
		1250	60	630-1250	400…800	2-12	–	**NZMN4-4-AE1250/800** 265916		S
		1600	100	800-1600	800…1600	2-12	–	**NZMN4-4-AE1600** 265918		S
		1600	60	800-1600	500…1000	2-12	–	**NZMN4-4-AE1600/1000** 265919		S
High switching capacity										
	**150**	630	100	315-630	315…630	2-8	–	**NZMH3-4-AE630** 265900		S
	150	630	60	315-630	200…400	2-8	–	**NZMH3-4-AE630/400** 265901		S
	**85**	800	100	400-800	400…800	2-12	–	**NZMH4-4-AE800** 265921		S
		800	60	400-800	250…500	2-12	–	**NZMH4-4-AE800/500** 265922		S
		1000	100	500-1000	500…1000	2-12	–	**NZMH4-4-AE1000** 265924		S
		1000	60	500-1000	315…630	2-12	–	**NZMH4-4-AE1000/630** 265925		S
		1250	100	630-1250	630…1250	2-12	–	**NZMH4-4-AE1250** 265927		S
		1250	60	630-1250	400…800	2-12	–	**NZMH4-4-AE1250/800** 265928		S
		1600	100	800-1600	800…1600	2-12	–	**NZMH4-4-AE1600** 265930		S
		1600	60	800-1600	500…1000	2-12	–	**NZMH4-4-AE1600/1000** 265931		S
Earth fault protection										
	**50**	400	100	200-400	200…400	2-11	–	**NZMN3-4-AE400-T** 110902		S
		400	60	200-400	125…250	2-11	–	**NZMN3-4-AE400/250-T** 110903		S
		630	100	315-630	315…630	2-8	–	**NZMN3-4-AE630-T** 110904		S
		630	60	315-630	200…400	2-8	–	**NZMN3-4-AE630/400-T** 110905		S
	150	400	100	200-400	200…400	2-11	–	**NZMH3-4-AE400-T** 110906		S
		400	60	200-400	125…250	2-11	–	**NZMH3-4-AE400/250-T** 110907		S
		630	100	315-630	315…630	2-8	–	**NZMH3-4-AE630-T** 110908		S
		630	60	315-630	200…400	2-8	–	**NZMH3-4-AE630/400-T** 110909		S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list			**Withdrawable units** **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
				Order base separately			**B = box terminals** **S = screw terminals**
NZMN3-4-AE630-BT 111658 Terminals as accessory		B		**NZMN3-4-AE630-AVE** 110875 **NZMN3-4-AE630/400-AVE** 113544		1 off	For further terminal types see accessories IEC/EN 60947-2 R.m.s. value measurement and "thermal memory" Set value for neutral conductor is same as set value I_r for main pole.
				Withdrawable units as accessories			
				**NZMH3-4-AE630-AVE** 110879 **NZMH3-4-AE630/400-AVE** 113590 Withdrawable units as accessories		1 off	
							
Terminals as accessory				**NZMN3-4-AE400-T-AVE** 113538 **NZMN3-4-AE400/250-T-AVE** 113539 **NZMN3-4-AE630-T-AVE** 113540 **NZMN3-4-AE630/400-T-AVE** 113541 **NZMH3-4-AE400-T-AVE** 113584 **NZMH3-4-AE400/250-T-AVE** 113585 **NZMH3-4-AE630-T-AVE** 113586 **NZMH3-4-AE630/400-T-AVE** 113587		1 off	

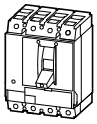
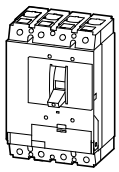
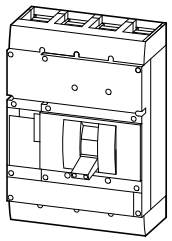
Circuit-breakers, electronic releases, 4 pole

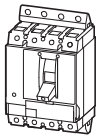
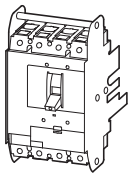
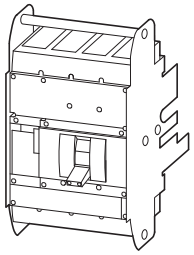
NZM...-4-VE

	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range Overload releases		Short-circuit releases		**Fixed mounting** with screw terminals		
		Phase conductors	Neutral conductor		Phase conductor	Non-delayed	Delayed	**Part no.** Article no.	**Price** See price list	
	I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x …	$I_{sd} = I_r$ x …			
	kA	A	%	A	A					

Systems protection, cable protection, selectivity, generator protection

Normal switching capacity

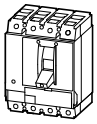
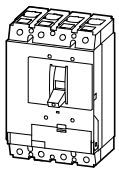
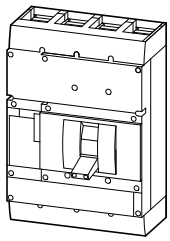
	**50**	100	100	50-100	50…100	1200 A fixed	2-10	**NZMN2-4-VE100** 265933		S
		160	100	80-160	80…160	1920 A fixed	2-10	**NZMN2-4-VE160** 265935		S
		160	60	80-160	50…100	1920 A fixed	2-10	**NZMN2-4-VE160/100** 265936		S
		250	100	125-250	125…250	3000 A fixed	2-10	**NZMN2-4-VE250** 265938		S
		250	60	125-250	80…160	3000 A fixed	2-10	**NZMN2-4-VE250/160** 265939		S
		400	100	200-400	200…400	2-11	2-10	**NZMN3-4-VE400** 265957		S
		400	60	200-400	125…250	2-11	2-10	**NZMN3-4-VE400/250** 265958		S
		630	100	315-630	315…630	2-8	1.5-7	**NZMN3-4-VE630** 265960		S
		630	60	315-630	200…400	2-8	1.5-7	**NZMN3-4-VE630/400** 265961		S
		800	100	400-800	400…800	2-12	2-10	**NZMN4-4-VE800** 265975		S
		800	60	400-800	250…500	2-12	2-10	**NZMN4-4-VE800/500** 265976		S
		1000	100	500-1000	500…1000	2-12	2-10	**NZMN4-4-VE1000** 265978		S
		1000	60	500-1000	315…630	2-12	2-10	**NZMN4-4-VE1000/630** 265979		S
		1250	100	630-1250	630…1250	2-12	2-10	**NZMN4-4-VE1250** 265981		S
		1250	60	630-1250	400…800	2-12	2-10	**NZMN4-4-VE1250/800** 265982		S
		1600	100	800-1600	800…1600	2-12	2-10	**NZMN4-4-VE1600** 265984		S
		1600	60	800-1600	500…1000	2-12	2-10	**NZMN4-4-VE1600/1000** 265985		S

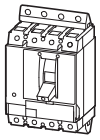
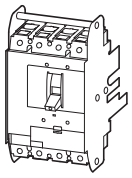
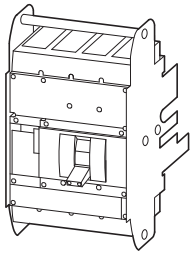
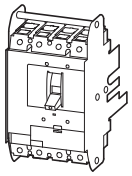
Fixed mounting with box terminals			**Plug-in/withdrawable units**			
Part no. Article no.	**Price** See price list		**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
			Order base separately			
						B = box terminals **S = screw terminals** For further terminal types see accessories
Terminals as accessory			**NZMN2-4-VE100-SVE** 113275		1 off	IEC/EN 60947-2 Set value for neutral conductor is same as set value I_r for main pole. R.m.s. value measurement and "thermal memory" Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release) – NZM...3-4-VE400(630): 2 – 14 s at 6 x I_r and infinite (without overload release) Adjustable delay t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable
			NZMN2-4-VE160-SVE 113277			
			NZMN2-4-VE160/100-SVE 113278			
			NZMN2-4-VE250-SVE 113280			
			NZMN2-4-VE250/160-SVE 113281			
			**NZMN3-4-VE400-AVE** 110876			
			NZMN3-4-VE400/250-AVE 113546			
			NZMN3-4-VE630-AVE 110877			
			NZMN3-4-VE630/400-AVE 113548			
			Withdrawable units as accessories			

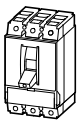
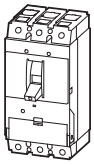
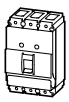
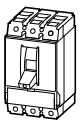
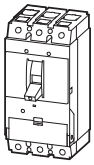
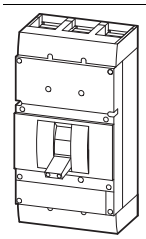
Circuit-breakers, electronic releases, 4 pole

NZM...-4-VE

HPL17040EN

	Switching capacity 400/415 V 50/60 Hz	Rated current = Rated uninterrupted current		Setting range Overload releases		Short-circuit releases		**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	
		Phase conductors	Neutral conductor		Phase conductor	Non-delayed	Delayed			
	I_{cu}	$I_n = I_u$	I_r x % of phase conductor	I_r	I_r	$I_i = I_n$ x …	$I_{sd} = I_r$ x …			
	kA	A	%	A	A					
						I>	I>			
Systems protection, cable protection, selectivity, generator protection										
High switching capacity										
	**150**	100	100	50-100	50…100	1200 A fixed	2-10	**NZMH2-4-VE100** 265941		S
		160	100	80-160	80…160	1920 A fixed	2-10	**NZMH2-4-VE160** 265943		S
		160	60	80-160	50…100	1920 A fixed	2-10	**NZMH2-4-VE160/100** 265944		S
		250	100	125-250	125…250	3000 A fixed	2-10	**NZMH2-4-VE250** 265946		S
		250	60	125-250	80…160	3000 A fixed	2-10	**NZMH2-4-VE250/160** 265947		S
		400	100	200-400	200…400	2-11	2-10	**NZMH3-4-VE400** 265963		S
		400	60	200-400	125…250	2-11	2-10	**NZMH3-4-VE400/250** 265964		S
		630	100	315-630	315…630	2-8	1.5-7	**NZMH3-4-VE630** 265966		S
		630	60	315-630	200…400	2-8	1.5-7	**NZMH3-4-VE630/400** 265967		S
	**85**	800	100	400-800	400…800	2-12	2-10	**NZMH4-4-VE800** 265987		S
		800	60	400-800	250…500	2-12	2-10	**NZMH4-4-VE800/500** 265988		S
		1000	100	500-1000	500…1000	2-12	2-10	**NZMH4-4-VE1000** 265990		S
		1000	60	500-1000	315…630	2-12	2-10	**NZMH4-4-VE1000/630** 265991		S
		1250	100	630-1250	630…1250	2-12	2-10	**NZMH4-4-VE1250** 265993		S
		1250	60	630-1250	400…800	2-12	2-10	**NZMH4-4-VE1250/800** 265994		S
		1600	100	800-1600	800…1600	2-12	2-10	**NZMH4-4-VE1600** 265996		S
		1600	60	800-1600	500…1000	2-12	2-10	**NZMH4-4-VE1600/1000** 265997		S
Earth fault protection										
	50	400	100	200-400	200…400	2-11	2-10	–		
		630	100	315-630	315…630	2-8	1.5-7	–		
	150	400	100	200-400	200…400	2-11	2-10	–		
		630	100	315-630	315…630	2-8	1.5-7	–		

Fixed mounting with box terminals			**Plug-in/withdrawable units**			
Part no. Article no.	**Price** See price list		**Part no.** Article no. Order base separately	**Price** See price list	Std. pack	**Notes**
						B = box terminals **S = screw terminals** For further terminal types see accessories
Terminals as accessory			**NZMH2-4-VE100-SVE** 113388		1 off	IEC/EN 60947-2 Set value for neutral conductor is same as set value I_r for main pole. R.m.s. value measurement and "thermal memory" Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release) – NZM...3-4-VE400(630): 2 – 14 s at 6 x I_r and infinite (without overload release) Adjustable delay t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable
			NZMH2-4-VE160-SVE 113390			
			NZMH2-4-VE160/100-SVE 113391			
			NZMH2-4-VE250-SVE 113393			
			NZMH2-4-VE250/160-SVE 113394			
			**NZMH3-4-VE400-AVE** 110880			
			NZMH3-4-VE400/250-AVE 113592			
			NZMH3-4-VE630-AVE 110881			
			NZMH3-4-VE630/400-AVE 113594			
			Withdrawable units as accessories		1 off	
–			**NZMN3-4-VE400-T-AVE** 119902		1 off	
–			**NZMN3-4-VE630-T-AVE** 119903			
–			**NZMH3-4-VE400-T-AVE** 119900			
–			**NZMH3-4-VE630-T-AVE** 119901			

	Rated current = Rated uninterrupted current $I_n = I_u$ A	Short-circuit protection, max. fuse gL-characteristic A gL	**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list		**Fixed mounting** with box terminals **Part no.** Article no.	**Price** See price list	
Switch-disconnectors								
2 switch positions I, 0								
	63	125	Screw terminals as accessories			**PN1-63** 259140		B
	100	125				**PN1-100** 259141		B
	125	125				**PN1-125** 259142		B
	160	160				**PN1-160** 281235		B
	160	250	**PN2-160** 266005		S	**PN2-160-BT** 110308		B
	200	250	**PN2-200** 266006		S	**PN2-200-BT** 110309		B
	250	250	**PN2-250** 266007		S	**PN2-250-BT** 110310		B
	400	630	**PN3-400** 266017		S	**PN3-400-BT** 110314		B
	630	630	**PN3-630** 266018		S	**PN3-630-BT** 110315		B
3 switch positions I, +, 0 Can be remotely operated with shunt release XU/XA, remote operator XR, Can be equipped with trip-indicating auxiliary contact M22-K..								
	63	125	Screw terminals as accessories			**N1-63** 259143		B
	100	125				**N1-100** 259144		B
	125	125				**N1-125** 259145		B
	160	160				**N1-160** 281236		B
	160	250	**N2-160** 266008		S	**N2-160-BT** 110311		B
	200	250	**N2-200** 266009		S	**N2-200-BT** 110312		B
	250	250	**N2-250** 266010		S	**N2-250-BT** 110313		B
	400	630	**N3-400** 266019		S	**N3-400-BT** 110316		B
	630	630	**N3-630** 266020		S	**N3-630-BT** 110317		B
	800	1600	**N4-800** 266025		S	Terminals as accessory		
	1000	1600	**N4-1000** 266026		S			
	1250	1600	**N4-1250** 266027		S			
	1600	1600	**N4-1600** 266028		S			

	Plug-in/withdrawable units				
	Part no. Article no.	**Price** See price list		Std. pack	**Notes**
					B = box terminals **S = screw terminals** For further terminal types see accessories
–	–			1 off	IEC/EN 60947-3 Main switch characteristics including positive operation to IEC/EN 60204, VDE 0113 Isolating characteristics to IEC/EN 60947-3, VDE 0660 Contact protection to VDE 0160 part 100
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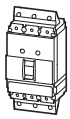
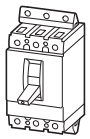
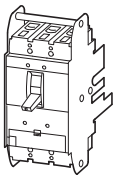
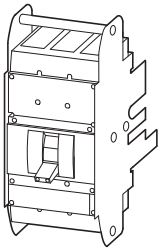
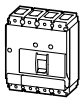
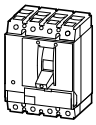
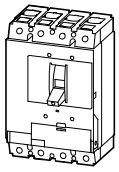
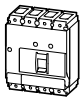
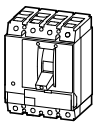
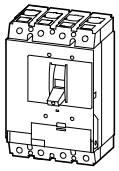
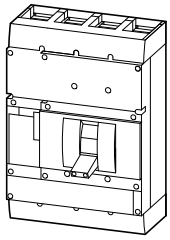
	**N1-63-SVE** 113729			1 off	
	N1-100-SVE 113730				
	N1-125-SVE 113731				
	–				
	**N2-160-SVE** 113733				
	N2-200-SVE 113734				
	N2-250-SVE 113735				
	**N3-400-AVE** 110768				
	N3-630-AVE 110769				
	Withdrawable units as accessories				

	Rated current = Rated uninterrupted current $I_n = I_u$ A	Short-circuit protection, max. fuse gL-characteristic A gL	**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list		**Fixed mounting** with box terminals **Part no.** Article no.	**Price** See price list	
Switch-disconnectors								
2 switch positions I, 0								
	63	125	Screw terminals as accessories			**PN1-4-63** 265999		B
	100	125				**PN1-4-100** 266000		B
	125	125				**PN1-4-125** 266001		B
	160	160				**PN1-4-160** 281253		B
	160	250	**PN2-4-160** 266011		S	**PN2-4-160-BT** 118880		B
	200	250	**PN2-4-200** 266012		S	**PN2-4-200-BT** 118881		B
	250	250	**PN2-4-250** 266013		S	**PN2-4-250-BT** 118882		B
	400	630	**PN3-4-400** 266021		S	**PN3-4-400-BT** 111653		B
	630	630	**PN3-4-630** 266022		S	**PN3-4-630-BT** 111654		B
3 switch positions I, +, 0 Can be remotely operated with shunt release XU/XA, remote operator XR, Can be equipped with trip-indicating auxiliary contact M22-K..								
	63	125	Screw terminals as accessories			**N1-4-63** 266002		B
	100	125				**N1-4-100** 266003		B
	125	125				**N1-4-125** 266004		B
	160	160				**N1-4-160** 281254		B
	160	250	**N2-4-160** 266014		S	**N2-4-160-BT** 118883		B
	200	250	**N2-4-200** 266015		S	**N2-4-200-BT** 118884		B
	250	250	**N2-4-250** 266016		S	**N2-4-250-BT** 118885		B
	400	630	**N3-4-400** 266023		S	**N3-4-400-BT** 111651		B
	630	630	**N3-4-630** 266024		S	**N3-4-630-BT** 111652		B
	800	1600	**N4-4-800** 266029		S	Terminals as accessory		
	1000	1600	**N4-4-1000** 266030		S			
	1250	1600	**N4-4-1250** 266031		S			
	1600	1600	**N4-4-1600** 266032		S			

	Plug-in units **Part no.** Article no. Order base separately	**Price** See price list	Std. pack	**Notes**
				B = box terminals **S = screw terminals** For further terminal types see accessories
–	–		1 off	IEC/EN 60947-3 Main switch characteristics including positive operation to IEC/EN 60204, VDE 0113 Isolating characteristics to IEC/EN 60947-3, VDE 0660 Contact protection to VDE 0160 part 100
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–	–		1 off	
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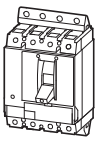
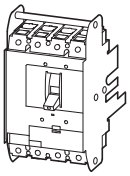
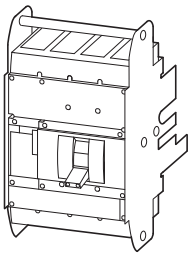
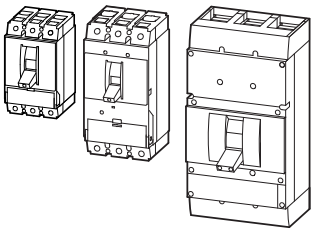
	**N2-4-160-SVE** 113736			
	N2-4-200-SVE 113737			
	N2-4-250-SVE 113738			
	**N3-4-400-AVE** 110872			
	N3-4-630-AVE 110873			
	Withdrawable units as accessories			

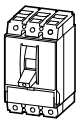
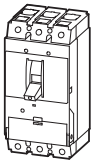
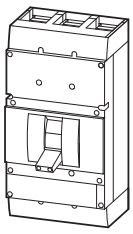
With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 660

Circuit-breakers for 1000 V AC, 3 pole

Switch-disconnectors for 1000 V DC, 2 pole
Without overload and short-circuit release

			System and cable protection			**Selectivity protection**		**Motor protection**				
Switching capacity												
1000 V	kA/p.f.	I_{cu}	10/0.5	15/0.5	20/0.3	10/0.5	20/0.3	15/0.5	20/0.3			
		I_{cs}	3/0.5	10/0.5	15/0.3	3/0.5	15/0.3	10/0.5	15/0.3			
Rated uninterrupted current I_u = Rated current I_n			I_u	I_u	I_u	I_u	I_u	I_u	I_u	I_u	I_u	I_u
Ambient air temperature at 100% I_u min./max. –25/+50 °C N... S1-DC max. +70 °C			A	A	A	A	A	A	A	A	A	A
			NZMH2-A...-S1	NZMH3-AE...-S1	NZMH4-AE...-S1	NZMH2-VE...-S1	NZMH4-VE...-S1	NZMH3-ME...-S1	NZMH4-ME...-S1	N2-...-S1-DC	N3-...-S1-DC	N4-...-S1-DC
			20	250	630	100	630	220	550	160	320	800
			25	400	800	160	800	350	875	**200**	400	1000
			32	**630**	1000	**250**	1000	**450**	**1400**		**500**	1250
			40		1250		1250					**1400**
			50		**1600**		**1600**					
			63									
			80									
			100									
			125									
			160									
			200									
			250									
			300									
Rated short-time withstand current I_{cw} (0.1s current$_{rms}$)		kA								3	6	25

HPL17047EN

	Switching capacity 1000 V 50/60 Hz	Rated current = Rated uninterrupted current	**Setting range** Overload releases	Short-circuit releases		**Fixed mounting** **Part no.** Article no.	**Price** See price list		Std. pack
				Non-delayed	Delayed				
	I_{cu} kA	$I_n = I_u$ A	I_r A	$I_i = I_n$ x …	$I_{sd} = I_r$ x …				
				I>	I>				
System and cable protection									
Thermomagnetic releases									
	**10**	20	15-20	350 A fixed	–	**NZMH2-A20-S1** 290355		S	1 off
		25	20-25	350 A fixed	–	**NZMH2-A25-S1** 290356		S	
		32	25-32	350 A fixed	–	**NZMH2-A32-S1** 290357		S	
		40	32-40	8-10	–	**NZMH2-A40-S1** 290358		S	
		50	40-50	6-10	–	**NZMH2-A50-S1** 290359		S	
		63	50-63	6-10	–	**NZMH2-A63-S1** 290360		S	
		80	63-80	6-10	–	**NZMH2-A80-S1** 290361		S	
		100	80-100	6-10	–	**NZMH2-A100-S1** 290362		S	
		125	100-125	6-10	–	**NZMH2-A125-S1** 290363		S	
		160	125-160	6-10	–	**NZMH2-A160-S1** 290364		S	
		200	160-200	6-10	–	**NZMH2-A200-S1** 290365		S	
		250	200-250	6-10	–	**NZMH2-A250-S1** 290366		S	
		300	240-300	6-10	–	**NZMH2-A300-S1** 107577		S	
Electronic releases R.m.s. value measurement and “thermal memory”									
	**15**	250	125-250	2-11	–	**NZMH3-AE250-S1** 119361		S	1 off
		400	200-400	2-11	–	**NZMH3-AE400-S1** 119362		S	
		630	315-630	2-8	–	**NZMH3-AE630-S1** 119363		S	
	**20**	630	315-630	2-12	–	**NZMH4-AE630-S1** 290370		S	
		800	400-800	2-12	–	**NZMH4-AE800-S1** 290371		S	
		1000	500-1000	2-12	–	**NZMH4-AE1000-S1** 290372		S	
		1250	630-1250	2-12	–	**NZMH4-AE1250-S1** 290373		S	
		1600	800-1600	2-12	–	**NZMH4-AE1600-S1** 290374		S	

Notes

B = box terminals
S = screw terminals

IEC/EN 60947-2

Terminal type:
NZM2: Cover NZM2-XKSA required
NZM3: Cover NZM3-XKSA required
NZM4: Isolated bar connection (screw terminal NZM4-XKS)

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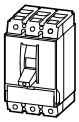
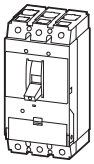
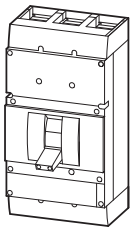
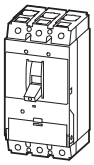
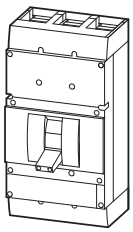
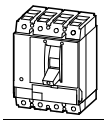
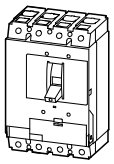
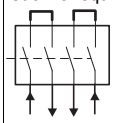
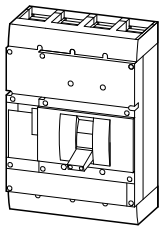
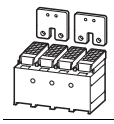
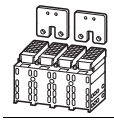
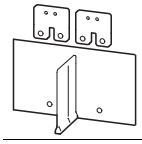
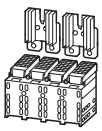
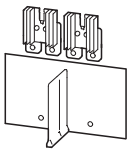
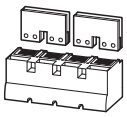
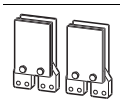
	Switching capacity 1000 V 50/60 Hz	Rated current = Rated uninterrupted current	Setting range Overload releases	Short-circuit releases		Fixed mounting Part no. Article no.	Price See price list		Std. pack
				Non-delayed	Delayed				
	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x …	$I_{sd} = I_r$ x …				
	kA	A	A						
Systems protection, cable protection, selectivity, generator protection									
IEC/EN 60947-2 R.m.s. value measurement and “thermal memory” Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release) Adjustable delay t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable									
	**10**	100	50-100	1200 A fixed	2-10	**NZMH2-VE100-S1** 100777		S	1 off
		160	80-160	1920 A fixed	2-10	**NZMH2-VE160-S1** 100778		S	
		250	125-250	3000 A fixed	2-10	**NZMH2-VE250-S1** 100779		S	
		400	200-400	2-11	2-10	**NZMH3-VE400-S1** 119367		S	
		630	315-630	2-8	1.5-7	**NZMH3-VE630-S1** 119368		S	
	**20**	630	315-630	2-12	2-10	**NZMH4-VE630-S1** 290375		S	
		800	400-800	2-12	2-10	**NZMH4-VE800-S1** 290376		S	
		1000	500-1000	2-12	2-10	**NZMH4-VE1000-S1** 290377		S	
		1250	630-1250	2-12	2-10	**NZMH4-VE1250-S1** 290378		S	
		1600	800-1600	2-12	2-10	**NZMH4-VE1600-S1** 290379		S	
Motor protection									
IEC/EN 60947-4-1, IEC/EN 60947-2 Phase-failure sensitivity R.m.s. value measurement and “thermal memory” Adjustable delay setting t_r • 2 – 20 s at 6 x I_r and infinite (without overload release)									
	**15**	220	110-220	2-14	–	**NZMH3-ME220-S1** 119364		S	1 off
		350	175-350	2-14	–	**NZMH3-ME350-S1** 119365		S	
		450	225-450	2-12	–	**NZMH3-ME450-S1** 119366		S	
	**20**	550	275-550	2-14	–	**NZMH4-ME550-S1** 290383		S	
		875	438-875	2-14	–	**NZMH4-ME875-S1** 290384		S	
		1400	700-1400	2-14	–	**NZMH4-ME1400-S1** 290385		S	

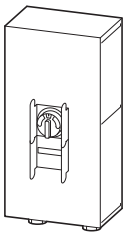
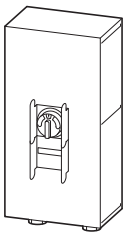
Notes

B = box terminals
S = screw terminals

Terminal type:
NZM2: Cover NZM2-XKSA required
NZM3: Cover NZM3-XKSA required
NZM4: Isolated bus connection (screw terminal NZM4-XKS)

	Rated current = Rated uninterrupted current $I_n = I_u$ A	Short-circuit protection, max. fuse gR-characteristic A gR	**Fixed mounting** **Part no.** Article no.	**Price** See price list	Std. pack		**Notes**
Switch-disconnectors for 1000 V DC							**B = box terminals S = screw terminals**
	160	200	**N2-4-160-S1-DC** 127732		1 off	S	IEC/EN 60947-3
	200	200	**N2-4-200-S1-DC** 127733			S	Main switch characteristics including positive operation to IEC/EN 60204, VDE 0113. Isolating characteristics to IEC/EN 60947, VDE 0660. Protection against electric shock to VDE 0160 part 100. Switch-disconnectors N can, in addition, be combined with shunt releases NZM...-XU, NZM...-XA and auxiliary contacts as well as with remote operator NZM...-XR...
	320	500	**N3-4-320-S1-DC** 127734			S	
	400	500	**N3-4-400-S1-DC** 142267			S	
	500	500	**N3-4-500-S1-DC** 142268			S	Connection types: For 2 pole switching, series connection of two poles each is required. See jumper kits under accessories 
	800	1600	**N4-4-800-S1-DC** 119890			S	
	1000	1600	**N4-4-1000-S1-DC** 119891			S	
	1250	1600	**N4-4-1250-S1-DC** 119886			S	
	1400	1400	**N4-4-1400-S1-DC** 119887			S	Terminals as accessory Switch can not be combined with plug-in/withdrawable units and/or connection on rear.

		Rated operational current I_n A	For use with	Number of poles	Degree of protection	**Part no.** Article no.	**Price** See price list	Std. pack
Jumper kits								
Model contains parts for upper switch side for 4 pole switches N...-S1-DC that are used as 2 pole switches for DC. The jumpers each connect two current paths in series. Incomer and outgoer at bottom or top, freely selectable. ≥ 1250 A: For 65 °C ambient air temperature connection at bottom through module plates NZM4-4-XKM2S-1600.								
	Jumper kit with cover	200 at 65 °C 160 at 70 °C	N2-4-…S1-DC	4 pole/ 2 pole	IP2X	**NZM2-4-XKV2P** 131730		1 off
	Terminal jumpers with cover	400 at 70 °C	N3-320(400)-S1-DC	4 pole/ 2 pole	IP2X	**NZM3-4-XKV2P** 131731		
	Jumper kit with insulating plates	500 at 50 °C 400 at 70 °C	N3-400(500)-S1-DC	4 pole/ 2 pole	IP00	**NZM3-4-XKVI2P** 142269		
	Jumper kit with cover and heat sink	400 at 70 °C 500 at 55 °C 500 at 40 °C	N3-400(500)-S1-DC	4 pole/ 2 pole	IP1X IP2X	**NZM3-4-XKV2P-K** 142271		
	Jumper kit with insulating plates and heat sinks	500 at 65 °C	N3-500-S1-DC	4 pole/ 2 pole	IP00	**NZM3-4-XKVI2P-K** 142270		
	Jumper kit with cover	1400 at 40 °C 1250 at 65 °C	N4-4-…S1-DC	4 pole/ 2 pole	IP2X	**NZM4-4-XKV2P** 119888		
	Jumper kit with heat sink	1400 at 65 °C	N4-4-1400-S1-DC	4 pole/ 2 pole	IP00	**NZM4-4-XKV2P-1400** 119905		

	Number of conductors	Rated current = Rated uninterrupted current $I_n = I_u$ A	Short-circuit protection, max. fuse gL-characteristic A gL	Fixed mounting **Part no.** Article no.	**Price** See price list	Std. pack
Switch-disconnectors for ATEX type						
2 switch positions I, 0						
	3 pole	125	125	**PN1-125/HIV/DA-SVD-SW/ATEX22** 119386		1 off
		160	160	**PN1-160/HIV/DA-SVD-SW/ATEX22** 119387		
		200	250	**PN2-200/HIV/DA-SVD-SW/ATEX22** 119388		
		240	250	**PN2-250/HIV/DA-SVD-SW/ATEX22** 119389		
		400	630	**PN3-400/HIV/DA-SVD-SW/ATEX22** 119410		
		630	630	**PN3-630/HIV/DA-SVD-SW/ATEX22** 119411		
	6 pole	160	160	**2PN1-160/HIV/DA-SVD-SW/ATEX22** 119418		
	6 pole	250	250	**2PN2-250/HIV/DA-SVD-SW/ATEX22** 119419		
ATEX switches for EMC type						
	3 pole	125	125	**PN1-125/HIV/DA-SVD-SW/EMV/ATEX22** 119412		
		160	160	**PN1-160/HIV/DA-SVD-SW/EMV/ATEX22** 119413		
		200	250	**PN2-200/HIV/DA-SVD-SW/EMV/ATEX22** 119414		
		240	250	**PN2-250/HIV/DA-SVD-SW/EMV/ATEX22** 119415		
		400	630	**PN3-400/HIV/DA-SVD-SW/EMV/ATEX22** 119416		
		630	630	**PN3-630/HIV/DA-SVD-SW/EMV/ATEX22** 119417		

Notes

Main switch characteristics including positive operation to IEC/EN 60204, VDE 0113.
Isolating characteristics to IEC/EN 60947-3, VDE 0660.
Protection against electric shock to VDE 0160 part 100.

ATEX = Atmosphères explosibles = explosive atmospheres
Eaton supplies switch-disconnectors PN1, PN2 and PN3 for a current range of up to 630 A as complete device according to ATEX Directive 94/9 EG (binding as of 06/2003).
The switches are approved for device group II, the application “everything, except for mining” and for category 3 (normal safety).
Switch-disconnectors in surface mounting enclosure with ATEX approval are used in potentially explosive dust-laden areas, such as mills, metal grinding works, wood processing operations, cement works, the aluminum industry, the foodstuffs industry, grain storage and processing plants, agriculture, and in the pharmaceuticals industry.

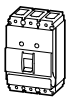
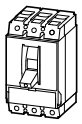
ATEX switches for EMC are suitable for use with screened cables.
For important general flush mounting and application notes, see the included installation instructions AWA1230-2480, which you can also download from our homepage www.moeller.net.

Circuit-breakers

UL/CSA approved to UL 489, CSA-C22.2 No. 5-09 as well as IEC/EN 60947

With main switch characteristics to IEC/EN 60204 and isolating characteristics to IEC/EN 60947, VDE 0660

Rated uninterrupted current I_u = Rated current I_n
Adjustable overload releases I_r
Adjustable short-circuit releases I_i
Delayed short-circuit releases I_{sd}

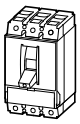
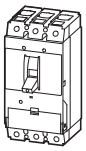
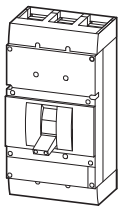
Thermomagnetic releases
Overload release

Fixed		Adjustable			None	
I_u		I_u		I_r	I_u	
A		A		A	A	
NZM1	NZM2	NZM1	NZM2		NZM1	NZM2
15-**125**	15-**250**	20-**125**	20-**250**	0.8-1 x I_n	1.2-**100**	1.6-**250**

Basic switching capacity[1]			**NZMB1-...-NA**		**NZMB2-...-NA**					
NEMA Test Procedure	240 V 60 Hz	sym. rms kA	35		35					
SCCR	480 V 60 Hz	sym. rms kA	25[2]		25					
	600 V 60 Hz	sym. rms kA	–		18[4]					
IEC/EN 60947	400/415 V	kA/p.f.	25	0.25	25	0.25				
	440 V	kA/p.f.	25	0.25	25	0.25				
Normal switching capacity[1]			**NZMN1-...-NA**		**NZMN2-...-NA**					
NEMA Test Procedure	240 V 60 Hz	sym. rms kA	85		85					
SCCR	480 V 60 Hz	sym. rms kA	35[2]		35					
	600 V 60 Hz	sym. rms kA	–		25[4]					
IEC/EN 60947	400/415 V	kA/p.f.	50	0.25	50	0.25				
	440 V	kA/p.f.	35	0.25	35	0.25				
	525 V	kA/p.f.	20	0.30	25	0.25				
	690 V	kA/p.f.	10	0.50	20	0.30				
High switching capacity[1]					**NZMH2-...-NA**					
NEMA Test Procedure	240 V 60 Hz	sym. rms kA			150					
SCCR	480 V 60 Hz	sym. rms kA			100					
	600 V 60 Hz	sym. rms kA			65[3][4]					
IEC/EN 60947	400/415 V	kA/p.f.			150	0.20				
	440 V	kA/p.f.			130	0.20				
	525 V	kA/p.f.			50	0.25				
	690 V	kA/p.f.			20	0.30				

Notes

[1] Switches correspond with both UL/CSA and IEC regulations
IEC switching performance values shown on type label. → Technical data
[2] For NZM...1-...-NA 480Y/277V
[3] For NZMH2 > 125 A: 50 kA
[4] For NZM...2: 600Y/347 V

Electronic releases

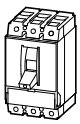
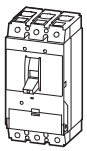
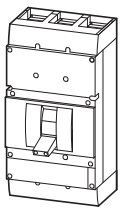
Overload release											**Short-circuit releases**		
Fixed	Adjustable		None	Fixed	Adjustable		None	Fixed	Adjustable		System protection		Motor protection
I_u	I_u	I_r	I_u	I_u	I_u	I_r	I_u	I_u	I_u	I_r	I_{sd}	I_i	I_i
A	A	A	A	A	A	A	A	A	A	A	A	A	A
150-**250**	100-**250**	0.5 - 1 x I_n	90-**220**	250-**600**	250-**600**	0.5 - 1 x I_n	220-**450**	600-**1200**	800-**1200**	0.5 - 1 x I_n	2-10 x I_r	2-12 x I_n	2-14 x I_n

NZMN2-...E...-NA				**NZMN3-...E...-NA**				**NZMN4-...E...-NA**						
85				85				85						
35				42				42						
25[4)]				35				35						
50	0.25			50	0.25			50	0.25					
35	0.25			35	0.25			35	0.25					
25	0.25			25	0.25			25	0.25					
20	0.30			20	0.30			20	0.30					
NZMH2-...E...-NA				**NZMH3-...E...-NA**				**NZMH4-...E...-NA**						
150				150				125						
100				100				85						
50[4)]				50				50						
150	0.20			150	0.20			85	0.20					
130	0.20			130	0.20			85	0.20					
50	0.25			65	0.25			65	0.25					
20	0.30			35	0.25			50	0.25					

The approved switches are suitable for world-wide use. The UL and CSA certificates can be found at www.ul.com and www.csa.com
UL certificates: File No.:E 31593 (NZM1-4), E 148671 (N(S)1-4)
CSA certificates: File No.165628 (NZM1-4)

Molded case switch
UL/CSA approved to UL 489, CSA 22.2 No. 5-09
as well as IEC/EN 60947-2 Annex L

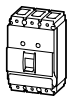
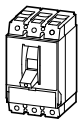
With main switch characteristics to IEC/EN 60204, VDE 0113
Isolating characteristics to IEC/EN 60947
Without overcurrent protection
With short-circuit release
Rated uninterrupted current $I_u = I_n$

63	160	400	800		
100	200	**600**	1000		
125	**250**		**1200**		

	Switching capacity		**NS1-...-NA**	**NS2-...-NA**	**NS3-...-NA**	**NS4-...-NA**
	according to UL 489, CSA 22.2	240 V	85	150	150	85
	SCCR	480 V	35[1)]	100	100	65
		600 V	–	50[4)]	50	42
	IEC/EN 60947	400/415 V	50	150	150	70
		440 V	35	130	130	65
		525 V	20	50	65	40
		690	10	20	35	35

Notes
[1)] For NS1-...-NA: 480Y/277V
[4)] For NZM...2: 600Y/347 V

	Switching capacity				Rated current = Rated uninterrupted current	Setting range		Fixed mounting		
	SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases	**Part no.** Article no.	**Price** See price list	
						Fixed	Non-delayed			
	I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	kA	kA	kA	A	A				
System and cable protection										
Fixed overload releases I_r										
Basic switching capacity										
	**25**	–	–	–	20	20	350 A fixed	Screw terminals as accessories		–
			–	–	25	25	350 A fixed			–
			–	–	30	30	350 A fixed			–
			–	–	35	35	Approx. 8-10			–
			–	–	40	40	Approx. 8-10			–
			–	–	45	45	Approx. 6-10			–
			–	–	50	50	Approx. 6-10			–
			–	–	60	60	Approx. 6-10			–
			–	–	70	70	Approx. 6-10			–
			–	–	80	80	Approx. 6-10			–
			–	–	90	90	Approx. 6-10			–
			–	–	100	100	Approx. 6-10			–
			–	–	110	110	Approx. 6-10			–
			–	–	125	125	Approx. 6-10			–
	**25**	**25**	18	–	15	15	350 A fixed	**NZMB2-AF15-NA** 269142		S
				–	20	20	350 A fixed	**NZMB2-AF20-NA** 269143		S
				–	25	25	350 A fixed	**NZMB2-AF25-NA** 269144		S
				–	30	30	350 A fixed	**NZMB2-AF30-NA** 269145		S
				–	35	35	Approx. 8-10	**NZMB2-AF35-NA** 269146		S
				–	40	40	Approx. 8-10	**NZMB2-AF40-NA** 269147		S
				–	45	45	Approx. 6-10	**NZMB2-AF45-NA** 269148		S
				–	50	50	Approx. 6-10	**NZMB2-AF50-NA** 269149		S
				–	60	60	Approx. 6-10	**NZMB2-AF60-NA** 269160		S
				–	70	70	Approx. 6-10	**NZMB2-AF70-NA** 269161		S
				–	80	80	Approx. 6-10	**NZMB2-AF80-NA** 269162		S
				–	90	90	Approx. 6-10	**NZMB2-AF90-NA** 269163		S
				–	100	100	Approx. 6-10	**NZMB2-AF100-NA** 269164		S
				–	110	110	Approx. 6-10	**NZMB2-AF110-NA** 269165		S
				–	125	125	Approx. 6-10	**NZMB2-AF125-NA** 269166		S
				–	150	150	Approx. 6-10	**NZMB2-AF150-NA** 269167		S

Fixed mounting
with box terminals

Part no. Article no.	Price See price list		Std. pack	Information relevant for export to North America		Notes
				B = box terminals **S = screw terminals**		
NZMB1-AF20-NA 281554		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMB1-AF25-NA 281555		B		UL File No.	E31593	
NZMB1-AF30-NA 281556		B		UL CCN	DIVQ	
NZMB1-AF35-NA 272204		B		CSA File No.	022086	
NZMB1-AF40-NA 272205		B		CSA Class No.	1432-01	
NZMB1-AF45-NA 272206		B		NA Certification	UL Listed, CSA certified	
NZMB1-AF50-NA 272207		B		Specially designed for NA	Yes	
NZMB1-AF60-NA 272208		B		Suitable for	Feeder circuits, branch circuits	
NZMB1-AF70-NA 272209		B		Current Limiting CB	Yes	
NZMB1-AF80-NA 272250		B		Max. Voltage Rating	480Y/277 V	
NZMB1-AF90-NA 272251		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMB1-AF100-NA 272252		B				
NZMB1-AF110-NA 281557		B				
NZMB1-AF125-NA 281558		B				
NZMB2-AF15-BT-NA 107611		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMB2-AF20-BT-NA 107612		B		UL File No.	E31593	
NZMB2-AF25-BT-NA 107613		B		UL CCN	DIVQ	
NZMB2-AF30-BT-NA 107614		B		CSA File No.	022086	
NZMB2-AF35-BT-NA 107615		B		CSA Class No.	1432-01	
NZMB2-AF40-BT-NA 107616		B		NA Certification	UL Listed, CSA certified	
NZMB2-AF45-BT-NA 107617		B		Specially designed for NA	Yes	
NZMB2-AF50-BT-NA 107618		B		Suitable for	Feeder circuits, branch circuits	
NZMB2-AF60-BT-NA 107619		B		Current Limiting CB	Yes	
NZMB2-AF70-BT-NA 107620		B		Max. Voltage Rating	600Y/347 V, 480 V	
NZMB2-AF80-BT-NA 107621		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMB2-AF90-BT-NA 107622		B				
NZMB2-AF100-BT-NA 107623		B				
NZMB2-AF110-BT-NA 107624		B				
NZMB2-AF125-BT-NA 107625		B				
NZMB2-AF150-BT-NA 107626		B				

	Switching capacity				Rated current = Rated uninterrupted current	Setting range		Fixed mounting		
	SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases	**Part no.** Article no.	**Price** See price list	
						Fixed	Non-delayed			
	I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	kA	kA	kA	A	A				

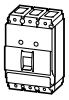
System and cable protection

Fixed overload releases I_r

Basic switching capacity

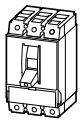
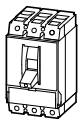
	**25**	**25**	18	–	175	175	Approx. 6-10	**NZMB2-AF175-NA** 269168		S
				–	200	200	Approx. 6-10	**NZMB2-AF200-NA** 269169		S
				–	225	225	Approx. 6-10	**NZMB2-AF225-NA** 271089		S
				–	250	250	Approx. 6-10	**NZMB2-AF250-NA** 271100		S

Normal switching capacity

	**35**	–	–	–	20	20	350 A fixed	Screw terminals as accessories		
			–	–	25	25	350 A fixed			
			–	–	30	30	350 A fixed			
			–	–	35	35	Approx. 8-10			
			–	–	40	40	Approx. 8-10			
			–	–	45	45	Approx. 6-10			
			–	–	50	50	Approx. 6-10			
			–	–	60	60	Approx. 6-10			
			–	–	70	70	Approx. 6-10			
			–	–	80	80	Approx. 6-10			
			–	–	90	90	Approx. 6-10			
			–	–	100	100	Approx. 6-10			
			–	–	110	110	Approx. 6-10			
			–	–	125	125	Approx. 6-10			
	**35**	**35**	25	–	15	15	350 A fixed	**NZMN2-AF15-NA** 269170		S
				–	20	20	350 A fixed	**NZMN2-AF20-NA** 269171		S
				–	25	25	350 A fixed	**NZMN2-AF25-NA** 269172		S
				–	30	30	350 A fixed	**NZMN2-AF30-NA** 269173		S
				–	35	35	Approx. 8-10	**NZMN2-AF35-NA** 269174		S
				–	40	40	Approx. 8-10	**NZMN2-AF40-NA** 269175		S
				–	45	45	Approx. 6-10	**NZMN2-AF45-NA** 269176		S
				–	50	50	Approx. 6-10	**NZMN2-AF50-NA** 269177		S
				–	60	60	Approx. 6-10	**NZMN2-AF60-NA** 269178		S
				–	70	70	Approx. 6-10	**NZMN2-AF70-NA** 269179		S

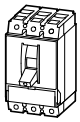
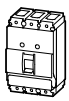
Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
				B = box terminals **S = screw terminals**		
NZMB2-AF175-BT-NA 107627		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMB2-AF200-BT-NA 107628		B		UL File No.	E31593	
NZMB2-AF225-BT-NA 107629		B		UL CCN	DIVQ	
NZMB2-AF250-BT-NA 107630		B		CSA File No.	022086	
				CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMN1-AF20-NA 281565		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMN1-AF25-NA 281566		B		UL File No.	E31593	
NZMN1-AF30-NA 281567		B		UL CCN	DIVQ	
NZMN1-AF35-NA 274220		B		CSA File No.	022086	
NZMN1-AF40-NA 274223		B		CSA Class No.	1432-01	
NZMN1-AF45-NA 274230		B		NA Certification	UL Listed, CSA certified	
NZMN1-AF50-NA 274231		B		Specially designed for NA	Yes	
NZMN1-AF60-NA 274232		B		Suitable for	Feeder circuits, branch circuits	
NZMN1-AF70-NA 274233		B		Current Limiting CB	Yes	
NZMN1-AF80-NA 274234		B		Max. Voltage Rating	480Y/277 V	
NZMN1-AF90-NA 274235		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMN1-AF100-NA 274236		B				
NZMN1-AF110-NA 281568		B				
NZMN1-AF125-NA 281569		B				
NZMN2-AF15-BT-NA 107631		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMN2-AF20-BT-NA 107632		B		UL File No.	E31593	
NZMN2-AF25-BT-NA 107633		B		UL CCN	DIVQ	
NZMN2-AF30-BT-NA 107634		B		CSA File No.	022086	
NZMN2-AF35-BT-NA 107635		B		CSA Class No.	1432-01	
NZMN2-AF40-BT-NA 107636		B		NA Certification	UL Listed, CSA certified	
NZMN2-AF45-BT-NA 107637		B		Specially designed for NA	Yes	
NZMN2-AF50-BT-NA 107638		B		Suitable for	Feeder circuits, branch circuits	
NZMN2-AF60-BT-NA 107639		B		Current Limiting CB	Yes	
NZMN2-AF70-BT-NA 107640		B		Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	

	Switching capacity				Rated current = Rated uninterrupted current	Setting range		Fixed mounting		
	SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases	**Part no.** Article no.	**Price** See price list	
						Fixed	Non-delayed			
	I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
	kA	kA	kA	kA	A	A				
										
System and cable protection										
Fixed overload releases I_r										
Normal switching capacity										
	**35**	**35**	25	–	80	80	Approx. 6-10	**NZMN2-AF80-NA** 269180		S
				–	90	90	Approx. 6-10	**NZMN2-AF90-NA** 269181		S
				–	100	100	Approx. 6-10	**NZMN2-AF100-NA** 269182		S
				–	110	110	Approx. 6-10	**NZMN2-AF110-NA** 269183		S
				–	125	125	Approx. 6-10	**NZMN2-AF125-NA** 269184		S
				–	150	150	Approx. 6-10	**NZMN2-AF150-NA** 269185		S
				–	175	175	Approx. 6-10	**NZMN2-AF175-NA** 269186		S
				–	200	200	Approx. 6-10	**NZMN2-AF200-NA** 269187		S
				–	225	225	Approx. 6-10	**NZMN2-AF225-NA** 271101		S
				–	250	250	Approx. 6-10	**NZMN2-AF250-NA** 271102		S
High switching capacity										
	**150**	**150**	65	–	15	15	350 A fixed	**NZMH2-AF15-NA** 269188		S
					20	20	350 A fixed	**NZMH2-AF20-NA** 269189		S
					25	25	350 A fixed	**NZMH2-AF25-NA** 269190		S
					30	30	350 A fixed	**NZMH2-AF30-NA** 269191		S
					35	35	Approx. 8-10	**NZMH2-AF35-NA** 269192		S
					40	40	Approx. 8-10	**NZMH2-AF40-NA** 269193		S
					45	45	Approx. 6-10	**NZMH2-AF45-NA** 269194		S
					50	50	Approx. 6-10	**NZMH2-AF50-NA** 269195		S
					60	60	Approx. 6-10	**NZMH2-AF60-NA** 269196		S
					70	70	Approx. 6-10	**NZMH2-AF70-NA** 269197		S
					80	80	Approx. 6-10	**NZMH2-AF80-NA** 269198		S
					90	90	Approx. 6-10	**NZMH2-AF90-NA** 269199		S
					100	100	Approx. 6-10	**NZMH2-AF100-NA** 269200		S
					110	110	Approx. 6-10	**NZMH2-AF110-NA** 269201		S
					125	125	Approx. 6-10	**NZMH2-AF125-NA** 269202		S
	100	**100**	50	–	150	150	Approx. 6-10	**NZMH2-AF150-NA** 269203		S
					175	175	Approx. 6-10	**NZMH2-AF175-NA** 269204		S
					200	200	Approx. 6-10	**NZMH2-AF200-NA** 269205		S
					225	225	Approx. 6-10	**NZMH2-AF225-NA** 271103		S
					250	250	Approx. 6-10	**NZMH2-AF250-NA** 271104		S

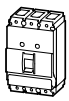
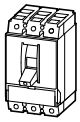
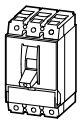
Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
				B = box terminals **S = screw terminals**		
NZMN2-AF80-BT-NA 107641		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMN2-AF90-BT-NA 107642		B		UL File No.	E31593	
NZMN2-AF100-BT-NA 107643		B		UL CCN	DIVQ	
NZMN2-AF110-BT-NA 107644		B		CSA File No.	022086	
NZMN2-AF125-BT-NA 107645		B		CSA Class No.	1432-01	
NZMN2-AF150-BT-NA 107646		B		NA Certification	UL Listed, CSA certified	
NZMN2-AF175-BT-NA 107647		B		Specially designed for NA	Yes	
NZMN2-AF200-BT-NA 107648		B		Suitable for	Feeder circuits, branch circuits	
NZMN2-AF225-BT-NA 107649		B		Current Limiting CB	Yes	
NZMN2-AF250-BT-NA 107650		B		Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMH2-AF15-BT-NA 107809		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMH2-AF20-BT-NA 107810		B		UL File No.	E31593	
NZMH2-AF25-BT-NA 107811		B		UL CCN	DIVQ	
NZMH2-AF30-BT-NA 107812		B		CSA File No.	022086	
NZMH2-AF35-BT-NA 107813		B		CSA Class No.	1432-01	
NZMH2-AF40-BT-NA 107814		B		NA Certification	UL Listed, CSA certified	
NZMH2-AF45-BT-NA 107815		B		Specially designed for NA	Yes	
NZMH2-AF50-BT-NA 107816		B		Suitable for	Feeder circuits, branch circuits	
NZMH2-AF60-BT-NA 107817		B		Current Limiting CB	Yes	
NZMH2-AF70-BT-NA 107818		B		Max. Voltage Rating	600Y/347 V, 480 V	
NZMH2-AF80-BT-NA 107819		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMH2-AF90-BT-NA 107820		B				
NZMH2-AF100-BT-NA 107821		B				
NZMH2-AF110-BT-NA 107822		B				
NZMH2-AF125-BT-NA 107823		B				
NZMH2-AF150-BT-NA 107824		B				
NZMH2-AF175-BT-NA 107825		B				
NZMH2-AF200-BT-NA 107826		B				
NZMH2-AF225-BT-NA 107827		B				
NZMH2-AF250-BT-NA 107828		B				

Switching capacity				Rated current = Rated uninterrupted current	Setting range		Fixed mounting		
SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases Non-delayed	**Part no.** Article no.	**Price** See price list	
I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...			
kA	kA	kA	kA	A	A				
						I >			
System and cable protection									
Adjustable overload release I_r									
Basic switching capacity									
	**25**	–	–	–	20	15-20	350 A fixed	Screw terminals as accessories	
			–	–	25	20-25	350 A fixed		
			–	–	32	25-32	350 A fixed		
			–	–	40	32-40	8-10		
			–	–	50	40-50	6-10		
			–	–	63	50-63	6-10		
			–	–	80	63-80	6-10		
			–	–	100	80-100	6-10		
			–	–	125	100-125	6-10		
	**25**	**25**	18	–	20	15-20	350 A fixed	**NZMB2-A20-NA** 269206	S
				–	25	20-25	350 A fixed	**NZMB2-A25-NA** 269207	S
				–	32	25-32	350 A fixed	**NZMB2-A32-NA** 269208	S
				–	40	32-40	8-10	**NZMB2-A40-NA** 269209	S
				–	50	40-50	6-10	**NZMB2-A50-NA** 269210	S
				–	63	50-63	6-10	**NZMB2-A63-NA** 269211	S
				–	80	63-80	6-10	**NZMB2-A80-NA** 269212	S
				–	100	80-100	6-10	**NZMB2-A100-NA** 269213	S
				–	125	100-125	6-10	**NZMB2-A125-NA** 269214	S
				–	160	125-160	6-10	**NZMB2-A160-NA** 269215	S
				–	200	160-200	6-10	**NZMB2-A200-NA** 269216	S
				–	250	200-250	6-10	**NZMB2-A250-NA** 271105	S
Normal switching capacity									
	**35**	–	–	–	20	15-20	350 A fixed	Screw terminals as accessories	
			–	–	25	20-25	350 A fixed		
			–	–	32	25-32	350 A fixed		
			–	–	40	32-40	8-10		
			–	–	50	40-50	6-10		
			–	–	63	50-63	6-10		

Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
				B = box terminals **S = screw terminals**		
NZMB1-A20-NA 281559		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMB1-A25-NA 281560		B		UL File No.	E31593	
NZMB1-A32-NA 281561		B		UL CCN	DIVQ	
NZMB1-A40-NA 272253		B		CSA File No.	022086	
NZMB1-A50-NA 272254		B		CSA Class No.	1432-01	
NZMB1-A63-NA 272255		B		NA Certification	UL Listed, CSA Certified	
NZMB1-A80-NA 272256		B		Specially designed for NA	Yes	
NZMB1-A100-NA 272258		B		Suitable for	Feeder circuits, Branch Circuits	
NZMB1-A125-NA 281562		B		Current Limiting CB	Yes	
				Max. Voltage Rating	480Y/277 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMB2-A20-BT-NA 107773		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMB2-A25-BT-NA 107774		B		UL File No.	E31593	
NZMB2-A32-BT-NA 107775		B		UL CCN	DIVQ	
NZMB2-A40-BT-NA 107776		B		CSA File No.	022086	
NZMB2-A50-BT-NA 107777		B		CSA Class No.	1432-01	
NZMB2-A63-BT-NA 107778		B		NA Certification	UL Listed, CSA Certified	
NZMB2-A80-BT-NA 107779		B		Specially designed for NA	Yes	
NZMB2-A100-BT-NA 107780		B		Suitable for	Feeder circuits, Branch Circuits	
NZMB2-A125-BT-NA 107781		B		Current Limiting CB	Yes	
NZMB2-A160-BT-NA 107782		B		Max. Voltage Rating	600Y/347 V, 480 V	
NZMB2-A200-BT-NA 107783		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMB2-A250-BT-NA 107784		B				
NZMN1-A20-NA 281570		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMN1-A25-NA 281571		B		UL File No.	E31593	
NZMN1-A32-NA 281572		B		UL CCN	DIVQ	
NZMN1-A40-NA 274237		B		CSA File No.	022086	
NZMN1-A50-NA 274239		B		CSA Class No.	1432-01	
NZMN1-A63-NA 274240		B		NA Certification	UL Listed, CSA Certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, Branch Circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	480Y/277 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	

Switching capacity				Rated current = Rated uninterrupted current	Setting range		Fixed mounting		
SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases Non-delayed	**Part no.** Article no.	**Price** See price list	
I_{cu} kA	I_{cu} kA	I_{cu} kA	I_{cu} kA	$I_n = I_u$ A	I_r A	$I_i = I_n$ x ...			
System and cable protection									
Adjustable overload release I_r									
Normal switching capacity									
	**35**	–	–	–	80	63-80	6-10	Screw terminals as accessories	
			–	–	100	80-100	6-10		
			–	–	125	100-125	6-10		
	**35**	**35**	25	–	20	15-20	350 A fixed	**NZMN2-A20-NA** 269217	S
				–	25	20-25	350 A fixed	**NZMN2-A25-NA** 269218	S
				–	32	25-32	350 A fixed	**NZMN2-A32-NA** 269219	S
				–	40	32-40	8-10	**NZMN2-A40-NA** 269220	S
				–	50	40-50	6-10	**NZMN2-A50-NA** 269221	S
				–	63	50-63	6-10	**NZMN2-A63-NA** 269222	S
				–	80	63-80	6-10	**NZMN2-A80-NA** 269223	S
				–	100	80-100	6-10	**NZMN2-A100-NA** 269224	S
				–	125	100-125	6-10	**NZMN2-A125-NA** 269225	S
				–	160	125-160	6-10	**NZMN2-A160-NA** 269226	S
				–	200	160-200	6-10	**NZMN2-A200-NA** 269227	S
				–	250	200-250	6-10	**NZMN2-A250-NA** 271106	S
High switching capacity									
	**150**	**150**	65	–	20	15-20	350 A fixed	**NZMH2-A20-NA** 269228	S
					25	20-25	350 A fixed	**NZMH2-A25-NA** 269229	S
					32	25-32	350 A fixed	**NZMH2-A32-NA** 269230	S
					40	32-40	8-10	**NZMH2-A40-NA** 269231	S
					50	40-50	6-10	**NZMH2-A50-NA** 269232	S
					63	50-63	6-10	**NZMH2-A63-NA** 269233	S
					80	63-80	6-10	**NZMH2-A80-NA** 269234	S
					100	80-100	6-10	**NZMH2-A100-NA** 269235	S
					125	100-125	6-10	**NZMH2-A125-NA** 269236	S
	100	**100**	50	–	160	125-160	6-10	**NZMH2-A160-NA** 269237	S
					200	160-200	6-10	**NZMH2-A200-NA** 269238	S
					250	200-250	6-10	**NZMH2-A250-NA** 271107	S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**	**Notes**
				B = box terminals **S = screw terminals**	
NZMN1-A80-NA 274241		B	1 off	Product Standards: UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking Max. Voltage Rating: 480Y/277 V Other Standards as NZMN2... below.	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMN1-A100-NA 274242		B			
NZMN1-A125-NA 281573		B			
NZMN2-A20-BT-NA 107785		B		Product Standards: UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking UL File No.: E31593 UL CCN: DIVQ CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA Certified Specially designed for NA: Yes Suitable for: Feeder circuits, Branch Circuits Current Limiting CB: Yes Max. Voltage Rating: 600Y/347 V, 480 V Degree of Protection: IEC: IP20; UL/CSA Type: -	
NZMN2-A25-BT-NA 107786		B			
NZMN2-A32-BT-NA 107787		B			
NZMN2-A40-BT-NA 107788		B			
NZMN2-A50-BT-NA 107789		B			
NZMN2-A63-BT-NA 107790		B			
NZMN2-A80-BT-NA 107791		B			
NZMN2-A100-BT-NA 107792		B			
NZMN2-A125-BT-NA 107793		B			
NZMN2-A160-BT-NA 107794		B			
NZMN2-A200-BT-NA 107795		B			
NZMN2-A250-BT-NA 107796		B			
NZMH2-A20-BT-NA 107797		B			
NZMH2-A25-BT-NA 107798		B			
NZMH2-A32-BT-NA 107799		B			
NZMH2-A40-BT-NA 107800		B			
NZMH2-A50-BT-NA 107801		B			
NZMH2-A63-BT-NA 107802		B			
NZMH2-A80-BT-NA 107803		B			
NZMH2-A100-BT-NA 107804		B			
NZMH2-A125-BT-NA 107805		B			
NZMH2-A160-BT-NA 107806		B			
NZMH2-A200-BT-NA 107807		B			
NZMH2-A250-BT-NA 107808		B			

Circuit-breakers UL/CSA, IEC, electronic releases, 3 pole

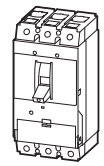
NZM...AEF...NA

Switching capacity				Rated current = Rated uninterrupted current	Setting range			Fixed mounting			
SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases Non-delayed		**Part no.** Article no.	**Price** See price list		Std. pack
I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...					
kA	kA	kA	kA	A	A						

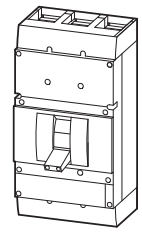
System and cable protection

Fixed overload release I_r
R.m.s. value measurement and "thermal memory"

Normal switching capacity

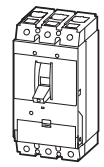


42	**42**	35	35	250	250	2-11	1)	**NZMN3-AEF250-NA** 269275		S	1 off
				300	300	2-11		**NZMN3-AEF300-NA** 269276		S	
				350	350	2-11		**NZMN3-AEF350-NA** 269277		S	
				400	400	2-11		**NZMN3-AEF400-NA** 269278		S	
				450	450	2-8		**NZMN3-AEF450-NA** 269279		S	
				500	500	2-8		**NZMN3-AEF500-NA** 269280		S	
				550	550	2-8		**NZMN3-AEF550-NA** 269281		S	
				600	600	2-8		**NZMN3-AEF600-NA** 269282		S	

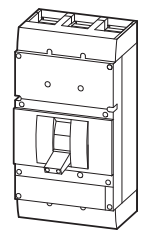


42	**42**	35	35	600	600	2-12	2)	**NZMN4-AEF600-NA** 271108		S	
				700	700	2-12		**NZMN4-AEF700-NA** 271109		S	
				800	800	2-12		**NZMN4-AEF800-NA** 271110		S	
				900	900	2-12		**NZMN4-AEF900-NA** 271111		S	
				1000	1000	2-12		**NZMN4-AEF1000-NA** 271112		S	
				1200	1200	2-12		**NZMN4-AEF1200-NA** 271113		S	

High switching capacity



100	**100**	50	50	250	250	2-11	1)	**NZMH3-AEF250-NA** 269283		S	1 off
				300	300	2-11		**NZMH3-AEF300-NA** 269284		S	
				350	350	2-11		**NZMH3-AEF350-NA** 269285		S	
				400	400	2-11		**NZMH3-AEF400-NA** 269286		S	
				450	450	2-8		**NZMH3-AEF450-NA** 269287		S	
				500	500	2-8		**NZMH3-AEF500-NA** 269288		S	
				550	550	2-8		**NZMH3-AEF550-NA** 269289		S	
				600	600	2-8		**NZMH3-AEF600-NA** 269290		S	



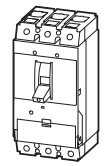
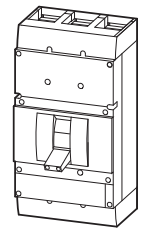
85	**85**	50	50	600	600	2-12	2)	**NZMH4-AEF600-NA** 271114		S	
				700	700	2-12		**NZMH4-AEF700-NA** 271115		S	
				800	800	2-12		**NZMH4-AEF800-NA** 271116		S	
				900	900	2-12		**NZMH4-AEF900-NA** 271117		S	
				1000	1000	2-12		**NZMH4-AEF1000-NA** 271118		S	
				1200	1200	2-12		**NZMH4-AEF1200-NA** 271119		S	

Switching capacity				Rated current = Rated uninterrupted current	Setting range			Fixed mounting			
SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases Non-delayed		**Part no.** Article no.	**Price** See price list		Std. pack
I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...					
kA	kA	kA	kA	A	A						

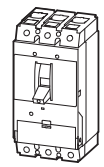
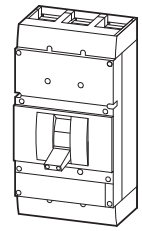
System and cable protection

Adjustable overload release I_r
R.m.s. value measurement and "thermal memory"

Normal switching capacity

	**42**	**42**	35	35	250	125-250	2-11	1)	**NZMN3-AE250-NA** 269299		S	1 off
					400	200-400	2-11		**NZMN3-AE400-NA** 269300		S	
					600	300-600	2-8		**NZMN3-AE600-NA** 269301		S	
	**42**	**42**	35	35	800	400-800	2-12	2)	**NZMN4-AE800-NA** 271120		S	
					1000	500-1000	2-12		**NZMN4-AE1000-NA** 271121		S	
					1200	600-1200	2-12		**NZMN4-AE1200-NA** 271122		S	

High switching capacity

	**100**	**100**	50	50	250	125-250	2-11	1)	**NZMH3-AE250-NA** 269302		S	1 off
					400	200-400	2-11		**NZMH3-AE400-NA** 269303		S	
					600	300-600	2-8		**NZMH3-AE600-NA** 269304		S	
	**85**	**85**	50	50	800	400-800	2-12	2)	**NZMH4-AE800-NA** 271123		S	
					1000	500-1000	2-12		**NZMH4-AE1000-NA** 271124		S	
					1200	600-1200	2-12		**NZMH4-AE1200-NA** 271125		S	

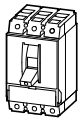
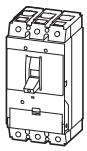
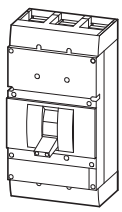
Notes

Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.

B = box terminals
S = screw terminals

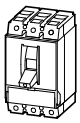
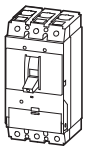
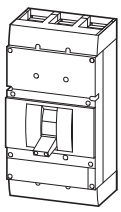
Information relevant for export to North America

Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking
UL File No.	E31593
UL CCN	DIVQ
CSA File No.	022086
CSA Class No.	1432-01
NA Certification	UL Listed, CSA certified
Specially designed for NA	Yes
Suitable for	Feeder circuits, branch circuits
Current Limiting CB	1)Yes 2)No
Max. Voltage Rating	600 V
Degree of Protection	IEC: IP20; UL/CSA Type: -

	Switching capacity				Rated current = Rated uninterrupted current	Setting range			Fixed mounting		
	SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases		**Part no.** Article no.		**Price** See price list
						Fixed	Non-delayed	Delayed			
	I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	$I_{sd} = I_r$ x ...			
	kA	kA	kA	kA	A	A					
							I>	I>			
Systems protection, cable protection, selectivity, generator protection											
Fixed overload release I_r R.m.s. value measurement and "thermal memory"											
Normal switching capacity											
	**35**	**35**	25	–	150	150	1800 A fixed	2-10	**NZMN2-VEF150-NA** 271126		S
				–	175	175	2100 A fixed	2-10	**NZMN2-VEF175-NA** 271127		S
				–	200	200	2400 A fixed	2-10	**NZMN2-VEF200-NA** 271128		S
				–	225	225	2700 A fixed	2-10	**NZMN2-VEF225-NA** 271129		S
				–	250	250	3000 A fixed	2-10	**NZMN2-VEF250-NA** 271130		S
	**42**	**42**	35	35	250	250	2-11	2-10	**NZMN3-VEF250-NA** 269308		S
					300	300	2-11	2-10	**NZMN3-VEF300-NA** 269309		S
					350	350	2-11	2-10	**NZMN3-VEF350-NA** 269310		S
					400	400	2-11	2-10	**NZMN3-VEF400-NA** 269311		S
					450	450	2-8	1.5-7	**NZMN3-VEF450-NA** 269312		S
					500	500	2-8	1.5-7	**NZMN3-VEF500-NA** 269313		S
					550	550	2-8	1.5-7	**NZMN3-VEF550-NA** 269314		S
					600	600	2-8	1.5-7	**NZMN3-VEF600-NA** 269315		S
	**42**	**42**	35	35	600	600	2-12	2-10	**NZMN4-VEF600-NA** 271136		S
					700	700	2-12	2-10	**NZMN4-VEF700-NA** 271137		S
					800	800	2-12	2-10	**NZMN4-VEF800-NA** 271138		S
					900	900	2-12	2-10	**NZMN4-VEF900-NA** 271139		S
					1000	1000	2-12	2-10	**NZMN4-VEF1000-NA** 271140		S
					1200	1200	2-12	2-10	**NZMN4-VEF1200-NA** 271141		S

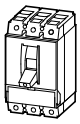
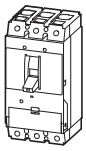
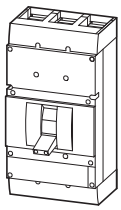
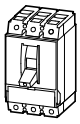
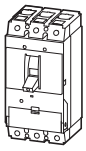
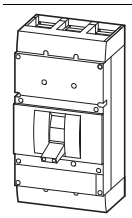
Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
NZMN2-VEF150-BT-NA 107593		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label. Adjustable delay setting t_r • 2 – 20 s at 6 x I_r Adjustable delay t_{sd} • Steps 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable (ex-works OFF)
NZMN2-VEF175-BT-NA 107594		B		UL File No.	E31593	
NZMN2-VEF200-BT-NA 107595		B		UL CCN	DIVQ	
NZMN2-VEF225-BT-NA 107596		B		CSA File No.	022086	
NZMN2-VEF250-BT-NA 107597		B		CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory			1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
				UL File No.	E31593	
				UL CCN	DIVQ	
				CSA File No.	022086	
				CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory			1 off			

	Switching capacity				Rated current = Rated uninterrupted current	Setting range			Fixed mounting		
	SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Short-circuit releases		**Part no.** Article no.		**Price** See price list
						Fixed	Non-delayed	Delayed			
	I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	$I_{sd} = I_r$ x ...			
	kA	kA	kA	kA	A	A					
							I>	I>			
Systems protection, cable protection, selectivity, generator protection											
Fixed overload release I_r R.m.s. value measurement and "thermal memory"											
High switching capacity											
	**100**	**100**	50	–	150	150	1800 A fixed	2-10	**NZMH2-VEF150-NA** 271131		S
				–	175	175	2100 A fixed	2-10	**NZMH2-VEF175-NA** 271132		S
				–	200	200	2400 A fixed	2-10	**NZMH2-VEF200-NA** 271133		S
				–	225	225	2700 A fixed	2-10	**NZMH2-VEF225-NA** 271134		S
				–	250	250	3000 A fixed	2-10	**NZMH2-VEF250-NA** 271135		S
	**100**	**100**	50	50	250	250	2-11	2-10	**NZMH3-VEF250-NA** 269316		S
					300	300	2-11	2-10	**NZMH3-VEF300-NA** 269317		S
					350	350	2-11	2-10	**NZMH3-VEF350-NA** 269318		S
					400	400	2-11	2-10	**NZMH3-VEF400-NA** 269319		S
					450	450	2-8	1.5-7	**NZMH3-VEF450-NA** 269320		S
					500	500	2-8	1.5-7	**NZMH3-VEF500-NA** 269321		S
					550	550	2-8	1.5-7	**NZMH3-VEF550-NA** 269322		S
					600	600	2-8	1.5-7	**NZMH3-VEF600-NA** 269323		S
	**85**	**85**	50	50	600	600	2-12	2-10	**NZMH4-VEF600-NA** 271142		S
					700	700	2-12	2-10	**NZMH4-VEF700-NA** 271143		S
					800	800	2-12	2-10	**NZMH4-VEF800-NA** 271144		S
					900	900	2-12	2-10	**NZMH4-VEF900-NA** 271145		S
					1000	1000	2-12	2-10	**NZMH4-VEF1000-NA** 271146		S
					1200	1200	2-12	2-10	**NZMH4-VEF1200-NA** 271147		S

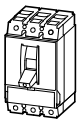
Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
NZMH2-VEF150-BT-NA 107598		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	IEC switching performance values shown on type label. Adjustable delay setting t_r • 2 – 20 s at 6 x I_r Adjustable delay t_{sd} • Steps 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable (ex-works OFF)
NZMH2-VEF175-BT-NA 107599		B		UL File No.	E31593	
NZMH2-VEF200-BT-NA 107840		B		UL CCN	DIVQ	
NZMH2-VEF225-BT-NA 107841		B		CSA File No.	022086	
NZMH2-VEF250-BT-NA 107842		B		CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory			1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
				UL File No.	E31593	
				UL CCN	DIVQ	
				CSA File No.	022086	
				CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory						

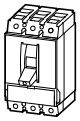
	Switching capacity				Rated current = Rated uninterrupted current	Setting range			Fixed mounting		
						Overload releases	Short-circuit releases		**Part no.** Article no.		**Price** See price list
							Non-delayed	Delayed			
	SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz							
	I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r	$I_i = I_n$ x ...	$I_{sd} = I_r$ x ...			
	kA	kA	kA	kA	A	A					
							$I>$	$I>$			
Systems protection, cable protection, selectivity, generator protection											
Adjustable overload release I_r R.m.s. value measurement and "thermal memory"											
Normal switching capacity											
	**35**	**35**	25	–	100	50-100	1200 A fixed	2-10	**NZMN2-VE100-NA** 271148		S
				–	160	80-160	1920 A fixed	2-10	**NZMN2-VE160-NA** 271149		S
				–	250	125-250	3000 A fixed	2-10	**NZMN2-VE250-NA** 271150		S
	**42**	**42**	35	35	250	125-250	2-11	2-10	**NZMN3-VE250-NA** 269332		S
					400	200-400	2-11	2-10	**NZMN3-VE400-NA** 269333		S
					600	300-600	2-8	1.5-7	**NZMN3-VE600-NA** 269334		S
	**42**	**42**	35	35	800	400-800	2-12	2-10	**NZMN4-VE800-NA** 271154		S
					1000	500-1000	2-12	2-10	**NZMN4-VE1000-NA** 271155		S
					1200	630-1200	2-12	2-10	**NZMN4-VE1200-NA** 271156		S
High switching capacity											
	**100**	**100**	50	–	100	50-100	1200 A fixed	2-10	**NZMH2-VE100-NA** 271151		S
					160	80-160	1920 A fixed	2-10	**NZMH2-VE160-NA** 271152		S
					250	125-250	3000 A fixed	2-10	**NZMH2-VE250-NA** 271153		S
	**100**	**100**	50	50	250	125-250	2-11	2-10	**NZMH3-VE250-NA** 269335		S
					400	200-400	2-11	2-10	**NZMH3-VE400-NA** 269336		S
					600	300-600	2-8	1.5-7	**NZMH3-VE600-NA** 269337		S
	**85**	**85**	50	50	800	400-800	2-12	2-10	**NZMH4-VE800-NA** 271157		S
					1000	500-1000	2-12	2-10	**NZMH4-VE1000-NA** 271158		S
					1200	630-1200	2-12	2-10	**NZMH4-VE1200-NA** 271159		S

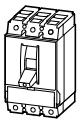
Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
NZMN2-VE100-BT-NA 107843		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label. Adjustable delay setting t_r • 2 – 20 s at 6 x I_r Adjustable delay t_{sd} • Steps: 0, 20, 60, 100, 200, 300, 500, 750, 1000 ms i^2t constant function • NZM2 fixed OFF • NZM3, NZM4 switchable (ex-works OFF)
				UL File No.	E31593	
NZMN2-VE160-BT-NA 107844		B		UL CCN	DIVQ	
				CSA File No.	022086	
NZMN2-VE250-BT-NA 107845		B		CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory				Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
				UL File No.	E31593	
				UL CCN	DIVQ	
				CSA File No.	022086	
				CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMH2-VE100-BT-NA 107846		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
				UL File No.	E31593	
NZMH2-VE160-BT-NA 107847		B		UL CCN	DIVQ	
				CSA File No.	022086	
NZMH2-VE250-BT-NA 107848		B		CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600Y/347 V, 480 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory				Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
				UL File No.	E31593	
				UL CCN	DIVQ	
				CSA File No.	022086	
				CSA Class No.	1432-01	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Current Limiting CB	Yes	
				Max. Voltage Rating	600 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	

	Rated current = Rated uninterrupted current	Setting range	**Fixed mounting** with screw terminals		
		Short-circuit releases	**Part no.** Article no.	**Price** See price list	
	$I_n = I_u$	Non-delayed			
	A	$I_i = I_n$ x ...			
		$I>$			
Short-circuit protection					
Motor protection in conjunction with contactor and overload relay • With short-circuit release • Without overload release I_r					
Basic switching capacity					
	1.2	7-12	Screw terminals as accessories		
	2	6-11			
	3	6-11			
	5	6-11			
	8	6-11			
	12	7-12			
	18	7-12			
	26	8-13			
	33	8-14			
	40	8-14			
	50	8-14			
	63	8-14			
	80	8-14			
	100	8-13			
	1.6	8-14	**NZMB2-S1.6-CNA** 269472		S
	2.4	8-14	**NZMB2-S2.4-CNA** 269473		S
	5	6-11	**NZMB2-S5-CNA** 103034		S
	8	6-11	**NZMB2-S8-CNA** 103035		S
	12	7-12	**NZMB2-S12-CNA** 103036		S
	18	7-12	**NZMB2-S18-CNA** 103037		S
	26	8-13	**NZMB2-S26-CNA** 103038		S
	33	8-14	**NZMB2-S33-CNA** 103039		S
	40	8-14	**NZMB2-S40-CNA** 269243		S
	50	8-14	**NZMB2-S50-CNA** 269244		S
	63	8-14	**NZMB2-S63-CNA** 269245		S
	80	8-14	**NZMB2-S80-CNA** 269246		S
	100	8-14	**NZMB2-S100-CNA** 269247		S
	125	8-14	**NZMB2-S125-CNA** 269248		S
	160	8-14	**NZMB2-S160-CNA** 269249		S
	200	8-13	**NZMB2-S200-CNA** 269250		S
	250	8-10	**NZMB2-S250-CNA** 102478		S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
						B = box terminals **S = screw terminals** For further terminal types see accessories
NZMB1-S1.2-CNA 102906		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMB1-S2-CNA 102907		B		UL File No.	E31593	
NZMB1-S3-CNA 102908		B		UL CCN	DKPU2	
NZMB1-S5-CNA 102909		B		CSA File No.	022086	
NZMB1-S8-CNA 103020		B		CSA Class No.	1432-01	
NZMB1-S12-CNA 103021		B		NA Certification	UL Recognized, CSA certified	
NZMB1-S18-CNA 103022		B		Conditions of Acceptability	Only used in motor circuits in conjunction with suitable contactor and overload relay. SCCR value applies for complete combination starter only, consisting of instantaneous trip circuit breaker, contactor and overload relay.	
NZMB1-S26-CNA 103023		B		Specially designed for NA	Yes	
NZMB1-S33-CNA 103024		B		Suitable for	Branch circuits, feeder circuits	
NZMB1-S40-CNA 281263		B		Max. Voltage Rating	480Y/277 V	
NZMB1-S50-CNA 281264		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMB1-S63-CNA 281265		B				
NZMB1-S80-CNA 281266		B				
NZMB1-S100-CNA 281267		B				
NZMB2-S1.6-BT-CNA 107651		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMB2-S2.4-BT-CNA 107652		B		UL File No.	E31593	
NZMB2-S5-BT-CNA 107653		B		UL CCN	DKPU2	
NZMB2-S8-BT-CNA 107654		B		CSA File No.	022086	
NZMB2-S12-BT-CNA 107655		B		CSA Class No.	1432-01	
NZMB2-S18-BT-CNA 107656		B		NA Certification	UL Recognized, CSA certified	
NZMB2-S26-BT-CNA 107657		B		Conditions of Acceptability	Only used in motor circuits in conjunction with suitable contactor and overload relay. SCCR value applies for complete combination starter only, consisting of instantaneous trip circuit breaker, contactor and overload relay.	
NZMB2-S33-BT-CNA 107658		B		Specially designed for NA	Yes	
NZMB2-S40-BT-CNA 107659		B		Suitable for	Branch circuits, feeder circuits	
NZMB2-S50-BT-CNA 107660		B		Max. Voltage Rating	600Y/347 V, 480 V	
NZMB2-S63-BT-CNA 107661		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMB2-S80-BT-CNA 107662		B				
NZMB2-S100-BT-CNA 107663		B				
NZMB2-S125-BT-CNA 107664		B				
NZMB2-S160-BT-CNA 107665		B				
NZMB2-S200-BT-CNA 107666		B				
NZMB2-S250-BT-CNA 107667		B				

	Rated current = Rated uninterrupted current $I_n = I_u$ A	Setting range Short-circuit releases Non-delayed $I_i = I_n$ x ... $I>$		**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list		Std. pack
Short-circuit protection							
Motor protection in conjunction with contactor and overload relay • With short-circuit release • Without overload release I_r							
Normal switching capacity							
	1.2	7-12	[1]	**NZMN1-S1.2-CNA** 103025		B	1 off
	2	6-11		**NZMN1-S2-CNA** 103026		B	
	3	6-11		**NZMN1-S3-CNA** 103027		B	
	5	6-11		**NZMN1-S5-CNA** 103028		B	
	8	6-11		**NZMN1-S8-CNA** 103029		B	
	12	7-12		**NZMN1-S12-CNA** 103030		B	
	18	7-12		**NZMN1-S18-CNA** 103031		B	
	26	8-13		**NZMN1-S26-CNA** 103032		B	
	33	8-14		**NZMN1-S33-CNA** 103033		B	
	40	8-14		**NZMN1-S40-CNA** 281276		B	
	50	8-14		**NZMN1-S50-CNA** 281277		B	
	63	8-14		**NZMN1-S63-CNA** 281278		B	
	80	8-14		**NZMN1-S80-CNA** 281279		B	
	100	8-13		**NZMN1-S100-CNA** 281280		B	
	1.6	8-14	[2]	**NZMN2-S1.6-CNA** 269478		S	
	2.4	8-14		**NZMN2-S2.4-CNA** 269479		S	
	5	6-11		**NZMN2-S5-CNA** 103040		S	
	8	6-11		**NZMN2-S8-CNA** 103041		S	
	12	7-12		**NZMN2-S12-CNA** 103042		S	
	18	7-12		**NZMN2-S18-CNA** 103043		S	
	26	8-13		**NZMN2-S26-CNA** 103044		S	
	33	8-14		**NZMN2-S33-CNA** 103045		S	
	40	8-14		**NZMN2-S40-CNA** 269255		S	
	50	8-14		**NZMN2-S50-CNA** 269256		S	
	63	8-14		**NZMN2-S63-CNA** 269257		S	
	80	8-14		**NZMN2-S80-CNA** 269258		S	
	100	8-14		**NZMN2-S100-CNA** 269259		S	
	125	8-14		**NZMN2-S125-CNA** 269260		S	
	160	8-14		**NZMN2-S160-CNA** 269261		S	
	200	8-13		**NZMN2-S200-CNA** 269262		S	
	250	8-10		**NZMN2-S250-CNA** 102479		S	

	Rated current = Rated uninterrupted current	Setting range		**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list		Std. pack
		Short-circuit releases					
	$I_n = I_u$	Non-delayed					
	A	$I_i = I_n$ x ...					
		$I>$					
Short-circuit protection							
Motor protection in conjunction with contactor and overload relay • With short-circuit release • Without overload release I_r							
High switching capacity							
	1.6	8-14	[2]	**NZMH2-S1.6-CNA** 269482		S	1 off
	2.4	8-14		**NZMH2-S2.4-CNA** 269483		S	
	5	6-11		**NZMH2-S5-CNA** 103046		S	
	8	6-11		**NZMH2-S8-CNA** 103047		S	
	12	7-12		**NZMH2-S12-CNA** 103048		S	
	18	5-9		**NZMH2-S18-CNA** 103049		S	
	26	8-13		**NZMH2-S26-CNA** 103050		S	
	33	8-14		**NZMH2-S33-CNA** 103051		S	
	40	8-14		**NZMH2-S40-CNA** 269267		S	
	50	8-14		**NZMH2-S50-CNA** 269268		S	
	63	8-14		**NZMH2-S63-CNA** 269269		S	
	80	8-14		**NZMH2-S80-CNA** 269270		S	
	100	8-14		**NZMH2-S100-CNA** 269271		S	
	125	8-14		**NZMH2-S125-CNA** 269272		S	
	160	8-14		**NZMH2-S160-CNA** 269273		S	
	200	8-13		**NZMH2-S200-CNA** 269274		S	
	250	8-10		**NZMH2-S250-CNA** 102490		S	

Notes

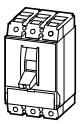
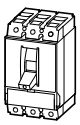
B = box terminals
S = screw terminals

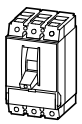
For further terminal types see accessories

Switches correspond with both UL/CSA and IEC regulations.
IEC switching performance values shown on type label.

Information relevant for export to North America

Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking
UL File No.	E31593
UL CCN	DKPU2
CSA File No.	022086
CSA Class No.	1432-01
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Only used in motor circuits in conjunction with suitable contactor and overload relay. SCCR value applies for complete combination starter only, consisting of instantaneous trip circuit breaker, contactor and overload relay.
Specially designed for NA	Yes
Suitable for	Branch circuits, feeder circuits
Max. Voltage Rating	[1] 480Y/277 V [2] 600Y/347 V, 480 V
Degree of Protection	IEC: IP20; UL/CSA Type: -

Switching capacity		Rated current = Rated uninterrupted current	Setting range		Motor power	**Fixed mounting** with screw terminals		
SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz		Overload releases	Short-circuit releasess Non-delayed	460 V 480 V HP	**Part no.** Article no.	**Price** See Price list	
I_{cu} kA	I_{cu} kA	$I_n = I_u$ A	I_r A	$I_i = I_n$ x ...				
								
Motor protection								
100% rated Adjustable overload releases For use in motor circuits with contactor. Additional motor protective characteristics (calibration) to UL508, CSA-C22.2 No. 14-05.								
Normal switching capacity								
	35	35	90	45-90	2-14	60	**NZMN2-ME90-NA** 118964	S
			140	70-140	2-14	100	**NZMN2-ME140-NA** 118965	S
			200	100-200	2-14	150	**NZMN2-ME200-NA** 118966	S
High switching capacity								
	100	100	90	45-90	2-14	60	**NZMH2-ME90-NA** 118967	S
			140	70-140	2-14	100	**NZMH2-ME140-NA** 118968	S
			200	100-200	2-14	150	**NZMH2-ME200-NA** 118969	S

Rated current = Rated uninterrupted current	Setting range Short-circuit releases	**Fixed mounting** with screw terminals **Part no.** Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
$I_n = I_u$ A	Non-delayed $I_i = I_n$ x ...					
						
Short-circuit protection					**B = box terminals** **S = screw terminals**	
Motor protection in conjunction with contactor and overload relay • With short-circuit release • Without overload release I_r					For further terminal types see accessories	
Normal switching capacity						
 90	2-14	**NZMN2-SE90-CNA** 271160		S	1 off	
140	2-14	**NZMN2-SE140-CNA** 271161		S		
220	2-14	**NZMN2-SE220-CNA** 271162		S		

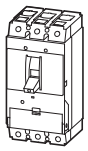
Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking
UL File No.	E31593
UL CCN	DKPU2
CSA File No.	022086
CSA Class No.	1432-01
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Only used in motor circuits in conjunction with suitable contactor and overload relay. SCCR value applies for complete combination starter only, consisting of instantaneous trip circuit breaker, contactor and overload relay.
Specially designed for NA	Yes
Suitable for	Branch circuits, feeder circuits
Max. Voltage Rating	480 V
Degree of Protection	IEC: IP20; UL/CSA Type: -

Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.

Fixed mounting
with box terminals

Part no. Article no.	Price See Price list	Std. pack	Information relevant for export to North America		Notes
					B = box terminals **S = screw terminals** For further terminal types see accessories
NZMN2-ME90-BT-NA 142421		S	1 off		Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label. Adjustable delay setting t_r • 2 – 20 s at 6 x I_r
NZMN2-ME140-BT-NA 142422		S	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NZMN2-ME200-BT-NA 142423		S	UL CCN	DIVQ	
			NA Certification	Request filed for UL and CSA	
			Specially designed for NA	Yes, additionally calibrated according to UL 508	
			Suitable for	Feeder circuits, branch circuits	
NZMH2-ME90-BT-NA 142424		S	1 off	Max. Voltage Rating	480 V
NZMH2-ME140-BT-NA 142425		S		Degree of Protection	IEC: IP20; UL/CSA Type: -
NZMH2-ME200-BT-NA 142426		S			

Fixed mounting
with screw terminals

Rated current = Rated uninterrupted current $I_n = I_u$ A	Setting range Short-circuit releases Non-delayed $I_i = I_n$ x …	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America		Notes
Short-circuit protection Motor protection in conjunction with contactor and overload relay • With short-circuit release • Without overload release I_r							**B = box terminals** **S = screw terminals** For further terminal types see accessories
Normal switching capacity							
 220	2-14	**NZMN3-SE220-CNA** 269341		S	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking
350	2-14	**NZMN3-SE350-CNA** 269342		S		UL File No.	E31593
450	2-12	**NZMN3-SE450-CNA** 284465		S		UL CCN	DKPU2
						CSA File No.	022086
						CSA Class No.	1432-01
						NA Certification	UL Recognized, CSA certified
						Conditions of Acceptability	Only used in motor circuits in conjunction with suitable contactor and overload relay. SCCR value applies for complete combination starter only, consisting of instantaneous trip circuit breaker, contactor and overload relay.
						Specially designed for NA	Yes
						Suitable for	Branch circuits, feeder circuits
						Max. Voltage Rating	600 V
						Degree of Protection	IEC: IP20; UL/CSA Type: -

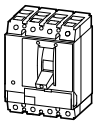
Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.

Switching capacity				Rated current = Rated uninterrupted current	Setting range		
SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		Overload releases	Neutral conductor	Short-circuit releases
						I_r × % of phase conductor	Non-delayed
I_{cu}	I_{cu}	I_{cu}	I_{cu}	$I_n = I_u$	I_r		$I_i = I_n$ x ...
kA	kA	kA	kA	A	A	%	
							I>

System and cable protection

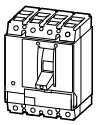
Fixed overload releases I_r

Basic switching capacity



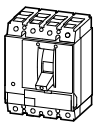
25	**25**	–	–	125	125	100	Approx. 6 - 10
		–	–	150	150	100	Approx. 6 - 10
		–	–	175	175	100	Approx. 6 - 10
		–	–	200	200	100	Approx. 6 - 10
		–	–	225	225	100	Approx. 6 - 10
		–	–	250	250	100	Approx. 6 - 10

Normal switching capacity



35	**35**	–	–	125	125	100	Approx. 6 - 10
		–	–	150	150	100	Approx. 6 - 10
		–	–	175	175	100	Approx. 6 - 10
		–	–	200	200	100	Approx. 6 - 10
		–	–	225	225	100	Approx. 6 - 10
		–	–	250	250	100	Approx. 6 - 10

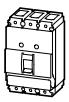
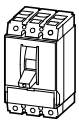
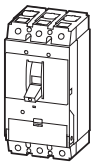
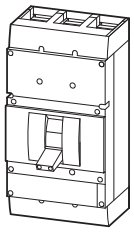
High switching capacity



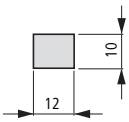
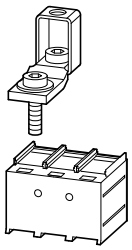
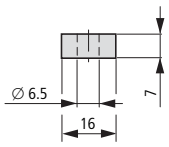
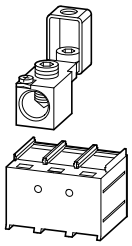
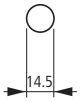
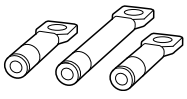
150	**150**	–	–	125	125	100	Approx. 6 - 10
100	**100**	–	–	150	150	100	Approx. 6 - 10
		–	–	175	175	100	Approx. 6 - 10
		–	–	200	200	100	Approx. 6 - 10
		–	–	225	225	100	Approx. 6 - 10
		–	–	250	250	100	Approx. 6 - 10

Fixed mounting
with box terminals

Part no. Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
						B = box terminals **S = screw terminals** For further terminal types see accessories
NZMB2-4-AF125-BT-NA 113011		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	Switches correspond with both UL/CSA and IEC regulations. IEC switching performance values shown on type label.
NZMB2-4-AF150-BT-NA 113012		B		UL File No.	E31593	
NZMB2-4-AF175-BT-NA 113013		B		UL CCN	DIVQ	
NZMB2-4-AF200-BT-NA 113014		B		CSA File No.	–	
NZMB2-4-AF225-BT-NA 113015		B		CSA Class No.	–	
NZMB2-4-AF250-BT-NA 113016		B		NA Certification	UL Listed	
				Specially designed for NA	Yes	
NZMN2-4-AF125-BT-NA 113005		B	1 off	Suitable for	Feeder circuits, branch circuits	
NZMN2-4-AF150-BT-NA 113006		B		Current Limiting CB	Yes	
NZMN2-4-AF175-BT-NA 113007		B		Max. Voltage Rating	480 V	
NZMN2-4-AF200-BT-NA 113008		B		Degree of Protection	IEC: IP20; UL/CSA Type: -	
NZMN2-4-AF225-BT-NA 113009		B				
NZMN2-4-AF250-BT-NA 113010		B				
NZMH2-4-AF125-BT-NA 113017		B	1 off			
NZMH2-4-AF150-BT-NA 113018		B				
NZMH2-4-AF175-BT-NA 113019		B				
NZMH2-4-AF200-BT-NA 113020		B				
NZMH2-4-AF225-BT-NA 113021		B				
NZMH2-4-AF250-BT-NA 113022		B				

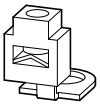
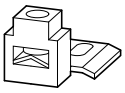
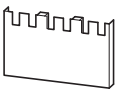
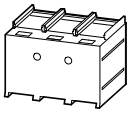
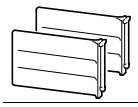
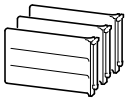
	Rated current = Rated uninterrupted current	Switching capacity				Response value of short-circuit releases	**Fixed mounting** with screw terminals		
		SCCR 480Y/ 277 V 60 Hz	SCCR 480 V 60 Hz	SCCR 600Y/ 347 V 60 Hz	SCCR 600 V 60 Hz		**Part no.** Article no.	**Price** See price list	
	$I_n = I_u$	I_{cu}	I_{cu}	I_{cu}	I_{cu}	I_i			
	A	kA	kA	kA	kA	A			
Molded case switches for North America									
With permanently set short-circuit release (self-protection)									
3 switch positions I, +, 0 Can be remotely operated with shunt release XU/XA, remote operator XR, Can be equipped with trip-indicating auxiliary contact M22-K..									
		63	**35**	–	–	–	1250	Screw terminals as accessories	
		100			–	–	1250		
		125			–	–	1250		
		160	**100**	**100**	50	–	2500	**NS2-160-NA** 102684	S
		200					2500	**NS2-200-NA** 102685	S
		250					2500	**NS2-250-NA** 102686	S
		400	**100**	**100**	50	50	6600	**NS3-400-NA** 102687	S
		600					6600	**NS3-600-NA** 102688	S
		800	**65**	**65**	42	42	25000	**NS4-800-NA** 102689	S
		1000					25000	**NS4-1000-NA** 102690	S
		1200					25000	**NS4-1200-NA** 102691	S

Fixed mounting with box terminals **Part no.** Article no.	**Price** See price list		Std. pack	**Information relevant for export to North America**		**Notes**
						B = box terminals **S = screw terminals** For further terminal types see accessories
NS1-63-NA 102681		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	IEC/EN 60947-2: circuit-breaker without overcurrent protection (CBI-X) with main switch characteristics and isolating characteristics to IEC/EN 60204
NS1-100-NA 102682		B		UL File No.	E148671	
NS1-125-NA 102683		B		UL CCN	WJAZ	
				CSA File No.	022086	
				CSA Class No.	4652-06	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Max. Voltage Rating	480Y/277 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
NS2-160-BT-NA 107578		B	1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
NS2-200-BT-NA 107579		B		UL File No.	E148671	
NS2-250-BT-NA 107610		B		UL CCN	WJAZ	
				CSA File No.	022086	
				CSA Class No.	4652-06	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Max. Voltage Rating	600Y/347 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	
Terminals as accessory			1 off	Product Standards	UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking	
				UL File No.	E148671	
				UL CCN	WJAZ	
				CSA File No.	022086	
				CSA Class No.	4652-06	
				NA Certification	UL Listed, CSA certified	
				Specially designed for NA	Yes	
				Suitable for	Feeder circuits, branch circuits	
				Max. Voltage Rating	600 V	
				Degree of Protection	IEC: IP20; UL/CSA Type: -	

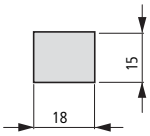
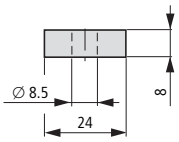
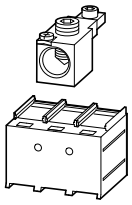
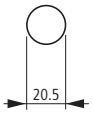
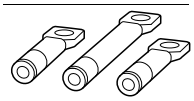
	Max. cable connection area	Number of poles	For use with	Terminal capacity Cable Cable lugs	Terminal capacity Terminal capacity mm²	AWG/kcmil	Terminal capacity Copper strip No. of discs × width × disc thickness mm	Terminal capacity Copper bar width x thickness mm
Box terminal								
Standard equipment								
		3 pole	NZM1, PN1, N(S)1	Copper cable	1 x 10 - 70 2 x 6 - 25 1)	1 x 12 - 2/0	≧ 2 x 9 x 0.8	–
		4 pole	NZM1-4, PN1-4, N1-4					
Screw terminals								
		3 pole	NZM1, PN1, N(S)1	Copper cable lugs Aluminium cable lugs	1 x 10 - 70 2 x 6 - 25 1 x 10 - 35 2 x 10 - 35 1)	1 x 12 - 2/0	–	≧ 12 x 5
		4 pole	NZM1-4, PN1-4, N1-4					
Tunnel terminal								
		3 pole	NZM1, PN1, N(S)1	Copper cable ⊙ ▽ Aluminium cable ⊙ ▽	1 x 16 - 95 1)	1 x 6 - 3/0 -	–	–
		4 pole	NZM1-4, PN1-4, N1-4					
Rear terminal bolts								
Not UL/CSA approved								
	–	3 pole	NZM1, PN1, N1	Copper cable lugs Aluminium cable lugs	1 x 10-70 2 x 6-25 1 x 10-35 2 x 10-35 1)	–	–	min. 12 x 5 max. 16 x 5
	–	4 pole	NZM1-4, PN1-4, N1-4					

Notes 1) Up to 95 mm² can be connected depending on make of cable.

Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**	
NZM1-XKC 260015		1 set	Standard connection with all NZM1, PN1 and N(S)1 switches. Conversion kit for circuit-breaker with screw terminal. Contains parts for a 3 or 4 pole switch side. Fitted within the switch housing. Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
NZM1-4-XKC 267075		1 set		–	
NZM1-XKS 260019		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Flush mounting outside the switch housing. Cover NZM1(-4)-XKSA must be fitted (included as standard).	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
NZM1-4-XKS 266725		1 set		–	
NZM1-XKA 266730		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. With control circuit terminal for 1 x 0.75 - 2.5 mm^2 (18 - 14 AWG) or 2 x 0.75 - 1.5 mm^2 (18 - 14 AWG) copper conductor. Flush mounting outside the switch housing. Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules. Cover NZM1(-4)-XKSA must be fitted (included as standard).	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
NZM1-4-XKA 266731		1 set		–	
NZM1-XKR 266734		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches.	–	
NZM1-4-XKR 266737		1 set		–	

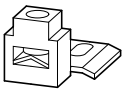
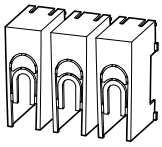
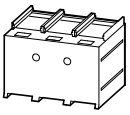
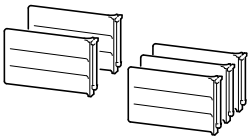
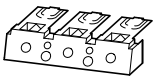
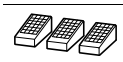
	Max. cable connection area	Number of poles	For use with	Connection	Terminal capacity[1] mm²	AWG/kcmil
Control cable terminals						
	–	3 and 4 pole	NZM1(-4), PN1(-4), N(S)1(-4)	Screw terminals	1 x 0.75-2.5 2 x 0.75-1.5	1 x 18-14 2 x 18-16
	–	3 and 4 pole	NZM1(-4), PN1(-4), N(S)1(-4)	Box terminal	1 x 0.75-2.5 2 x 0.75-1.5	1 x 18-14 2 x 18-16
Terminal covers knockout						
Not UL/CSA approved For box terminal						
	–	3 pole	NZM1, PN1, N1	–	–	–
	–	4 pole	NZM1-4, PN1-4, N1-4	–	–	–
Cover						
	–	3 pole	NZM1, PN1, N(S)1	–	–	–
	–	4 pole	NZM1-4, PN1-4, N1-4	–	–	–
IP2X protection against contact with finger						
For box terminal						
	–	3 pole	NZM1, PN1, N1	–	–	–
	–	4 pole	NZM1-4, PN1-4, N1-4	–	–	–
For covers NZM1(-4)-XKSA or NZM1…(C)NA, N(S)1…NA						
	–	3 pole	NZM1, PN1, NS1	–	–	–
	–	4 pole	NZM1-4, PN1-4, N1-4	–	–	–
Phase isolators						
	–	3 pole	NZM1, PN1, N(S)1	–	–	–
	–	4 pole	NZM1-4, PN1-4, N1-4	–	–	–

Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**	
NZM1-XSTS 260150		1 set	Contains for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers. Included as standard with tunnel terminal. Degree of protection IP1X Height or thickness of connections: 2 mm	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E140305 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
NZM-XSTK 266739		1 set	Contains for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers. cannot be combined with NZM1(-4)-XIPK IP2X protection against contact with a finger. Degree of protection IP1X Height or thickness of connections: 2 mm		
NZM1-XKSFA 100780		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection (simplified finger protection). Cannot be combined with NZM-XSTK control circuit terminal.	UL/CSA certification not required	
NZM1-4-XKSFA 100781		1 off		–	
NZM1-XKSA 260021		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Contact protection against direct contact where cable lugs, bars or tunnel terminals are used. Contained in the set with tunnel terminals and screw terminals. When using insulated conductor material to degree of protection IP1X.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
NZM1-4-XKSA 266741		1 off		–	
NZM1-XIPK 266744		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection to IP2X. Protection when reaching into the cable connection area with the connection of cables in the box terminal. Cannot be combined with NZM-XSTK control circuit terminal.	–	
NZM1-4-XIPK 266745		1 set		–	
NZM1-XIPA 266748		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection to IP2X.	UL/CSA certification not required	
NZM1-4-XIPA 266749		1 set		–	
NZM1-XKP 119862		1 set	Contains parts, including insulating plate for mounting plate, for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Insulation protection up to a rated operating voltage U_e of 415 V AC when minimum distances are not maintained. Can not be combined with connection on rear NZM1(-4)-XKR.	UL/CSA certification not required	
NZM1-4-XKP 119863		1 set		–	

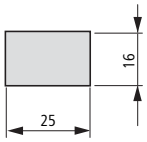
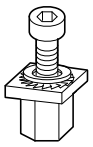
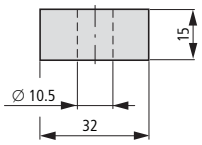
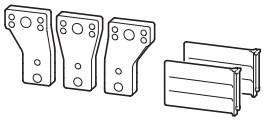
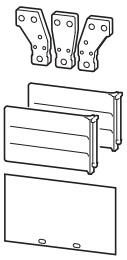
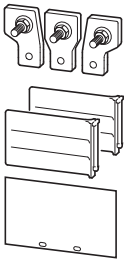
	Max. cable connection area	Number of poles	For use with	Terminal capacity Cable Cable lugs	Terminal capacity[1] mm²	AWG/kcmil	Terminal capacity Copper strip No. of discs × width × disc thickness mm	Terminal capacity Copper bar width x thickness mm
Box terminal								
		3 pole	NZM2, PN2, N(S)2 ≤ 160 A	Copper cable	1 x 10-185 2 x 4-70	1 x 12 - 350	≧ 2 x 9 x 0.8	–
			NZM2, PN2, N(S)2 > 160 A					
		4 pole	NZM2-4, PN2-4, N2-4 ≤ 160 A					
			NZM2-4, PN2-4, N2-4 > 160 A					
Screw terminals								
Standard equipment								
		3 pole	NZM2, PN2, N(S)2	Copper cable lugs Aluminium cable lugs	1 x 10 - 185 2 x 4 - 70 1 x 10 - 50 2 x 10 - 50	1 x 12 - 350	≧ 2 x 16 x 0.8	≧ 16 x 5
		4 pole	NZM2-4, PN2-4, N2-4					
Tunnel terminal								
		3 pole	NZM2, PN2, N(S)2	Copper cable Aluminium cable	1 x 16 - 185 1 x 16 - 185 Up to 240 mm² can be connected depending on the cable manufacturer.	1 x 6 - 350	–	–
		4 pole	NZM2-4, PN2-4, N2-4					
Rear terminal bolts								
Not UL/CSA approved When using cable lugs without NZM3(-4)-XKSA cover, they must be insulated.								
	–	3 pole	NZM2, PN2, N2	Copper cable lugs Aluminium cable lugs	1 x 10 - 185 2 x 4 - 70 1 x 10 - 50 2 x 10 - 50	–	≧ 2 x 16 x 0.8 ≦ 6 x 24 x 0.5	≧ 16 x 5 ≦ 20 x 5
		4 pole	NZM2-4, PN2-4, N2-4					

Notes [1] Up to 240 mm² can be connected depending on the cable manufacturer.

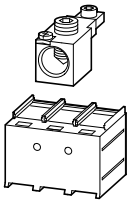
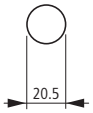
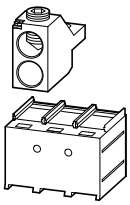
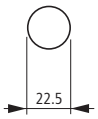
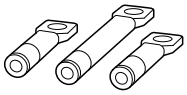
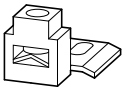
Part no. suffix Article no. for ordering with basic device	Price See price list	Part no. Article no. when ordered separately	Price See price list	Std. pack	Notes	Information relevant for export to North America
+NZM2-160-XKCO 262218		**NZM2-160-XKC** 262240		1 set	Part no. suffix and part no.contain parts for a circuit-breaker side at top or bottom for 3 or 4 pole switches. Conversion kit for circuit-breaker with screw terminal. Fitted within the switch housing. O = for fitting at the top U = for fitting at the bottom U_e ≧ 525 V AC: Use NZM2(-4)-XKSA cover.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
+NZM2-160-XKCU 262223		–		1 set		
+NZM2-250-XKCO 262242		**NZM2-250-XKC** 262244		1 set		
+NZM2-250-XKCU 262243		–		1 set		
+NZM2-4-160-XKCO 266751		**NZM2-4-160-XKC** 266755		1 set	Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules.	–
+NZM2-4-160-XKCU 266753		–		1 set		
+NZM2-4-250-XKCO 266752		**NZM2-4-250-XKC** 266756		1 set		
+NZM2-4-250-XKCU 266754		–		1 set		
–		**NZM2-XKS** 260030		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Standard connection with all NZM2, PN2 and N2 circuit-breakers. Conversion kit for circuit-breaker with box terminal. Use special cable lugs narrow version, → 17/88 Fitted within the switch housing. If a bar is used, insulation (400 mm) e.g sleeving and a NZM2(-4)-XKSA cover are required. U_e ≧ 525 V AC: With all other connection materials, e.g. cables and strips, use cover NZM2(-4)-XKSA.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
–		**NZM2-4-XKS** 266750		1 set		–
–		**NZM2-XKA** 271457		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. With control circuit terminal for 1 x 0.75 - 2.5 mm² (18 - 14 AWG) or 2 x 0.75 - 1.5 mm² (18 - 16 AWG) copper conductor. Flush mounting outside the switch housing. Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules. Cover NZM2(-4)-XKSA must be fitted (included as standard).	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
–		**NZM2-4-XKA** 271458		1 set		–
+NZM2-XKRO 266763		**NZM2-XKR** 266765		1 set	Part no. suffix and part no.contain parts for a circuit-breaker side at top or bottom for 3 or 4 pole switches. O = for fitting at the top U = for fitting at the bottom	–
+NZM2-XKRU 266764		–		1 set		
+NZM2-4-XKRO 266766		**NZM2-4-XKR** 266768		1 set		
+NZM2-4-XKRU 266767		–		1 set		

	Number of poles	For use with	Terminal capacity Connection	Terminal capacity[1)] mm²	AWG/kcmil	**Part no. suffix** Article no. for ordering with basic device	**Price** See price list
Control cable terminals							
	3 and 4 pole	NZM2(-4), PN2(-4), N(S)2(-4)	Screw terminals	1 x 0.75 - 2.5 2 x 0.75 - 1.5	1 x 18 - 14 2 x 18 - 16	–	
	3 and 4 pole	NZM2(-4), PN2(-4), N(S)2(-4)	Box terminal			–	
Cable lug cover							
	3 pole	NZM2, PN2, NS2	Copper cable lugs Aluminium cable lugs	1 x 10-185 2 x 4-70 1 x 10-50 2 x 10-50	–	–	
	4 pole	NZM2-4, PN2-4, N2-4			–	–	
Cover							
	3 pole	NZM2, PN2, NS2	–	–	–	–	
	4 pole	NZM2-4, PN2-4, N2-4	–	–	–	–	
Phase isolators							
	3 pole	NZM2, PN2, N(S)2	–	–	–	–	
	4 pole	NZM2-4, PN2-4, N2-4	–	–	–	–	
Terminal covers, knockout							
	3 pole	NZM2, PN2, N(S)2	–	–	–	**+NZM2-XKSFA0** 108269	
			–	–	–	**+NZM2-XKSFAU** 108270	
	4 pole	NZM2-4, PN2-4, N2-4	–	–	–	**+NZM2-4-XKSFA0** 108271	
			–	–	–	**+NZM2-4-XKSFAU** 108272	
IP2X protection against contact with finger							
For box terminal							
	3 pole	NZM2, PN2, N(S)2	–	–	–	–	
	4 pole	NZM2-4, PN2-4, N2-4	–	–	–	–	
For covers NZM2(-4)-XKSA or NZM2(-4) or NZM2…(C)NA and N(S)2…NA							
	3 pole	NZM2, PN2, N(S)2	–	–	–	–	
	4 pole	NZM2-4, PN2-4, N2-4	–	–	–	–	
Copper cable lug							
Not UL/CSA approved When using cable lugs without NZM3(-4)-XKSA cover, they must be insulated.							
	3 and 4 pole	NZM2(-4), PN2(-4), N2(-4)	–	150 mm²	–	–	
			–	120 mm²	–	–	
			–	95 mm²	–	–	
			–	185 mm²	–	–	

Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
NZM2-XSTS 260156		1 set	Contains parts for two terminal locations located at top or bottom for 3 or 4 pole switches. Included as standard with tunnel terminal. Degree of protection IP1X NZM-XSTK cannot be combined with NZM1(-4)-XIPK IP2X protection against contact with a finger. Height or thickness of connections: 2 mm	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E140305 UL CCN DIHS CSA File No. 022086 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified Suitable for Refer to main component information
NZM-XSTK 266739		1 set		
NZM2-XKSAE 119868		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Contact protection where cable lugs are used on screw terminals. When using insulated conductor material, degree of protection IP2X	UL/CSA certification not required
NZM2-4-XKSAE 119870		1 set		–
NZM2-XKSA 260038		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Contact protection where cable lugs, bars or tunnel terminals are used. When using insulated conductor material, degree of protection IP1X	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E31593 UL CCN DIHS CSA File No. 22086 CSA Class No. 1432-01 NA Certification UL Listed, CSA certified Suitable for Refer to main component information
NZM2-4-XKSA 266770		1 off		–
NZM2-XKP 119864		1 set	Contains parts, including insulating plate for mounting plate, for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Can not be combined with connection on rear NZM2(-4)-XKR. Insulation protection up to a rated operating voltage U_e of 415 V AC when minimum distances are not maintained.	UL/CSA certification not required
NZM2-4-XKP 119865		1 set		–
NZM2-XKSFA 104640		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection (simplified finger protection). O = for fitting at the top U = for fitting at the bottom	UL/CSA certification not required
NZM2-4-XKSFA 104641		1 off		
NZM2-XIPK 266773		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection to IP2X. Protection on grasping terminal chamber when connecting cables in box terminals. With two conductors maximum cross-section 25 mm² or AWG4. Can not be combined with control cable terminal NZM-XSTK.	UL/CSA certification not required
NZM2-4-XIPK 266774		1 set		–
NZM2-XIPA 266777		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection to IP2X. When fitting to NZM2-..-(C)NA or NZM...-NA: With 2 conductors maximum cross-section 25 mm² or AWG4.	UL/CSA certification not required
NZM2-4-XIPA 266778		1 set		–
KS150-NZM7 059777		3 off	Contains a cable lug for 3 or 4 pole switch. Special cable lug, narrow style	–
KS120-NZM7 059776				
KS95-NZM7 059775				
NZM2-XKS185 260032				

	Max. cable connection area	Number of poles	For use with	Rated current[1] I_n A	Terminal capacity Cable Cable lugs	Terminal capacities[1] mm²	AWG/kcmil	Terminal capacity Copper strip No. of discs × width × disc thickness mm	Copper bar width x thickness mm
Box terminal									
		3 pole	NZM3(-4), PN3(-4), N(S)3(-4)	max. 500 400 UL/ CSA	Copper cable Copper cable	1 x 35 - 240 2 x 16 - 120	1 x 2 - 350	min. 6 x 16 x 0.8 max. 10 x 24 x 1.0 or max. 11 x 21 x 1	–
				630	Copper cable	1 x 35 - 240 2 x 16 - 120	1 x 2 - 350	10 x 24 x 1.0 + 5 x 24 x 1.0 or (2 x) 8 x 24 x 1.0	
		4 pole							
Screw connection, standard									
		3 pole	NZM3, PN3, N(S)3	630	Copper cable lugs	1 x 16 - 300 2 x 16 - 240	1 x 4 - 350 2 x 350	10 x 32 x 1.0 + 5 x 32 x 1.0	30 x 10 + 30 x 5
				Max. 400	Aluminium cable lugs	1 x 10 - 120 2 x 10 - 120	1 x 4 - 350 2 x 350		
		4 pole	NZM3-4, PN3-4, N(S)3-4						
Connection width extension									
One hole, for screws or terminals									
		3 pole	NZM3, PN3, N(S)3	630	Copper cable lugs Aluminium cable lugs	2 x 300	2 x 500	(2 x) 10 x 50 x 1.0	(2 x) 10 x 50
		4 pole	NZM3-4, PN3-4, N3-4						
Two holes, for screws or terminals									
	–	3 pole	NZM3, PN3, N(S)3	630	Copper cable lugs	NZM3-XKV70-2: 4 x 35 - 185 NZM3-XKV70-2 + NZM4-XKA: 4 x 50 - 240	NZM3-XKV70-2: 2 x 350 NZM3-XKV70-2 + NZM4-XKA: 4 x 500	NZM3-XKV70-2 + NZM4-XKB: ≧ 6 x 16 - 0.8 ≦ (2 x) 10 x 32 x 1	(2 x) 10 x 50
		4 pole	NZM3-4, PN3-4, N3-4						
One threaded stud									
	–	3 pole	NZM3, PN3, N(S)3	630	Copper cable lugs	2 x 95-300	2 x 500	(2x) 10 x 32 x 1.0	(2 x) 10 x 40

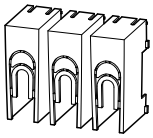
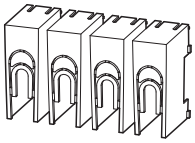
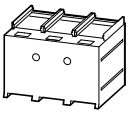
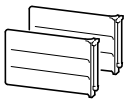
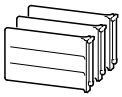
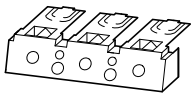
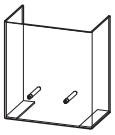
Part no. suffix Article no. for ordering with basic device	**Price** See price list	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**	
+NZM3-XKCO 262246		**NZM3-XKC** 260042		1 set	Part no. suffix and part no.contain parts for a circuit-breaker side at top or bottom for 3 or 4 pole switches. Conversion kit for circuit-breaker with screw terminal. Fitted within the switch housing. O = for fitting at the top U = for fitting at the bottom U_e ≧ 525 V AC: Use NZM3(-4)-XKSA cover. Use ferrules with flexible and highly flexible conductors. Observe limited cable cross-section through sleeve.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
+NZM3-XKCU 262245		–					
+NZM3-4-XKCO 266781		**NZM3-4-XKC** 266783		1 set		–	
+NZM3-4-XKCU 266782		–					
–	–	**NZM3-XKS** 260039		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Standard connection with all NZM3, PN3 and N3 circuit-breakers. Conversion kit for circuit-breaker with box terminal. Use special cable lugs narrow version, → 17/88 Fitted within the switch housing. If a bar is used, insulation (400 mm) heat-shrink tubing and a cover NZM3(-4)-XKSA are required. U_e ≧ 525 V AC: For all other connection types use cover NZM3(-4)-XKSA.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
–	–	**NZM3-4-XKS** 266780		1 set		–	
–	–	**NZM3-XKV70** 100514		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Central drilling for e.g. up to 2 cable lugs per phase. For fitting to switches with screw terminal. Phase isolator and insulation plate are included as standard. Distance between pole centres with NZM3(-4)-XKV70: 70 mm Hole for control wire exists. Connection terminals NZM3(-4)-XK300 and NZM3(-4)-XK22X21 can be installed.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E140305 DIHS 022086 1432-01 UL Listed, CSA certified
–	–	**NZM3-4-XKV70** 100515		1 set		–	
–	–	**NZM3-XKV70-2** 119860		1 set	Contains parts for a terminal located at top or bottom for 3 pole circuit-breakers. Double hole fitting for up to four 185 mm² cable lugs, 50 mm bbar or large flat cable terminal NZM4-XKB or large tunnel terminal NZM4-XKA For fitting to switches with screw terminal. Phase isolator, insulation plate and 2 control circuit terminals supplied.	Product Standards NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking Request filed for UL and CSA Refer to main component information
–	–	**NZM3-4-XKV70-2** 132673					
–	–	**NZM3-XKV70KB** 112884		1 set	Contains parts for a terminal located at top or bottom for 3 pole circuit-breakers. Threaded stud for cable lugs up to 2 × 300 mm² For fitting to switches with screw terminal. Phase isolator, insulation plate and 2 control circuit terminals supplied.	–	

	Max. cable connection area	Number of poles	For use with	Rated current[1] I_n A	Terminal capacity Cable Cable lugs	Terminal capacities[1] mm²	AWG/kcmil	Terminal capacity Copper strip No. of discs × width × disc thickness mm	Copper bar width x thickness mm
Terminals for connection width extension									
		3 pole	NZM3, PN3, N(S)3	Max. 500	Copper cable	1 x 120 - 300	–	–	–
		4 pole	NZM3-4, PN3-4, N3-4						
Not UL/CSA approved									
		3 pole	NZM3, PN3, N(S)3	630	–	–	–	(2 ×) 11 x 21 x 1.0	–
		4 pole	NZM3-4, PN3-4, N3-4						
Tunnel terminal									
 		3 pole	NZM3, PN3, N(S)3	Max. 350	Copper cable ⊙ ▽ Aluminium cable ⊙ ▽	1 x 16 - 185	1 x 6 - 350	–	–
		4 pole	NZM3-4, PN3-4, N3-4						
 		3 pole	NZM3, PN3, N(S)3	Max. 630	Copper cable ⊙ ▽ Aluminium cable ⊙ ▽	1 x 50-240 2 x 50-240	1 x 0-500 2 x 0-500	–	–
		4 pole	NZM3-4, PN3-4, N3-4						
Rear terminal bolts									
Not UL/CSA approved									
		3 pole	NZM3, PN3, N3	Max. 630 Max. 500	Copper cable lugs Aluminium cable lugs	1 x 16-240 2 x 16-240 1 x 10-120 2 x 10-120	–	min. 6 x 16 x 0.8 max. 10 x 32 x 1.0	min. 20 x 5 max. 30 – 10
		4 pole	NZM3-4, PN3-4, N3-4						
Control cable terminals									
		3 and 4 pole	NZM3, PN3, N(S)3	–	Screw terminals	1 x 0.75-2.5 2 x 0.75-1.5	1 x 18-14 2 x 18-16	–	–
		3 and 4 pole	NZM3-4, PN3, N(S)3-4	–	Box terminal	1 x 0.75-2.5 2 x 0.75-1.5	1 x 18-14 2 x 18-16	–	–

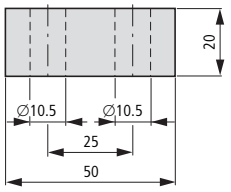
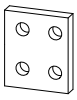
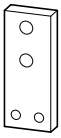
Notes

[1] The rated operational current values have been determined according to IEC/EN 60947 (switchgear standard). They generally relate to the max. defined cross-sections and are intended as a general guide.
The engineering standards which apply in each case must be observed.

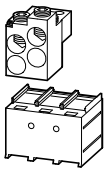
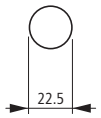
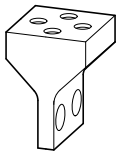
Part no. suffix Article no. for ordering with basic device	**Price** See price list	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
–		**NZM3-XK300** 100782		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Only in combination with connection width extension NZM3(-4)-XKV70. Use ferrules with flexible and highly flexible conductors. With control cable terminal for 1 × 0.75 – 2.5 mm² or 2 × 0.75 – 1.5 mm² copper conductor as standard.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
–		**NZM3-4-XK300** 100783		1 set		–
–		**NZM3-XK22X21** 100784		1 set		–
–		**NZM3-4-XK22X21** 100785		1 set		
–		**NZM3-XKA1**[2] 271459		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. With control cable terminal for 1 × 0.75 – 2.5 mm² (18 – 14 AWG) or 2 × 0.75 – 1.5 mm² (18 – 16 AWG) copper cable as standard. Fitting outside switch housing. Use ferrules with flexible and highly flexible conductors. Max. cross section shown can only be connected when flexible and without ferrules. Cover NZM3(-4)-XKSA must be fitted (included as standard).	–
–		**NZM3-4-XKA1**[2] 271460		1 set		
–		**NZM3-XKA2** 271461		1 set		Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
–		**NZM3-4-XKA2** 271462		1 set		–
+NZM3-XKRO 266790		**NZM3-XKR** 266792		1 set	Part no. suffix and part no.contain parts for a circuit-breaker side at top or bottom for 3 or 4 pole switches. O = for fitting at the top U = for fitting at the bottom	–
+NZM3-XKRU 266791		–		1 set		
+NZM3-4-XKRO 266793		**NZM3-4-XKR** 266795		1 set		
+NZM3-4-XKRU 266794		–		1 set		
–	–	**NZM3/4-XSTS** 266797		1 set	Contains for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers. Included as standard with tunnel terminal. Degree of protection IP1X Height or thickness of connections: 2 mm	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
–	–	**NZM-XSTK** 266739		1 set	Contains for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers. Included as standard with tunnel terminal. Degree of protection IP1X NZM-XSTK cannot be combined with NZM1(-4)-XIPK IP2X protection against contact with a finger. Height or thickness of connections: 2 mm	

		Max. cable connection area	Number of poles	For use with	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack
Cable lug cover							
	–	–	3 pole	NZM3, PN3, N(S)3	**NZM3-XKSAE** 119869		1 set
	–	–	4 pole	NZM3-4, PN3-4, N3-4	**NZM3-4-XKSAE** 119871		1 set
Cover							
	–	–	3 pole	NZM3, PN3, N(S)3	**NZM3-XKSA** 260045		1 off
	–	–	4 pole	NZM3-4, PN3-4, N3-4	**NZM3-4-XKSA** 266801		1 off
Phase isolators							
	–	–	3 pole	NZM3, PN3, N(S)3	**NZM3-XKP** 100512		1 set
	–	–	4 pole	NZM3-4, PN3-4, N3-4	**NZM3-4-XKP** 100513		1 set
Terminal covers, knockout							
	–	–	3 pole	NZM3, PN3, N(S)3	**NZM3-XKSFA** 104642		1 off
	–	–	4 pole	NZM3-4, PN3-4, N3-4	**NZM3-4-XKSFA** 104643		1 off
Large cover for connection width extension							
	–	–	3 pole	NZM3, PN3, N3 + NZM3-XKV70(-2)	**NZM3-XKSAV** 119858		1 off
			4 pole	NZM3-4, PN3-4, N3-4 + NZM3-4-XKV70	**NZM3-4-XKSAV** 132675		1 off
IP2X protection against contact with finger							
For box terminal							
	–	–	3 pole	NZM3, PN3, N3	**NZM3-XIPK** 266804		1 set
	–	–	4 pole	NZM3-4, PN3-4, N3-4	**NZM3-4-XIPK** 266805		1 set
For covers NZM3(-4)-XKSA or NZM3...(C)NA and N(S)3…NA							
	–	–	3 pole	NZM3, PN3, N(S)3	**NZM3-XIPA** 266808		1 set
	–	–	4 pole	NZM3-4, PN3-4, N3-4	**NZM3-4-XIPA** 266809		1 set
Copper cable lug							
Not UL/CSA approved When using cable lugs **without** NZM3(-4)-XKSA cover, they must be insulated.							
	185 mm²	–	3 and 4 pole	NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XKS185** 260040		3 off
	240 mm²	–			**NZM3-XKS240** 260041		3 off

Notes	Information relevant for export to North America
Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Contact protection where cable lugs are used on screw terminals. When using insulated conductor material, degree of protection IP2X.	UL/CSA certification not required –
Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Insulation/protection against direct contact where cable lugs, bars or tunnel terminals are used. Included in set with tunnel terminals. When using insulated conductor material to degree of protection IP1X.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information –
Contains parts, including insulating plate for mounting plate, for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Included with the connection width extension. Cannot be combined with the NZM3(-4)-XKA tunnel terminal, NZM3(-4)-XKR connection on rear. Insulation protection where cable lugs, bars, or flat conductor are used.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection (simplified finger protection).	UL/CSA certification not required –
Contains parts for a terminal located at top or bottom for 3 pole circuit-breakers. Insulation protection/protection against direct contact for connection of cable lugs or bars to connection width extension. Can also be used fir connection width extension NZM3-XKV70 with terminals NZM3-XK300, NZM3-XK22x21 or NZM4-XKA. When using insulated conductor material, degree of protection IP2X.	–
Contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Enhanced contact protection to IP2X. Protection when reaching into the cable connection area with the connection of cables in the box terminal. with 2 conductors max. cross section 70 mm². Cannot be combined with NZM-XSTK control circuit terminal.	UL/CSA certification not required –
Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Enhanced contact protection to IP2X. When fitting to NZM3...-(C)NA or N3...-NA: with 2 conductors max. cross section 70 mm².	UL/CSA certification not required –
The part no. contains a cable lug for 3 or 4 pole switch. Special cable lug, narrow style	– –

	Space requirement	Rated current[1]	Number of poles	For use with	Terminal capacity			Terminal capacity	
					Cable Cable lugs	Terminal capacity	AWG/kcmil	Copper strip No. of discs × width × disc thickness	Copper bar width x thickness
		I_n							
		A				mm²		mm	mm
Screw terminals									
Threaded stud standard equipment Screws	2-hole		Max. 1600	3 and 4 pole	NZM4(-4) N4(-4) N(S)4	Copper cable lugs	1 x 120-185 4 x 50-185	1 x 250-350 4 x 0-350	(2 x) 10 x 50 x 1.0	(2 x) 50 x 10
				3 pole	NZM4, N(S)4				
				4 pole	NZM4-4, N4-4				
Module plate									
	1-hole	–	Max. 1250	3 pole	NZM4, N(S)4	Copper cable lugs	1 x 120-300 2 x 95-300	1 x 250-600 2 x 000-600	(2 x) 10 x 40 x 1.0 (2 x) 10 x 50 x 1.0	(2 x) 40 x 10 (2 x) 50 x 10
				4 pole	NZM4-4, N4-4					
	2-hole	–	Max. 1400	3 pole	NZM4, N(S)4		2 x 95-185 4 x 35-185	2 x 000-350 4 x 2-350	(2 x) 10 x 50 x 1.0	(2 x) 50 x 10
				4 pole	NZM4-4, N4-4					
	2-hole	–	Max. 1250	3 pole	NZM4, N(S)4	Copper cable lugs	2 x 95-300	2 x 000-600	(2 x) 10 x 40 x 1.0 (2 x) 10 x 50 x 1.0	(2 x) 40 x 10 (2 x) 50 x 10
				4 pole	NZM4-4, N4-4					
		–	Max. 1600	3 pole	NZM4, N(S)4					
				4 pole	NZM4-4, N4-4					

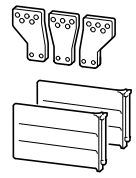
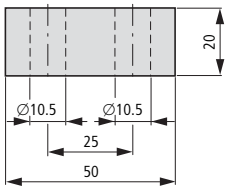
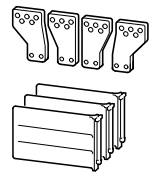
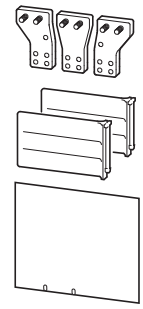
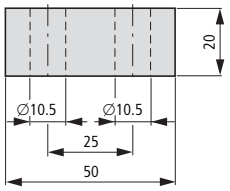
Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
–			Double hole fitting with M10 threaded stud at 25 mm spacing. Use special cable lug narrow version.	–
NZM4-XKS 127736		1 set	Double hole fitting with M10 screw at 25 mm spacing. Use special cable lug narrow version.	UL/CSA certification not required
NZM4-4-XKS 127737		1 set		–
NZM4-XKM1 266814		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. For M10 screws. Can be enlarged for M12 screws. Use special cable lug narrow version. Can be fitted to circuit-breaker with screw terminal. Insulation using cover NZM4(-4)-XKSA or phase divider NZM4(-4)-XKP necessary.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 22086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
NZM4-4-XKM1 266815		1 set		–
NZM4-XKM2 266820		1 set		Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 22086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
NZM4-4-XKM2 266821		1 set		–
NZM4-XKM2S-1250 284471		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole circuit-breakers. Insulation using cover NZM4(-4)-XKSA or phase divider NZM4(-4)-XKP necessary.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 22086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
NZM4-4-XKM2S-1250 284472		1 set		–
NZM4-XKM2S-1600 284473		1 set		Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 22086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
NZM4-4-XKM2S-1600 284474		1 set		–

	Rated current [1] I_n A	Number of poles	For use with	Terminal capacity Cable Cable lugs	Terminal capacity mm²	AWG/kcmil	Terminal capacity Copper strip No. of discs × width × disc thickness mm	Copper bar width x thickness mm
Flat cable terminal								
	Max. 1100	3 pole	NZM4, N(S)4	–	–	–	min. 6 x 16 x 0.8 max. (2 x) 10 x 32 x 1.0	–
		4 pole	NZM4-4, N4-4	–	–	–	min. 6 x 16 x 0.8 max. (2 x) 10 x 32 x 1.0	–
Tunnel terminal								
	Max. 1400	3 pole	NZM4, N(S)4	Copper cable ☺ ▽ Aluminium cable ☺ ▽	1 x 50-240 4 x 50-240	1 x 0-500 4 x 0-500	–	–
		4 pole	NZM4-4, N4-4				–	–
Rear terminal bolts								
Not UL/CSA approved								
	Max. 1250	3 pole	NZM4, N4	Copper cable lugs Aluminium cable lugs	1 x 120-185 2 x 95-185 4 x 35-185 1 x 185 2 x 70-185 4 x 50-185	–	(2 x) 10 x 50 x 1.0	(2 x) 50 x 10
		4 pole	NZM4(-4), N4(-4)					

Notes

[1] The rated operational current values have been determined according to IEC/EN 60947 (switchgear standard). They generally relate to the max. defined cross-sections and are intended as a general guide.
The engineering standards which apply in each case must be observed.

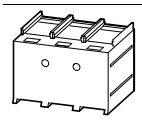
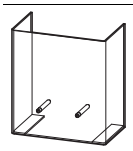
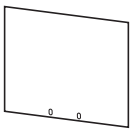
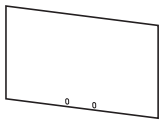
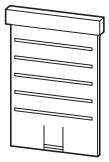
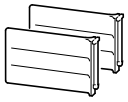
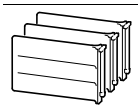
Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
NZM4-XKB 266829		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Conversion kit for circuit-breaker with screw terminal. Insulation using cover NZM4(-4)-XKSA or phase divider NZM4(-4)-XKP necessary. When the circuit-breaker is installed on a conductive mounting plate, cover NZM4(-4)-XKSA must be used With control circuit terminal for 1 x 0.75-2.5 mm² or 2x 0.75-1.5 mm² copper conductors as standard.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking NA Certification: Request filed for UL and CSA
NZM4-4-XKB 266831		1 set		–
NZM4-XKA 266836		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. With control circuit terminal for 1 x 0.75-2.5 mm² (18-14 AWG) or 2 x 0.75-1.5 mm² (18-16 AWG) copper cable as standard. Can be fitted to circuit-breaker with screw terminal. Use ferrules with flexible and highly flexible conductors. Cover NZM4(-4)-XKSA must be fitted (included as standard).	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E31593 UL CCN: DIHS CSA File No.: 22086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Refer to main component information
NZM4-4-XKA 266837		1 set		–
NZM4-XKR 266842		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Can also be retrofitted: Module plate NZM4...-XKM... or connection width extension NZM4-...-XKV...	–
NZM4-4-XKR 266843		1 set		–

		Space requirement	Rated current[1]	Number of poles	For use with	Terminal capacity			Terminal capacity	
						Cable Cable lugs	Terminal capacity	AWG/kcmil	Copper strip No. of discs × width × disc thickness	Copper bar width x thickness
			I_n							
			A				mm²		mm	mm
Connection width extension										
	–		Max. 1600	3 pole	NZM4, N(S)4	Copper cable lugs	4 x 300 6 x 95-240	4 x 600 6 x 000-500	max. (2 x) 10 x 80 x 1.0	max. (2 x) 80 x 10
	–		Max. 1600	4 pole	NZM4-4, N4-4					
With two threaded studs										
	–		1600	3 pole	NZM4, N(S)4	Copper cable lugs	4 x 95-300	4 x 500	(2x) 10 x 80 x 1.0	(2 x) 10 x 80

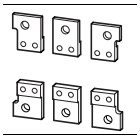
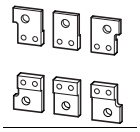
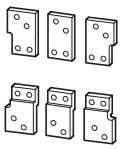
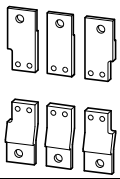
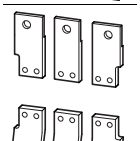
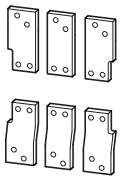
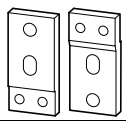
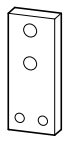
Notes

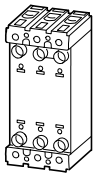
[1] The rated operational current values have been determined according to IEC/EN 60947 (switchgear standard). They generally relate to the max. defined cross-sections and are intended as a general guide.
The engineering standards which apply in each case must be observed.

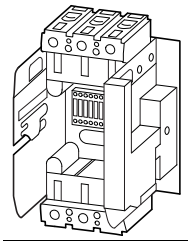
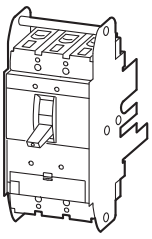
Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**	
NZM4-XKV95 281591		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Five-hole fitting, for example, for up to nine cable lugs per phase. Can be fitted to circuit-breaker with screw terminal. Phase isolator supplied. Distance between pole centres with NZM4(-4)-XKV95: 95 mm Installation conditions for current transformer up to 130 mm width with 80 mm bar width. Distance between pole centers with NZM4-XKV110: 107.5 mm Installation conditions for current transformer up to 135 mm width with 80 mm bar width. Distance between pole centers with NZM4-4-XKV120: 122 mm Installation conditions for current transformer up to 164 mm width with 80 mm bar width. 4 mm holes predrilled for control cable terminal. NZM4-XKV95 contains hole for large cover NZM4-XKSAV.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1432-01 UL Listed, CSA certified Refer to main component information
NZM4-XKV110 281593					
NZM4-4-XKV95 281592		1 set		–	
NZM4-4-XKV120 281594				–	
NZM4-XKV95-2KB 119861		1 set	Contains parts for a terminal located at top or bottom for 3 pole circuit-breakers. Threaded stud for cable lugs up to 4 × 300 mm^2 Can be fitted to circuit-breaker with screw terminal. Phase isolator, insulation plate and 2 control circuit terminals supplied.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1432-01 UL Listed, CSA certified Refer to main component information

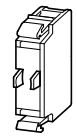
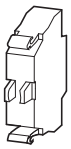
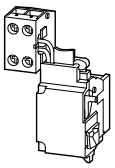
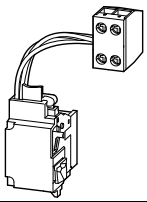
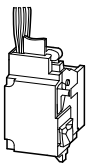
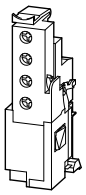
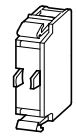
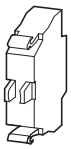
	Number of poles	For use with	Terminal capacity Connection	Terminal capacity mm²	AWG/kcmil
Control cable terminals					
	3 and 4 pole	NZM3(-4), PN3, N(S)3(-4)	Screw terminals	1 x 0.75-2.5 2 x 0.75-1.5	1 x 18-14 2 x 18-16
Cover					
	3 pole	NZM4, N(S)4			
	4 pole	NZM4-4, N4-4			
Cover size					
For connection width extension					
	3 pole	NZM4, N(S)4 + NZM4-XKV95(KB)			
Insulation plate					
	3 pole	NZM4, N(S)4 + NZM4-XKV…			
	4 pole	NZM4(-4), N(S)4(-4) + NZM4-4-XKV…			
Terminal covers, knockout					
	3 pole	NZM4, N(S)4			
	4 pole	NZM4-4, N4-4			
Phase isolators					
	3 pole	NZM4 N(S)4			
	4 pole	NZM4-4, N4-4			
Cable lug					
Not UL/CSA approved When using cable lugs without NZM3(-4)-XKSA cover, they must be insulated.					
	3 and 4 pole	NZM4(-4), N(S)4(-4)		185 mm² 240 mm²	

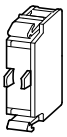
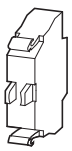
Part no. Article no. when ordered separately	Price See price list	Std. pack	Notes	Information relevant for export to North America	
NZM3/4-XSTS 266797		1 off	Contains parts for two terminal locations located at top or bottom for 3 or 4 pole circuit-breakers. Included as standard with tunnel terminal. Degree of protection IP1X Height or thickness of the control circuit terminals: NZM-XSTS = 2 mm	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E140305 DIHS 022086 1437-01 UL Listed, CSA certified Refer to main component information
NZM4-XKSA 266846		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Contact protection where cable lugs, bars, flat cable terminals or tunnel terminals are used. Included in set with tunnel terminals. When using insulated conductor material, degree of protection IP1X.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1432-01 UL Listed, CSA certified Refer to main component information
NZM4-4-XKSA 266847		1 off			
NZM4-XKSAV 119876		1 off	Contains parts for a terminal located at top or bottom for 3 pole circuit-breakers. Insulation protection/protection against direct contact for connection of cable lugs or bars to connection width extension. When using insulated conductor material, degree of protection IP2X.	UL/CSA certification not required	
NZM4-XISP 119866		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Insulation protection when minimum distance from mounting plate not observed. Included with the connection width extension.	Product Standards NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking Request filed for UL and CSA Refer to main component information
NZM4-4-XISP 119867		1 off			
NZM4-XKSFA 292193		1 off	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Increased contact protection with connection of insulated bars or flat band.	UL/CSA certification not required	
NZM4-4-XKSFA 292194		1 off			
NZM4-XKP 281595		1 set	Contains parts for a terminal located at top or bottom for 3 or 4 pole switches. Included with the connection width extension. Cannot be combined with tunnel terminal NZM4(-4)-XKA or rear connection NZM4-XKR. Insulation protection where cable lugs, bars, module plates or tunnel terminals are used.	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking E31593 DIHS 022086 1432-01 UL Listed, CSA certified Refer to main component information
NZM4-4-XKP 281596		1 set			
NZM3-XKS185 260040		3 off	The part no. contains a cable lug for 3 or 4 pole switch. Special cable lug, narrow style		
NZM3-XKS240 260041					

	Rated current I_n A	For use with		**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Adapter set N(ZM)4/N(ZM)12							
Not UL/CSA approved							
	Max. 1000	N4	3 pole	**N4-XAS12-1000** 285609		1 set	Conversion kit from N(ZM)12 to N(ZM)4. With the terminal lugs of the replacement kit all three-pole NZM12 and N12 can be adapted to the connection dimensions of the NZM4 or N4 supplied from model year 1983. 4 pole basic devices, withdrawable units and basic devices with remote operator can not be replaced.
	Max. 1250	N4	3 pole	**N4-XAS12-1250** 285610		1 set	Contents of replacement kits N(ZM)4-XAS12…: 3 connection extensions on outlet side 3 connection extensions on trip block side 2 mounting brackets 4 fixing screws 4 phase isolators 6 fixing screws, nuts and washers Paper drilling template in the instructional leaflet (AWA) The replacement kits have the same dimensions as models N(ZM)12…, which correspond to production status 02/97 to the present.
	Max. 1600	N4	3 pole	**N4-XAS12-1600** 285611		1 set	
	Max. 1000	NZM4	3 pole	**NZM4-XAS12-1000** 285612		1 set	Special feature: Prior to 02/97 the N(ZM)12-800 was supplied with 10 mm instead of 8 mm terminal lugs. With these models the customer must determine the device's year of manufacture by measuring the thickness of the terminal lug and order replacement kit N(ZM)4-XAS12-1250. Example: N(ZM)12-800…(1000) > N(ZM)4-XAS12-1000 N(ZM)12-800 before 02/97 > N(ZM)4-XAS12-1250 N(ZM)12-1250 > N(ZM)4-XAS12-1250 N(ZM)12-1600 > N(ZM)4-XAS12-1600 Addition for devices constructed prior to 1983! Here the replacement kit for switch-disconnectors can be used in full. For circuit-breakers with "long" ZM design, the adapter fit only at the top! At the bottom the devices are about 65 mm longer and the lower connection is about 26 mm deeper. Consequently the bottom adapters are too short and the heights do not correspond.
	Max. 1250	NZM4	3 pole	**NZM4-XAS12-1250** 285613		1 set	
	Max. 1600	NZM4	3 pole	**NZM4-XAS12-1600** 285614		1 set	
	Max. 1250	NZM4, N4	3 pole	**NZM4-XAS14-1250** 283291		1 set	Conversion kit for NZM14 to NZM4. Same connections as NZM14. Contains for both sides of switch. 3 connection extensions on outlet side 3 connection extensions on trip block side. 1 long shroud for the outlet side Paper drilling template in the instructional leaflet (AWA) Cannot be combined with the module plate (NZM4-XKM...), flat cable terminal (NZM4-XKB), connection width extension (NZM4-XKV...), tunnel terminal (NZM4-XKA), connection on rear (NZM4-XKR) and withdrawable unit (NZM4-XAV...).
	1600	NZM4, N4	3 pole	**NZM4-XAS14-1600** 283292		1 set	

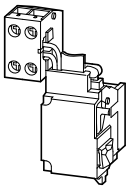
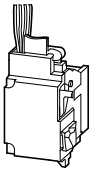
		For use with	Number of poles	Part no. Article no.	Price See Price List		Std. pack	Notes
Plug-in units								**B = box terminals** **S = screw terminals**
For circuit-breakers NZM and switch-disconnectors N Not UL/CSA approved Not for U_e > 690 V								For further terminal types see accessories
Plug-in socket								
	Completion through switches with plug-in insert NZM...-SVE...	NZM1 N1	3 pole	**NZM1-XSVS** 109777		B	1 off	$I_{nmax.}$ at: 20°C: 125 A (NZM1) 70°C: 100 A (NZM1) Mounting position: vertical, 90° right, 90° left Order control circuit plug unit separately!
		NZM2 N2	3 pole	**NZM2-XSVS** 266699		S	1 off	$I_{nmax.}$ at: 20°C: 250 A 40°C: 230 A (NZM…2-…) 250 A (NZM…2-E…) Mounting position: vertical, 90° right, 90° left Order control circuit plug unit separately!
		NZM2-4 N2-4	4 pole	**NZM2-4-XSVS** 266700		S	1 off	
Control circuit plug unit								
	–	NZM1, N1 NZM2(-4) N2(-4)	For auxiliary contact, shunt/over-voltage release	**NZM2-XSVHI** 266705		–	1 off	10 terminals
	–	NZM2(-4) N2(-4)	For remote operator	**NZM2-XSVR** 266706		–	1 off	

	For use with	Number of poles	Part no. suffix Article no. for order with basic device	Price See Price List	Std. pack	Part no. Article no. for separate order	Price See Price List		Std. pack	Notes
Withdrawable unit										
For circuit-breakers NZM and switch-disconnectors N Not UL/CSA approved Not for U_e > 690 V										
Socket base For switches with withdrawable carrier. Also for reserved compartments.										
	NZM3 N3	3 pole	–			**NZM3-XAVS** 266711		S	1 off	$I_{nmax.}$ at: 20 °C: 605 A (NZM3), 1600 A (NZM4) 40 °C: 550 A (NZM3), 1500 A (NZM4) Mounting position: NZM3: vertical, 90° left NZM4: vertical 3 positions: Connected, test, disconnected Position indication is mechanical with pointers. Additional electrical indication with auxiliary contacts possible. One N/O or NC contact M22-(C)K01 or M22-(C)K10 each per position. Alternatively also double contacts M22-CK... Complete with control circuit plug unit. All auxiliary contact (HIA, HIN, HIV) and shunt release connections to the control circuit plug unit are already present. Maximum configuration: 3 contacts HIN, 2 contacts HIA, 2 contacts HIV Cannot be combined with adapter set NZM4/NZM14 (NZM4-XSAS14-…) or N(ZM)4/N(ZM)12.
	NZM3-4 N3-4	4 pole	–			**NZM3-4-XAVS** 266712		S	1 off	
	NZM4 N4	3 pole	–			**NZM4-XAVS** 266713		S	1 off	
	NZM4-4 N4-4	4 pole	–			**NZM4-4-XAVS** 266714		S	1 off	
Withdrawable carrier Suitable for socket base Only in combination with switch										
	NZM4 N4	3 pole	**+NZM4-XAVE** 266717		1 off	–		–		
	NZM4-4 N4-4	4 pole	**+NZM4-4-XAVE** 266718		1 off	–		–		

		For use with	Contact configuration: ⊖ = safety function by positive opening according to IEC/EN 60947-5-1 N/O = normally open contact	NC = normally closed contact	Contact sequences	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack
Auxiliary contacts								
Standard auxiliary contacts (HIN)[1] Switches with the main contacts. Used for indicating and interlocking tasks.								
	Single contact	NZM1(-4), 2(-4), 3(-4), 4(-4) PN1(-4), 2(-4), 3(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O			**M22-K10** 216376		20 off
				1 NC ⊖		**M22-K01** 216378		
	Double contact	NZM1(-4), 2(-4), 3(-4), 4(-4) PN1(-4), 2(-4), 3(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O	1 NC ⊖				
				2 NC ⊖				
			2 N/O					
Early-make auxiliary contact[2] For interlocking and load shedding circuits, as well as for early make of the undervoltage release in main switch/emergency switching off applications								
	With clamp terminal on left switch side.	NZM1(-4) PN1(-4) N(S)1(-4)	2 N/O	–		**NZM1-XHIV** 259426		1 off
	With clamp terminal on right switch side.		2 N/O	–		**NZM1-XHIVR** 292195		
	With 3 m connection cable instead of screw connection.		2 N/O	–		**NZM1-XHIVL** 259432		
	–	NZM2(-4), 3(-4) PN2(-4), 3(-4) N(S)2(-4), 3(-4)	2 N/O	–		**NZM2/3-XHIV** 259430		
		NZM4(-4) N(S)4(-4)	2 N/O	–		**NZM4-XHIV** 266172		
Trip indicating auxiliary contact (HIA), (HIAFI)[1] General trip indication "+", when tripped by shunt release, overload release, short-circuit release or earth-fault release due to fault current.								
	Single contact	NZM1(-4), 2(-4), 3(-4), 4(-4) PN1(-4), 2(-4), 3(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O			**M22-K10** 216376		20 off
				1 NC ⊖		**M22-K01** 216378		20 off
	Double contact	NZM1(-4), 2(-4), 3(-4), 4(-4) PN1(-4), 2(-4), 3(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4)	1 N/O	1 NC ⊖				
				2 NC ⊖				
			2 N/O					

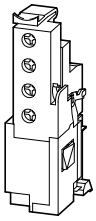
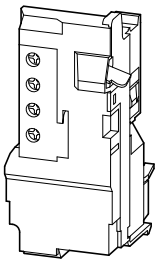
	Part no. Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Notes**
	M22-CK10 216384		20 off	The following applies for the std. pack: M22-(C)K… : Std. pack = 20 off	The following can be clipped into the switch: • NZM1: one standard auxiliary contact • NZM2: up to two standard auxiliary contacts M22-(C)K... • NZM3: up to three standard auxiliary contacts M22-(C)K... • NZM4: up to three standard auxiliary contacts M22-(C)K... Any combinations of the auxiliary contact types are possible. Marking on switch: HIN On combination with remote operator NZM-XR... the right mounting location of standard auxiliary contact HIN can be fitted only with individual contacts.
	M22-CK01 216385				
	M22-CK11 107940				
	M22-CK02 107899				
	M22-CK20 107898				
					Not in conjunction with undervoltage release NZM…-XU… or shunt release NZM…-XA… Early make with switch on and switch off (manual actuation): approx. 20 ms
					Not in conjunction with undervoltage release NZM…-XU…, shunt release NZM…-XA… or remote operator NZM…-XR… Early make (manual operation): approx. 20...90 ms
	**M22-CK10** 216384		20 off	The following applies for the std. pack: M22-(C)K… : Std. pack = 20 off	The following can be clipped into the switch: • NZM1 - one trip-indicating auxiliary switch • NZM2 - one trip-indicating auxiliary switch M22-(C)K… • NZM3 - one trip-indicating auxiliary switch M22-(C)K… • NZM4 - up to two trip-indicating auxiliary switches M22-(C)K…. Any combinations of the auxiliary contact types are possible. Not in combination with switch-disconnector PN… Marking on switch: HIA Labeling in residual-current block: HIAFI. If the trip-indicating auxiliary contacts are used in the residual-current block, the NC contacts operates as N/O contacts and the N/O contact operates as an NC contact.
	M22-CK01 216385		20 off		
	**M22-CK11** 107940		20 off		
	M22-CK02 107899		20 off		
	M22-CK20 107898		20 off		

[2] Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No. E140305
UL CCN DIHS
CSA File No. 022086
CSA Class No. 1437-01
NA Certification UL Listed, CSA certified

		For use with	Rated control voltage U_s V	**Part no.** Article no. for separate order	**Price** See price list	Std. pack	**Notes**
Undervoltage releases							
Without auxiliary contacts							
Non-delayed disconnection of circuit-breaker NZM or switch-disconnector N when control voltage drops below 35 – 70% U_S. For use with emergency switching off devices in conjunction with emergency switching off button.							
	With clamp terminal on left switch side.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XU24AC** 259434		1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on is reliably prevented. Undervoltage releases cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA...
			48 V 50/60 Hz	**NZM1-XU48AC** 259436			
			60 V 50/60 Hz	**NZM1-XU60AC** 259438			
			110 V-130 V 50/60 Hz	**NZM1-XU110-130AC** 259440			
			208 V-240 V 50/60 Hz	**NZM1-XU208-240AC** 259442			
			380 V-440 V 50/60 Hz	**NZM1-XU380-440AC** 259444			
			480 V-525 V 50/60 Hz	**NZM1-XU480-525AC** 259446			
			600 V 50/60 Hz	**NZM1-XU600AC** 259448			
			12 V DC	**NZM1-XU12DC** 259450			
			24 V DC	**NZM1-XU24DC** 259452			
			110 V-130 V DC	**NZM1-XU110-130DC** 259458			
			220 V-250 V DC	**NZM1-XU220-250DC** 259460			
	With 3 m connection cable instead of screw terminal.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XUL24AC** 259462		1 off	
			110 V-130 V 50/60 Hz	**NZM1-XUL110-130AC** 259468			
			208 V-240 V 50/60 Hz	**NZM1-XUL208-240AC** 259471			
			380 V-440 V 50/60 Hz	**NZM1-XUL380-440AC** 259473			
			480 V-525 V 50/60 Hz	**NZM1-XUL480-525AC** 259475			
			600 V 50/60 Hz	**NZM1-XUL600AC** 259477			
			12 V DC	**NZM1-XUL12DC** 259479			
			24 V DC	**NZM1-XUL24DC** 259481			
			110 V-130 V DC	**NZM1-XUL110-130DC** 259487			
			220 V-250 V DC	**NZM1-XUL220-250DC** 259489			

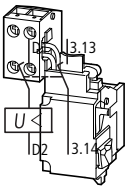
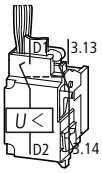
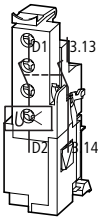
Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

	For use with	Rated control voltage U_s V	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Undervoltage releases						
Without auxiliary contacts Non-delayed disconnection of circuit-breaker NZM or switch-disconnector N when control voltage drops below 35 – 70% U_S. For use with emergency switching off devices in conjunction with emergency switching off button						
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	**NZM2/3-XU24AC** 259491		1 off	When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is reliably prevented. Undervoltage release cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or undervoltage release NZM...-XA...
		48 V 50/60 Hz	**NZM2/3-XU48AC** 259493			
		60 V 50/60 Hz	**NZM2/3-XU60AC** 259495			
		110 V-130 V 50/60 Hz	**NZM2/3-XU110-130AC** 259497			
		208 V-240 V 50/60 Hz	**NZM2/3-XU208-240AC** 259499			
		380 V-440 V 50/60 Hz	**NZM2/3-XU380-440AC** 259501			
		480 V-525 V 50/60 Hz	**NZM2/3-XU480-525AC** 259503			
		600 V 50/60 Hz	**NZM2/3-XU600AC** 259505			
		12 V DC	**NZM2/3-XU12DC** 259507			
		24 V DC	**NZM2/3-XU24DC** 259509			
		110 V-130 V DC	**NZM2/3-XU110-130DC** 259515			
		220 V-250 V DC	**NZM2/3-XU220-250DC** 259517			
	NZM4(-4), N(S)4(-4)	24 V 50/60 Hz	**NZM4-XU24AC** 266189		1 off	
		48 V 50/60 Hz	**NZM4-XU48AC** 266190			
		60 V 50/60 Hz	**NZM4-XU60AC** 266191			
		110 V-130 V 50/60 Hz	**NZM4-XU110-130AC** 266192			
		208 V-240 V 50/60 Hz	**NZM4-XU208-240AC** 266193			
		380 V-440 V 50/60 Hz	**NZM4-XU380-440AC** 266194			
		480 V-525 V 50/60 Hz	**NZM4-XU480-525AC** 266195			
		600 V 50/60 Hz	**NZM4-XU600AC** 266196			
		12 V DC	**NZM4-XU12DC** 266203			
		24 V DC	**NZM4-XU24DC** 266204			
		110 V-130 V DC	**NZM4-XU110-130DC** 266207			
		220 V-250 V DC	**NZM4-XU220-250DC** 266208			

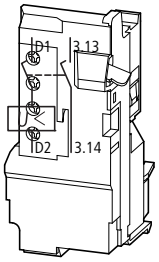
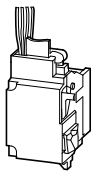
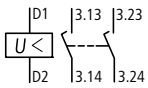
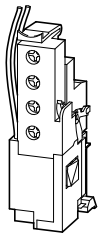
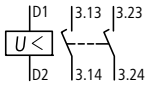
Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

	For use with	Rated control voltage U_s V	**Part no.** Article no. for separate order	**Price** See price list	Std. pack	**Notes**
Undervoltage releases						
With two early-make auxiliary contacts For interlocking and load-shedding circuits, as well as for early-make of the undervoltage release in main-switch applications. For use with emergency switching off devices in conjunction with emergency switching off button.						
	With clamp terminal on left switch side.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XUHIV24AC** 259531		1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on is reliably prevented. Early-make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms Undervoltage releases cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA... .
			48 V 50/60 Hz	**NZM1-XUHIV48AC** 259533			
			60 V 50/60 Hz	**NZM1-XUHIV60AC** 259535			
			110 V-130 V 50/60 Hz	**NZM1-XUHIV110-130AC** 259537			
			208 V-240 V 50/60 Hz	**NZM1-XUHIV208-240AC** 259539			
			380 V-440 V 50/60 Hz	**NZM1-XUHIV380-440AC** 259541			
			480 V-525 V 50/60 Hz	**NZM1-XUHIV480-525AC** 259543			
			12 V DC	**NZM1-XUHIV12DC** 259545			
			24 V DC	**NZM1-XUHIV24DC** 259547			
			110 V-130 V DC	**NZM1-XUHIV110-130DC** 259553			
			220 V-250 V DC	**NZM1-XUHIV220-250DC** 259555			
	With 3 m connection cable instead of screw connection.	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XUHIVL24AC** 259557		1 off	
			110 V-130 V 50/60 Hz	**NZM1-XUHIVL110-130AC** 259563			
			208 V-240 V 50/60 Hz	**NZM1-XUHIVL208-240AC** 259565			
			380 V-440 V 50/60 Hz	**NZM1-XUHIVL380-440AC** 259567			
			480 V-525 V 50/60 Hz	**NZM1-XUHIVL480-525AC** 259569			
			12 V DC	**NZM1-XUHIVL12DC** 259571			
			24 V DC	**NZM1-XUHIVL24DC** 259573			
			110 V-130 V DC	**NZM1-XUHIVL110-130DC** 259579			
			220 V-250 V DC	**NZM1-XUHIVL220-250DC** 259581			
		NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	**NZM2/3-XUHIV24AC** 259583		1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on is reliably prevented. Early-make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms Cannot be used in conjunction with remote operator NZM...-XR.... Undervoltage releases cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA....
			48 V 50/60 Hz	**NZM2/3-XUHIV48AC** 259585			
			60 V 50/60 Hz	**NZM2/3-XUHIV60AC** 259587			
			110 V-130 V 50/60 Hz	**NZM2/3-XUHIV110-130AC** 259589			
			208 V-240 V 50/60 Hz	**NZM2/3-XUHIV208-240AC** 259591			
			380 V-440 V 50/60 Hz	**NZM2/3-XUHIV380-440AC** 259594			
			480 V-525 V 50/60 Hz	**NZM2/3-XUHIV480-525AC** 259598			
			12 V DC	**NZM2/3-XUHIV12DC** 259600			
			24 V DC	**NZM2/3-XUHIV24DC** 259602			
			110 V-130 V DC	**NZM2/3-XUHIV110-130DC** 259608			
			220 V-250 V DC	**NZM2/3-XUHIV220-250DC** 259610			

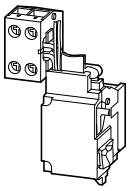
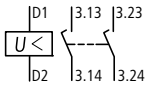
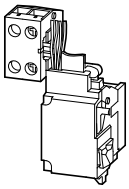
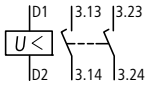
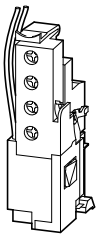
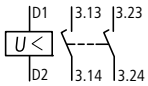
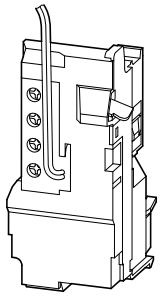
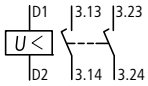
Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

	For use with	Rated operating voltage U_s V	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Undervoltage releases						
With two early-make auxiliary contacts						
For interlocking and load-shedding circuits, as well as for early-make of the undervoltage release in main-switch applications. For use with emergency switching off devices in conjunction with emergency switching off button.						
	NZM4(-4), N(S)4(-4)	24 V 50/60 Hz	**NZM4-XUHIV24AC** 266217		1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on is reliably prevented. Early make of auxiliary contacts on switching on (manual operation): approx. 90 ms Cannot be used in conjunction with remote operator NZM...-XR.... Undervoltage release cannot be installed together with early-make auxiliary contact NZM…-XHIV… or shunt release NZM…-XA…
		48 V 50/60 Hz	**NZM4-XUHIV48AC** 266218			
		60 V 50/60 Hz	**NZM4-XUHIV60AC** 266219			
		110 V-130 V 50/60 Hz	**NZM4-XUHIV110-130AC** 266220			
		208 V-240 V 50/60 Hz	**NZM4-XUHIV208-240AC** 266221			
		380 V-440 V 50/60 Hz	**NZM4-XUHIV380-440AC** 266222			
		480 V-525 V 50/60 Hz	**NZM4-XUHIV480-525AC** 266223			
		12 V DC	**NZM4-XUHIV12DC** 266231			
		24 V DC	**NZM4-XUHIV24DC** 266232			
		110 V-130 V DC	**NZM4-XUHIV110-130DC** 266235			
		220 V-250 V DC	**NZM4-XUHIV220-250DC** 266236			
With 2 separate early-make auxiliary contacts						
With 3 m connection cable instead of screw terminal.						
 	NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XUHIV20L24AC** 259612		1 off	When the undervoltage release is de-energized, accidental contact with the main switches of the switch during attempts to switch on is safely prevented. Early make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms Cannot be used in conjunction with remote operator NZM...-XR.... Undervoltage release cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA...
		110 V-130 V 50/60 Hz	**NZM1-XUHIV20L110-130AC** 259620			
		208 V-240 V 50/60 Hz	**NZM1-XUHIV20L208-240AC** 259622			
		380 V-440 V 50/60 Hz	**NZM1-XUHIV20L380-440AC** 259624			
		24 V DC	**NZM1-XUHIV20L24DC** 259630			
Contacts 3.23 and 3.24 with separate 3 m connection cables.						
 	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	**NZM2/3-XUHIV2024AC** 259640		1 off	
		110 V-130 V 50/60 Hz	**NZM2/3-XUHIV20110-130AC** 259648			
		208 V-240 V 50/60 Hz	**NZM2/3-XUHIV20208-240AC** 259651			
		380 V-440 V 50/60 Hz	**NZM2/3-XUHIV20380-440AC** 259653			
		24 V DC	**NZM2/3-XUHIV2024DC** 259659			

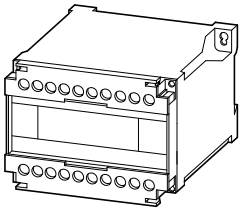
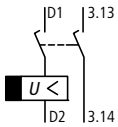
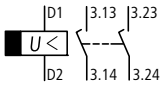
Information relevant for export to North America

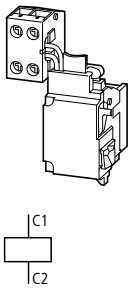
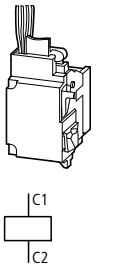
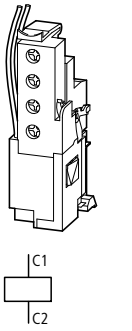
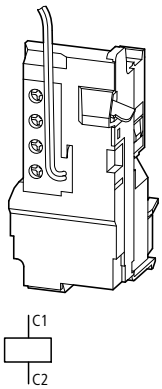
Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

	For use with	Rated control voltage U_s V	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Undervoltage releases						
With 2 separate early-make auxiliary contacts For use with emergency switching off devices in conjunction with emergency switching off button.						
Coil connections wired to clamp terminals, auxiliary contact connections with 3 m loose connection cables.						
		NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XUHIV20KL24AC** 284388		1 off	When the undervoltage release is de-energized, accidental contact with the main contacts of the switch during attempts to switch on is reliably prevented.
			110 V-130 V 50/60 Hz	**NZM1-XUHIV20KL110-130AC** 284389			
			208 V-240 V 50/60 Hz	**NZM1-XUHIV20KL208-240AC** 284400			
			24 V DC	**NZM1-XUHIV20KL24DC** 284387			
Coil connections with 3 m loose connection cables, auxiliary contact connections wired to clamp terminals.							Early make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms
		NZM1(-4), N(S)1(-4)	24 V 50/60 Hz	**NZM1-XUHIV20LK24AC** 284402		1 off	Cannot be used in conjunction with remote operator NZM...-XR....
			110 V-130 V 50/60 Hz	**NZM1-XUHIV20LK110-130AC** 284403			
			208 V-240 V 50/60 Hz	**NZM1-XUHIV20LK208-240AC** 284404			
			24 V DC	**NZM1-XUHIV20LK24DC** 284401			
		NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	24 V 50/60 Hz	**NZM2/3-XUHIV20LK24AC** 285291		1 off	Undervoltage release cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA...
			110 V-130 V 50/60 Hz	**NZM2/3-XUHIV20LK110-130AC** 284407			
			208 V-240 V 50/60 Hz	**NZM2/3-XUHIV20LK208-240AC** 284408			
			24 V DC	**NZM2/3-XUHIV20LK24DC** 284405			
Contacts 3.23 and 3.24 with separate 3 m connection cables.							
		NZM4(-4), N(S)4(-4)	24 V 50/60 Hz	**NZM4-XUHIV2024AC** 266244		1 off	
			110 V-130 V 50/60 Hz	**NZM4-XUHIV20110-130AC** 266247			
			208 V-240 V 50/60 Hz	**NZM4-XUHIV20208-240AC** 266248			
			380 V-440 V 50/60 Hz	**NZM4-XUHIV20380-440AC** 266249			
			24 V DC	**NZM4-XUHIV2024DC** 266258			

Information relevant for export to North America

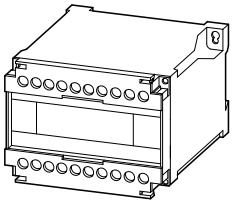
Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

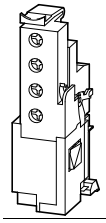
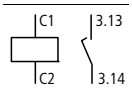
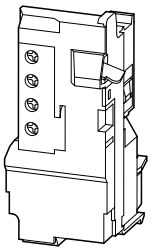
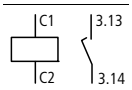
	For use with	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Undervoltage releases, off-delayed					
Combination of separate delay unit and special releases. For use with emergency switching off devices in conjunction with emergency switching off button. Not UL/CSA approved					
Delay unit					
Voltage dips of less than 0.06 – 16 s do not cause disconnection of the NZM circuit-breaker or N switch-disconnector.					
	NZM1(-4), 2(-4), 3(-4), 4(-4) N(S)1(-4), 2(-4), 3(-4), 4(-4) 50/60 Hz 220 V-240 V 380 V-440 V 480 V-550 V DC/AC 24 V	**UVU-NZM** 260154		1 off	Delay time can be set from 70 ms – 4 s. With additional external capacitor: • 30,000 µF ≧ 35 V up to 8 s • 90,000 µF ≧ 35 V up to 16 s A special release is required. Cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA... . Delay unit for separate installation (mounting: top-hat rail or screws). For other operating voltages use a control transformer.
Special trip block					
For combination with separate delay unit					
Without auxiliary contacts					
NZM1 with 3 m loose connection cables instead of screw terminal, NZM2, 3, and 4 with screw terminals					
	NZM1(-4) N(S)1(-4)	**NZM1-XUVL** 271607		1 off	Delay unit UVU-NZM is additionally required. Cannot be installed simultaneously with separate early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA....
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	**NZM2/3-XUV** 259527			
	NZM4(-4) N(S)4(-4)	**NZM4-XUV** 266588			
With two early-make auxiliary contacts					
	NZM1(-4) N(S)1(-4)	**NZM1-XUVHIVL** 271608		1 off	Cannot be used in conjunction with remote operator NZM...-XR.... Delay unit UVU-NZM is additionally required. Cannot be installed simultaneously with separate early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XA.... NZM1, 2, 3: Early make of auxiliary contacts on switching on and off (manual operation): approx. 20 ms. NZM4: Early make of auxiliary contacts on switching on (manual operation): approx. 90 ms.
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	**NZM2/3-XUVHIV** 259684			
	NZM4(-4) N(S)4(-4)	**NZM4-XUVHIV** 266596			
With two independently operating early-make auxiliary contacts					
NZM1 with 3 m separate connection cables instead of screw terminal, NZM2, 3, 4 with screw terminal, contact 3.23 and 3.24 with 3 m separate connection cables.					
	NZM1(-4) N(S)1(-4)	**NZM1-XUVHIV20L** 271609		1 off	
	NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	**NZM2/3-XUVHIV20** 259688			
	NZM4(-4) N(S)4(-4)	**NZM4-XUVHIV20** 266604			

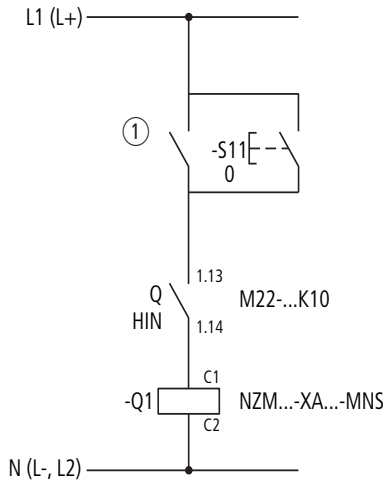
	For use with	Rated cntrol voltage U_s V	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Shunt releases						
Without auxiliary contacts						
Switches are tripped by a voltage pulse or by the application of uninterrupted voltage.						
	With clamp terminal on left switch side.	NZM1(-4), N(S)1(-4)	12 V AC/DC	**NZM1-XA12AC/DC** 259706		1 off	When the shunt release is live, contact with the switch's main contacts on switching on is reliably prevented. Undervoltage releases cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or shunt release NZM...-XU... .
			24 V AC/DC	**NZM1-XA24AC/DC** 259708		
			48 V AC/DC	**NZM1-XA48AC/DC** 259720		
			60 V AC/DC	**NZM1-XA60AC/DC** 259722		
			110 V-130 V AC/DC	**NZM1-XA110-130AC/DC** 259724		
			208 V-250 V AC/DC	**NZM1-XA208-250AC/DC** 259726		
			380 V-440 V AC/DC	**NZM1-XA380-440AC/DC** 259728		
	With 3 m connection cable instead of screw terminal.	NZM1(-4), N(S)1(-4)	12 V AC/DC	**NZM1-XAL12AC/DC** 259734		1 off	
			24 V AC/DC	**NZM1-XAL24AC/DC** 259736		
			110 V-130 V AC/DC	**NZM1-XAL110-130AC/DC** 259742		
			208 V-250 V AC/DC	**NZM1-XAL208-250AC/DC** 259744		
			380 V-440 V AC/DC	**NZM1-XAL380-440AC/DC** 259746		
		NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	12 V AC/DC	**NZM2/3-XA12AC/DC** 259752		1 off	
			24 V AC/DC	**NZM2/3-XA24AC/DC** 259754		
			48 V AC/DC	**NZM2/3-XA48AC/DC** 259756		
			60 V AC/DC	**NZM2/3-XA60AC/DC** 259758		
			110 V-130 V AC/DC	**NZM2/3-XA110-130AC/DC** 259760		
			208 V-250 V AC/DC	**NZM2/3-XA208-250AC/DC** 259763		
			380 V-440 V AC/DC	**NZM2/3-XA380-440AC/DC** 259766		
		NZM4(-4), N(S)4(-4)	12 V AC/DC	**NZM4-XA12AC/DC** 266446		1 off	
			24 V AC/DC	**NZM4-XA24AC/DC** 266447		
			48 V AC/DC	**NZM4-XA48AC/DC** 266448		
			60 V AC/DC	**NZM4-XA60AC/DC** 266449		
			110 V-130 V AC/DC	**NZM4-XA110-130AC/DC** 266450		
			208 V-250 V AC/DC	**NZM4-XA208-250AC/DC** 266451		
			380 V-440 V AC/DC	**NZM4-XA380-440AC/DC** 266452		

Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

	For use with	With screw terminal **Part no.** Article no. With screw terminal	**Price** See price list	Std. pack	**Notes**
Shunt releases					
Capacitor unit 230 V 50/60 Hz in conjunction with shunt release NZM...-XA208-250 AC/DC Enclosure: degree of protection IP20 Not UL/CSA approved					Enables the reliable use of circuit-breakers as mesh network circuit-breakers in the range from 0 – 110 % U_n with constant switch-off time of 40 ms. If the mains voltage is absent, the installed capacitor supplies power for actuating the shunt release for at least 12 hours. The capacitor unit is arranged independently of the circuit-breaker. Connect NZM-XCM to the power feed side. Note on engineering: Connect a standard auxiliary contact (HIN) as N/O in series with the coil of the shunt release! Standard auxiliary contact not included as standard.
	NZM1(-4), N(S)1(-4) NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM-XCM** 229413		1 off	

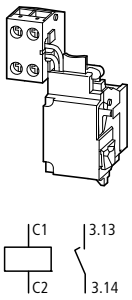
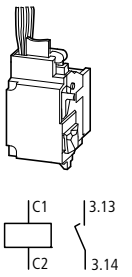
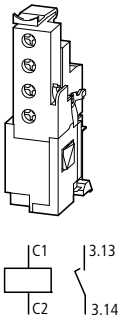
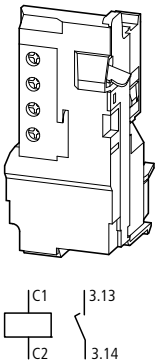
			Part no. Article no. With screw terminal	**Price** See price list	Std. pack	**Notes**
Shunt releases						
For mesh network circuit-breakers For intermittent operation Maximum On-time = 1 s Operating range 10-110 % U_s Not UL/CSA approved						Rated control voltage 230 V AC For use with NZM3(-4), N3(-4) and NZM4(-4), N4(-4) Cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or undervoltage release NZM...-XU... . Intermittent operation guaranteed by series connection of a make contact M22-(C)K10. The maximum duty factor of the shunt releases for mesh network circuit-breakers is 1 s.
		Without auxiliary contacts	**NZM3-XA-230AC-MNS** 274097		1 off	
		With early-make auxiliary contact	**NZM3-XAHIV-230AC-MNS** 274141		1 off	
		Without auxiliary contacts	**NZM4-XA-230AC-MNS** 274138			
		With early-make auxiliary contact	**NZM4-XAHIV-230AC-MNS** 274143		1 off	



①	Reverse power relay contact from mesh network relay
-S11	Remote off
q	Standard auxiliary contacts
-Q1	Shunt releases

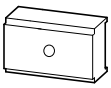
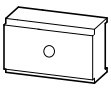
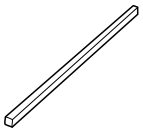
NZM...-XAHIV:
Cannot be used in conjunction with remote operator NZM...-XR....

NZM3: Early make of auxiliary contact on switching on and off (manual operation): approx. 20 ms.
NZM4: Early make of auxiliary contact on switching on (manual operation): approx. 90 ms.

	For use with	Rated control voltage U_s V	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Shunt releases						
With early-make auxiliary contact						
Not in combination with remote operator.						
	With clamp terminal on left switch side.	NZM1(-4), N(S)1(-4)	12 V AC/DC	**NZM1-XAHIV12AC/DC** 259772		1 off	When the shunt release is live, contact with the switch's main contacts on switching on is reliably prevented. Early make of auxiliary contact on switching on and off (manual operation): approx. 20 ms. Undervoltage release cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or undervoltage release NZM...-XU...
			24 V AC/DC	**NZM1-XAHIV24AC/DC** 259774			
			48 V AC/DC	**NZM1-XAHIV48AC/DC** 259776			
			60 V AC/DC	**NZM1-XAHIV60AC/DC** 259778			
			110 V-130 V AC/DC	**NZM1-XAHIV110-130AC/DC** 259780			
			208 V-250 V AC/DC	**NZM1-XAHIV208-250AC/DC** 259782			
			380 V-440 V AC/DC	**NZM1-XAHIV380-440AC/DC** 259784			
	With 3 m connection cable instead of screw connection .	NZM1(-4), N(S)1(-4)	12 V AC/DC	**NZM1-XAHIVL12AC/DC** 259790		1 off	
			24 V AC/DC	**NZM1-XAHIVL24AC/DC** 259792			
			110 V-130 V AC/DC	**NZM1-XAHIVL110-130AC/DC** 259798			
			208 V-250 V AC/DC	**NZM1-XAHIVL208-250AC/DC** 259800			
			380 V-440 V AC/DC	**NZM1-XAHIVL380-440AC/DC** 259802			
		NZM2(-4), N(S)2(-4) NZM3(-4), N(S)3(-4)	12 V AC/DC	**NZM2/3-XAHIV12AC/DC** 259808		1 off	
			24 V AC/DC	**NZM2/3-XAHIV24AC/DC** 259810			
			48 V AC/DC	**NZM2/3-XAHIV48AC/DC** 259812			
			60 V AC/DC	**NZM2/3-XAHIV60AC/DC** 259814			
			110 V-130 V AC/DC	**NZM2/3-XAHIV110-130AC/DC** 259816			
			208 V-250 V AC/DC	**NZM2/3-XAHIV208-250AC/DC** 259818			
			380 V-440 V AC/DC	**NZM2/3-XAHIV380-440AC/DC** 259820			
		NZM4(-4), N(S)4(-4)	12 V AC/DC	**NZM4-XAHIV12AC/DC** 266470		1 off	When the shunt release is live, contact with the switch's main contacts on switching on is reliably prevented. Early make of auxiliary contact on switching on (manual operation): approx. 90 ms. Cannot be used in conjunction with remote operator NZM...-XR.... Undervoltage release cannot be installed simultaneously with early-make auxiliary contact NZM...-XHIV... or undervoltage release NZM...-XU...
			24 V AC/DC	**NZM4-XAHIV24AC/DC** 266471			
			48 V AC/DC	**NZM4-XAHIV48AC/DC** 266472			
			60 V AC/DC	**NZM4-XAHIV60AC/DC** 266473			
			110 V-130 V AC/DC	**NZM4-XAHIV110-130AC/DC** 266474			
			208 V-250 V AC/DC	**NZM4-XAHIV208-250AC/DC** 266475			
			380 V-440 V AC/DC	**NZM4-XAHIV380-440AC/DC** 266476			

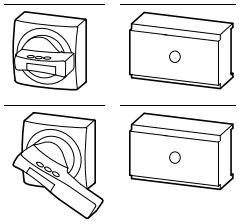
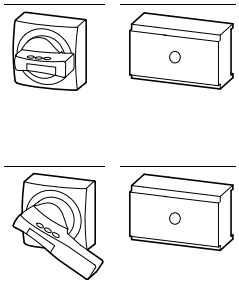
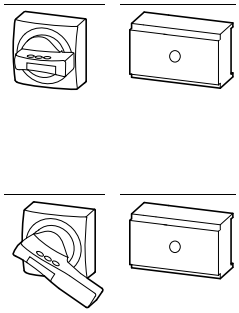
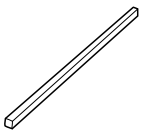
Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

Product view		For use with	Standard **Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Door coupling rotary handles						
Complete including rotary drive and coupling parts An additional extension shaft is necessary with the NZM...-XT(V)D(V)(R)(-60) part numbers. Degree of protection IP66/UL/CSA type 4X, 12						
Standard, black/grey						
		Lockable in 0 position on handle with up to 3 padlocks. With door interlock.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XTVD** 260166		1 off	Door interlock • **Not** defeated in the locked OFF and ON positions • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM…-XTVD(V) • External warning plate/ designation label can be clipped on
			NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XTVD** 260168			
			NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XTVD** 260170			
			NZM4(-4), N(S)4(-4)	**NZM4-XTVD** 266614			
		Lockable on handle and switch with up to 3 padlocks. Can be locked in 0 position, with adequate modification also in I position. With door interlock. Lockable on switch in 0 position.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XTVDV** 260172			
			NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XTVDV** 260174			
			NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XTVDV** 260176			
			NZM4(-4), N(S)4(-4)	**NZM4-XTVDV** 266616			
Red-yellow for emergency switching off							
		Lockable on handle and switch with up to 3 padlocks. Lockable in 0 position on handle. With door interlock. Lockable on switch in 0 position.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XTVDVR** 260178		1 off	Door interlock • **Not** defeated in the locked OFF position. • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM…-XTVDVR • External warning plate/ designation label can be clipped on
			NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XTVDVR** 260180			
			NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XTVDVR** 260182			
			NZM4(-4), N(S)4(-4)	**NZM4-XTVDVR** 266618			
Extension shaft							
	–	400 mm max. mounting depth	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XV4** 261232		1 off	Length 290 mm, can be cut to required length.
			NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XV4** 261234			
		600 mm max. mounting depth	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XV6** 260191			Length 425 mm, can be cut to required length.
			NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XV6** 260193			

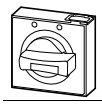
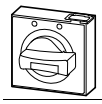
Notes Circuit-breaker can also be installed in a horizontal position 90° left/right, with the handle still in the same position.

For maximum shaft length 60 mm **Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	Extremely narrow fittings **Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
NZM1-XTVD-60 271504		1 off	Door interlock • Can **not** be defeated in the locked OFF and ON positions • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM…-XTVD(V)-60 • For maximum shaft length 60 mm • Without shaft support • Cannot be combined with additional handle NZM...-XDZ • External warning plate/designation label can be clipped on.	**NZM1-XTVD-0** 279392		1 off	Door interlock • Can **not** be defeated in the locked OFF and ON positions • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM…-XTVD(V)-0 • For extremely narrow fittings • With special short extension shaft • Cannot be combined with additional handle NZM...-XDZ • External warning plate/designation label can be clipped on.	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E140305 UL CCN DIHS CSA File No. 022086 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP66, UL/CSA Type 4X, 12
NZM2-XTVD-60 271505				**NZM2-XTVD-0** 279393				
NZM3-XTVD-60 271506				**NZM3-XTVD-0** 279394				
NZM4-XTVD-60 271507				**NZM4-XTVD-0** 279395				
NZM1-XTVDV-60 271508				**NZM1-XTVDV-0** 279396				
NZM2-XTVDV-60 271509				**NZM2-XTVDV-0** 279397				
NZM3-XTVDV-60 271510				**NZM3-XTVDV-0** 279398				
NZM4-XTVDV-60 271511				**NZM4-XTVDV-0** 279399				
NZM1-XTVDVR-60 271512		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM…-XTVDVR-60 • For maximum shaft length 60 mm • Without shaft support • Cannot be combined with additional handle NZM...-XDZ • External warning plate/designation label can be clipped on.	**NZM1-XTVDVR-0** 279400		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Can be modified such that it can be defeated from the outside using a screwdriver, when it is in the unlocked ON position. • Door can be opened in OFF NZM…-XTVDVR-0 • For extremely narrow fittings • With special short extension shaft • Cannot be combined with additional handle NZM...-XDZ • External warning plate/designation label can be clipped on.	
NZM2-XTVDVR-60 271513				**NZM2-XTVDVR-0** 279401				
NZM3-XTVDVR-60 271514				**NZM3-XTVDVR-0** 279402				
NZM4-XTVDVR-60 271515				**NZM4-XTVDVR-0** 279403				
–			–	–			–	UL/CSA certification not required
–				–				
–				–				
–				–				

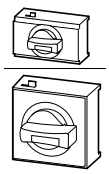
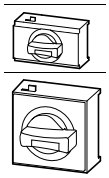
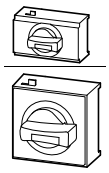
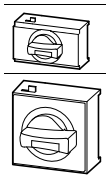
Product view	For use with		Standard **Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Door coupling rotary handles Complete including rotary drive and coupling parts Extension shaft additionally required. Degree of protection IP66/UL/CSA type 4X, 12 Difference to normal IEC handles: Door opening only possible with active rotation beyond the 0 position.						
Standard, black/grey						
	Lockable in 0 position on handle. With door interlock.	NZM1, N1	**NZM1-XTVD-NA** 271445		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/designation label can be clipped on.
		NZM2, N2	**NZM2-XTVD-NA** 271446			
		NZM3, N3	**NZM3-XTVD-NA** 271447			
		NZM4, N4	**NZM4-XTVD-NA** 271448			
	Lockable on handle and switch with up to 3 padlocks. Lockable in 0 position on handle. With door interlock. Lockable on switch in 0 position.	NZM1, N(S)1	**NZM1-XTVDV-NA** 100683		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening possible with active rotation beyond the 0 position. Can be defeated from the outside using a screwdriver. • Cannot be combined with mechanical interlock • External warning plate/designation label can be clipped on.
		NZM2, N(S)2	**NZM2-XTVDV-NA** 100684			
		NZM3, N(S)3	**NZM3-XTVDV-NA** 100685			
		NZM4, N(S)4	**NZM4-XTVDV-NA** 100686			
Red-yellow for emergency switching off						
	Lockable on handle and switch with up to 3 padlocks. Lockable in 0 position on handle. With door interlock. Lockable on switch in 0 position.	NZM1, N(S)1	**NZM1-XTVDVR-NA** 271449		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/designation label can be clipped on.
		NZM2, N(S)2	**NZM2-XTVDVR-NA** 271450			
		NZM3, N(S)3	**NZM3-XTVDVR-NA** 271451			
		NZM4, N(S)4	**NZM4-XTVDVR-NA** 271452			
Extension shaft						
	400 mm max. mounting depth	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XV4** 261232		1 off	Length 290 mm, can be cut to required length.
		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XV4** 261234			
	600 mm max. mounting depth	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XV6** 260191			Length 425 mm, can be cut to required length.
		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XV6** 260193			

Notes Circuit-breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

For maximum shaft length 60 mm **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**	Extremely narrow fittings **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
–			–	–			–	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E140305 UL CCN DIHS CSA File No. 022086 CSA Class No.1437-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP66, UL/CSA Type 4X, 12
–				–				
–				–				
–				–				
NZM1-XTVDV-60-NA 100667		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening possible with active rotation beyond the 0 position. Can be defeated from the outside using a screwdriver. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on. NZM…-XTVDV-60-NA • For a maximum shaft length of 60 mm • Without shaft support • Cannot be combined with additional handle NZM...-XDZ • External warning plate/ designation label can be clipped on.	**NZM1-XTVDV-0-NA** 100675		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening possible with active rotation beyond the 0 position. Can be defeated from the outside using a screwdriver. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on. NZM…-XTVDV-0-NA • For extremely narrow fittings • With special short extension shaft • Cannot be combined with additional handle NZM...-XDZ • External warning plate/ designation label can be clipped on.	
NZM2-XTVDV-60-NA 100668				**NZM2-XTVDV-0-NA** 100676				
NZM3-XTVDV-60-NA 100669				**NZM3-XTVDV-0-NA** 100677				
NZM4-XTVDV-60-NA 100670				**NZM4-XTVDV-0-NA** 100678				
NZM1-XTVDVR-60-NA 100671		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on. NZM…-XTVDVR-60-NA • For a maximum shaft length of 60 mm • Without shaft support • Cannot be combined with additional handle NZM...-XDZ • External warning plate/ designation label can be clipped on.	**NZM1-XTVDVR-0-NA** 100679		1 off	Door interlock • Can **not** be defeated in the locked OFF position. • Door opening with active rotation beyond the 0 position. • Cannot be combined with mechanical interlock • External warning plate/ designation label can be clipped on. NZM…-XTVDVR-0-NA • For extremely narrow fittings • With special short extension shaft • Cannot be combined with additional handle NZM...-XDZ • External warning plate/ designation label can be clipped on.	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E140305 UL CCN DIHS CSA File No. 022086 CSA Class No.1437-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP66, UL/CSA Type 4X, 12
NZM2-XTVDVR-60-NA 100672				**NZM2-XTVDVR-0-NA** 100680				
NZM3-XTVDVR-60-NA 100673				**NZM3-XTVDVR-0-NA** 100681				
NZM4-XTVDVR-60-NA 100674				**NZM4-XTVDVR-0-NA** 100682				
–			–	–			–	UL/CSA certification not required
–				–				
–				–				
–				–				

		For use with	**Part no.** Article no. for separate order	**Price** See price list	Std. pack	**Notes**	**Information relevant for export to North America**
Rotary handle on circuit-breaker							
Complete with rotary drive							
Standard, black/grey							
	Lockable in 0 position on switch with up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XDV** 260125		1 off	NZM1, 2, 3: Can also be combined with insulating surround. MODAN handle position detection by wire release can be retrofitted.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified
		NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XDV** 260127				
		NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XDV** 260129				
		NZM4(-4), N(S)4(-4)	**NZM4-XDV** 266608				
	Lockable in 0 position on handle with up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XDVG** 285247		1 off	Can also be combined with insulating surround.	
		NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XDVG** 285248				
Red-yellow for emergency switching off							
	Lockable in 0 position on switch with up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XDVR** 260135		1 off	NZM1, 2, 3: Can also be combined with insulating surround. MODAN handle position detection by wire release can be retrofitted.	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified
		NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XDVR** 260137				
		NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XDVR** 260140				
		NZM4(-4), N(S)4(-4)	**NZM4-XDVR** 266610				
	Lockable in 0 position on handle with up to 3 padlocks.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XDVGR** 285249		1 off	Can also be combined with insulating surround.	
		NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XDVGR** 285280				

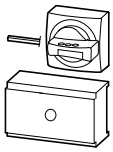
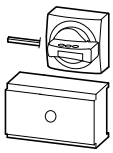
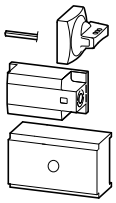
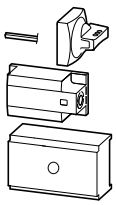
Notes Circuit-breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

		For use with	Part no. Article no. when ordered separately	Price See price list	Std. pack	Notes	Information relevant for export to North America
Rotary handles on switch with door interlock							
Complete with rotary drive and insulating surround							
Standard, black/grey							
	Lockable in 0 position on handle with up to 3 padlocks, can also be modified for the I position. Also available with door interlock e.g. for MCC service distribution.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XDTV** 260131		1 off	Door interlock • In the ON position, can be defeated from the outside using a 1 mm pin • Can **not** be defeated in the locked OFF and ON positions • Door can be opened in OFF • Can only be switched ON when the door is closed	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified
		NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XDTV** 260133				
Red-yellow for emergency switching off							
	Lockable in 0 position on handle with up to 3 padlocks. Also available with door interlock e.g. for MCC service distribution.	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XDTVR** 260142		1 off		
		NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XDTVR** 260144				
Rotary handles on switch with door interlock for UL/CSA approved NA switches							
Difference to normal IEC handles: Door opening only possible with active rotation beyond the 0 position.							
Complete with rotary drive and insulating surround							
Standard, black/grey							
	Lockable in 0 position on handle with up to 3 padlocks, can also be modified for the I position. Also available with door interlock e.g. for MCC service distribution.	NZM1, N(S)1	**NZM1-XDTV-NA** 271453		1 off	Door interlock • In the ON position, can be defeated from the outside using a 1 mm pin • Can **not** be defeated in the locked OFF and ON positions • Door opening only possible with active rotation beyond the 0 position. • Can only be switched ON when the door is closed • Cannot be combined with mechanical interlock	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified
		NZM2, N(S)2	**NZM2-XDTV-NA** 271454				
Red-yellow for emergency switching off							
	Lockable in 0 position on handle with up to 3 padlocks. Also available with door interlock e.g. for MCC service distribution.	NZM1, N(S)1	**NZM1-XDTVR-NA** 271455		1 off		
		NZM2, N(S)2	**NZM2-XDTVR-NA** 271456				

Notes Circuit-breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

Main switch assembly kit

NZM...-XHB..., NZM...-XS...

	Model	For use with	Part no. Article no. for separate order	Price See price list	Std. pack	Information relevant for export to North America
Main switch assembly kit						
Equipment supplied: • Door coupling rotary handle • Extension shaft NZM...-XV4 • External warning plate/designation label in German/English • Black and yellow flash For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → Page 17/84 Other external warning plates/designation labels can be clipped on. Degree of protection IP66/UL/CSA type 4X, 12						
With black door coupling rotary handle						
 Lockable in 0 position on handle with up to 3 padlocks, can also be modified for the I position. With door interlock.	–	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XHB** 266626		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
	–	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XHB** 266627			
	–	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XHB** 266628			
	–	NZM4(-4) N(S)4(-4)	**NZM4-XHB** 271779			
With red door coupling rotary handle for use of switch as emergency switching off device to IEC/EN 60204-1						
 Lockable in 0 position on handle with up to 3 padlocks. Lockable door as additional feature, locking facility on circuit-breaker in 0 position.	–	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XHBR** 266632			
	–	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XHBR** 266633			
	–	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XHBR** 266634			
	–	NZM4(-4) N(S)4(-4)	**NZM4-XHBR** 271842			
For side wall installation Actuation of the switch on the control panel side wall Switch mounting on mounting plate						
Standard, black/grey						
 Lockable in 0 position on handle with up to 3 padlocks, with adequate modification also in I position.	For operation on the left	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XS-L** 266641		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
		NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XS-L** 266642			
		NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XS-L** 266643			
		NZM4(-4) N(S)4(-4)	**NZM4-XS-L** 289806			
	For operation on the right	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XS-R** 266644			
		NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XS-R** 266645			
		NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XS-R** 266646			
		NZM4(-4) N(S)4(-4)	**NZM4-XS-R** 289807			
Red-yellow for emergency switching off						
 Lockable in 0 position on handle with up to 3 padlocks.	For operation on the left	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XSR-L** 266653		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
		NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XSR-L** 266654			
		NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XSR-L** 266655			
		NZM4(-4) N(S)4(-4)	**NZM4-XSR-L** 289808			
	For operation on the right	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XSR-R** 266656			
		NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XSR-R** 266657			
		NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XSR-R** 266658			
		NZM4(-4) N(S)4(-4)	**NZM4-XSR-R** 289809			

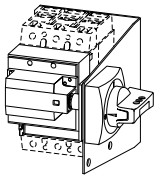
	Model	For use with	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Information relevant for export to North America**

Main switch assembly kit for side wall installation with mounting bracket.

For direct mounting of circuit-breaker and handle in the side wall of the control cabinet
Equipment supplied:
- Door coupling rotary handle
- Mounting bracket
- Special short extension shaft
- External warning plate/designation label in German/English
- Black and yellow flash

For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → Page 17/84
Other external warning plates/designation labels can be clipped on.
Degree of protection IP66/UL/CSA type 4X, 12

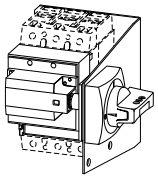
Standard, black/grey



Lockable in 0 position, with adequate modification also in I position. Minimum clearance between control panel side walls and circuit-breaker is defined by mounting bracket. Extension cannot be used.

Model	For use with	**Part no.**	**Price**	Std. pack	**Information relevant for export to North America**
For operation on the left	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XSM-L** 266663		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
For operation on the left	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XSM-L** 266664			
For operation on the right	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XSM-R** 266665			
For operation on the right	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XSM-R** 266666			

Red-yellow for emergency switching off



Lockable in 0 position on handle. Minimum clearance between control panel side walls and circuit-breaker is defined by mounting bracket. Extension cannot be used.

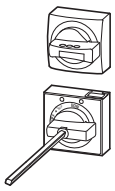
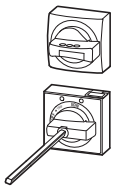
Model	For use with	**Part no.**	**Price**	Std. pack	**Information relevant for export to North America**
For operation on the left	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XSRM-L** 266671		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
For operation on the left	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XSRM-L** 266672			
For operation on the right	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XSRM-R** 266673			
For operation on the right	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XSRM-R** 266674			

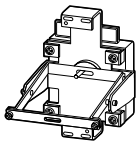
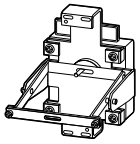
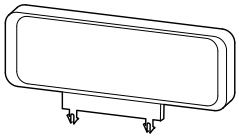
Additional plate

For fitting to the mounting bracket when using neutral conductor or PE conductor terminals K25, K50, K95 or K150.

Model	For use with	**Part no.**	**Price**	Std. pack	**Information relevant for export to North America**
–	–	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), N(S)2(-4)	**NZM1/2-XZB** 266676	1 off	UL/CSA certification not required

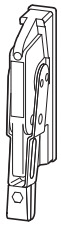
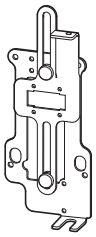
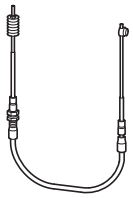
Notes Additional terminal arrangement for side wall operator with mounting bracket.
→ Engineering, Page 17/153

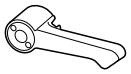
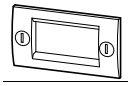
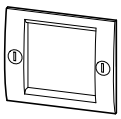
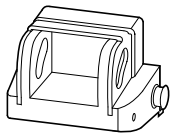
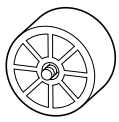
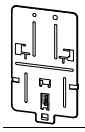
		Model	For use with	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Information relevant for export to North America**
Main switch assembly kit with additional rotary handle							
Main switch assembly kit with additional rotary handle for switching with opened control panel door Equipment supplied: • Door coupling rotary handle • Additional rotary handle on switch with "Deliberate Action" operation • Extension shaft NZM…-XV6 for mounting depth 600 mm, NZM1/2-XV4 with NZM1 for mounting depth 400 mm • External warning plate/designation label in German/English • Black and yellow flash For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → Page 17/84 Other external warning plates/designation labels can be clipped on. Degree of protection IP66/UL/CSA type 4X, 12							
With black door coupling rotary handle							
	Lockable in 0 position on handle with up to 3 padlocks, can also be modified for the I position. Lockable door as additional feature, locking facility on circuit-breaker in 0 position.	IEC	NZM1(-4) PN1(-4), N1(-4)	**NZM1-XHB-DA** 125956		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
		UL/CSA	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XHB-DA-NA** 125958			
		IEC	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XHB-DA** 116895			
		UL/CSA	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XHB-DA-NA** 116897			
		IEC	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XHB-DA** 118988			
		UL/CSA	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XHB-DA-NA** 119000			
		IEC	NZM4(-4) PN4(-4), N(S)4(-4)	**NZM4-XHB-DA** 119002			
		UL/CSA	NZM4(-4) PN4(-4), N(S)4(-4)	**NZM4-XHB-DA-NA** 119004			
With red door coupling rotary handle For use of switch as emergency switching off device							
	Lockable in 0 position on handle with up to 3 padlocks. With door interlock and lockable on switch in 0 position.	IEC	NZM1(-4) PN1(-4), N1(-4)	**NZM1-XHB-DAR** 125957		1 off	Product Standards: UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No.: E140305 UL CCN: DIHS CSA File No.: 022086 CSA Class No.: 1437-01 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP66, UL/CSA Type 4X, 12
		UL/CSA	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XHB-DAR-NA** 125959			
		IEC	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XHB-DAR** 116896			
		UL/CSA	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XHB-DAR-NA** 116898			
		IEC	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XHB-DAR** 118989			
		UL/CSA	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XHB-DAR-NA** 119001			
		IEC	NZM4(-4) PN4(-4), N(S)4(-4)	**NZM4-XHB-DAR** 119003			
		UL/CSA	NZM4(-4) PN4(-4), N(S)4(-4)	**NZM4-XHB-DAR-NA** 119005			

		For use with	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Rear-mounted drives						
For direct rear connection of the switch to the side of the control panel or control panel door. Switch actuation on rear through side wall or control panel door. For switch with toggle lever. For enhanced protection against direct contact on the incomer side, IP2X protection against contact with a finger can be ordered → Page 17/84 Degree of protection IP66, UL/CSA type 4X, 12						
Standard, black/grey						
	Lockable in 0 position on handle with up to 3 padlocks.	NZM1, N1, NS1, PN1	**NZM1-XRAV** 107245		1 off	External warning plate can be clipped on
		NZM2, N2, NS2, PN2	**NZM2-XRAV** 107247			
Red-yellow for emergency switching off						
	Lockable in 0 position on handle with up to 3 padlocks.	NZM1, N1, NS1, PN1	**NZM1-XRAVR** 107249		1 off	
		NZM2, N2, NS2, PN2	**NZM2-XRAVR** 107261			
External warning plate/designation label						
						
"Main switch – open in 0 position"	German/English	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**ZFS61/62-NZM7** 272525		10 off	A bilingual external warning plate/ designation label in German/English is already included in the main switch assembly kit.
	German		**ZFS61-NZM7** 051089			
	English		**ZFS62-NZM7** 065957			
	French		**ZFS63-NZM7** 065958			
	Chinese/English		**ZFS82-NZM** 104910		1 off	External warning plates are available in the following languages: 64 Bulgarian, 65 Danish, 66 Finnish, 67 Dutch, 68 Italian, 69 Greek, 70 Norwegian, 71 Polish, 72 Portuguese, 73 Romanian, 74 Russian, 75 Swedish, 76 Serbo-Croatian, 77 Spanish, 78 Czech, 79 Turkish, 80 Hungarian, 81 Afrikaans, 82 Chinese/English, 83 Chinese. To obtain the order number, insert the language code number into the part number required. **Ordering example** External warning plate in Finnish: ZFS**66**-NZM7
	Chinese		**ZFS83-NZM** 105945			
	Further languages		**ZFS*-NZM7** 999978			
Symbol	Circuit-breaker symbol		**ZFS-LS-NZM** 104829			
	Switch-disconnector symbol		**ZFS-LTS-NZM** 104828			
	Disconnector symbol		**ZFS-TS-NZM** 115365			
Blank	Blank (for engraving or printing)		**ZFS60-NZM7** 065896		10 off	
Lightning symbol						
Including terminal marking for main switch						
Small		NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**BPF-NZM7** 217294		10 off	Included as standard in main switch assembly kit Marking of the input side of the switch is possible
Large		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**BPF-NZM10** 231363			

Information relevant for export to North America

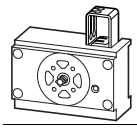
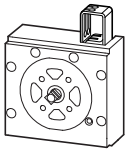
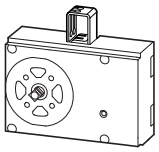
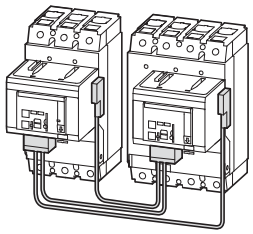
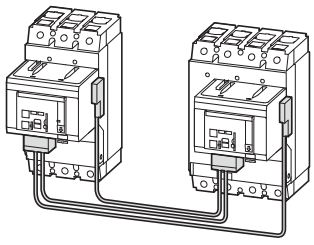
Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified
Degree of Protection	IEC: IP66, UL/CSA Type 4X, 12

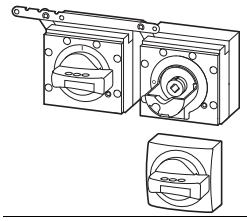
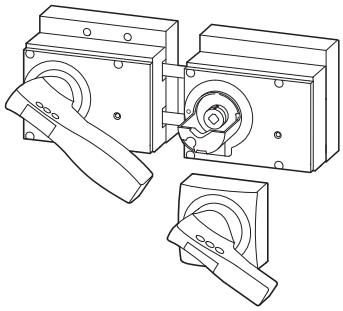
	For use with	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America
Side-mounted handle						
For mounting outside the control panel door. Actuation of a switch with toggle lever using a Bowden cable and mechanical components mounted on the front of the switch. For switch with toggle lever. **Caution! Intended exclusively for use outside the scope of validity of the IEC/EN 60947 area**.						
Handle, metal, black/red						
	Degree of protection UL/CSA Type 12	NZM2…-NA, NS2…-NA NZM3…-NA, NS3…-NA	**NZM-XSHGVR12-NA** 107269		1 off	Lockable in 0-position on handle with up to 3 padlocks, for 1 door of an American style control panel (door plus wide bar beside the door). For each handle 1 additional mechanical unit and 1 Bowden cable is required.	Product Standards UL489; CSA-C22.2 No. 5-09 UL File No. E140305 UL CCN DIHS CSA File No. 236770 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP66, UL/CSA Type 12
	Degree of protection UL/CSA Type 4X		**NZM-XSHGVR4X-NA** 107268				Product Standards UL489; CSA-C22.2 No. 5-09 UL File No. E140305 UL CCN DIHS CSA File No. 236770 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified Degree of Protection IEC: IP66, UL/CSA Type 4X
Mechanical unit							
		NZM2…-NA, NS2…-NA	**NZM2-XSHM-NA** 107266		1 off	For mounting on the front of a switch with toggle lever, including fixing sundries.	UL/CSA certification not required
		NZM3…-NA, NS3…-NA	**NZM3-XSHM-NA** 107267				
Bowden cables							
	Nominal length 36" = 91.4 cm	NZM2…-NA, NS2…-NA NZM3…-NA, NS3…-NA	**NZM-XSHBZ36-NA** 107263		1 off	–	Product Standards UL489; CSA-C22.2 No. 5-09 UL File No. E140305 UL CCN DIHS CSA File No. 236770 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified
	Nominal length 48" = 121.9 cm		**NZM-XSHBZ48-NA** 107264				
	Nominal length 60" = 152.4 cm		**NZM-XSHBZ60-NA** 107265				Product Standards UL489; CSA-C22.2 No. 5-09 UL File No. E140306 UL CCN DIHS CSA File No. 236771 CSA Class No. 1437-02 NA Certification UL Listed, CSA certified

	For use with	Part no. Article no. when ordered separately	Price See price list	Std. pack	Notes
Additional handle					
Enables switching when control panel door is open					
	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XDZ** 266621		1 off	Push-fits on to the extension shaft. 100 mm free extension shaft required. Cannot be combined with door coupling rotary handles NZM...-XT...-60 or NZM...-XT...0.
	NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XDZ** 266622			
Insulating surround					
For toggle levers, rotary handles with rotary drive and remote operators Degree of protection IP40					
	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XBR** 260195		1 off	For rectangular cut-out on doors and enclosures with material thicknesses of 1.5 – 5 mm. External warning plate/designation label can be clipped on. NZM4-XBR can not be combined with rotary handle with rotary mechanism.
	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XBR** 260197			
	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XBR** 284645			
	NZM4(-4) N(S)4(-4)	**NZM4-XBR** 284646			
Toggle lever locking device					
Lockable in Off position with up to three padlocks (hasp thickness 4 – 8 mm)					
	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XKAV** 260199		1 off	Cannot be combined with insulating surround.
	NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4)	**NZM2/3-XKAV** 260201			
Spacers					
Enables fast and attractively priced offsetting of varying construction sizes with/without rotary handle or remote operator to the same front depth					
	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XAB** 260203		1 set	Grid depth 17.5 mm, M4 thread One set contains 4 spacers Maximum component fitting: NZM1: 4 off per fixing screw, NZM2: 2 off per fixing screw, 2 (NZM1) or 4 (NZM2) fixing screws contained per switch
	NZM3(-4) PN3(-4), N(S)3(-4) NZM4(-4) N(S)4(-4)	**NZM3-XAB** 260211			Grid depth 17.5 mm, M5 thread One set contains 4 spacers NZM3, NZM4: 1 off per fixing screw 4 fixing screws per switch included
Clips					
Allows switches to be clipped onto DIN rails					
	NZM1(-4) PN1(-4) N(S)1(-4)	**NZM1-XC35** 260213		1 off	For 35 mm top-hat rails
	NZM2(-4) PN2(-4) N(S)2(-4)	**NZM2-XC75** 260215			For 75 mm top-hat rails Not in combination with remote operator.

Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

	For use with	Part no. Article no. for separate order	Price See price list	Std. pack	Notes	Information relevant for export to North America
Mechanical interlock for (door coupling) rotary handles						
	NZM1(-4) PN1(-4), N(S)1(-4)	**NZM1-XMV** 281581		1 off	Allows interlocking of 2, 3 or 4 switches, including different construction sized switches, with Bowden cables. For every switch an interlocking module NZM…-XMV and a rotary handle on switch NZM…-XDV or a door coupling rotary handle NZM…-XTVD and Bowden cables are required. Possible combinations and interlock variants, → Engineering Cannot be combined with UL/CSA door coupling rotary handles NZM…-XTV…-NA, paralleling mechanisms, side wall operators, remote operators or insulating surrounds. Selection and combinations of required Bowden cables → Engineering	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E140305 UL CCN DIHS CSA File No. 022086 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified
	NZM2(-4) PN2(-4), N(S)2(-4)	**NZM2-XMV** 281582				
	NZM3(-4) PN3(-4), N(S)3(-4)	**NZM3-XMV** 281583				
	NZM4(-4) N(S)4(-4)	**NZM4-XMV** 281584				
Bowden cables						
For mechanical interlock for (door coupling) rotary handles						
 Length: 225 mm	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4) NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM-XBZ225** 281585		1 off	Selection and combinations of Bowden cables → Engineering	Product Standards UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking UL File No. E140305 UL CCN DIHS CSA File No. 022086 CSA Class No. 1437-01 NA Certification UL Listed, CSA certified
Length: 600 mm		**NZM-XBZ600** 281586				
Length: 1000 mm		**NZM-XBZ1000** 281587				
Mechanical interlock for remote operator						
For 2 switches of the same or different construction size with opposed operation. Adjacent mounting.						
	NZM2(-4), N(S)2(-4) +NZM2(-4), N(S)2(-4)	**NZM2-XMVR** 104543		1 off	Contains parts for both switch sides. Extension shaft additionally required. Maximum switch spacing → Engineering Can not be combined with rotary handles, door coupling rotary handles, early-make auxiliary contacts, and direct-switching remote operator NZM2-XRD.	–
	NZM2(-4), N(S)2(-4) +NZM3(-4), N(S)3(-4)	**NZM2/3-XMVR** 104544				
	NZM3(-4), N(S)3(-4) +NZM3(-4), N(S)3(-4)	**NZM3-XMVR** 104545				
	NZM3(-4), N(S)3(-4) +NZM4(-4), N(S)4(-4)	**NZM3/4-XMVR** 104546				
	NZM4(-4), N(S)4(-4) +NZM4(-4), N(S)4(-4)	**NZM4-XMVR** 104547				
For 2 switches of the same or different construction size with opposed operation. Extra long Bowden cable for mounting one above the other or in adjacent enclosures.						
	NZM2(-4), N(S)2(-4) +NZM2(-4), N(S)2(-4)	**NZM2-XMVRL** 104548		1 off	Contains parts for both switch sides. Extension shaft additionally required. Maximum switch spacing → Engineering Can not be combined with rotary handles, door coupling rotary handles, early-make auxiliary contacts, and direct-switching remote operator NZM2-XRD.	–
	NZM2(-4), N(S)2(-4) +NZM3(-4), N(S)3(-4)	**NZM2/3-XMVRL** 104549				
	NZM3(-4), N(S)3(-4) +NZM3(-4), N(S)3(-4)	**NZM3-XMVRL** 104550				
	NZM3(-4), N(S)3(-4) +NZM4(-4), N(S)4(-4)	**NZM3/4-XMVRL** 104551				
	NZM4(-4), N(S)4(-4) +NZM4(-4), N(S)4(-4)	**NZM4-XMVRL** 104552				

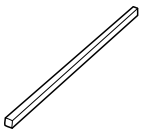
	For use with	Part no. Article no. for separate order	Price See price list	Std. pack	Notes	Information relevant for export to North America
Paralleling mechanism						
Simultaneous actuation of 2 PN switch-disconnectors of the same type mounted side-by-side. Not UL/CSA approved						
	PN1(-4) + PN1(-4)	**PN1-XPA** 283471		1 off	**PN1, PN2** • 1 × rotary handle on switch (-XD) supplied. • 1 × door coupling rotary handle (-XTVD) supplied.	–
	PN2(-4) + PN2(-4)	**PN2-XPA** 283472				
	PN3(-4) + PN3(-4)	**PN3-XPA** 283473			**PN3** • 1 × rotary handle on switch (not lockable) supplied. • 1 × door coupling rotary handle (not lockable) supplied. • Not suitable for use as a main switch.	

Notes

Extension shaft (-XV4(6)) additionally required for the door coupling rotary handle.
Cannot be combined with mechanical interlock, insulating surrounds, side wall operators or remote operators.

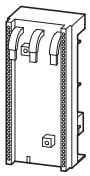
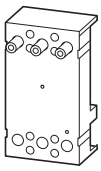
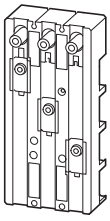
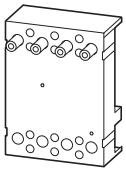
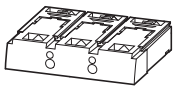
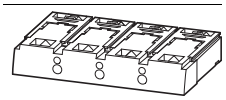
For use as emergency switching off device
For this the door coupling rotary handle requires an exchange thumb-grip in red/yellow according to the following order number:
- for PN1 and PN2: NZM2-XDGVR → 100747
- for PN3: NZM4-XDGVR → 100774

Note: The locking function of these handles must not be used.

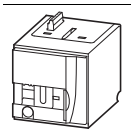
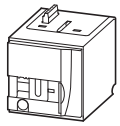
		For use with	Part no. Article no. for separate order	Price See price list	Std. pack	Notes	Information relevant for export to North America
Extension shaft							
	400 mm max. built-in depth	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XV4** 261232		1 off	Length 290 mm, can be cut to required length.	UL/CSA certification not required
		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XV4** 261234				
	600 mm max. built-in depth	NZM1(-4), PN1(-4), N(S)1(-4) NZM2(-4), PN2(-4), N(S)2(-4)	**NZM1/2-XV6** 260191			Length 425 mm, can be cut to required length.	
		NZM3(-4), PN3(-4), N(S)3(-4) NZM4(-4), N(S)4(-4)	**NZM3/4-XV6** 260193				

Notes

Circuit-breaker can also be installed in a lying position 90° left/right, with the handle still in the same position.

	Number of poles		Rated operational current I_e A	Adapter width mm	For use with	**Part no. suffix** Article no. for ordering with basic device	**Price** See price list
Component adapters for circuit-breakers and switch-disconnectors							
For mounting on flat copper bars 12–30x5–10 mm, double T and triple T profile Rated operating voltage U_e: 690 V • Temperature resistant to 120 °C • Self-extinguishing to UL 94 • Track resistance CTI 200							
	3 pole		160	90	NZM1, PN1, N(S)1	–	
			250	106	NZM2, PN2, N(S)2	–	
			630	140	NZM3, PN3, N(S)3	–	
	4 pole		250	140	NZM2-4, PN2-4, N2-4	–	
			630	185	NZM3-4, PN3-4, N3-4	–	
Connection block for component adapters							
For NZM2, NZM3 circuit-breakers							
	3 pole	Above	250	–	NZM2, PN2, N(S)2	**+NZM2-XKR4O** 281664	
		Below		–	NZM2, PN2, N(S)2	**+NZM2-XKR4U** 281665	
		Above	630	–	NZM3, PN3, N(S)3	**+NZM3-XKR13O** 281667	
		Below		–	NZM3-4, PN3-4, N(S)3-4	**+NZM3-XKR13U** 115796	
	4 pole	Above	250	–	NZM2-4, PN2-4, N(S)2-4	**+NZM2-4-XKR4O** 118905	
		Below		–	NZM3, PN3, N(S)3	**+NZM2-4-XKR4U** 118906	
		Above	630	–	NZM3-4, PN3-4, N(S)3-4	**+NZM3-4-XKR13O** 118908	
		Below		–	NZM2-4, PN2-4, N(S)2-4	**+NZM3-4-XKR13U** 118909	

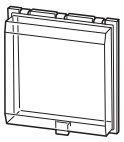
Part no. Article no. for separate order	Price See price list	Std. pack	Notes	Information relevant for export to North America
NZM1-XAD160 104554		1 off	For switch and standard connection with box terminal. Connection to the system at top using supplied connection cable. In conjunction with IP2X protection against contact with a finger. Enhanced contact protection on the switch secondary side. Clips onto busbar with combination foot. Combination foot for adjustment to 5 and 10 mm rail thickness , terminal capacity 6 x 9 x 0.8. Rated short-circuit switching capacity 35 kA at 480 V. Mounted by latching onto de-energized busbar.	Product Standards: UL508A; CSA-C22.2 No. 14; IEC 60439-1; CE marking UL File No.: E300273 UL CCN: NMTR, NMTR7 CSA File No.: 236217 CSA Class No.: 3211-37 NA Certification: UL Listed, CSA certified Conditions of Acceptability: Refer to approbation report Suitable for: Feeder circuits Max. Voltage Rating: 600 V AC Degree of Protection: Feeder circuits
NZM2-XAD250 104555			Connection to the system possible at top or bottom via connection on rear (+)NZM2-XKR4… Mounting using clamp and screw fixing. Rated short-circuit switching capacity 65 kA at 480 V, 50 kA at 600 V. Mounted by latching onto de-energized busbar.	
NZM3-XAD630 107206			Connection to the system possible at top or bottom via connection on rear (+)NZM3-XKR13… For mounting use claw terminal. Rated short-circuit switching capacity 65 kA at 480 V, 50 kA at 600 V. Mounted by latching onto de-energized busbar.	
NZM2-4-XAD250 138388			Connection to the system possible at top via connection on rear with (+)NZM2-4-XKR4… Mounting using clamp and screw fixing.	
NZM3-4-XAD630 138389			Connection to the system possible at top via connection on rear with (+)NZM3-4-XKR13… Mounting using clamp and screw fixing.	
NZM2-XKR4 281666		1 off	Part no. and part no. suffix include parts for one switch side at top or bottom (for NZM3 top only). Required with component adapter and switch with connection on rear.	Product Standards: UL 489; CSA-C22.2 No. 5-09; IEC 60947-2; CE marking UL File No.: E31593 UL CCN: DIVQ CSA File No.: 022086 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Specially designed for NA: Yes Suitable for: Feeder circuits, branch circuits Current Limiting CB: Yes Max. Voltage Rating: 480Y/277 V Degree of Protection: IEC: IP20; UL/CSA Type: -
–				
NZM3-XKR13 281668				
–				
NZM2-4-XKR4 118907				
–				
NZM3-4-XKR13 119020				
–				

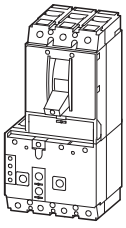
	For use with	Rated control voltage U_s V	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack	**Notes**
Remote operators						
For remote switching of circuit-breakers and switch-disconnectors. ON and OFF switching and resetting by means of two-wire or three-wire control. Local switching by hand possible. Lockable in the 0 position of the remote operator with up to 3 padlocks (hasp thickness: 4 – 8 mm)						
Closing delay 110 – 170 ms, opening delay 110 – 170 ms						
	NZM2(-4) N(S)2(-4)	110-130 V 50/60 Hz	**NZM2-XRD110-130AC** 115390		1 off	Sliding switch for "Auto" or "Manual" Max. number auxiliary contacts: - Standard auxiliary contacts: 2 - Trip-indicating auxiliary contact: 1 Cannot be combined with switch-disconnector PN... Cannot be combined with mechanical interlock [1] Not UL/CSA approved
		208-240 V 50/60 Hz	**NZM2-XRD208-240AC** 115391			
		380-440 V 50/60 Hz[1]	**NZM2-XRD380-440AC** 115392			
		24-30 V DC	**NZM2-XRD24-30DC** 115393			
		110-130 V DC	**NZM2-XRD110-130DC** 115394			
		220-250 V DC	**NZM2-XRD220-250DC** 115395			
Closing delay 60 – 100 ms, opening delay 300 – 3000 ms Can be synchronized						
	NZM2(-4) N(S)2(-4)	110-130 V 50/60 Hz	**NZM2-XR110-130AC** 259830		1 off	Cannot be combined with switch-disconnector PN... Dual auxiliary switch M 22-CK11 (20/02) can not be combined with remote operator NZM3-XR...
		208-240 V 50/60 Hz	**NZM2-XR208-240AC** 259832			
		380-440 V 50/60 Hz	**NZM2-XR380-440AC** 259834			
		24-30 V DC	**NZM2-XR24-30DC** 259836			
		48-60 V DC	**NZM2-XR48-60DC** 259838			
		110-130 V DC	**NZM2-XR110-130DC** 259840			
		220-250 V DC	**NZM2-XR220-250DC** 259842			
	NZM3(-4) N(S)3(-4)	110-130 V 50/60 Hz	**NZM3-XR110-130AC** 259848			
		208-240 V 50/60 Hz	**NZM3-XR208-240AC** 259850			
		380-440 V 50/60 Hz	**NZM3-XR380-440AC** 259852			
		24-30 V DC	**NZM3-XR24-30DC** 259854			
		48-60 V DC	**NZM3-XR48-60DC** 259856			
		110-130 V DC	**NZM3-XR110-130DC** 259858			
		220-250 V DC	**NZM3-XR220-250DC** 259860			
	NZM4(-4) N(S)4(-4)	110-130 V 50/60 Hz	**NZM4-XR110-130AC** 266684			
		208-240 V 50/60 Hz	**NZM4-XR208-240AC** 266685			
		380-440 V 50/60 Hz	**NZM4-XR380-440AC** 266686			
		24-30 V DC	**NZM4-XR24-30DC** 266691			
		48-60 V DC	**NZM4-XR48-60DC** 266692			
		110-130 V DC	**NZM4-XR110-130DC** 266693			
		220-250 V DC	**NZM4-XR220-250DC** 266694			

Notes
Two- and three-wire control, circuit diagram → Engineering, Page 17/153

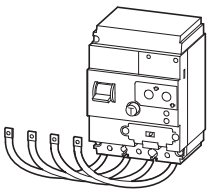
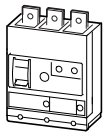
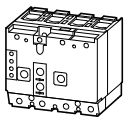
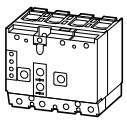
Information relevant for export to North America

Product Standards	UL489; CSA-C22.2 No. 5-09; IEC60947, CE marking
UL File No.	E140305
UL CCN	DIHS
CSA File No.	022086
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified

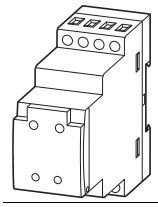
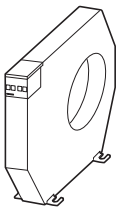
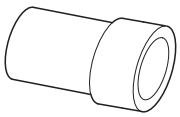
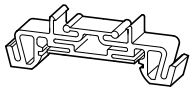
	For use with	Part no. Article no. when ordered separately	Price See price list	Std. pack	Notes
Cover for 4th pole					
Additional shroud for mounting the NZM2-XR... and NZM3-XR... on a 4 pole switch	NZM2-4 N2-4	**NZM2-XAVPR** 266677		1 off	–
	NZM3-4 N3-4	**NZM3-XAVPR** 266678		1 off	
Sealing device for "Auto" position					
Manual operation possible only after removing seal	NZM2(-4) N(S)2(-4)	**NZM2-XRDPL** 137305		1 off	Suitable for remote operator NZM2-XRD
Protective cover for door cutout					
	NZM2-XR NZM3-XR NZM4-XR	**RTR-NZM10** 034825		1 off	Electrical remote switching and manual tripping (push to trip) are still possible.

	Number of poles	Rated current = Rated uninterrupted current	Setting range		High switching capacity 150 kA; 415 V 50/60 Hz Part no. Article no.	Price See price list		Std. pack
			Overload releases	Short-circuit releases				
		I_u	I_r	I_i	**B = box terminals S = screw terminals**			
		A	A	A				
Circuit-breakers with earth-fault release, 3 pole For apparatus with power electronics, such as power inverters and frequency inverters								
AC/DC sensitive according to core-balance principle in range of 0 – 100 kHz residual-current frequency. Not UL/CSA approved. Suitable for use in three-phase systems. Rated operating voltage: 400 V (50/60 Hz) Rated fault current $I_{\Delta n}$ = 0.03 A Internal power supply U_e = 50 - 400 V Turnkey combination of current-limiting circuit-breaker and residual-current device. Adjusting buttons can be sealed.								
	3 pole	125	100-125	750…1250	**NZMH2-A125-FIA30** 129710		S	1 off
		160	125-160	960…1600	**NZMH2-A160-FIA30** 112627		S	
		200	160-200	1200…2000	**NZMH2-A200-FIA30** 112628		S	
		250	200-250	1500…2500	**NZMH2-A250-FIA30** 112629		S	
		125	100-125	750…1250	**NZMH2-A125-FIA30-BT** 129711		B	
		160	125-160	960…1600	**NZMH2-A160-FIA30-BT** 116304		B	
		200	160-200	1200…2000	**NZMH2-A200-FIA30-BT** 116305		B	
		250	200-250	1500…2500	**NZMH2-A250-FIA30-BT** 116306		B	

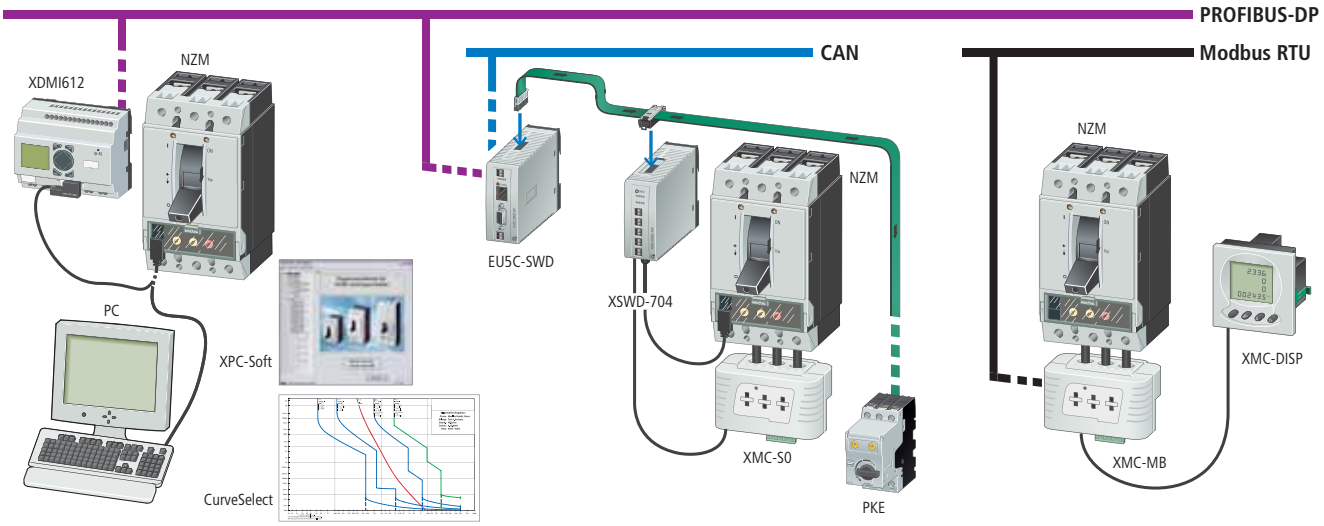
Notes Notes about terminals → Page 17/86

		For use with	Number of conductors	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Earth-fault release							
To IEC/EN 60947-2 Not UL/CSA approved Suitable for use in three- and single-phase systems							
Pulse-current sensitive according to core-balance principle For 3 and 4 pole NZM1(-4) circuit-breakers and N1(-4) switch-disconnectors, dependant on mains power U_e = 200 … 415 V 50/60 Hz							
Mounting on right side up to I_n = 160 A at I_{Cu} = 50 kA							
	Rated fault current $I_{\Delta n}$ = 0.03 A	NZM1 N(S)1	3 pole	**NZM1-XFI30R** 104603		1 off	At $I_{\triangle n}$ = 0.03 A: delay time t_v always fixed at 10 ms. Alarm indication > 30 % $I_{\triangle n}$ by yellow LED. Trip indication by up to 2 auxiliary contacts (HIAFI) can be retrofitted: N/O = M22-K01, NC = M22-K10 are reset with the reset toggle lever. If the trip-indicating auxiliary contact in the fault current block is used, the NC contacts operates as a N/O contact and the NC contact operates as N/O contacts. Double contact not permissible. Not in combination with insulated enclosure or main switch assembly kit for side wall installation with mounting bracket. NZM1-XFI...R can not be used in combination with lower cover NZM1-XKSA. NZM1-XFI…U not in combination with shunt or undervoltage release, early-make auxiliary contacts. Rated ultimate short-circuit breaking capacity is determined by the fitted NZM1 or NS1, or, Iif a switch-disconnector N1 is used, by the fitted back-up fuse → Technical data. Adjusting buttons can be sealed.
		NZM1-4 N1-4	4 pole	**NZM1-4-XFI30R** 104606			
	Rated fault current $I_{\Delta n}$ = 0.3 A	NZM1 N(S)1	3 pole	**NZM1-XFI300R** 104604			
		NZM1-4 N1-4	4 pole	**NZM1-4-XFI300R** 104607			
	Rated fault current $I_{\Delta n}$ = 0.03-0.1-0.3-0.5-1-3 A Delay time t_v = 10-60-150-300-450 ms	NZM1 N(S)1	3 pole	**NZM1-XFIR** 104605			
		NZM1-4 N1-4	4 pole	**NZM1-4-XFIR** 104608			
Mounting below up to 100 A							
	Rated fault current $I_{\Delta n}$ = 0.03 A	NZM1 N(S)1	3 pole	**NZM1-XFI30U** 104609		1 off	
		NZM1-4 N1-4	4 pole	**NZM1-4-XFI30U** 104612			
	Rated fault current $I_{\Delta n}$ = 0.3 A	NZM1 N(S)1	3 pole	**NZM1-XFI300U** 104610			
		NZM1-4 N1-4	4 pole	**NZM1-4-XFI300U** 104613			
	Rated fault current $I_{\Delta n}$ = 0.03-0.1-0.3-0.5-1-3 A Delay time t_v = 10-60-150-300-450 ms	NZM1 N(S)1	3 pole	**NZM1-XFIU** 104611			
		NZM1-4 N1-4	4 pole	**NZM1-4-XFIU** 104614			
Mounting below up to 250 A							
Pulse-current sensitive according to core-balance principle For 4 pole circuit-breaker NZM2-4 and switch-disconnector N2-4 independent of mains voltage U_e = 280 … 690 V 50/60 Hz							
	Rated fault current $I_{\Delta n}$ = 0.03 A	NZM2-4 N2-4	4 pole	**+NZM2-4-XFI30** 292343		1 off	Auxiliary contacts (1 N/O, 1 NC built-in) are reset with the reset button. Not in combination with plug-in units, insulated enclosure or main switch assembly kit for side wall installation with mounting bracket. Rated ultimate short-circuit breaking capacity is determined by fitted NZM2 and, when using a switch-disconnector N2, by the back-up fuse used → Technical data. Adjusting buttons can be sealed.
	Rated fault current $I_{\Delta n}$ 0.1-0.3-1-3 A Delay time t_v = 60-150-300-450 ms	NZM2-4 N2-4	4 pole	**+NZM2-4-XFI** 292344		1 off	
Core-balance principle with AC/DC current sensitivity (in range 0 … 100 kHz) For 4 pole circuit-breaker NZM2-4 and switch-disconnector N2-4 Internal voltage supply U_e = 50 … 400 V							
	Rated fault current $I_{\Delta n}$ = 0.03 A	NZM2-4 N2-4	4 pole	**+NZM2-4-XFIA30** 292345		1 off	Observe response threshold dependence on frequency! See "Frequency response" characteristic curve. Adjusting buttons can be sealed.
	Rated fault current $I_{\Delta n}$ 0.3- 0.5-1 A Delay time t_v = 60-150-300-450 ms	NZM2-4 N2-4	4 pole	**+NZM2-4-XFIA** 292346		1 off	

	For use with	Part no. suffix Article no. for ordering with basic device	Price See price list	Std. pack	Notes
Earth-fault release, 3 pole, 4 pole					
Not dependent on mains and control voltages I_g = 0.35-0.4-0.5-0.6-0.7-0.8-0.9-1.0 x I_n t_g = 0-20-60-100-200-300-500-750-1000 ms Not UL/CSA approved	NZM4 NS4	**+NZM4-XT** 266721		1 off	Only suitable for use in conjunction with circuit-breakers with electronic releases. Not in combination with motor-protective circuit-breakers NZM…-ME… Indication of the earth-fault in optional DMI communication module.
	NZM4-4	**+NZM4-4-XT** 266722		1 off	

	Description	Rated current Energy I_n A	Rated current Motor I_n A	Part no. Article no.	Price See price list	Std. pack	Notes
Residual-current relays							
Pulsed current sensitive Rated control voltage: U_s = 230 V AC (50/60 Hz) Integrated auxiliary contact (1 C/O) Ring-type transformer must also be ordered. Not UL/CSA approved							
	Rated fault current $I_{\triangle N}$ = 0.03 A	–	–	**PFR-003** 285555		1 off	–
	Rated fault current $I_{\triangle N}$ = 0.3 A	–	–	**PFR-03** 285556			–
	Rated fault current $I_{\triangle N}$ = 0.03-5 A Adjustable fault current and delay time Fault current early warning by flashing, red LED	–	–	**PFR-5** 285557			Adjustable fault current: 0.03, 0.1, 0.3, 0.5, 1, 3, 5 A Adjustable delay time: 0.02, 0.1, 0.3, 0.5, 1, 3, 5 A
–	–	–	–	**PFR-5-110AC** 116963			–
Ring-type transformer							
Rated operating voltage: 690 V (50/60 Hz) Not UL/CSA approved							
	Internal diameter: 20 mm	50	50	**PFR-W-20** 285558		1 off	Includes fixing clip for DIN rail mounting
	Internal diameter: 30 mm	150	100	**PFR-W-30** 285559			
	Internal diameter: 35 mm	150	100	**PFR-W-35** 285600			Includes screw fixing Alternative: fixing clip for DIN mounting rail **Note on engineering:** The current transformer diameter must be selected 1.5 times larger than the envelope diameter of the passed through conductor.
	Internal diameter: 70 mm	400	200	**PFR-W-70** 285601			
	Internal diameter: 105 mm	600	250	**PFR-W-105** 285602			
	Internal diameter: 140 mm	1200	630	**PFR-W-140** 285603			
	Internal diameter: 210 mm	1800	800	**PFR-W-210** 285604			
Magnetic shielding							
Not UL/CSA approved							
	PFR-W-35	–	–	**PFR-WMA-35** 286001		1 off	Required for load circuits with high inrush currents > 4 × I_n, e.g. motors and capacitors.
	PFR-W-70	–	–	**PFR-WMA-70** 286002			
	PFR-W-105	–	–	**PFR-WMA-105** 286003			
	PFR-W-140	–	–	**PFR-WMA-140** 286004			
	PFR-W-210	–	–	**PFR-WMA-210** 286005			
Mounting clip							
	For the DIN rail mounting current transformers PFR-W-35 and larger	–	–	**PFR-WC** 286006		1 off	1 set = 2 off

Description



Overview

For the compact circuit-breakers NZM Eaton supplies the following energy measurement and communication components:

- NZM-XPC-Soft: Diagnostics software
- CurveSelect: Software for viewing characteristic curves
- NZM-XMC-S0: Energy measuring module
- NZM-XMC-MB: Measuring and communication module
- NZM-XSWD-704: Communication interface for SmartWire-Darwin with S0 input for energy data
- NZM-XDMI612: Data management interface with field bus connection for PROFIBUS-DP and bus diagnostics software

XPC-Soft

Circuit-breakers NZM with electronic trip block provide all required diagnostics data directly to the USB or COM interface of a connected PC through a built-in interface.
On overload or short-circuit, the NZM instantly switches off the system and, if a PC is connected, documents the events complete with date and time.
With the software XPC-Soft, users can view the history and analyze possible causes. The software can also output power consumption trend graphs as MS Excel table.

CurveSelect

The free characteristic curve program Moeller CurveSelect allows a settings-specific representation of the tripping characteristics of several protective devices with the same time and current scales.
This clearly simplifies an assessment of the interaction of Eaton's circuit-breakers NZM and IZM, motor-protective circuit-breakers PKZ, overload relays ZB, miniature circuit-breakers, and LV h.b.c. fuses.
Available for free download from www.moeller.net:
Products & Solutions > Power Distribution > Switching and Protecting Power > CurveSelect: Characteristics program for short-circuit- and overload protection.

Measuring and communication module

For measuring and optimizing energy consumption, Eaton provides module NZM-XMC. This compact device with built-in current converter determines the power and energy values per phase from the measured voltage and current. The module can operate the circuit-breaker through a remote operator. The data is made available on the MODBUS RTU.
With the XMC applications up to 500 A can be operated; the readings have a high accuracy of 0.5 %. Cables, strip or bar can be used. The conductors pass through a tunnel in the device and do not have to be severed. An optional external door display provides real-time local indication of the measured values.

Communication interface for SmartWire-Darwin

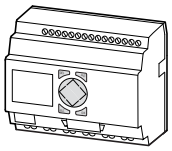
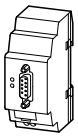
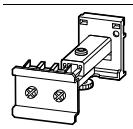
For remote diagnostics of the circuit-breaker, communication module NZM-XSWD-704 is used. With this module, the switch settings, trip causes, and actual currents can be transmitted to a field bus through SmartWire-Darwin. The circuit-breaker can therefore also be operated through SmartWire-Darwin, like the electronic motor protection PKE and the typical devices such as RMQ and DIL.
As a special feature, the XSWD features a built-in power meter, which can be supplied from an external energy measurement module XMC-S0. This provides everything that is necessary for optimizing energy usage.
With the data from the XSWD-704 all relevant information about energy supply or the respective outgoer on the desired field bus are available. This allows visualization and logging of the machines or system components.
For visualization, the free software BreakerVisu can, for example, be used, available for download from www.moeller.net:
www.moeller.net, Products & Solutions > Power Distribution > Switching and Protecting Power Distribution > Moeller BreakerVisu: Visualization for circuit-breakers

Data Management with PROFIBUS-DP interface

An alternative to the XSWD-704 is provided by data management interface NZM-XDMI612 with a field bus connection for PROFIBUS-DP.

The advantages of this solution are:

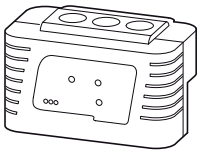
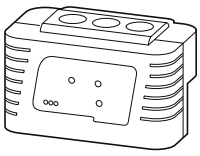
- For motor starter applications a ZMR function is available that does not trip the circuit-breaker in the event of an overload but that deactivates the contactor through the DMI.
- The built-in display provides a local indication of all parameters of the circuit-breaker.
- The DMI can change the circuit-breakers' tripping parameters. (remote parameterization)
- The DMI's six inputs and six outputs can be used for remote control and for any user functions.
- Through the outputs a "Tripped" signal can be issued locally.
- A central diagnosis across the entire bus to the FDT standard can be implemented through the DMI with the DPV1 module. For this purpose, software NZM-XPC-DTM and, in some cases, FDT-FAVIGATOR are required.

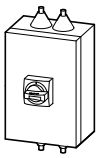
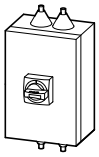
	Description	Part no. Article no.	Price See price list	Std. pack	Notes
Diagnostics and configuration software for NZM and DMI (local)					
	PC software for direct connection to all new NZM circuit-breakers with electronic releases (IEC and UL/CSA devices) or for direct connection to the DMI module, including the required connection cable to NZM. • Protection parameter: online display and curve display, export option to curve characteristics program "Moeller CurveSelect". • Warning and release messages: reading of diagnostic memory also in voltage-free state. • Load currents: display and trend indication. • Recording and export options to Excel for load currents and diagnostic messages. • Configuration of the DMI: motor starter, remote operator, assignment of the DMI inputs and outputs and displays.	**NZM-XPC-KIT** 265631		1 off	Only for use in combination with circuit-breakers with **electronic** releases. Download the manual AWB1230-1459 and demo-software at www.moeller.net. Order connecting cable to DMI separately: EASY-USB-CAB.
Connecting cable PC (USB) to DMI					
	• For transmission of DMI configuration between PC with XPC-Soft and DMI • For upgrading DMI firmware	**EASY-USB-CAB** 107926		1 off	Can also be used for programming easy small controllers.
Data management interface (DMI module)					
	• Access to diagnostics and operational data. • Recording current values, motor starter function, and setting parameters. • Control of the circuit-breakers with electronic trip block. • Comprehensive remote diagnostic options and remote operation via fieldbus in combination with a field Bus connection.	**NZM-XDMI612** 260217		1 off	Includes connection cable NZM-XDMI-CAB between NZM and DMI (length: 2 m). Only for use in combination with circuit-breakers with **electronic** releases.
Fieldbus interface for DMI					
	Connection to the DMI module • Transfer of phase currents, parameter data, status data and diagnostics data. • Transfer of circuit-breaker position (wiring of auxiliary contacts to DMI inputs). • Actuation of the DMI motor starter functions and the NZM remote operator. • Detection of digital inputs and actuation via field Bus. • PROFIBUS-DPV1-Slave fieldbus interface. Can be operated with class 1 and class 2 masters. Addresses available: 1 to 126.	**NZM-XDMI-DPV1** 270333		1 off	Connected to the DMI module and has the same contour appearance.
Switched-mode power supply unit For DMI module					
	• Rated input voltage: 50/60 HZ: 115/230 V AC • Rated output voltage (residual ripple): 24 V DC (± 3 %) • Rated output current: 1.25 A	**EASY400-POW** 212319		1 off	–
Telescopic adapter For DMI module For equalization of the mounting depth when rear mounted in CI-K... enclosures and cabinets.					
	With 35 mm top-hat rail IEC/EN 60715, adjustable from 75 – 115 mm. Screw and snap fitting.	**M22-TA** 226161		1 off	–

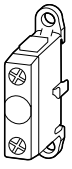
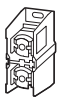
Information relevant for export to North America

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified

	Description	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
FDT frame software for operating field devices					
	PC software for integration of software modules (DTM's) according to the FDT standard V1.2 (e.g. NZM-XPC-DTM). • Operation of a temporary or stationary service station for engineering, remote diagnostics, remote operation and remote parameter definition of networked switchgear and field devices. • Engineering of the network topology of networked field devices. • Overview representation of the topology with online status information. • Access to the device-specific DTM's for configuration, operation, parameterization and diagnostics of the devices. • Storage of all engineering information in a central database. Download and upload from/to the devices.	**FDT-NAVIGATOR** 281623		1 off	The connection of the field devices can be implemented via the PROFIBUS DPV1 master or via gateways (e.g.: USB/PROFIBUS, Ethernet/ PROFIBUS). Communication interfacing for the PC and a communication DTM (driver) is necessary for this purpose.
DTM software module to FTD standard					
	PC software module (Device Type Manager) to FDT/DTM standard V1.2 for integration in the FDT navigator or other FDT-capable framework software packages (primary control system, PLC engineering systems). • Remote diagnostics, remote monitoring, remote parameter definition and remote operation of the new NZM2,3,4 circuit-breakers with electronic trip release via PROFIBUS-DPV1. • Indication of the circuit-breaker state (on/off/tripped), the phase currents, parameter data, status data and diagnostics data. • Definition of the trip parameters. • Display and setting the DMI motor starter functions and assignment of the DMI inputs and outputs. • Control of the motor starter functions.	**NZM-XPC-DTM** 281624		1 off	For connection of the circuit-breaker to the PROFIBUS-DP fieldbus, the accessory device NZM-XDMI612 and the fieldbus interface NZM-XDMI-DPV1 are required.
NZM interface module to SmartWire-Darwin					
	The module implements the data connection between the NZM2/3/4 with electronic release and SmartWire-Darwin. The following data is transmitted: • Digital status data (ON/OFF/Tripped) • Load warnings • Reason for last trip • The actual currents • Switch model • The current settings of the rotary coding switches The switch can also be operated with a remote operator. • Two digital inputs for the switch status • Two transistor outputs for remote switching • Retentive memory for energy data (kWh) Energy data is transmitted through digital input (S_0) from an external energy measuring module NZN...-XMC-SO.	**NZM-XSWD-704** 135530		1 off	A connection cable to the circuit-breaker and auxiliary contacts NZM is included as standard.

	Number of conductors	Description	For use with	Part no. Article no.	Price See price list	Std. pack	Notes
Energy measuring module							
For measuring the electrical active energy. The module has three built-in current transformers and three voltage taps, which are contacted with self-tapping screws that penetrate the cable insulation. Power supply 24 VDC The module supplies S0 pulses, which can be counted with an external device. One pulse output for active energy. The pulse rate is fixed.							
	3 pole	–	NZM 2 ≦ 300 A	**NZM2-XMC-S0** 129839		1 off	When mounting, observe the minimum clearances to circuit-breaker NZM. The module can be fitted on the input or output side.
		–	NZM 3 ≦ 500 A	**NZM3-XMC-S0** 129960		1 off	
	4 pole	–	NZM 2 ≦ 300 A	**NZM2-4-XMC-S0** 129963		1 off	
		–	NZM 3 ≦ 500 A	**NZM3-4-XMC-S0** 129964		1 off	
Measuring and communication module							
For measuring current, voltage, power and energy. The module has three built-in current transformers and three voltage taps, which are contacted with self-tapping screws that penetrate the cable insulation. Power supply 24 VDC Two S0 pulse outputs MODBUS interface (slave) The total energy consumption value is permanently stored in the module. Display device NZM-XMC-DISP can be connected for local indication of the readings. Can be extended with up to two add-on cards +NZM-XMC.							
	3 pole	–	NZM 2 ≦ 300 A	**NZM2-XMC-MB** 129961		1 off	When mounting, observe the minimum clearances to circuit-breaker NZM. The module can be fitted on the input or output side.
		–	NZM 3 ≦ 500 A	**NZM3-XMC-MB** 129962		1 off	
	4 pole	–	NZM 2 ≦ 300 A	**NZM2-4-XMC-MB** 129965		1 off	
		–	NZM 3 ≦ 500 A	**NZM3-4-XMC-MB** 129966		1 off	
Digital display device							
For door-mounting (connection to local display) For all measurement and communication modules with MODBUS interface Per-phase indication of current, voltage, power and energy values Includes fixed display configurations							
	3/4 pole	Front cutout 96 × 96 knockout	NZM...XMC-MB	**NZM-XMC-DISP** 129967		1 off	–
Power supply							
Power supply 230 V AC							
	3/4 pole	Can be plugged onto basic device	NZM...XMC-MB	**NZM-XMC-AC** 129968		1 off	–
Add-on cards for NZM-XMC modules							
Every measurement and communication module can be equipped with up to two expansion cards.							
		MODBUS interface	–	**+NZM-XMC-MB** 135524		1 off	Order add-on cards together with basic device. The cards are then supplied readily fitted in the basic device.
		Analog output for 4–20 mA pointer-type instruments	–	**+NZM-XMC-1AO** 135525		1 off	
		2 relay outputs (changeover contact)	–	**+NZM-XMC-2DO-R** 135526		1 off	
		4 relay outputs (changeover contact)	–	**+NZM-XMC-4DO-R** 135527		1 off	
		4 digital inputs and 4 digital outputs	–	**+NZM-XMC-4DI-4DO** 135528		1 off	

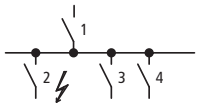
		Degree of protection	Max. rated uninterrupted current I_u A	For use with	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack
Insulated enclosures							
With door coupling rotary handle Complete includes all necessary functional parts Not UL/CSA approved							
Standard, black/grey							
	Lockable in 0 position on handle with up to 3 padlocks. Additionally with cover interlock.	IP65	≦ 63 A	PN1, N(S)1	**NZM1-XCIK5-TVD** 271521		1 off
		IP65	≦ 63 A	NZM1, PN1, N(S)1	**NZM1-XCI23-TVD** 271522		1 off
		IP64	≦ 125 A	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XCI43-TVD** 271523		1 off
		IP64	≦ 160 A	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XCI43/2-TVD** 104645		1 off
		IP64	≦ 200 A	NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XCI43-TVD** 271524		1 off
		IP64	≦ 250 A	NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XCI45-TVD** 280418		1 off
		IP64	≦ 400 A	NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XCI48-TVD** 271525		1 off
Red-yellow for emergency switching off							
	Lockable on handle and switch with up to 3 padlocks. Lockable in 0 position on handle. Additionally with cover interlock and locking facility on circuit-breaker in 0 position.	IP65	≦ 63 A	PN1, N(S)1	**NZM1-XCIK5-TVDVR** 271526		1 off
		IP65	≦ 63 A	NZM1, PN1, N(S)1	**NZM1-XCI23-TVDVR** 271527		1 off
		IP64	≦ 125 A	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XCI43-TVDVR** 271528		1 off
		IP64	≦ 160 A	NZM1(-4), PN1(-4), N(S)1(-4)	**NZM1-XCI43/2-TVDVR** 104646		1 off
		IP64	≦ 200 A	NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XCI43-TVDVR** 271529		1 off
		IP64	≦ 250 A	NZM2(-4), PN2(-4), N(S)2(-4)	**NZM2-XCI45-TVDVR** 279356		1 off
		IP64	≦ 400 A	NZM3(-4), PN3(-4), N(S)3(-4)	**NZM3-XCI48-TVDVR** 271530		1 off

	Rated uninterrupted current I_u A	Terminal capacity mm²	**Part no.** Article no. when ordered separately	**Price** See price list	Std. pack
Insulated additional terminals					
For passing through the neutral and protective conductor 1 pole					
	32	Flexible, 1 × (1.5 – 6)	**K10/1** 093827		10 off
	63	Flexible, 1 × (6 – 16), stranded, 1 × (16 – 25)	**K25/1** 096200		10 off
	100	Flexible, 1 × (10 – 35), stranded, 1 × (16 – 50)	**K50/1** 098573		10 off
	160	Stranded, 1 × (16 – 95)	**K95/1N/BR** 012336		1 off
	250	Stranded, 1 × (35 – 150), 2 x (16 – 70)	**K150/1/BR** 014709		1 off
	400	Stranded, 1 × (50 – 240), 2 × (25 – 120)	**K240/1/BR** 017082		1 off
	630	Stranded, 1 × (240 – 300), 2 × (50 – 240)	**K2X240/1/BR** 019455		1 off

Basic enclosure	Terminals for 3-pole switches fitted by user: for fourth and fifth conductor (N and PE), on 4 pole switches: for fifth conductor (PE)	**Notes**

CI-K5-160-M	K10/1, K25/1	Enclosures for separate mounting with top and bottom cable entry, suitable for installation of circuit-breakers and switch-disconnectors. Include fixing straps for wall mounting. Short-circuit resistance at 415 V 50/60 Hz up to 10 kA. Cannot be used in combination with remote operator NZM...-XR..., plug-in unit NZM...-XSV or withdrawable unit NZM...-XAV. Order insulated additional terminal for 4th or 5th pole separately. Enclosure CI-K5 with hard metric knock-outs Enclosure CI23 with flanges CI43, CI45 and CI48 feature gland plates. **Only for switches with box terminals for direct connection of cables.**
CI23-150	K10/1, K25/1	
CI43-150	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI45-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI48-250	K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR	
CI-K5-160-M	K10/1, K25/1	
CI23-150	K10/1, K25/1	
CI43-150	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR	
CI43-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI45-200	K10/1, K25/1, K50/1, K95/1N/BR, K150/1/BR, K240/1/BR	
CI48-250	K95/1N/BR, K150/1/BR, K240/1/BR, K2X240/1/BR	

Engineering



Incoming circuit-breaker

Outgoing circuit-breaker

Selectivity 415 V AC

between circuit-breakers enables separate shut-down of faulty system sections.
Selectivity (discrimination) exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, **only** outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 continue to operate.

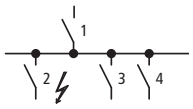
			Incoming circuit-breaker (S1)																	
			NZM...1-A...							**NZM...2-A...**									
	I_{cu} [kA]		25(36)(50)(100)							25(36)(50)(150)									
	I_n [A]		20-40	50	63	80	100	125	160	20-40	50	63	80	100	125	160	200	250	300
Outgoing circuit-breaker (S2)	I_n [A]	$I_{cu(415V)}$ [kA]	Selectivity threshold I_s [kA] for selectivity between S2 and S1, overload and short-circuit release set to max. value																	
FAZ–B(C)	0.5	15	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1	15	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	2	15	2	T	T	T	T	T	T	3	T	T	T	T	T	T	T	T	T	T
	3	15	1.2	2	3	3	10	T	T	1.5	1.5	3	5	T	T	T	T	T	T	T
	4	15	1.2	2	3	3	8	T	T	1.2	1.5	3	4	T	T	T	T	T	T	T
	6	15	1.2	2	2.5	3	5	10	10	1.2	1.5	2.5	3	T	T	T	T	T	T	T
	10	15	1.2	1.5	2	2	4	10	10	1	1.5	2.5	3	10	10	10	10	10	10	10
	13	15	1	1.5	2	2	4	10	10	1	1.2	2	3	10	10	10	10	10	10	10
	16	15	1	1.2	1.5	2	3	8	8	1	1.2	1.5	2.5	10	10	10	10	10	10	10
	20	15	0.8	1.2	1.5	1.5	3	8	8	1	1.2	1.5	2.5	10	10	10	10	10	10	10
	25	15	0.7	1.2	1.5	1.5	3	7	7	0.8	1	1.5	2	10	10	10	10	10	10	10
	32	15	–	1.2	1	1.5	2	6	6	–	1	1.5	2	8	8	8	8	10	10	10
	40	15	–	–	1	1.5	2	5	5	–	–	1.2	1.5	7	7	7	7	10	10	10
	50	15	–	–	–	1.2	1.5	4	4	–	–	–	1.5	6	6	6	6	10	10	10
	63	15	–	–	–	–	1.5	3	3	–	–	–	–	6	6	6	6	10	10	10
PKZM0-...	0.16	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	0.25	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	0.4	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	0.63	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1.6	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	2.5	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	4	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	6.3	100	4	5	5	T	T	T	T	2	3	4	5	T	T	T	T	T	T	T
	10	100	3	4	5	6	25	T	T	1.5	2.5	4	4	T	T	T	T	T	T	T
	12	50	3	4	5	6	25	T	T	1.5	2.5	4	4	T	T	T	T	T	T	T
	16	50	1.5	1.5	2	3	5	7	T	1	1.6	2	2.5	T	T	T	T	T	T	T
	20	50	0.8	1.5	1.5	2	3	5	T	0.8	1.2	1.5	2	T	T	T	T	T	T	T
	25	50	–	1	1.5	1.5	2.5	4	T	–	1	1.5	2	10	T	T	T	T	T	T
	32	50	–	–	1	1	2	3.5	T	–	–	1	1.5	8	40	T	T	T	T	T
PKZ2/ZM-...	0.6	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1.0	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1.6	100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	2.4	100	1.2	2	2.5	10	T	T	T	1.2	2	2.5	10	T	T	T	T	T	T	T
	4	100	1	1.5	2	2.5	2.5	4	10	1	1.5	2	2.5	2.5	10	10	10	T	T	T
	6	100	0.6	0.8	1	1.2	2	3	8	0.6	0.8	1	1.2	2	8	8	8	10	10	10
	10	100	0.5	0.7	0.8	1	1.2	2	4	0.5	0.7	0.8	1	1.2	4	4	4	5	5	5
	16	100	0.5	0.6	0.7	0.8	1.2	1.5	3	0.5	0.6	0.7	0.8	1.2	3	3	3	4	4	4
	25	30	–	0.6	0.7	0.7	1.2	1.5	2	–	0.6	0.7	0.7	1.2	2	2	2	3	3	3
	32	30	–	–	0.6	0.7	1.2	1.5	2	–	–	0.6	0.7	1.2	2	2	2	3	3	3
	40	30	–	–	0.6	0.7	1	1.5	2	–	–	0.6	0.7	1	2	2	2	2	2	2
PKZM4	16	100	0.5	0.8	0.8	0.8	2	5	5	0.5	0.8	0.8	0.8	2	5	5	5	5	5	5
	25	100	–	0.7	0.8	0.8	1.5	5	5	–	0.7	0.8	0.8	1.5	5	5	5	5	5	5
	32	50	–	–	0.8	0.8	1.5	4	4	–	–	0.8	0.8	1.5	4	4	4	4	4	4
	40	50	–	–	–	0.8	1.5	3	3	–	–	–	0.8	1.5	3	3	3	3	3	3
	50	50	–	–	–	–	1	2.5	2.5	–	–	–	–	1	2.5	2.5	2.5	2.5	2.5	2.5
	58	50	–	–	–	–	–	2.5	2.5	–	–	–	–	–	2.5	2.5	2.5	2.5	2.5	2.5
	63	50	–	–	–	–	–	2	2	–	–	–	–	–	2	2	2	2	2	2

Notes T: total selectivity

Incoming circuit-breaker (S1)																							
NZM...2-VE...			**NZM...3-A...**				**NZM...3-AE...**			**NZM…3-VE…**			**NZM...4-AE...**					**NZM…4-VE…**				
50(150)			36(50)(150)				50(150)			50(150)			50(85)					50(85)				
100	160	250	250	320	400	500	250	400	630	250	400	630	630	800	1000	1250	1600	630	800	1000	1250	1600
Selectivity threshold I_s [kA] for selectivity between S2 and S1, overload and short-circuit release set to max. value																						
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
8	8	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
7	7	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
6	6	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
6	6	10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
8	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
10	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
8	8	T	10	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
4	4	5	5	6	9	T	5	13	T	5	13	T	T	T	T	T	T	T	T	T	T	T
3	3	4	4	4	5	30	4	7	T	4	7	T	T	T	T	T	T	T	T	T	T	T
2	2	3	3	3	4	10	3	5	20	3	5	20	T	T	T	T	T	T	T	T	T	T
2	2	3	3	3	4	8	3	3.5	15	3	3.5	15	T	T	T	T	T	T	T	T	T	T
2	2	2.5	2	3	4	8	2.5	3.5	15	2.5	3.5	15	T	T	T	T	T	T	T	T	T	T
5	5	6	5	10	13	30	6	16	45	6	16	45	45	T	T	T	T	45	T	T	T	T
5	5	3.3	5	6	10	15	3.3	10	25	3.3	10	25	25	42	T	T	T	25	42	T	T	T
4	4	3	4	5	7	12	3	8	18	3	8	18	18	30	45	T	T	18	30	45	T	T
3	3	3	3	5	7	12	3	8	18	3	8	18	18	30	45	T	T	18	30	45	T	T
2.5	2.5	3	2.5	5	7	10	3	8	18	3	8	18	18	30	45	T	T	18	30	45	T	T
2.5	2.5	2.5	2.5	4	6	10	2.5	6.5	15	2.5	6.5	15	15	25	40	T	T	15	25	40	T	T
2	2	2.5	2	4	6	10	2.5	6.5	15	2.5	6.5	15	15	25	40	T	T	15	25	40	T	T

Selectivity: incoming circuit-breaker, outgoing circuit-breaker

NZM



Incoming circuit-breaker

Outgoing circuit-breaker

Selectivity 415 V AC

between circuit-breakers enables separate shut-down of faulty system sections.
Selectivity (discrimination) exists between incoming breaker 1 and outgoing breaker 2 if, **only** outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 continue to be operational.

Incoming circuit-breaker (S1)

			NZM...1-A...							**NZM...2-A...**									
	I_{cu}[kA]		25(36)(50)(100)							25(36)(50)(150)									
	I_n[A]		20-40	50	63	80	100	125	160	20-40	50	63	80	100	125	160	200	250	300
Outgoing circuit-breaker (S2)	I_n [A]	$I_{cu(415V)}$ [kA]	Prospective short-circuit current (kA). Set the overload and short-circuit release of the incoming circuit-breaker to the max. value.																	
NZM...1-A...	20-40	25-100	–	–	0.5	0.7	0.8	1.5	1.5	–	–	0.6	0.8	1.5	1.5	1.5	2	3	3
	50	25-100	–	–	–	0.6	0.8	1.5	1.5	–	–	–	0.8	1.5	1.5	1.5	2	3	3
	63	25-100	–	–	–	–	0.8	1.5	1.5	–	–	–	–	1.5	1.5	1.5	2	3	3
	80	25-100	–	–	–	–	–	1.5	1.5	–	–	–	–	–	1.5	1.5	2	3	3
	100	25-100	–	–	–	–	–	–	1.5	–	–	–	–	–	–	1.5	2	3	3
	125	25-100	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	3	3
	160	25-100	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	3	3
NZM...2-A...	20-40	25-150	–	–	0.5	0.6	0.8	1	1	–	–	0.5	0.6	0.8	1	1.2	1.6	2	2
	50	25-150	–	–	–	0.6	0.8	1	1	–	–	–	0.6	0.8	1	1.2	1.6	2	2
	63	25-150	–	–	–	–	0.8	1	1	–	–	–	–	0.8	1	1.2	1.6	2	2
	80	25-150	–	–	–	–	–	1	1	–	–	–	–	–	1	1.2	1.6	2	2
	100	25-150	–	–	–	–	–	–	1	–	–	–	–	–	–	1.2	1.6	2	2
	125	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.6	2	2
	160	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
	200	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	250	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	300	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...1-M...	40	25-150	–	–	–	–	0.8	1	1	–	–	–	–	0.8	1	1.2	1.6	2	2
	50	25-150	–	–	–	–	–	–	1	–	–	–	–	–	–	1.2	1.6	2	2
	63	25-150	–	–	–	–	–	–	1	–	–	–	–	–	–	1.2	1.6	2	2
	80	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1.6	2	2
	100	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
NZM...2-M...	20-12	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	160	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	200	25-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...2-VE...	100	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	1.2	1.6	2	2
	160	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	250	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...2-ME...	90	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	1.2	1.6	2	2
	140	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	220	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...3-AE...	250	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	320	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	400	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	500	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	630	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM…3-VE…	250	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	400	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	630	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...3-ME...	220	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	350	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	450	50-150	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...4-AE...	630	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	800	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1000	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1250	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1600	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM…4-VE…	630	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	800	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1000	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1250	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1600	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
NZM...4-ME...	550	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	875	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
	1400	50-85	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Notes T: total selectivity

Incoming circuit-breaker (S1)

NZM...2-VE...			NZM...3-A...				NZM...3-AE...			NZM…3-VE…			NZM...4-AE...					NZM…4-VE…				
50(150)			36(50)(150)				50(150)			50(150)			50(85)					50(85)				
100	160	250	250	320	400	500	250	400	630	250	400	630	630	800	1000	1250	1600	630	800	1000	1250	1600
Prospective short-circuit current (kA). Set the overload and short-circuit release of the incoming circuit-breaker to the max. value.																						
2	5	7.5	3	4	6	7	7.5	20	20	12.5	25	25	T	T	T	T	T	T	T	T	T	T
2	5	7.5	3	4	6	7	7.5	20	20	12.5	25	25	T	T	T	T	T	T	T	T	T	T
2	5	6	3	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	5	6	3	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	5	6	3	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	5	6	3	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	5	6	3	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
1	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
1	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
1	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	–	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	–	4	2.5	4	5	6	5	10	10	10	15	15	T	T	T	T	T	T	T	T	T	T
–	–	–	–	–	5	6	–	10	10	–	15	15	T	T	T	T	T	T	T	T	T	T
–	–	–	–	–	5	6	–	10	10	–	15	15	T	T	T	T	T	T	T	T	T	T
			–	–	5	6		10	10	–	15	15	T	T	T	T	T	T	T	T	T	T
1	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	2	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	–	4	2.5	4	6	7	6	15	15	11	20	20	T	T	T	T	T	T	T	T	T	T
–	–	2	2.5	4	6	7	6	7	10	7	10	12	T	T	T	T	T	T	T	T	T	T
–	–	–	2.5	4	6	7	6	7	10	7	10	12	T	T	T	T	T	T	T	T	T	T
–	–	–	–	–	6	7	–	7	10	–	10	12	T	T	T	T	T	T	T	T	T	T
–	1.2	2	2.5	4	6	7	6	7	10	7	8	11	T	T	T	T	T	T	T	T	T	T
–	–	2	2.5	4	6	7	6	7	10	7	8	11	T	T	T	T	T	T	T	T	T	T
–	–	–	–	–	6	7	–	7	10	–	8	11	T	T	T	T	T	T	T	T	T	T
–	–	2	2.5	4	6	7	6	7	10	5	10	12	T	T	T	T	T	T	T	T	T	T
–	–	–	2.5	4	6	7	6	7	10	5	10	12	T	T	T	T	T	T	T	T	T	T
–	–	–	–	–	6	7	–	7	10	5	10	12	T	T	T	T	T	T	T	T	T	T
–	–	–	–	–	–	–	–	5	7.5	–	10	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
			–	–	–	–		5	7.5	–	10	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	7.5	–	–	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	–	–	–	–	–	T/80	T/80	T/80	T/80	–	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	–	–	–	–	–	T/80	T/80	T/80	T/80	–	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	3.5	4	–	10	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	4	–	–	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	–	–	–	–	–	T/80	T/80	T/80	T/80	–	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	3.5	4	–	10	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	4	–	–	12	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	–	–	–	–	–	T/80	T/80	T/80	T/80	–	T/80	T/80	T/80	T/80
–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	15	20	20	–	10	15	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	–	–	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	–	–	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	–	–	–	–	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	10	15	20	20	–	10	15	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	–	–	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	–	–	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	–	–	–	–	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	20	–	–	–	20	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	20	–	–	–	–	20
–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

Protection of PVC insulated cables against thermal overload due to short-circuits

According to VDE 0100 Part 430 Wiring Regulations, cables and conductors must be protected from overload and short-circuits. In circuit-breakers NZM, overload protection is implemented through the adjustable, current-dependently delayed overload release.

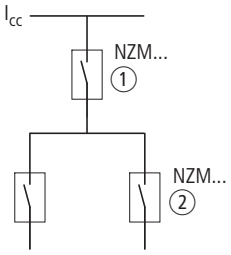
Short-circuit protection is provided by adjustable instantaneous releases, which open the main contacts in less than 25 ms. The short-circuit total opening time restricts the temperature rise of the cable to a minimum.

The tables indicate the minimum conductor cross-section reliably protected by circuit-breakers during a short-circuit.
(Operating voltage U_N = 415 V)

	Minimum protected cross-section mm² copper
NZM...1(-4)-...20	6
NZM...1(-4)-...25 – 160	10
NZM...2(-4)-...20 – 300	10
NZM...3(-4)-...250 – 630	16
NZM...4(-4)-...630 – 1600	95

Backup protection

between incoming circuit-breaker NZM(N)(H) and outgoing circuit-breaker NZMB(N)(H)



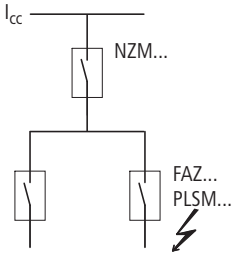
		Incoming circuit-breaker ①										
		NZM1				NZM2				NZM3		
	I_n	Up to 160 A				Up to 250 A				Up to 500 A	Up to 630 A	
	I_{cu}(415 V)	25 kA	36 kA	50 kA	100 kA	25 kA	36 kA	50 kA	150 kA	36 kA	50 kA	150 kA
Outgoing circuit-breaker ②												
I_{cu}(415 V)	I_n											
NZMB1 25 kA	Up to 160 A	25	36	50	100	25	36	50	100	36	50	100
NZMC1 36 kA	Up to 160 A	–	36	50	100	–	36	50	100	36	50	100
NZMN1 50 kA	Up to 160 A	–	–	50	100	–	–	50	100	–	50	100
NZMH1 100 kA	Up to 160 A	–	–	–	100	–	–	–	100	–	–	100
NZMB2 25 kA	Up to 300 A	25	36	50	100	25	36	50	150	36	50	150
NZMC2 36 kA	Up to 300 A	–	36	50	100	–	36	50	150	36	50	150
NZMN2 50 kA	Up to 300 A	–	–	50	100	–	–	50	150	–	50	150
NZMH2 150 kA	Up to 300 A	–	–	–	–	–	–	–	150	–	–	150
NZMC3 36 kA	Up to 500 A	–	–	–	–	–	–	–	–	–	50	150
NZMN3 50 kA	Up to 630 A	–	–	–	–	–	–	–	–	–	50	150
NZMH3 150 kA	Up to 630 A	–	–	–	–	–	–	–	–	–	–	150

Where the prospective fault current at the mounting location of circuit-breakers is very high current-limiting circuit-breakers NZMN(H) are normally used. A cost-effective alternative if the fault level is too high for circuit-breakers NZMB(C)(N) is to fit a current-limiting circuit-breaker NZMN(H) upstream of an arrangement of standard circuit-breakers NZMB(C)(N).

The table shows which current-limiting circuit-breakers NZMN(H) provide reliable protection at network locations with high short-circuit ratings in combination with NZMB(C)(N).

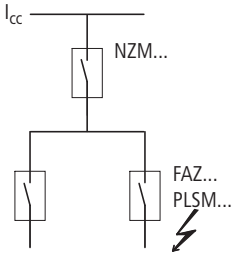
The selectivity limit is determined by the response current of the non-delayed short-circuit release in the upstream incoming circuit-breaker. In many applications this is sufficient.

between incoming circuit-breaker NZM...1-A... and outgoing circuit-breaker FAZ-B(C)/PLSM-B(C)...



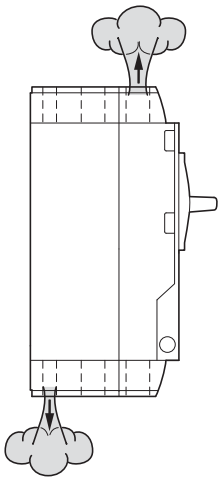
Outgoing circuit-breaker	Incoming circuit-breaker	
	NZMB1-A...	NZMC(N)(H)1-A...
FAZ-B(C)...		
0.5 – 16	25 kA	30 kA
20 – 40	20 kA	20 kA
50, 63	15 kA	15 kA
PLSM-B(C)...(/...)		
0.5 – 16	25 kA	30 kA
20 – 40	20 kA	20 kA
50, 63	15 kA	15 kA

between incoming circuit-breaker NZM...2-A... and outgoing circuit-breaker FAZ-B(C)/PLSM-B(C)...



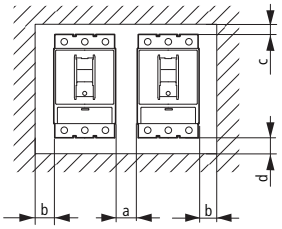
Outgoing circuit-breaker	Incoming circuit-breaker	
	NZMB2-A...	NZMN(H)2-A...
FAZ-B(C)...		
0.5 – 10	25 kA	50 kA
13 – 32	25 kA	30 kA
40 – 63	20 kA	20 kA
PLSM-B(C)...(/...)		
0.5 – 10	25 kA	50 kA
13 – 32	25 kA	30 kA
40 – 63	20 kA	20 kA

Direction of blow-out



	Top, front	Bottom, rear
NZM1	X	–
NZMB(C)2-A... 250	X	–
(P)N2(-4)-...	X	–
NZMN(H)2...	X	X
NZM...2-4..	X	X
NZM3	X	X
NZM4	X	–

Minimum clearances



between two adjacently mounted switches
Minimum clearance a in mm

	NZM1	NZM2	NZM3	NZM4
NZM1	0	5	5	15
NZM2	5	5	5	15
NZM3	5	5	5	15
NZM4	15	15	15	15

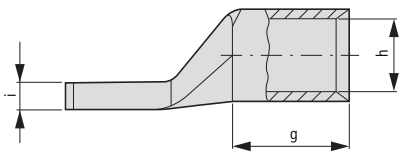
between switches and other parts
Minimum clearances in mm

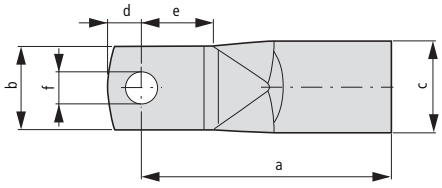
	b		c			d	
	≦ 690 V	1000 V	≦ 440 V	≦ 690 V	1000 V	≦ 690 V	1000 V
NZM1	0	–	30	60	–	0	–
NZM2[1)]	5	5	20[1)]	35[1)]	35	35	35
NZM3	5	5	30	60	60	60	60
NZM4	15	15	50	100[2)]	200	0	0

[1)] NZMB(C)2 – A … ≦ 440 V: C= 20 mm, d = 0 mm
≦ 690 V: C= 60 mm, d = 0 mm

[2)] At 690 V IT network: 200 mm

Tube cable lugs, dimensions





For pressing the cable lugs a press tool K22, HK60/22 or EK22 from Klauke with the following press inserts is required:
R22/95 for 95 mm²
R22/120 for 120 mm²
R22/150 for 150 mm²
R22/185 for 185 mm²
R22/240 for 240 mm²

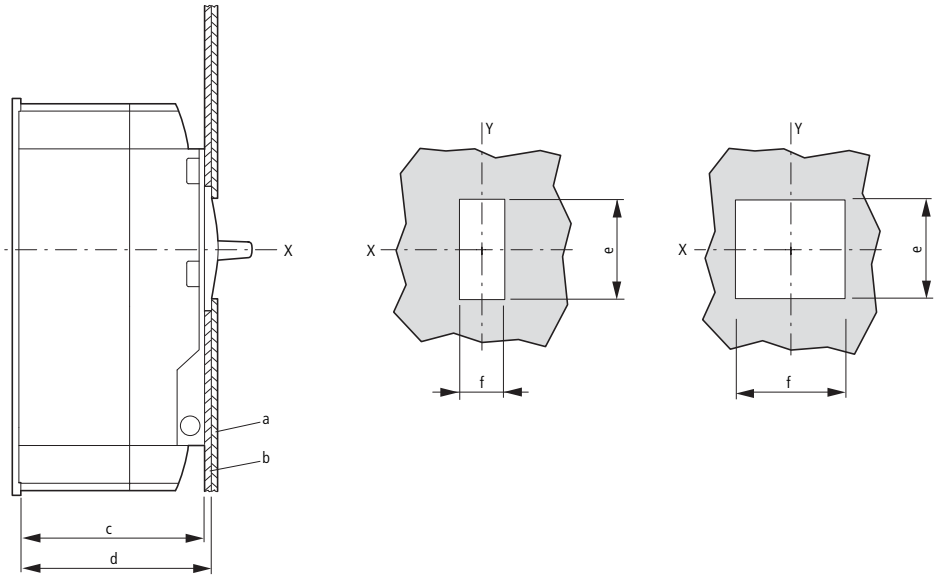
Cable lug	For use with	Nominal cross section	Terminal bolt	Dimensions in mm								
		mm²	∅	a	b	c	d	e	f	g	h	i
KS95-NZM7	NZM2	95	M8	53_{+2}	$23_{\pm0.5}$	$18_{\pm0.2}$	$10_{\pm1}$	19	8.5	25	13.5	4.4
KS120-NZM7	NZM2	120	M8	56_{+2}	$23_{\pm0.5}$	$19.5_{\pm0.2}$	$10_{\pm1}$	19	8.5	26	15	4.4
KS150-NZM7	NZM2	150	M8	61_{+2}	$23_{\pm0.5}$	$21_{\pm0.2}$	$10_{\pm1}$	19	8.5	30	16.5	4.4
NZM2-XKS185	NZM2	185	M8	$65_{\pm1.5}$	$22_{\pm1}$	$24_{\pm0.3}$	$9^{+1}_{-0.5}$	$19^{+2,5}_{-0.5}$	$8.5^{+0,05}_{-0.1}$	$30_{\pm2}$	$19_{\pm0.4}$	7
NZM3-XKS185	NZM3, NZM4	185	M10	65	24.5	24	11.5	18	10.5	30	19	$7.0_{\pm0.8}$
NZM3-XKS240	NZM3, NZM4	240	M10	72	31	26	11.5	19	10.5	35	21	$5.0_{\pm0.8}$

Engineering

Front cut-outs

Cut-out **a**
Rocker lever

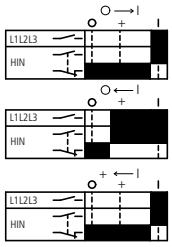
Cut-out **b**
Rotary handle, remote operator



	Distance from mounting plate and door cut-out		Cut-out **a**		Cut-out **b**	
	c	d	e	f	e	f
	mm	mm	mm	mm	mm	mm
NZM1	68	73	40	23	46	91
NZM2	103	108	79	36	96	101
NZM3	120.5	125.5	79	36	96	136
NZM4	138	146	101	105	118	204

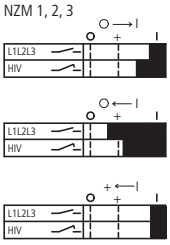
Contact sequence of the auxiliary contacts

Standard auxiliary contacts (HIN)

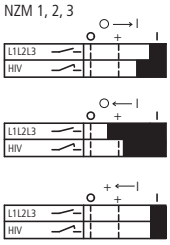


Early-make auxiliary contact (HIV)

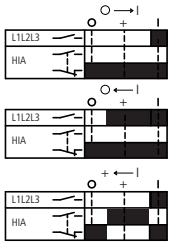
NZM 1, 2, 3



NZM 1, 2, 3



Trip-indicating auxiliary contacts (HIA)



0 → I Switch-on

0 ← I Switch-off

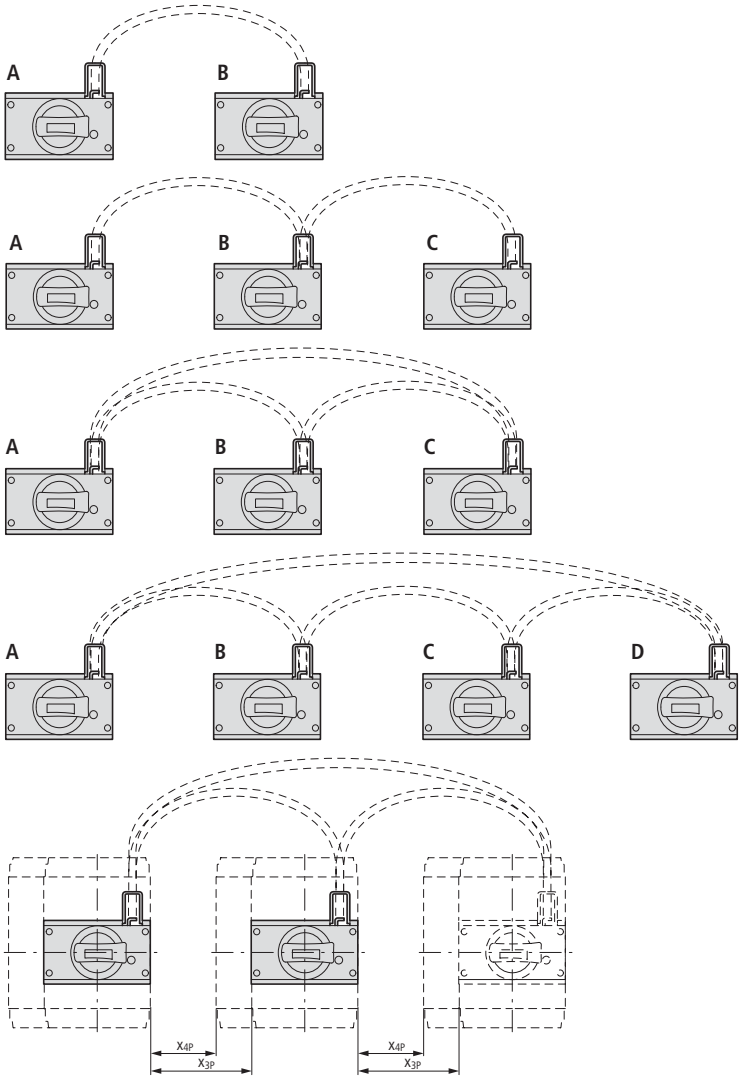
+← I Trip

■ Contact closed

□ Contact opened

Notes If early-make contacts are required in combination with shunt or undervoltage releases, please select the combination type in section "Releases"

Interlock variations and combination possibilities



A	B
OFF	OFF
ON/TRIP	~~ON~~
~~ON~~	ON/TRIP

A	B	C
OFF	OFF	OFF
~~ON~~	ON/TRIP	~~ON~~
ON/TRIP	~~ON~~	ON/TRIP

A	B	C
OFF	OFF	OFF
ON/TRIP	~~ON~~	~~ON~~
~~ON~~	ON/TRIP	~~ON~~
~~ON~~	~~ON~~	ON/TRIP

A	B	C	D
OFF	OFF	OFF	OFF
ON/TRIP	~~ON~~	ON/TRIP	~~ON~~
~~ON~~	ON/TRIP	~~ON~~	ON/TRIP

X_{3p} = switch spacing, 3 pole
X_{4p} = switch spacing, 4 pole

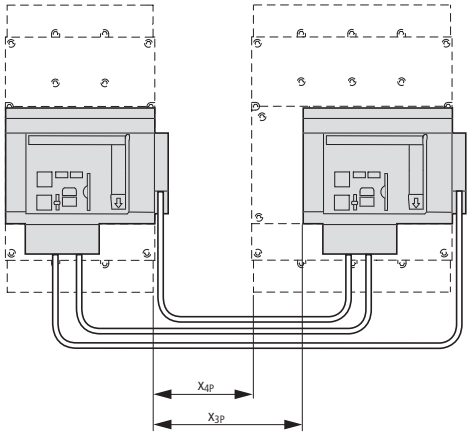
NZM-						Right switch			
Max. switch spacing		NZM1		NZM2		NZM3		NZM4	
		X_{3P}	X_{4P}	X_{3P}	X_{4P}	X_{3P}	X_{4P}	X_{3P}	X_{4P}
Left switch		mm	mm	mm	mm	mm	mm	mm	mm
NZM1	3/4 pole	135	105	120	85	135	90	125	80
NZM2	3/4 pole	135	105	120	85	135	90	125	80
NZM3	3/4 pole	90	75	75	35	85	40	80	45
NZM4	3/4 pole	50	35	40	15	25	–	15	–

NZM-XBZ600						Right switch			
Max. switch spacing		NZM1		NZM2		NZM3		NZM4	
		X_{3P}	X_{4P}	X_{3P}	X_{4P}	X_{3P}	X_{4P}	X_{3P}	X_{4P}
Left switch		mm	mm	mm	mm	mm	mm	mm	mm
NZM1	3/4 pole	510	480	495	460	510	465	475	405
NZM2	3/4 pole	510	480	495	460	510	465	475	405
NZM3	3/4 pole	460	430	450	410	460	415	460	390
NZM4	3/4 pole	400	370	380	340	400	375	390	320

NZM-XBZ1000						Right switch			
Max. switch spacing		NZM1		NZM2		NZM3		NZM4	
		X_{3P}	X_{4P}	X_{3P}	X_{4P}	X_{3P}	X_{4P}	X_{3P}	X_{4P}
Left switch		mm	mm	mm	mm	mm	mm	mm	mm
NZM1	3/4 pole	910	880	895	860	910	865	865	795
NZM2	3/4 pole	910	880	895	860	910	865	865	795
NZM3	3/4 pole	820	790	850	810	860	815	860	790
NZM4	3/4 pole	750	720	730	700	800	775	790	720

Mechanical interlock for remote operator, residual-current relay

NZM...-XMVR(L)



X_{3p} = max. switch spacing 3 pole
X_{4p} = max. switch spacing 4 pole

Mechanical interlock XMVR

NZM...-XMVR (mounted side-by-side)

Max. switch spacing Right switch

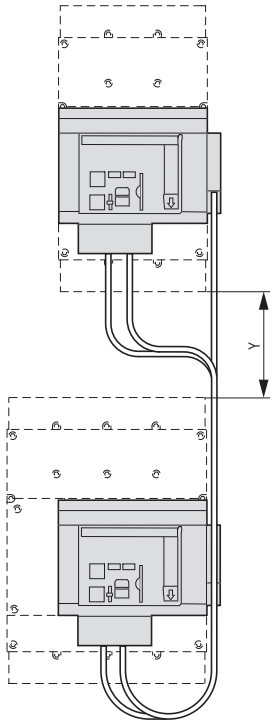
		NZM2		NZM3		NZM4	
		X_{3p}	X_{4p}	X_{3p}	X_{4p}	X_{3p}	X_{4p}
Left switch		mm	mm	mm	mm	mm	mm
NZM2	3/4 pole	130	95	95	50	–	–
NZM3	3/4 pole	–	–	135	90	155	85
NZM4	3/4 pole	–	–	–	–	120	50

Mechanical interlock XMVRL

NZM...-XMVRL (mounted side-by-side, in adjacent enclosures)

Max. switch spacing Right switch

		NZM2		NZM3		NZM4	
		X_{3p}	X_{4p}	X_{3p}	X_{4p}	X_{3p}	X_{4p}
Left switch		mm	mm	mm	mm	mm	mm
NZM2	3/4 pole	350	315	420	385	–	–
NZM3	3/4 pole	–	–	400	365	460	390
NZM4	3/4 pole	–	–	–	–	420	350



Mechanical interlock XMVRL

NZM…-XMVRL (mounted one above the other)

Max. switch spacing Switch at top

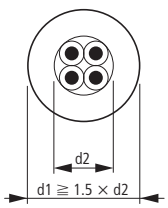
		NZM2	NZM3	NZM4
		3/4 pole	3/4 pole	3/4 pole
		Y	Y	Y
Switch at bottom		mm	mm	mm
NZM2	3/4 pole	220	225	–
NZM3	3/4 pole	–	220	230
NZM4	3/4 pole	–	–	230

Y = max. switch spacing

Residual-current relay PFR

Ring-type transformer PFR-W...

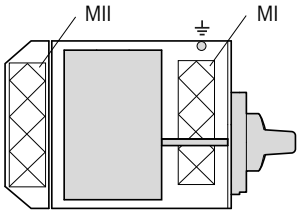
Maximum rated operational current [A]		Diameter	
Power distribution	Motor/capacitor	Transformer part no. PFR-W-… d1	Maximum conductor circumference (mm) d2
50	50	20	13
150	100	30	20
150	100	35	23
400	200	70	47
600	250	105	70
1200	630	140	93
1800	800	210	140



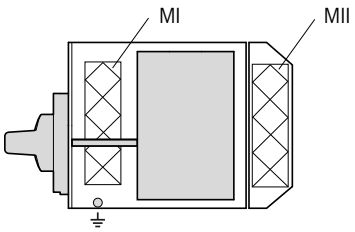
Additional terminal arrangement for side wall operator with mounting bracket.
NZM1-XS(R)M-..., NZM2-XS(R)M-...
Additional terminals K25, K50, K95, K150
Actuation:

3 pole

For operation on the right

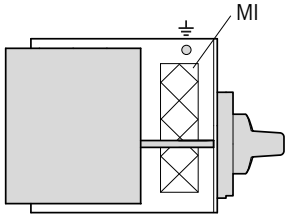


For operation on the left

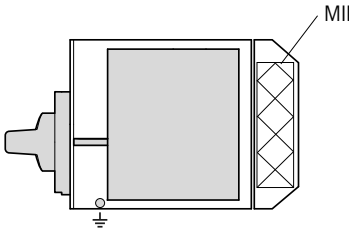


4 pole

For operation on the right



For operation on the left



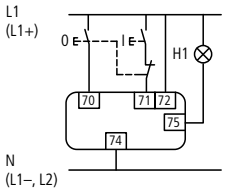
Mounting areas		MI				MII	
Variation options		V1	V2	V3	V4	V1	V2
Maximum number of additional terminals	K25	2 x	–	–	–	–	–
	K50	–	2 x	–	–	–	–
	K95	–	–	1 x	–	1 x	–
	K150	–	–	–	1 x	–	1 x

Example: In mounting area MI, variation option 1 allows the K25 additional terminal to be mounted twice.

2/3-wire control remote operator

Please note for engineering:

Three-wire control



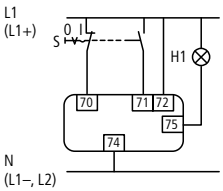
Terminal 70/71:

NZM-XR: Contact loading according to technical data

NZM2-XRD: Full current flows though the contact during make and break!

RMQ series contact elements can be used for the remote operators.NZM2(3.4)-XR(D)...

Two-wire control



Terminal 75:

NZM-XR: Operational readiness signal when cover closed and not locked.

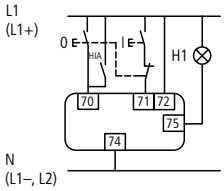
NZM2-XRD: Operational readiness signal when sliding switch set to Auto.

Sliding switch with three positions: Manual/Auto/Locked for reliable differentiation of operating positions.

AC-15: 400 V; 2 A

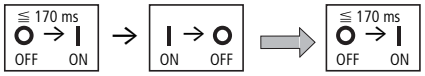
DC-13: 220 V; 0.2 A

Three-wire control with automatic reset to the 0 position after the switch has tripped

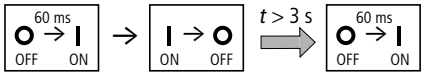


Switching cycle:

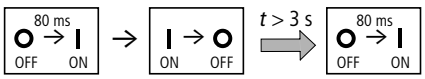
NZM2-XRD



NZM2-XR

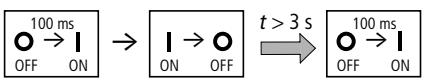


NZM3-XR



The time interval between OFF and ON is 3 seconds.
ON commands received during the time interval are ignored within the first 3 seconds after switch off.

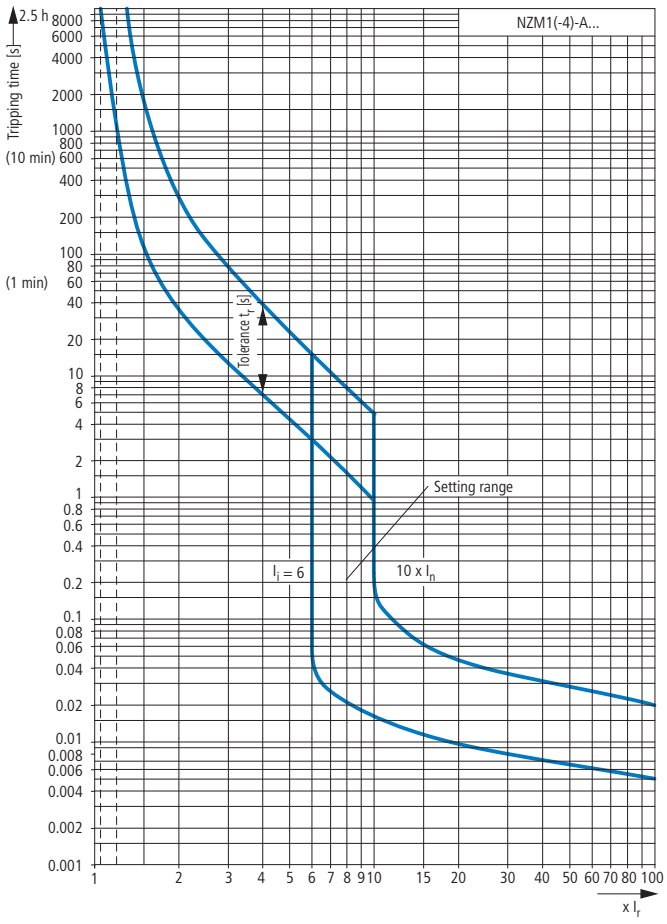
NZM4-XR



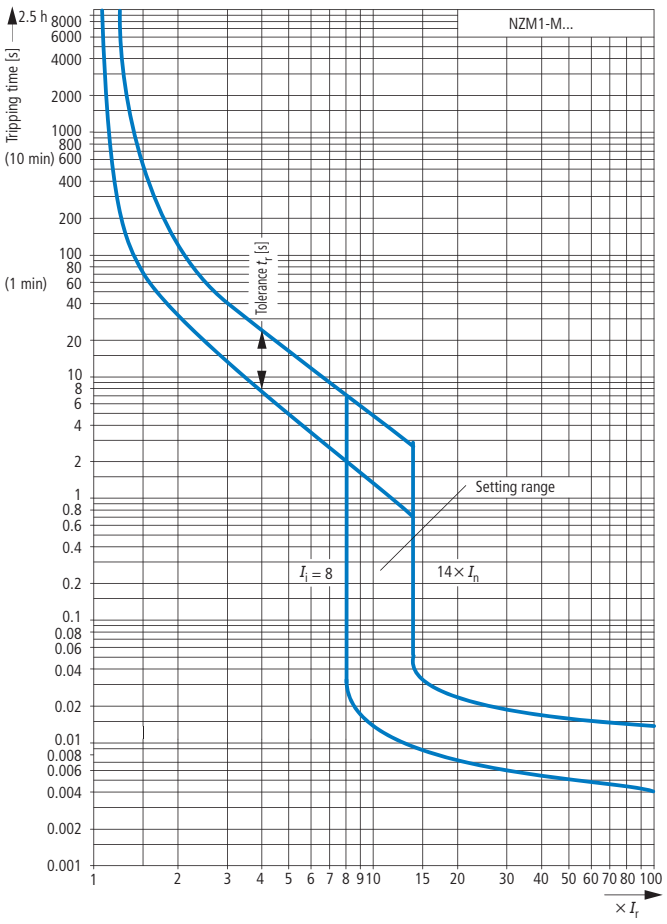
Construction size 1, 2: tripping characteristics

NZM1, NZM2

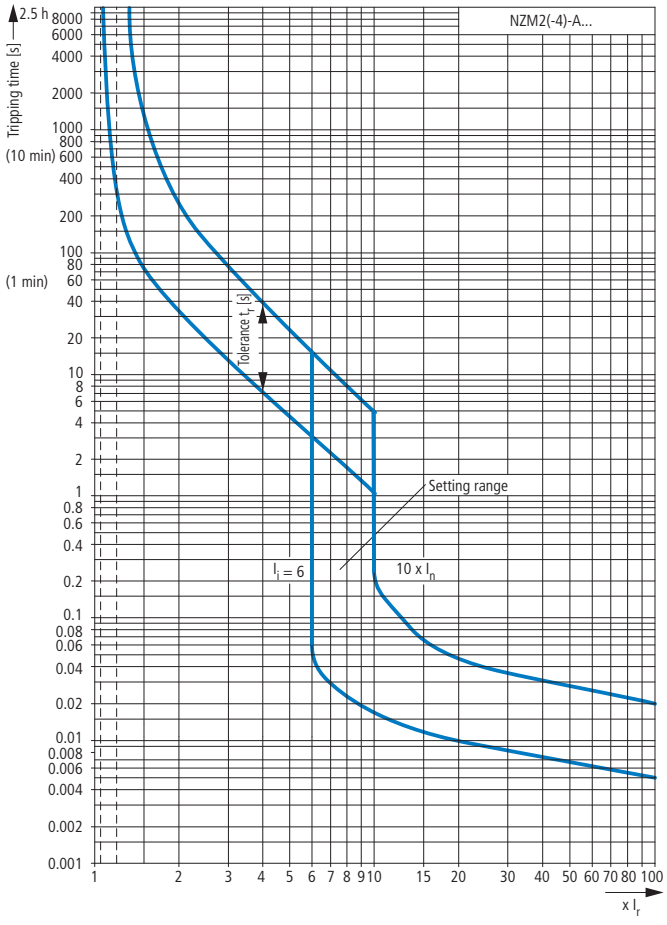
System and line protection with NZM1



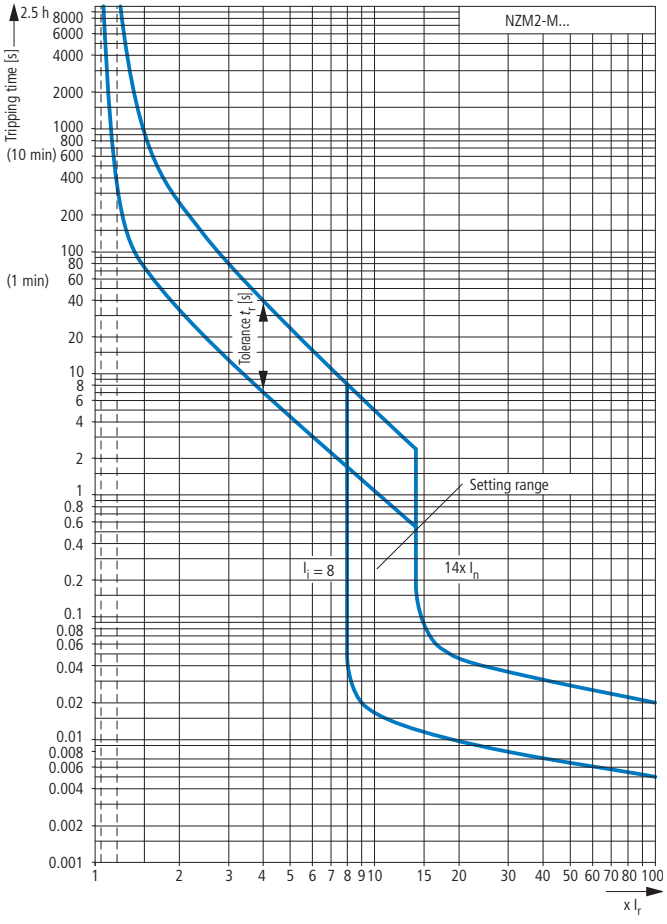
Motor protection with NZM1



System and line protection with NZM2

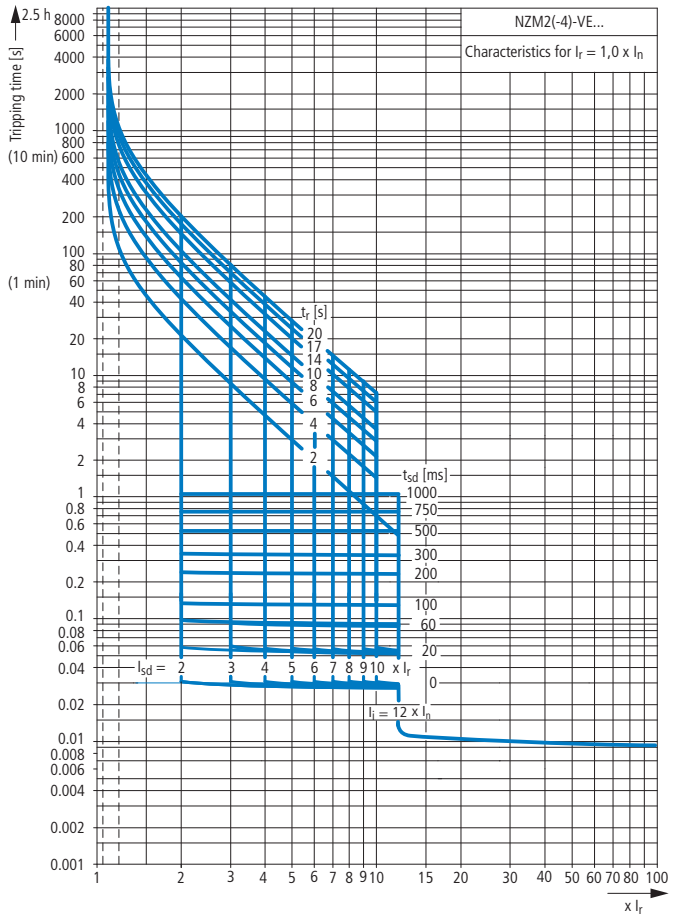


Motor protection with NZM2

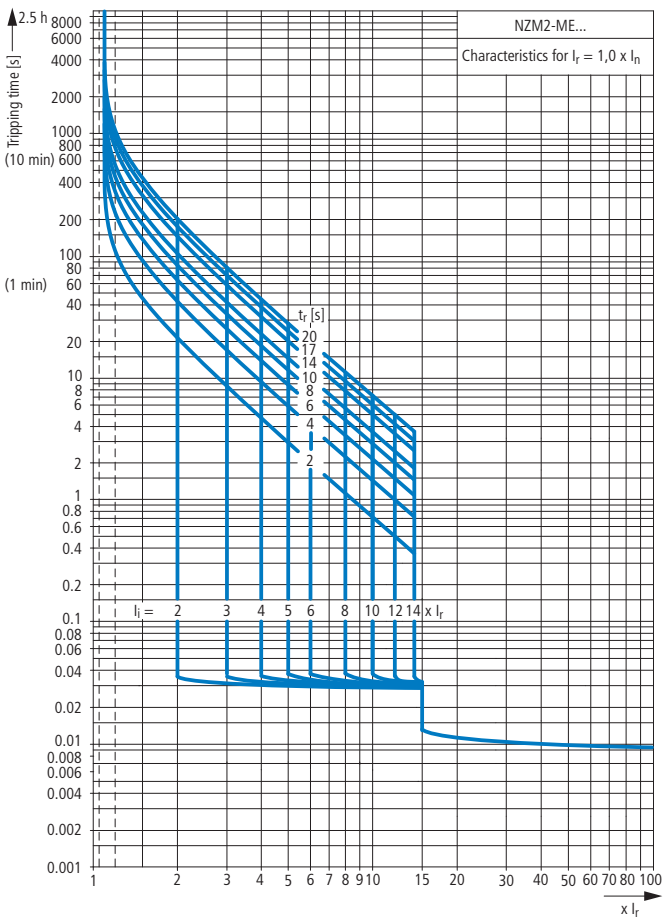


Notes With the free CurveSelect software you can quickly and easily create detailed representations of individual settings:
www.moeller.net, Products & Solutions > Power Distribution > Switching and Protecting Power Distribution > CurveSelect: Characteristics program

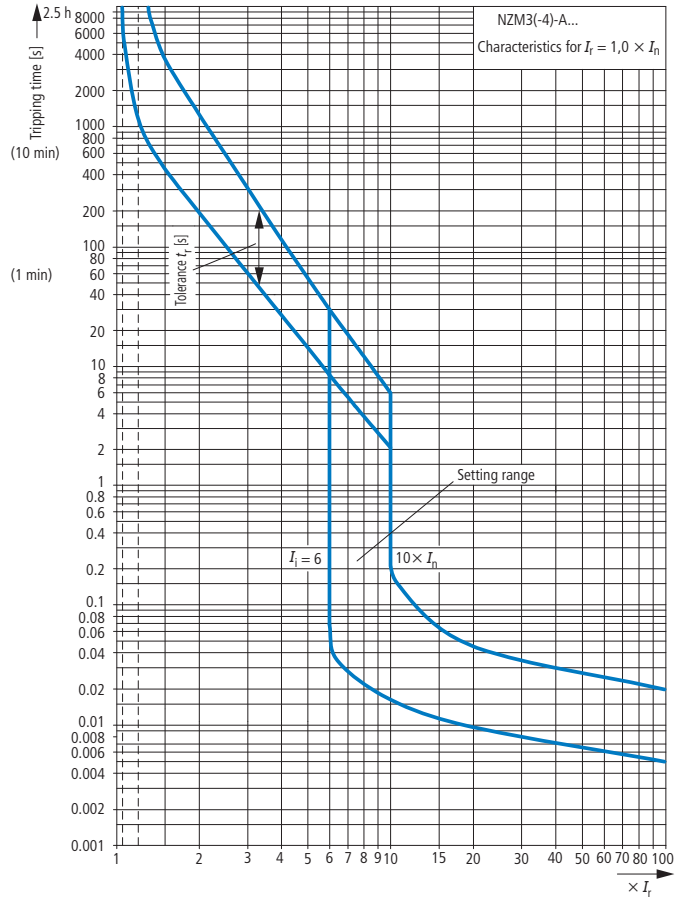
Systems, cable, selectivity and generator protection with NZM2

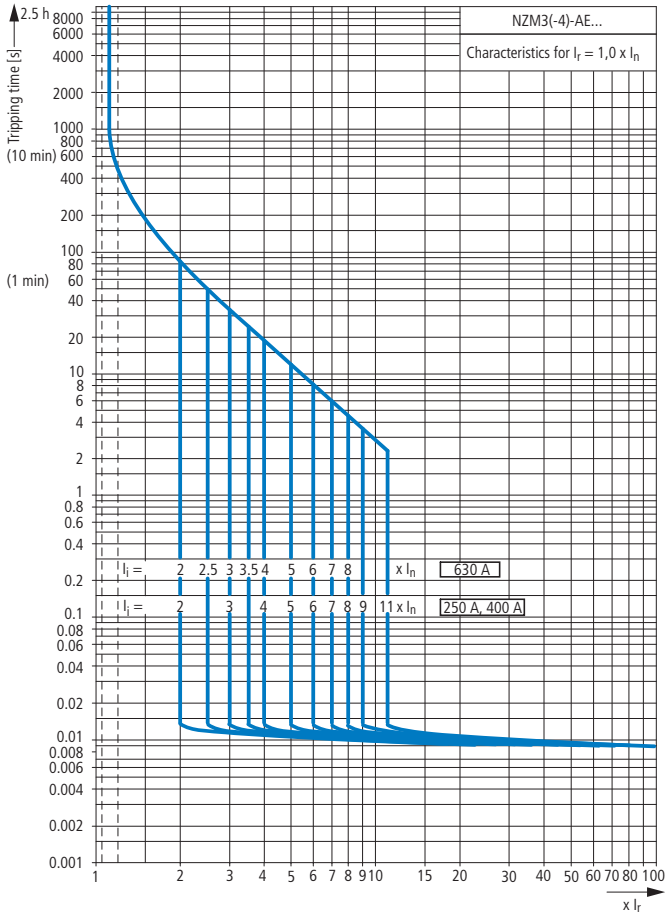


Motor protection with NZM2



System and line protection with NZM3





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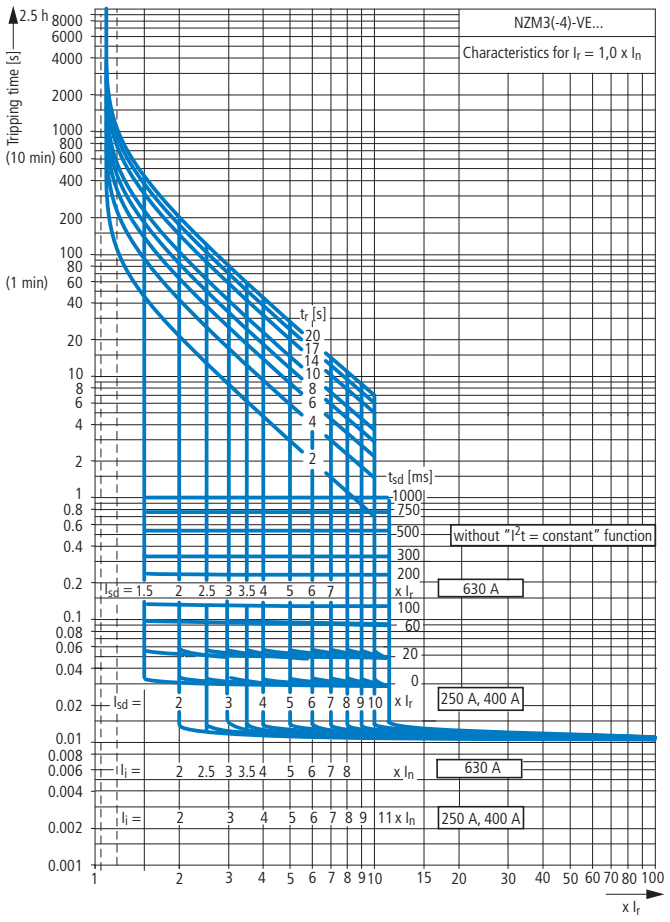
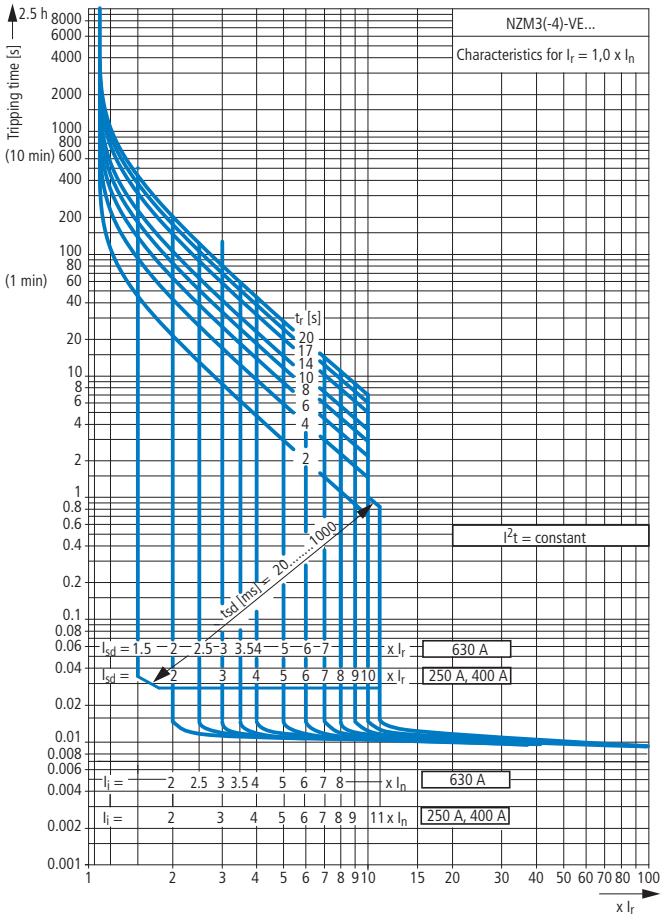
www.moeller.net, Products & Solutions > Power Distribution > Switching and Protecting Power Distribution > CurveSelect: Characteristics program

Construction size 3, 4: tripping characteristics

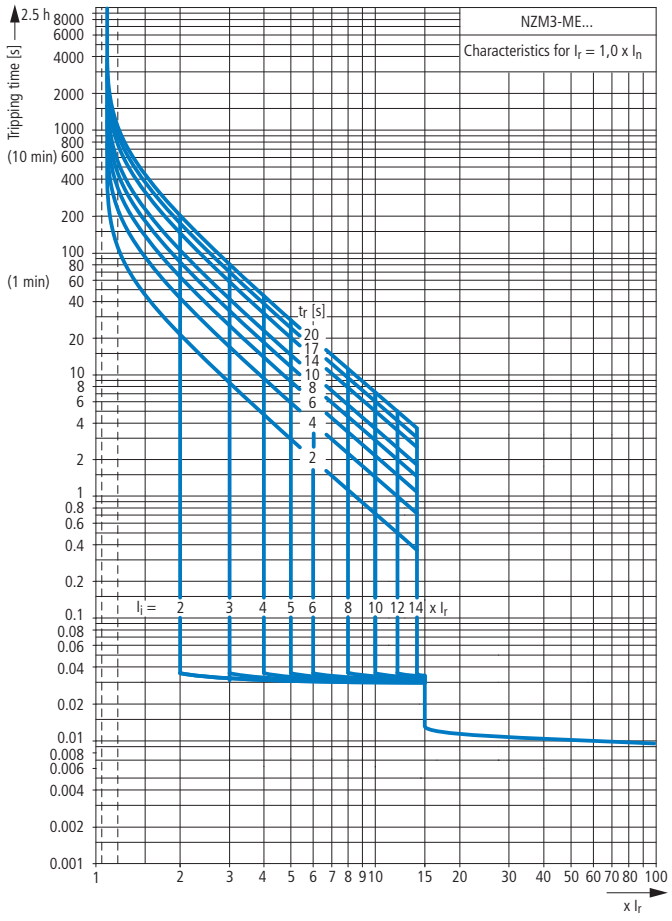
NZM3, NZM4

Systems, cable, selectivity and generator protection with NZM3



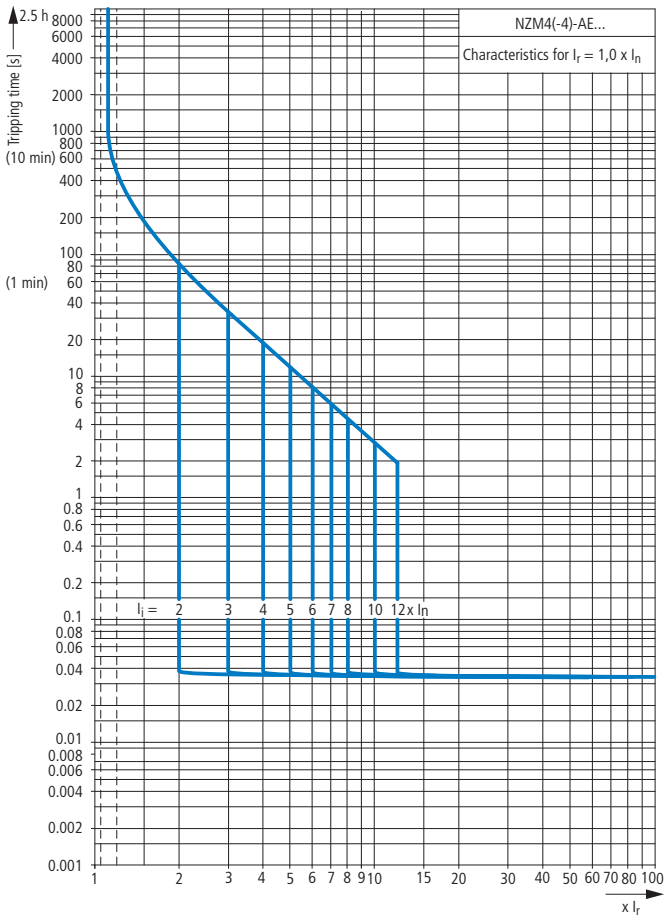


Motor protection with NZM3

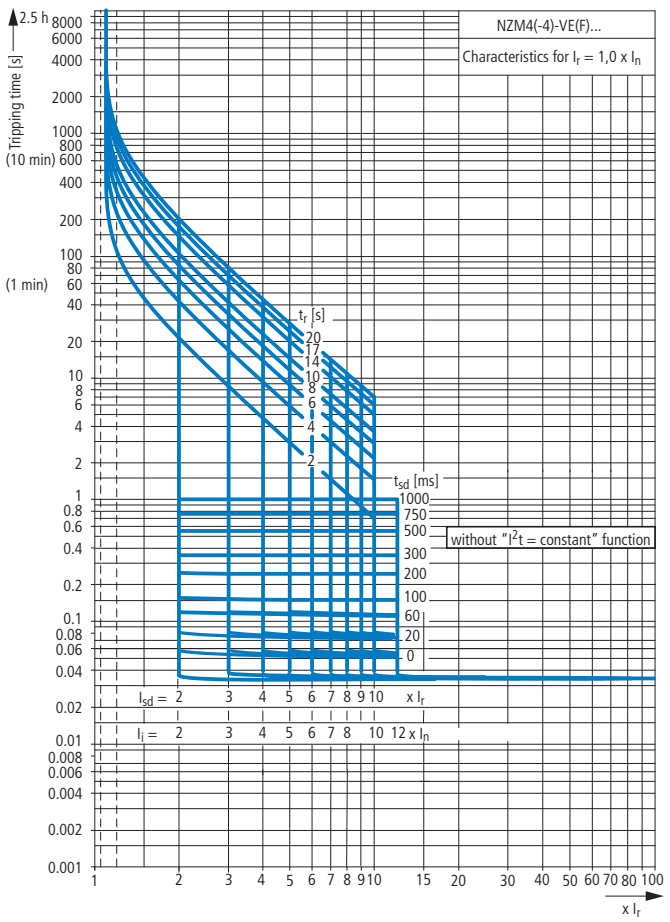


Notes With the free CurveSelect software you can quickly and easily create detailed representations of individual settings:
www.moeller.net, Products & Solutions > Power Distribution > Switching and Protecting Power Distribution > CurveSelect: Characteristics program

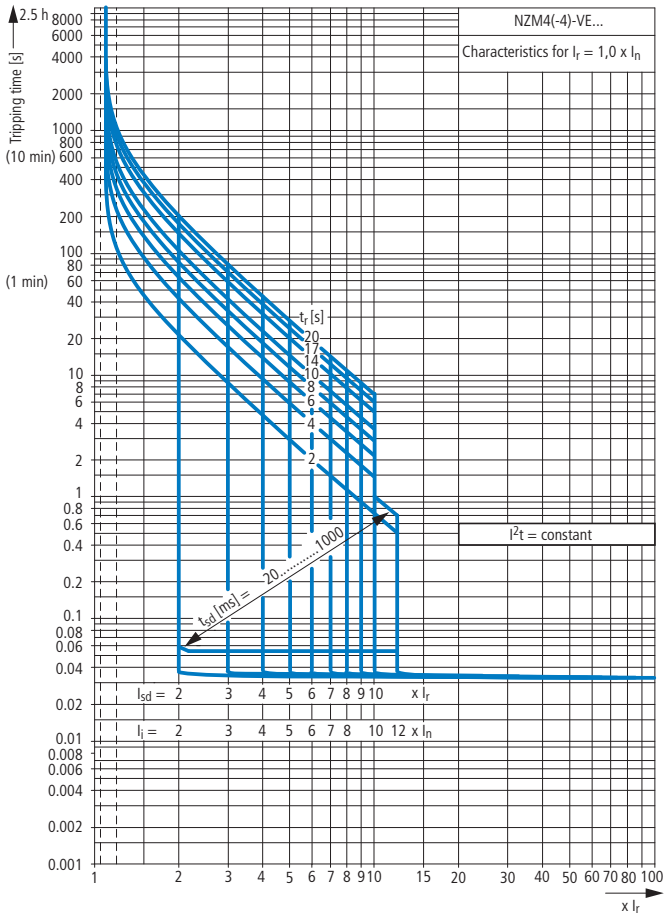
System and line protection with NZM4



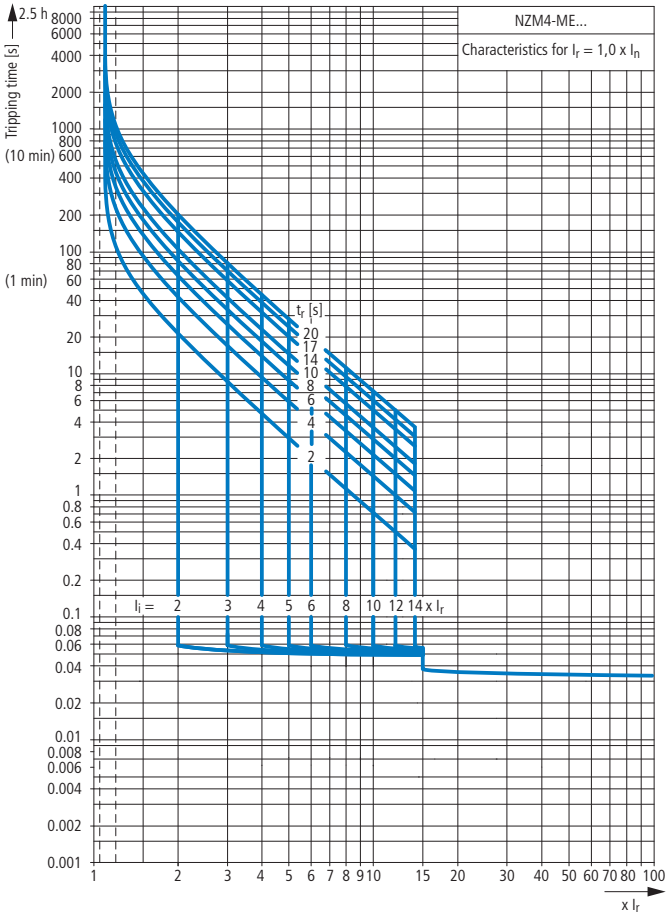
Systems, cable, selectivity and generator protection with NZM4



Systems, cable, selectivity and generator protection with NZM4



Motor protection with NZM4

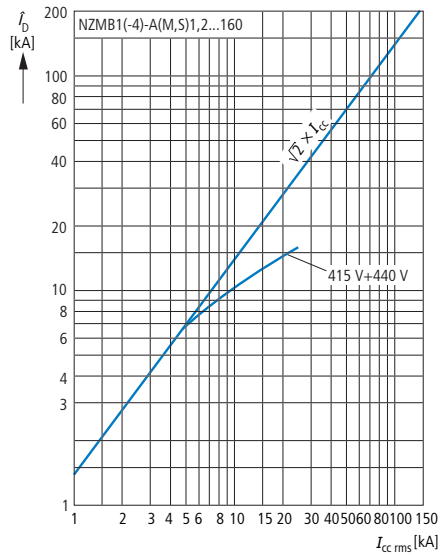


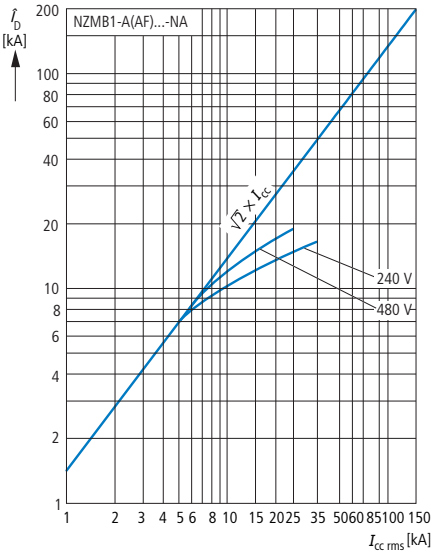
Notes With the free CurveSelect software you can quickly and easily create detailed representations of individual settings:
www.moeller.net, Products & Solutions > Power Distribution > Switching and Protecting Power Distribution > CurveSelect: Characteristics program

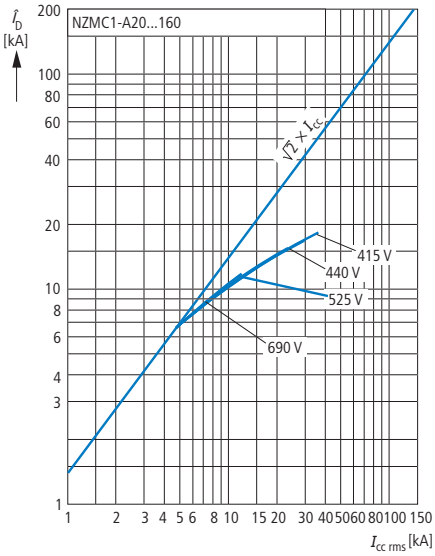
Construction size 1: let-through characteristsics

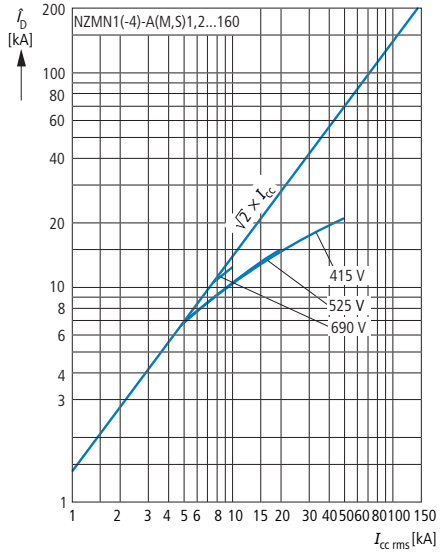
NZM1

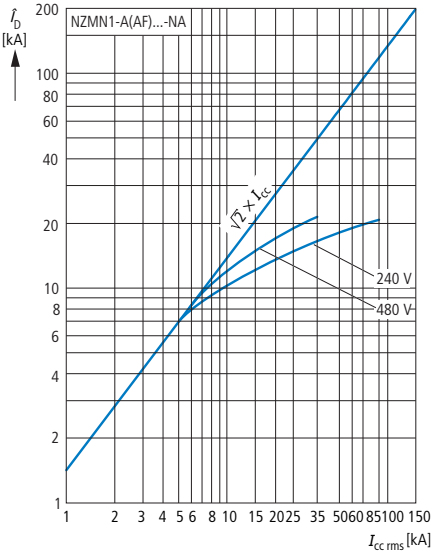
Let-through current I_D

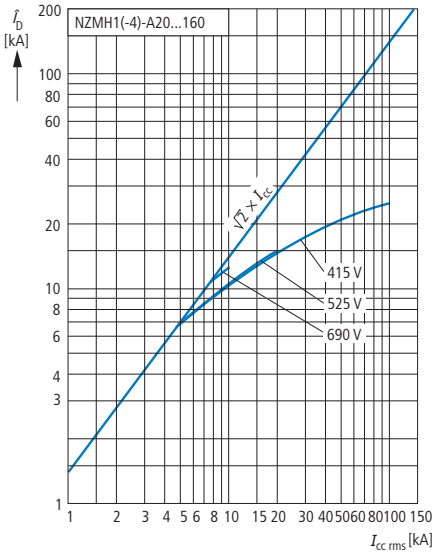




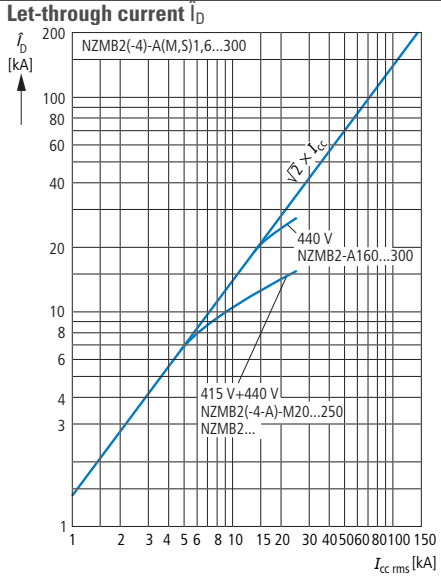


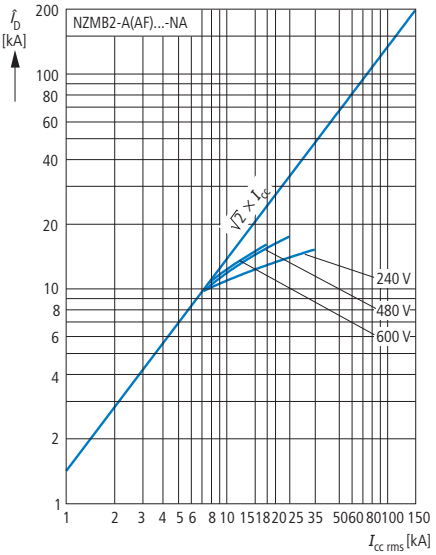


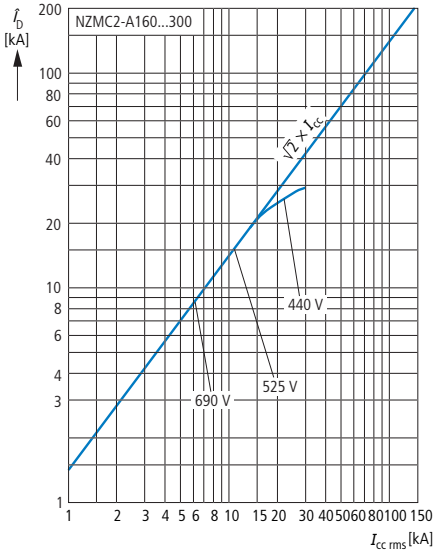


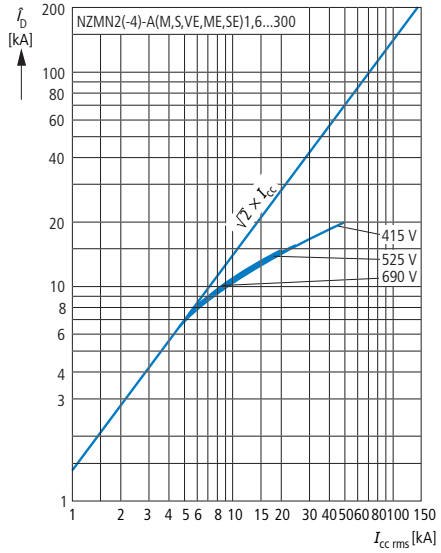


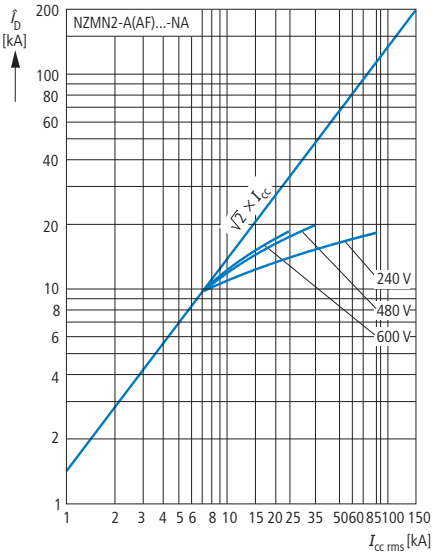
Let-through current $\hat{i}_D$

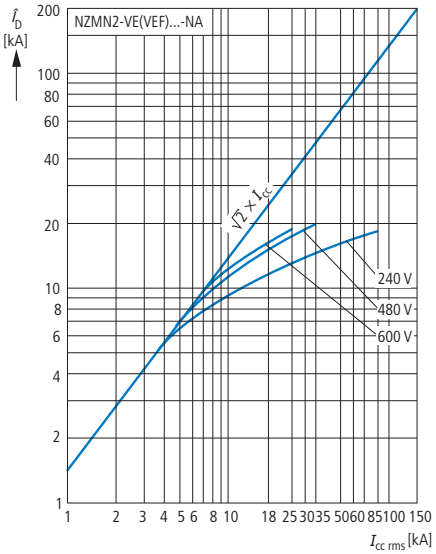


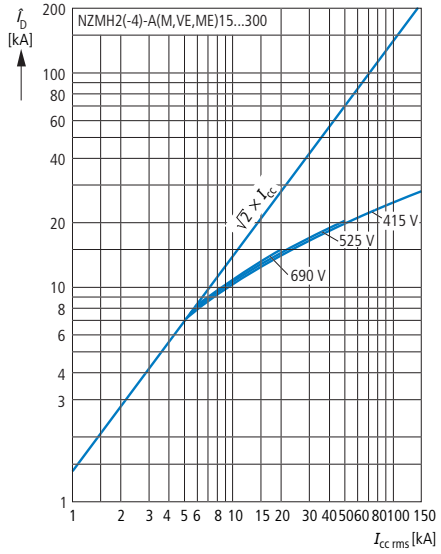


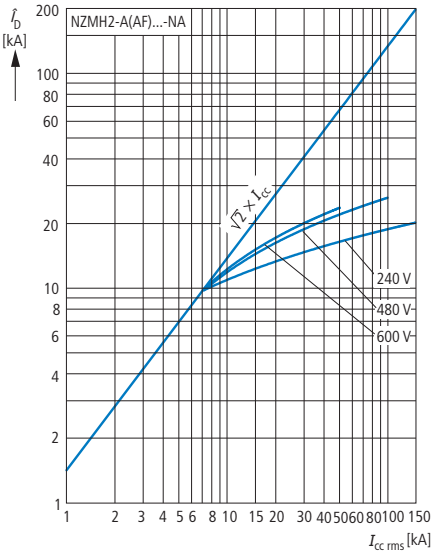


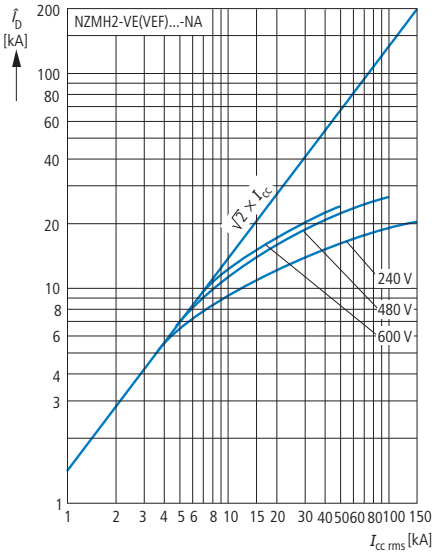








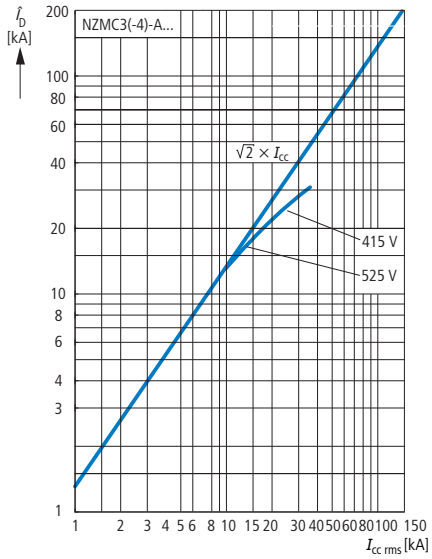


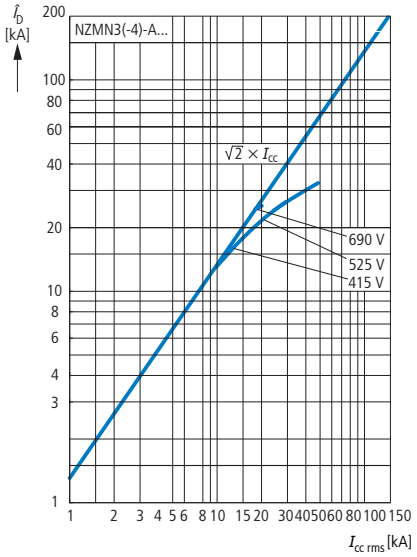


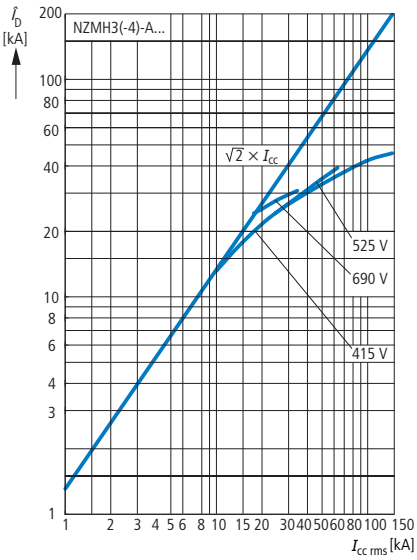
Construction size 3: let-through characteristics

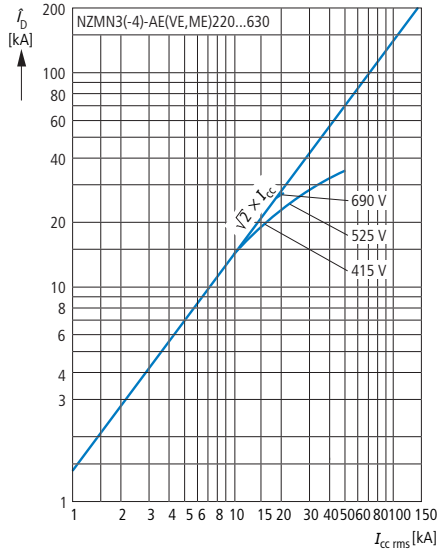
NZM3

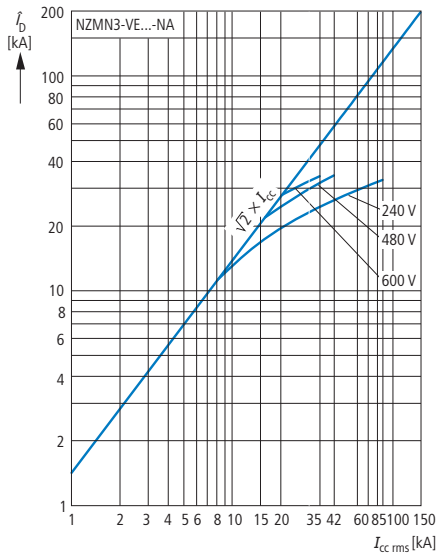
Let-through current $\hat{i}_D$

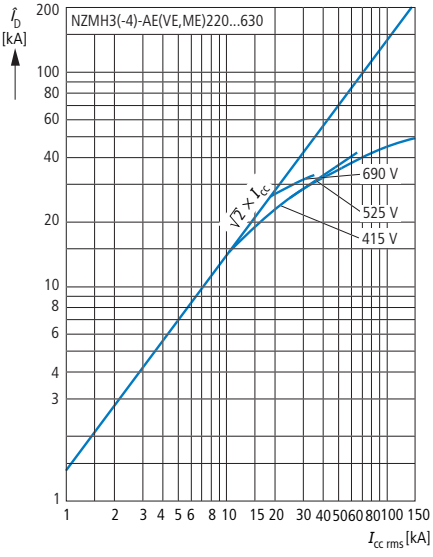


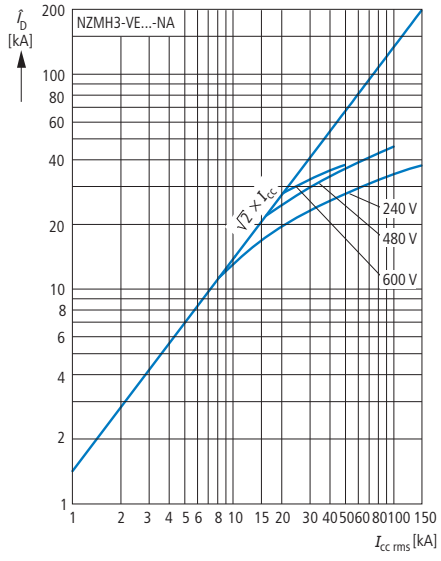




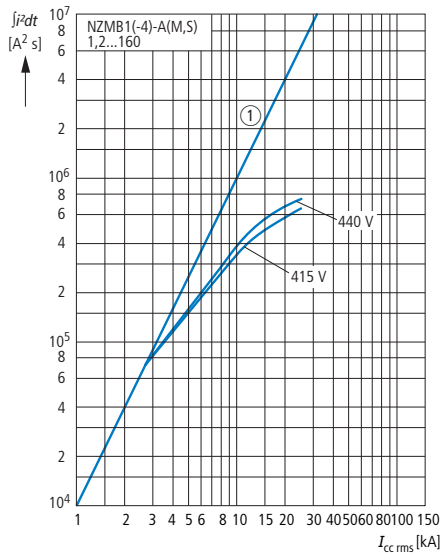


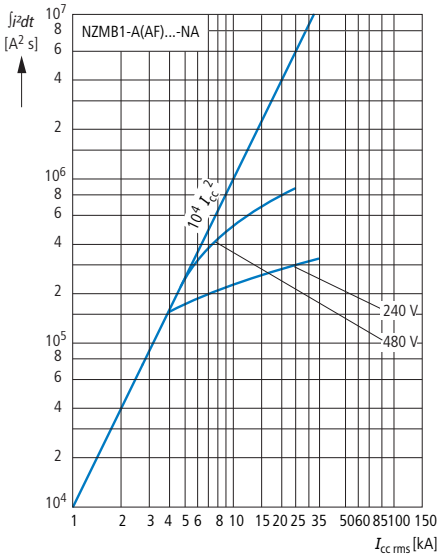


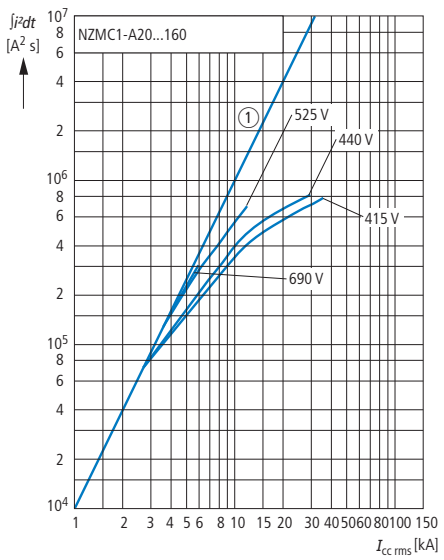


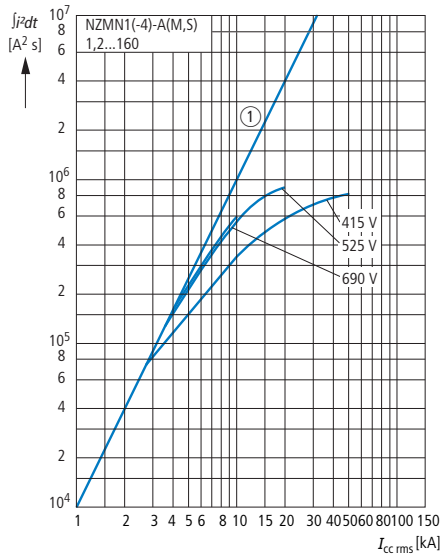


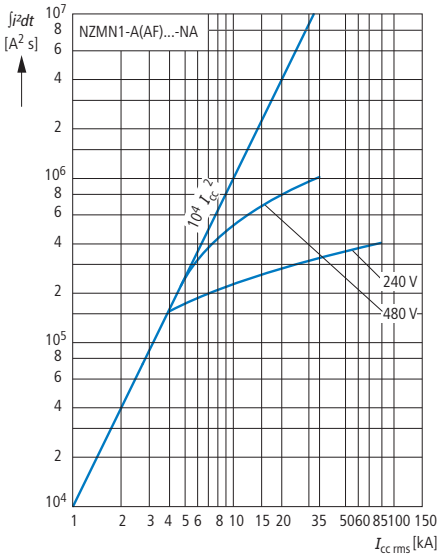
Let-through energy I^2t

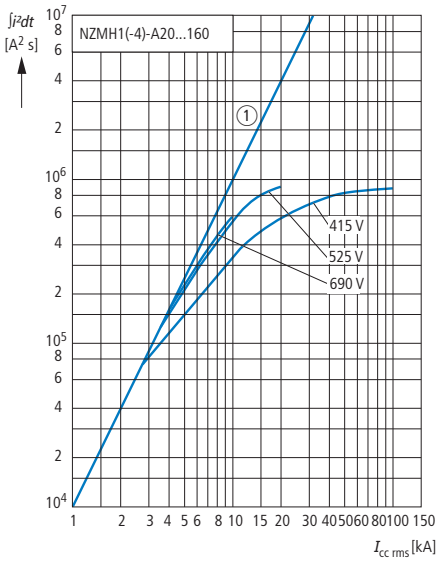












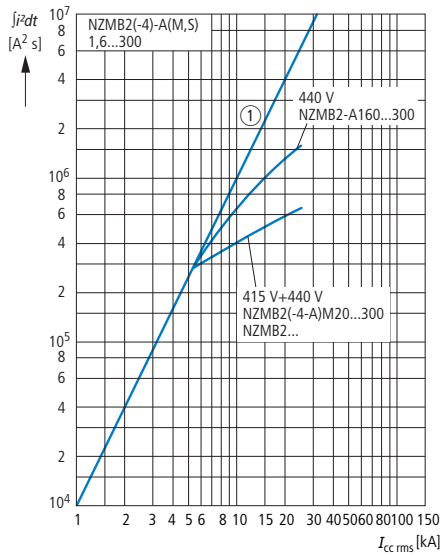
① 1 half-cycle

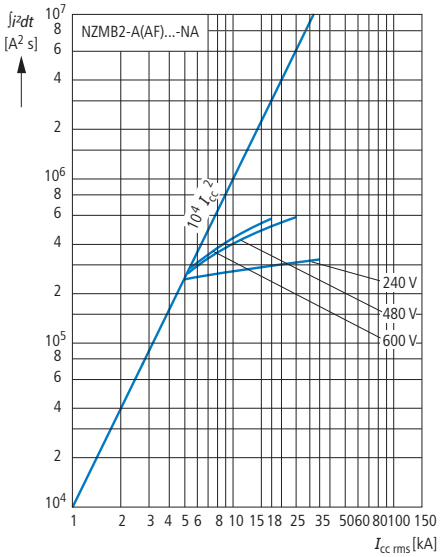
① 1 half-cycle

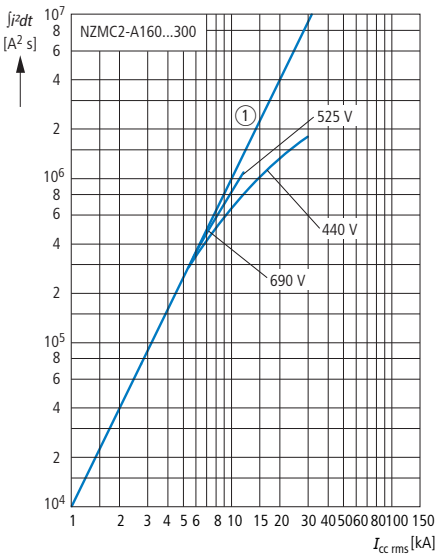
Construction size 2: let-through characteristics

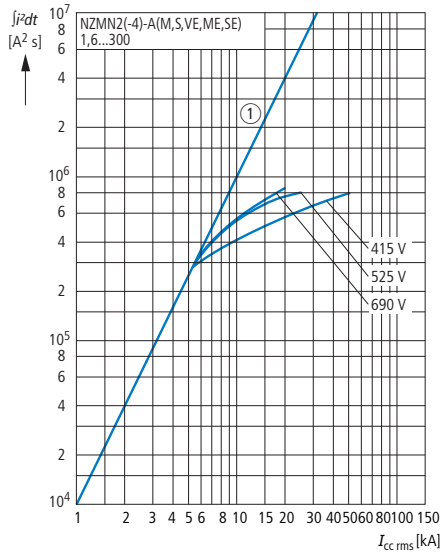
NZM2

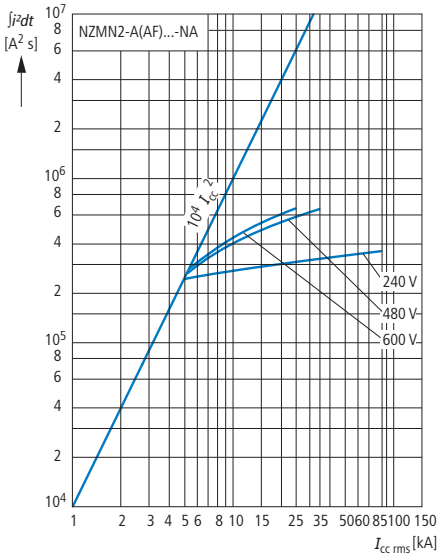
Let-through energy I^2t

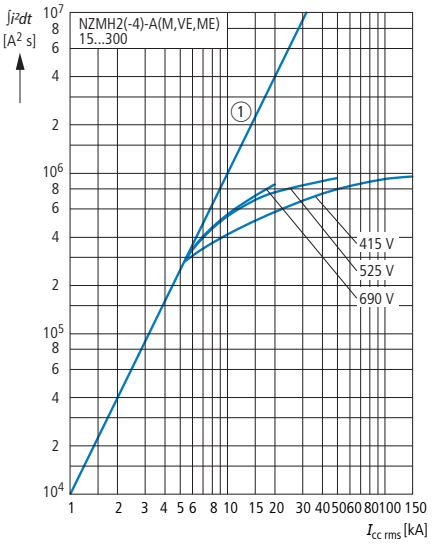


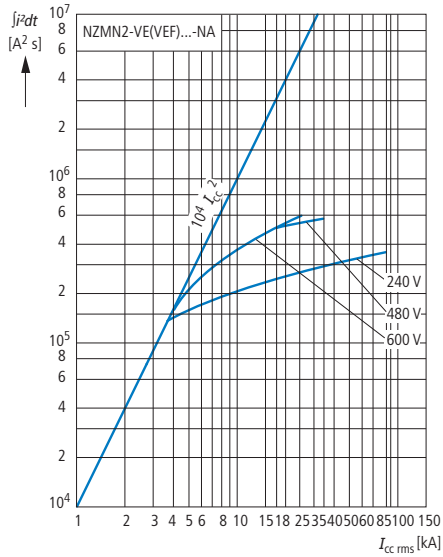


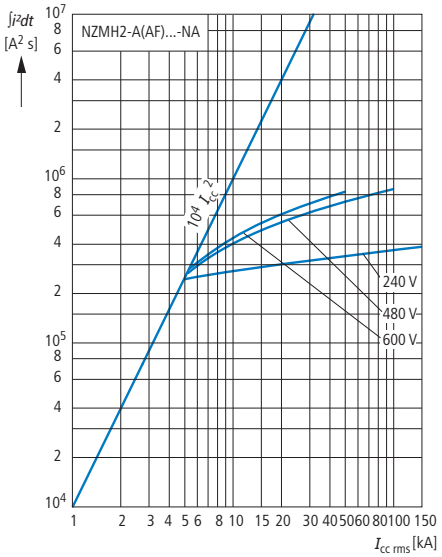


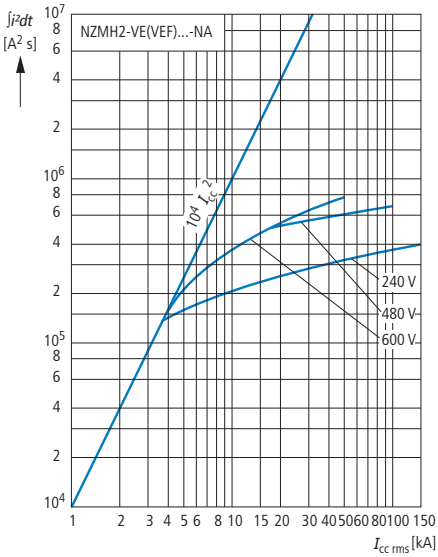








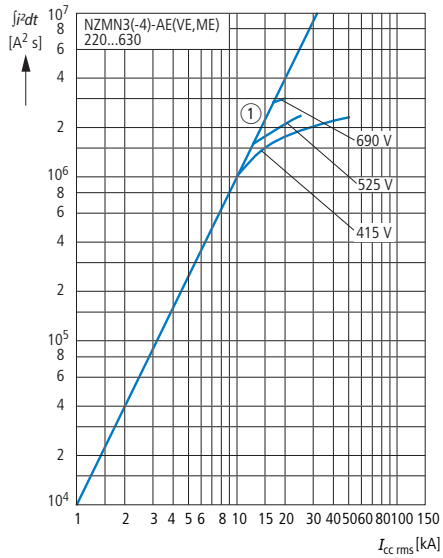


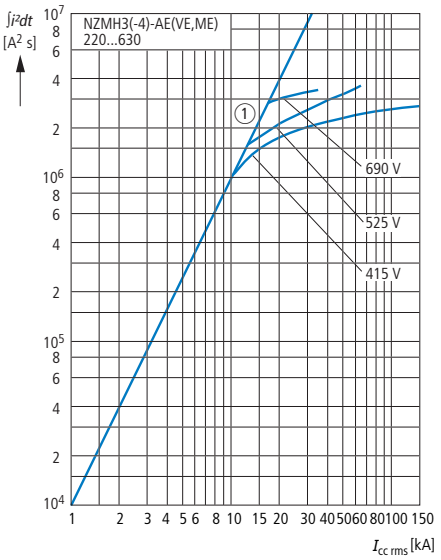


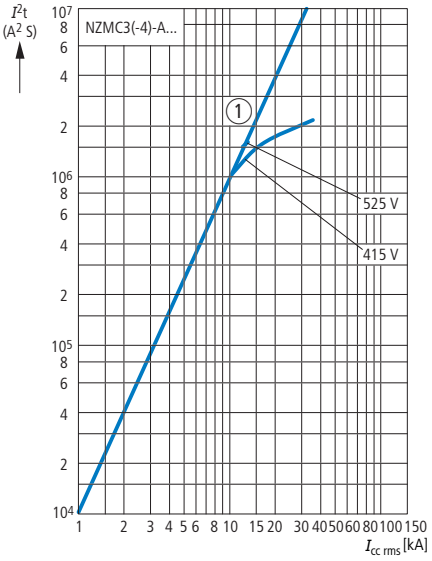
① 1 half-cycle

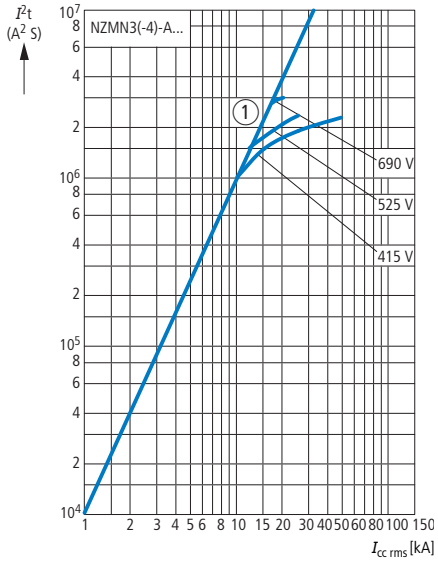
① 1 half-cycle

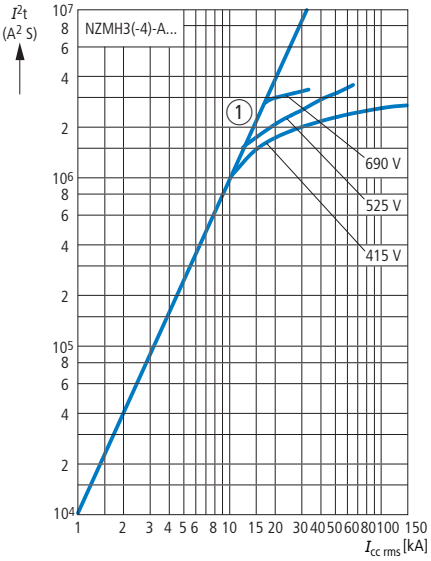
Let-through energy I^2t

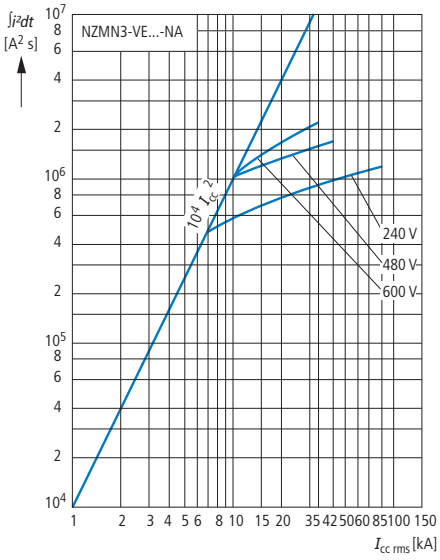


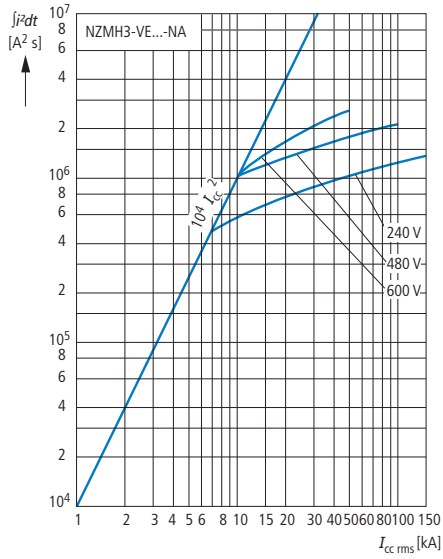










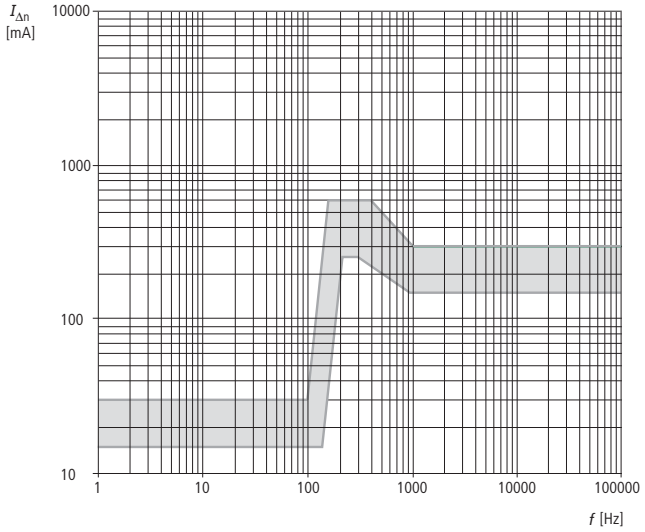


① 1 half-cycle

Frequency response

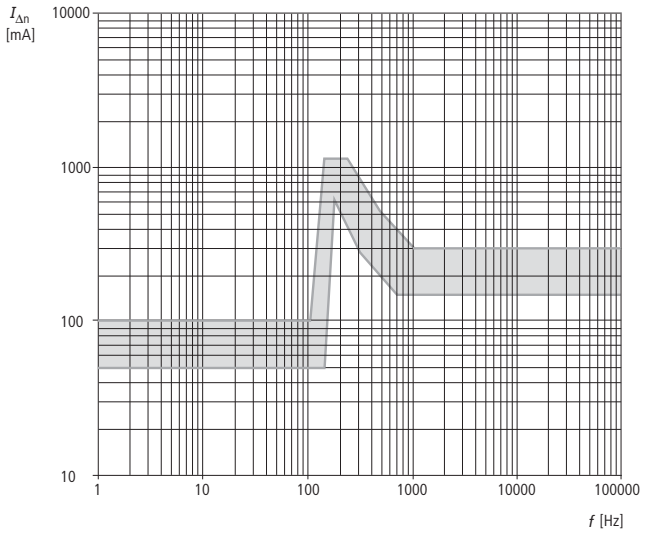
+NZM2-4-XFIA30

30 mA



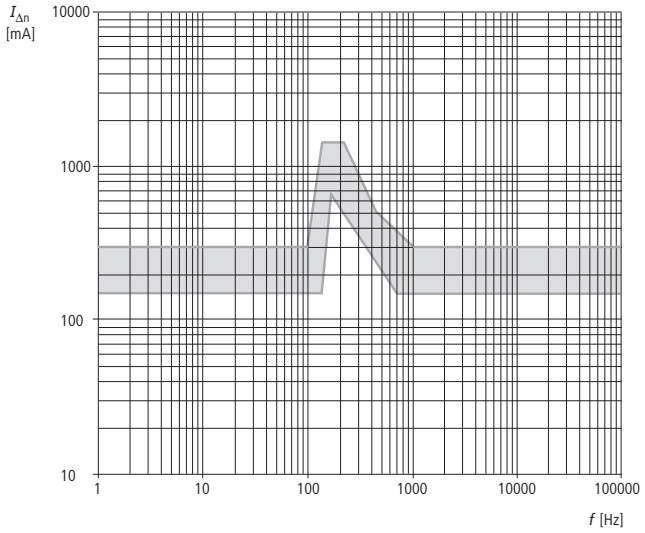
+NZM2-4-XFIA

100 mA

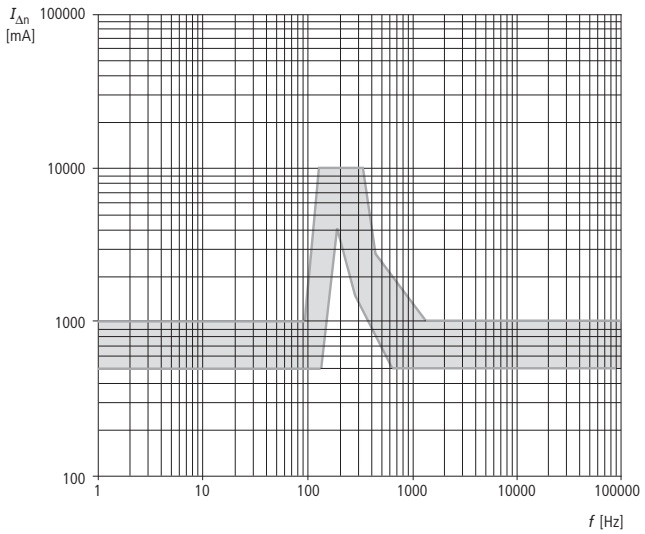


+NZM2-4-XFIA

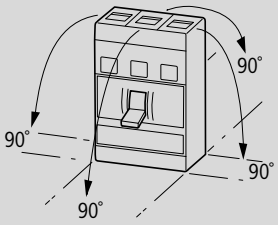
300 mA



1000 mA



Technical data

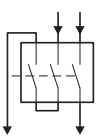
General			
Standards			IEC/EN 60947 and VDE 0660
Contact protection			Finger and back-of-hand proof to DIN EN 50274/VDE 0660 Part 514
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Ambient temperature			
Storage		°C	-25…+70
Operation		°C	-25…+70
Mechanical shock resistance (IEC/EN 60068-2-27)		g	20 (half-sinusoidal shock 20 ms)
Safe isolation according to EN 61140			
Between auxiliary contacts and main contacts		V AC	500
Between the auxiliary contacts		V AC	300
Built-in position			Vertical and 90° in all directions  With residual-current release XFI: - NZM1, N1, NZM2, N2: vertical and 90° in all directions With plug-in adapter elements - NZM1, N1, NZM2, N2: vertical, 90° right/left With withdrawable unit: - NZM3, N3: vertical, 90° left - NZM4, N4: vertical With remote operator: - NZM2, N(S)2, NZM3, N(S)3, NZM4, N(S)4: vertical and 90° in all directions
Direction of incoming supply			Any
Degree of protection			
Device			In the area of the HMI devices: IP20 (basic degree of protection)
Enclosure			With insulating surround: IP40 With door coupling rotary handle: IP66
Terminal type			Tunnel terminal: IP10 Phase isolator and cable terminal: IP00

			Rated uninterrupted current									
			max. 160 A			**max. 300 A**			**max. 630 A**		**max. 1600 A**	
			NZMB1	**NZMC1**	**NZMN1** **NZMH1**	**NZMB2**	**NZMC2**	**NZMN2** **NZMH2**	**NZMC3**	**NZMN3** **NZMH3**	**NZMN4**	**NZMH4**
Circuit-breaker												
Rated impulse withstand voltage U_{imp}												
Main contacts		V	6000	6000	6000	8000	8000	8000	8000	8000	8000	8000
Auxiliary contacts		V	6000	6000	6000	6000	6000	6000	6000	6000	6000	6000
Rated operating voltage	U_e	V AC	440	690	690	440	690	690	690	690	690	690
		V DC[1]	–	–	500	–	–	750	750	–	–	–
Overvoltage category/degree of pollution			III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3	III/3
Rated insulation voltage	U_i	V	690	690	690	690	690	1000	1000	1000	1000	1000
For use in IT electrical power networks		V	440	690	690	440	690	690	690	690	525	690[2]

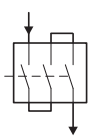
Notes

[1] Details apply for 3 pole system protection circuit-breaker with thermomagnetic release NZMN(H)1(2)(3)-A... up to 500 A.
For rated operating voltage switching on 3 contacts the following applies:
DC correction factor for instantaneous release
response value NZM1: 1.25, NZM2: 1.35, NZM3: 1.45
Setting for I_i at DC = setting I_i AC/correction factor DC

Switching of one pole via two series contacts



Switching of one pole via three series contacts



[2] > 800 A = 525

NZM...1, NZM...2, NZM...3, NZM...4

					Max. rated uninterrupted current 160 A			
					NZMB1	**NZMC1**	**NZMN1**	**NZMH1**
Switching capacity								
Rated short-circuit making capacity								
	240 V	I_{cm}		kA	63	121	187	220
	400/415 V	I_{cm}		kA	53	76	105	220
	440 V	I_{cm}		kA	53	63	74	74
	525 V	I_{cm}		kA	–	24	40	40
	690 V	I_{cm}		kA	–	14	17	17
Rated short-circuit breaking capacity I_{cn}								
I_{cu} according to IEC/EN 60947 Operating sequence O-t-CO	240 V 50/60 Hz	I_{cu}		kA	30	55	85	100
	400/415 V 50/60 Hz	I_{cu}		kA	**25**	**36**	**50**	**100**
	440 V 50/60 Hz	I_{cu}		kA	25	30	35	70
	525 V 50/60 Hz	I_{cu}		kA	–	12	20	20
	690 V 50/60 Hz	I_{cu}		kA	–	8	10	10
	500 V DC[3]	I_{cu}		kA	–	–	15	30
	750 V DC[3]	I_{cu}		kA	–	–	–	–
I_{cs} according to IEC/EN 60947 Operating sequence O-t-CO-t-CO	240 V 50/60 Hz	I_{cs}		kA	30	55	85	100
	400/415 V 50/60 Hz	I_{cs}		kA	**25**	**36**	**50**	**50**
	440 V 50/60 Hz	I_{cs}		kA	18.5	22.5	35	35
	525 V 50/60 Hz	I_{cs}		kA	–	6	10	10
	690 V 50/60 Hz	I_{cs}		kA	–	4	7.5	7.5
Maximum LV h.b.c. fuse[6]				A gG/gL	NZM.1-…20…100: 200 NZM.1-…125, 160: 315			
Rated short-time withstand current								
t = 0.3 s		I_{cw}		kA	–	–	–	–
t = 1 s		I_{cw}		kA	–	–	–	–
Utilization category according to IEC/EN 60947-2					A	A	A	A
Rated making and breaking capacity								
Rated operational current	AC-1	**400/415 V 50/60 Hz**	I_e	A	**160**	**160**	**160**	**160**
		690 V 50/60 Hz	I_e	A	160	160	160	160
	AC-3	**400/415 V 50/60 Hz**	I_e	A	**160**	**160**	**160**	**160**
		690 V 50/60 Hz	I_e	A	160	160	160	160
	DC-1[3]	500 V DC	I_e	A	–	–	125	125
		750 V DC	I_e	A	–	–	–	–
	DC-3[3]	500 V DC	I_e	A	–	–	125	125
		750 V DC	I_e	A	–	–	–	–
Lifespan, mechanical of which max. 50 % trip by shunt/undervoltage release			Operations		20000	20000	20000	20000
Lifespan, electrical								
	AC-1	**400/415 V 50/60 Hz**	Operations		**7500**	**7500**	**10000**	**10000**
		690 V 50/60 Hz	Operations		–	5000	7500	7500
	AC-3	**400/415 V 50/60 Hz**	Operations		–	**–**	**7500**	**7500**
		690 V 50/60 Hz	Operations		–	–	5000	5000
	DC-1[3]	500 V DC	Operations		–	–	10000	10000
		750 V DC	Operations		–	–	–	–
	DC-3[3]	500 V DC	Operations		–	–	5000	5000
		750 V DC	Operations		–	–	–	–
Max. operating frequency				Ops/h	120	120	120	120
Heat dissipation per pole at I_u[5]				W	16.7	16.7	16.7	16.7
Total opening delay on short-circuit				ms	< 10	< 10	< 10	< 10
Technical data that diverge from products for the IEC market Switching capacity of NA switch (UL489, CSA 22.2 No. 5-09) Short-circuit current rating (SCCR)								
	240 V 60 Hz			kA	35	–	85	–
	480 V 60 Hz			kA	25[1]	–	35[1]	–
	600 V 60 Hz			kA	–	–	–	–

Notes

[1] Switching capacity of NA switches with NZM…1-…(C)NA: 480 Y/277 V
[2] For rated operational current AC-3 with NZM4: 400 V: max. 650 kW; 690 V: max. 600 kW
[3] DC data apply only for NZM...A... with thermomagnetic release
[4] For switching capacity NZM2...NA: 600 V/347 V
[5] For thermal losses per pole the specification refers to the maximum rated operational current of the construction size
[6] Maximum back-up fuse, if the expected short-circuit currents at the installation location exceed the switching capacity of the circuit-breaker
[7] For higher switching capacity please inquire

NZM...1, NZM...2, NZM...3, NZM...4

Max. rated uninterrupted current 300 A				Max. rated uninterrupted current 630 A			Max. rated uninterrupted current 1600 A	
NZMB2	**NZMC2**	**NZMN2**	**NZMH2**	**NZMC3**	**NZMN3**	**NZMH3**	**NZMN4**	**NZMH4**
63	121	187	330	121	187	330	105	275
53	76	105	330	76	105	330	105	187
53	63	74	286	63	74	286	74	187
–	24	53	105	24	53	143	53	143
–	9	40	40	14	40	74	40	105
30	55	85	150	55	85	150	50	125
25	**36**	**50**	**150**	**36**	**50**	**150**	**50**	**85**
25	30	35	130	30	35	130	35	85[7)]
–	12	25	50	12	25	65	25	65
–	8	20	20	8	20	35	20	50
–	–	30	60	–	30	70	–	–
–	–	30	60	–	30	70	–	–
30	55	85	150	55	85	150	37	63
25	**36**	**50**	**150**	**36**	**50**	**150**	**37**	**43**
18.5	22.5	35	130	22.5	35	130	26	43
–	6	25	37.5	9	13	33	19	49
–	4	5	5	4	5	9	15	37
355	355	355	355	NZMC3...500: 630	NZMH3-...250, 400: 400 NZMH3...500: 630 NZMH3...630: 630	NZMH3-...250, 400: 400 NZMH3...500: 630 NZMH3...630: 630	NZMN4-…630…1250: 2 x 630 NZMN4-…1600: 2 x 800	
–	–	1.9	1.9	3.3	3.3	3.3	19.2	19.2
–	–	1.9	1.9	3.3	3.3	3.3	19.2	19.2
A	A	A	A	A	A	A	B	B
300	**300**	**300**	**300**	**500**	**630**	**630**	**1600**	**1600**
250	250	250	250	500	630	630	1600	1600
300	**300**	**300**	**300**	**450**	**450**	**450**	**1600[2)]**	**1600[2)]**
250	250	250	250	450	450	450	1600[2)]	1600[2)]
–	–	250	250	–	500	500	–	–
–	–	250	250	–	500	500	–	–
–	–	250	250	–	500	500	–	–
–	–	250	250	–	500	500	–	–
20000	20000	20000	20000	15000	15000	15000	10000	10000
7500	**7500**	**10000**	**10000**	**5000**	**5000**	**5000**	**3000**	**3000**
–	7500	7500	7500	3000	3000	3000	2000	2000
–	–	**6500**	**6500**	**2000**	**2000**	**2000**	**2000**	**2000**
–	5000	5000	5000	2000	2000	2000	1000	1000
–	–	7500	7500	–	5000	5000	–	–
–	–	7500	7500	–	5000	5000	–	–
–	–	3000	3000	–	2000	2000	–	–
–	–	3000	3000	–	2000	2000	–	–
120	120	120	120	60	60	60	60	60
19	19	19	19	31	31	31	97	97
< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 25 ≤ 415 V; < 35 > 415 V	< 25 ≤ 415 V; < 35 > 415 V
35	–	85	150	–	85	150	85	125
25	–	35	100	–	42	100	42	85
18[4)]	–	25[4)]	50[4)]	–	35	50	35	50

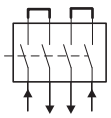
Circuit-breakers for 1000 V AC			**NZMH2...S1 max. 300 A**	**NZMH3...S1 max. 630 A**	**NZMH4...S1 max. 1600 A**
Rated operating voltage	U_e	V AC	1000	1000	1000
Rated uninterrupted current	I_u	A	300/50 °C	630/50 °C	1600/50 °C
Rated operational current					
AC-1			300	630	1600
Rated short-circuit making capacity					
1000 V 50/60 Hz	I_{cm}	kA	17	17	40
Rated short-circuit breaking capacity I_{cn}					
I_{cu} according to IEC/EN 60947 Operating sequence O-t-CO	I_{cu}	kA	10	15	20
I_{cs} according to IEC/EN 60947 Operating sequence O-t-CO-t-CO	I_{cs}	kA	3	10	15
Utility category			A	A	A/B
Maximum operating frequency		Ops/h	120	60	60
Durability					
Mechanical (of which max. 50 % trip by shunt/ undervoltage release)		Operations	20000	15000	10000
Electrical, AC-1 1000 V		Operations	3000	1000	500
Rated insulation voltage	U_i	V AC	1000	1000	1000
For use in IT electrical power networks			–	–	–

Switch-disconnectors for 1000 V DC			**N2-4...S1-DC max. 200 A**	**N3-4...S1-DC max. 500 A**	**N4-4...S1-DC max. 1400 A**
Rated operating voltage	U_e	V DC	1000	1000	1000
Rated uninterrupted current with terminal jumpers	I_u	A	200/65 °C	500/65 °C	1400/65 °C
Rated operational current	I_e		200 (DC 22-B)	500 (DC 22-B)	1400 (DC 21-B)
Rated short-time withstand current t =0.1 s	I_{cw}	kA	3	6	25
Rated conditional short-circuit current	I_q	kA	15	15	–
With back-up fuse		A_gR	200	500	–
Maximum operating frequency		Ops/h	120	60	60
Durability					
Mechanical (of which max. 50 % trip by shunt/ undervoltage release)		Operations	20000	15000	10000
Electrical, 1000 V DC		Operations	2500 (DC 22-B)	1000 (DC 22-B)	500 (DC 21-B)
Rated insulation voltage	U_i	V DC	1250	1250	1250
For use in IT electrical power networks		V DC	1000	1000	1000

Notes

NZM...S1 and N...S1-DC can not be combined with withdrawable units and/or connection on rear.
Can not be combined with early-make auxiliary contacts NZM-...XHIV or box terminal NZM2-4-XKC at U_i > 1000 V DC.

Terminal type N...S1-DC:
for 2 pole switches series connection of two poles each is required. See jumper kit NZM...-4-XKV2P



				PN1/N1 max. 160 A	PN2/N2 max. 250 A	PN3/N3 max. 630 A	N4 max. 1600 A
Switch-disconnectors							
Rated impulse withstand voltage U_{imp}							
Main contacts			V	6000	8000	8000	8000
Auxiliary contacts			V	6000	6000	6000	6000
Rated operating voltage AC (40-60 Hz)		U_e	V AC	690	690	690	690
Max. rated uninterrupted current							
IEC/EN 60947-3		I_u	A	160	250	630	1600
Overvoltage category/degree of pollution				III/3	III/3	III/3	III/3
Rated insulation voltage		U_i	V AC	690	690	1000	1000
For use in IT electrical power networks			V	690	690	690	525
Switching capacity							
Rated short-circuit making capacity		I_{cm}	kA	2.8	5.5	25	53
Rated short-time withstand current							
t = 0.3 s		I_{cw}	kA	2	3.5[1]	12	25
t = 1 s		I_{cw}	kA	2	3.5[1]	12	25
Rated conditional short-circuit current Iq							
With back-up fuse			A gG/gL	PN1(N1)-63…125: 125 PN1(N1)-160: 160	PN2(N2)-160…250: 250	PN3(N3)-400…630: 630	N4-630…1600: 2 x 800
400/415 V			kA	100	100	100	100
690 V			kA	80	80	80	80
With downstream fuse			A gG/gL	PN1(N1)-63…125: 125 PN1(N1)-160: 160	PN2(N2)-160…250: 250	PN3(N3)-400…630: 630	N4-630…1600: 2 x 800
400/415 V			kA	100	100	100	100
690 V			kA	10	80	80	80
Rated making and breaking capacity							
Rated operational current AC-22/23A							
	415 V	I_e	A	160	250	630	1600
	690 V	I_e	A	160	250	630	1600
Lifespan, mechanical		Operations		20000	20000	15000	10000
Maximum operating frequency			Ops/h	120	120	60	60
Lifespan, electrical according to IEC/EN 60947-4-1 Annex B							
AC-1							
	400/415 V	Operations		10000	10000[4]	5000	3000
	690 V	Operations		7500	7500[4]	3000	2000
AC-3							
	400/415 V	Operations		7500	7500[5]	3000	2000
	690 V	Operations		5000	5000[3][5]	2000	1000
Heat dissipation per pole at I_u[2]			W	12.7	16	40	97

Notes

[1] The rated short-time withstand current for PN2/N2 in conjunction with residual-current release NZM2-4-XFI... I_{cw} = 1.5 kA

[2] For thermal losses per pole the specification refers to the maximum rated operational current of the construction size.

[3] For the electrical life at AC-3 for PN2/N2 the following applies: 690 V: max. 160 kW

[4] For 4 pole switch-disconnectors the following applies: 400/415 V 7500 switching operations; 690 V 5000 switching operations

[5] For 4 pole switch-disconnectors the following applies: 400/415 V 6000 switching operations; 690 V 4000 switching operations

						NS1-...-NA max. 125A	NS2-...-NA max. 250A	NS3-...-NA max. 600A	NS4-...-NA max. 1200A
Molded Case Switch									
Rated peak withstand current			U_{imp}						
Main contacts					V	6000	8000	8000	8000
Auxiliary contacts					V	6000	6000	6000	6000
Rated operating voltage			U_e		VAC	690	690	690	690
Max. rated uninterrupted current									
IEC/EN 60947-2 Annex L			I_n		A	125	250	600	1200
UL489/CSA 22.2 No. 5.1			I_n		A	125	250	600	1200
Overvoltage category/pollution degree						III/3	III/3	III/3	III/3
Rated insulation voltage			U_{imp}		V	690	1000	1000	1000
Switching capacity according to UL 489, CSA 22.2 No. 5.1									
		240 V 60 Hz			KA	85	150	150	85
		480 V 60 Hz			KA	35	100	100	65
		600 V 60 Hz			KA	–	50	50	42
Switching capacity divergent from products for North America.									
Rated short-circuit making capacity		240 V 50/60 Hz	I_{cm}		KA	187	330	330	187
		400/415 V 50/60 Hz	I_{cm}		KA	105	330	330	154
		440 V 50/60 Hz	I_{cm}		KA	74	286	286	143
		525 V 50/60 Hz	I_{cm}		KA	53	105	143	84
		690 V 50/60 Hz	I_{cm}		KA	17	53	74	74
Rated short-circuit breaking capacity $I_{cc} = I_{cu}$ To IEC/EN 60947-2 Annex L	I_{cu} to IEC/EN 60947 test cycle O-t-CO	240 V 50/60 Hz	I_{cu}		KA	85	150	150	85
		400/415 V 50/60 Hz	I_{cu}		KA	50	150	150	70
		440 V 50/60 Hz	I_{cu}		KA	35	130	130	65
		525 V 50/60 Hz	I_{cu}		KA	20	50	85	40
		690 V 50/60 Hz	I_{cu}		KA	10	20	35	35
	I_{cs} according to IEC/EN 60947 test cycle O-t-CO-t-CO	240 V 50/60 Hz	I_{cs}		KA	85	150	150	43
		400/415 V 50/60 Hz	I_{cs}		KA	50	150	150	35
		440 V 50/60 Hz	I_{cs}		KA	35	130	130	33
		525 V 50/60 Hz	I_{cs}		KA	10	37.5	33	20
		690 V 50/60 Hz	I_{cs}		KA	7.5	5	9	18
Lifespan, mechanical (of which max. 50 % trip by shunt/undervoltage release)			Operations			20000	20000	15000	10000
Maximum operating frequency			ops./h			120	120	60	60
Lifespan, electrical	AC-1	400/415 V 50/60 Hz	Operations			10000	10000	5000	3000
		690 V 50/60 Hz	Operations			7500	7500	3000	2000
	AC-3	400/415 V 50/60 Hz	Operations			7500	6500	2000	2000
		690V 50/60 Hz	Operations			5000	5000	2000	1000
Heat dissipation per pole at I_u [1]			W			8.7	19	40	97
Total downtime on short-circuit			ms			< 10	< 10	< 10	< 25 ≦ 415 V < 35 > 415 V

Notes [1] Figures apply to the maximum rated operational current of the construction size

Circuit-breaker		Volts AC	Threshold current			Intermediate current			High interrupting capacity		
Part no.	Cont. amps	60Hz		Maximum			Maximum			Maximum	
			rms sym	Peak	I^2dt	rms sym	Peak	I^2dt	rms sym	Peak	I^2dt
	(A)	(V)	(kA)	(kA)	(kA^2s)	(kA)	(kA)	(kA^2s)	(kA)	(kA)	(kA^2s)
NZM B1	125 A	240	8.125	7.4	0.18	22	13.53	0.33	35	16.78	0.35
A.../AF...NA		480	8.125	9.22	0.38	18	15.16	0.67	25	26.55	0.78
NZM N1-	125 A	240	8.125	7.4	0.18	50	18.53	0.38	85	19.16	0.36
A.../AF...NA		480	8.125	9.22	0.38	22	18.55	0.97	35	20.58	1.02
NZMB2-	250 A	240	16.25	13.00	0.4	22	14.5	0.6	35	15.5	0.4
A.../AF...NA		480	15	14	0.6	22	13.5	0.45	25	16.5	0.6
		600	10	12	0.5	14	14.5	0.75	18	15.5	0.75
NZMN2-	250 A	240	16.25	13	0.4	50	17	0.45	85	19.5	0.45
A.../AF...NA		480	16.25	13.5	0.6	22	14.5	0.6	35	20	0.65
		600	15	14.5	0.7	22	16.5	0.8	25	17	0.75
NZMN2-	250 A	240	16.25	12	0.45	50	18	0.4	85	19.5	0.4
VE(F)-NA		480	16.25	14.5	0.5	22	18	0.65	35	20	0.6
		600	15	14.5	0.6	22	17	0.75	25	18	0.65
NZMH2-	125 A	240	8.125	9	0.3	100	19	0.35	200	21.5	0.35
A.../AF...NA		480	8.125	9	0.35	55	23	0.7	150	29	0.85
		600	8.125	10	0.4	42	22.5	0.7	55	26	0.8
NZMH2-	250 A	240	16.25	13	0.4	100	20.5	0.4	150	20	0.4
A... /AF...NA		480	16.25	13.5	0.5	65	24	0.9	100	27	0.8
		600	16.25	13	0.6	30	20	0.7	50	25	0.9
NZMH2-	250 A	240	16.25	11.5	0.4	100	18.5	0.3	150	21	0.4
VE.../VEF...NA		480	16.25	14.5	0.5	65	24	0.6	100	27	0.7
		600	16.25	14.5	0.5	30	20	0.6	50	25	0.8
NZMN3-	250 A	39	24.5	1	-	-	-	85	33.5	1.1	240
VE...NA		25	27	1.8	-	-	-	42	35	1.8	480
		20	25	1.8	-	-	-	35	34	2.6	600
NZMH3-	600 A	240	39	45	4.5	100	35	2	150	40	2.5
VE...NA		480	39	35	2.5	65	39	3	100	47	3
		600	30	31	2.4	42	37	3	50	42	2.8

Part no.	Weight kg
Circuit-breakers	
NZM...1-...	1.046
NZM...1-4-...	1.325
NZM...2-...	2.345
NZM...2-4-...	3.5
NZM...3-...	6.34
NZM...3-4-...	8.4
NZM...4-...	21
NZM...4-4-...	27
Plug-in adapter elements	
+NZM2-XSV	4.7
+NZM2-4-XSV	5.9
Withdrawable units	
+NZM3-XAV	21
+NZM3-4-XAV	27
+NZM4-XAV	52
+NZM4-4-XAV	65

Part no.	Weight kg
Switch-disconnectors	
PN1-..., N1-...	0.926
PN1-4-..., N1-4-...	1.325
PN2-..., N2-...	2.15
PN2-4-..., N2-4-...	2.65
PN3-..., N3-...	5.7
PN3-4-..., N3-4...	7.1
N4-...	17
N4-4-...	22

Temperature dependency, derating

NZM...A(F), NZM...M(S)

Device part no.	Release type	Response time of the overload release at temperatures deviating from the reference temperatures Temperature compensation coefficient 20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Thermomagnetic release (TM)								
System protection		System protection (reference temperature 40 °C)						
NZM…1(-4)-A(F)15…80(-NA)	TM	1.14	1.07	1	0.93	0.86	0.83	0.79
NZM…1(-4)-A(F)90…125(-NA)	TM	1.14	1.07	1	0.93	0.86	0.83	0.79
NZM…1(-4)-A160	TM	1.08	1.04	1	0.96	0.92	0.90	0.88
NZM…1-A20…125-SVE	TM with SVE	1.14	1.07	1	0.93	0.86	0.83	0.79
NZM…2(-4)-A(F)15…200(-NA)	TM	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM…2(-4)-A(F)250(-NA)	TM	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM…2(-4)-A20…200-SVE	TM with SVE	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM…2(-4)-A250-SVE	TM with SVE	1.04	1.02	1	0.98	0.96	0.95	0.94
NZM…3(-4)A-250…500	TM	1.12	1.06	1	0.94	0.88	0.85	0.82
NZM…3(-4)A-250…500	TM with XAV	1.06	1	0.94	0.88	0.82	0.79	0.76
Short-circuit/motor protection		Motor protection (reference temperature 20 °C)						
NZM…1-M(S)40…80(-CNA)	TM	1	0.98	0.95	0.93	0.90	0.89	0.88
NZM…1-M(S)100(-CNA)	TM	1	0.98	0.95	0.93	0.90	0.89	0.88
NZM…1-M(S)40…100-SVE	TM with SVE	1	0.98	0.95	0.93	0.90	0.89	0.88
NZM…2-M(S)20…200(-CNA)	TM	1	0.98	0.96	0.94	0.92	0.91	0.90
NZM…2-M(S)20…200-SVE	TM with SVE	1	0.98	0.96	0.94	0.92	0.91	0.90
NZM…3-S250…500	TM with/without XAV	1	1	1	1	1	1	1

Notes

If temperatures deviate from the reference temperature, a slight change of the overload protection properties occurs. To determine the response time from the tripping characteristics, the temperature compensation coefficients listed in the table must be considered.
Example:
An NZM1-A100 is calibrated for a reference temperature of 40 °C.
What happens when it is operated at an ambient temperature of 60 °C ?
At 60 °C, the temperature compensation coefficient of 0.86 results in a reduced operating current of I_r = 100 A x 0.86 = 86 A. In other words at an ambient temperature of 60 °C the NZM1-A100 trips as if it were set to 86 A.

Device part no.	Release type	Reduction of the rated operational current (derating) under particular ambient conditions (according to IEC 947) Derating coefficient 20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Thermomagnetic release (TM)								
System protection		System protection (reference temperature 40 °C)						
NZM…1(-4)-A(F)15…80(-NA)	TM	1	1	1	1	1	1	1
NZM…1(-4)-A(F)90…125(-NA)	TM	1	1	1	1	0.86	0.83	0.8
NZM…1(-4)-A160	TM	1	1	1	0.95	0.9	0.85	0.8
NZM…1-A20…100-SVE	TM with SVE	1	1	1	1	1	1	1
NZM…1-A125-SVE	TM with SVE	1	0.92	0.87	0.81	–	–	–
NZM…2(-4)-A(F)15…200(-NA)	TM	1	1	1	1	1	1	1
NZM…2(-4)-A(F)250(-NA)	TM	1	1	1	1	0.9	0.85	0.8
NZM…2(-4)-A20…200-SVE	TM with SVE	1	1	1	1	1	1	1
NZM…2(-4)-A250-SVE	TM with SVE	1	0.97	0.92	0.87	0.81	–	–
NZM…3(-4)A-250…500	TM	1	1	1	0.94	0.88	0.85	0.82
NZM…3(-4)A-250…500	TM with XAV	1	1	0.94	0.88	0.82	0.79	0.76
Short-circuit/motor protection		Motor protection (reference temperature 20 °C)						
NZM…1-M(S)40…80(-CNA)	TM	1	1	1	1	1	1	1
NZM…1-M(S)100(-CNA)	TM	1	1	1	1	0.86	0.83	0.8
NZM…1-M(S)40…100-SVE	TM with SVE	1	0.92	0.87	0.81	–	–	–
NZM…2-M(S)20…200(-CNA)	TM	1	1	1	1	1	1	1
NZM…2-M(S)20…200-SVE	TM with SVE	1	1	1	1	1	1	1
NZM…3-S250…500		1	1	1	0.94	0.88	0.85	0.82
NZM…3-S250…500	TM with XAV	1	1	1	0.94	0.88	0.85	0.82
NZM…3-S250…400	TM	1	1	1	1	1	1	1
NZM…3-S250…400	TM with XAV	1	1	1	1	1	0.97	0.94

Notes

In determining the maximum permissible current loads at different ambient temperatures, the derating coefficients listed in the table must be considered.
Example:
An NZM2-A250 should be operated at an ambient air temperature of 65 °C.
How high is the permissible rated operational current I_e?
At 65 °C the derating coefficient is 0.85, i.e. I_e = 250 A × 0.85 = 212.5 A.
At an ambient temperature of 65 °C the NZM2-A250 can therefore be operated at up to I_e = 212.5 A.

Device part no.	Release type	Reduction of the rated operational current (derating) under particular ambient conditions (according to IEC 947) Derating coefficient 20 °C	30 °C	40 °C	50 °C	60 °C	65 °C	70 °C
Electronic release (E)								
System protection								
NZM...3(-4)-AE(F)250...500(-NA)	E	1	1	1	1	1	1	1
NZM...3(-4)-AE(F)550...630(-NA)	E	1	1	1	1	0.9	0.85	0.8
NZM...3(-4)-AE250...400 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...3(-4)-AE630 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
NZM...4(-4)-AE(F)600...1250(-NA)	E	1	1	1	1	1	1	1
NZM...4(-4)-AE1600	E	1	1	1	1	0.87	0.85	0.82
NZM...4(-4)-AE630...1250 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...4(-4)-AE1600 + XAV	E with XAV	1	0.98	0.93	0.89	0.85	0.83	0.8
Selectivity and generator protection								
NZM...2(-4)-VE(F)100...175(-NA) (-S1)	E	1	1	1	1	1	1	1
NZM...2(-4)-VE(F)200...250(-NA) (-S1)	E	1	1	1	1	0.9	0.85	0.8
NZM...2(-4)-VE100...160 + XSV	E with XSV	1	1	1	1	1	1	1
NZM...2(-4)-VE250 + XSV	E with XSV	1	1	1	0.94	0.88	0.84	0.81
NZM...3(-4)-VE(F)250...500(-NA)	E	1	1	1	1	1	1	1
NZM...3(-4)-VE(F)550...630(-NA)	E	1	1	1	1	0.9	0.85	0.8
NZM...3(-4)-VE250...400 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...3(-4)-VE630 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
NZM...4(-4)-VE(F)600...1250(-NA) (-S1)	E	1	1	1	1	1	1	1
NZM...4(-4)-VE1600 (-S1)	E	1	1	1	1	0.87	0.85	0.82
NZM...4(-4)-VE630...1250 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...4(-4)-VE1600 + XAV	E with XAV	1	0.98	0.93	0.89	0.85	0.83	0.8
Motor protection								
NZM...2-ME(SE)90...140(-CNA)	E	1	1	1	1	1	1	1
NZM...2-ME(SE)220(-CNA)	E	1	1	1	1	0.9	0.85	0.8
NZM...2-ME90...140 + XSV	E with XSV	1	1	1	1	1	1	1
NZM...2-ME220 + XSV	E with XSV	1	1	1	0.94	0.88	0.84	0.81
NZM...3-ME(SE)220...350(-CNA) (-S1)	E	1	1	1	1	1	1	1
NZM...3-ME(SE)450(-CNA) (-S1)	E	1	1	1	1	1	1	1
NZM...3-ME220...350 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...3-ME450 + XAV	E with XAV	0.96	0.92	0.87	0.83	0.78	0.75	0.73
NZM...4-ME550...875 (-S1)	E	1	1	1	1	1	1	1
NZM...4-ME1400 (-S1)	E	1	1	1	1	1	1	1
NZM...4-ME550...875 + XAV	E with XAV	1	1	1	1	1	1	1
NZM...4-ME1400 + XAV	E with XAV	1	0.98	0.93	0.89	0.85	0.83	0.8
Switch-disconnectors/Molded Case Switch								
N1(-4) -63, PN1(-4)-63, NS1-63-NA		1	1	1	1	1	1	1
N1(-4) -100...125, PN1(-4)-100...125, NS1-100...125-NA		1	1	1	1	0.86	0.83	0.8
N1(-4) -160, PN1(-4)-160		1	1	1	0.95	0.9	0.85	0.8
N2(-4) -160...200, PN2(-4)-160...200, NS2-160...200-NA		1	1	1	1	1	1	1
N2(-4) -250, PN2(-4)-200, NS2-250-NA		1	1	1	1	0.9	0.85	0.8
N2(-4) -160...200 + XSV		1	1	1	1	1	1	1
N2(-4) -250, NS2-250-NA		1	0.97	0.92	0.87	0.81	-	-
N3(-4)-400, PN3(-4)-400, NS3-400-NA		1	1	1	1	1	1	1
N3(-4)-630, PN3(-4)-630, NS3-600-NA		1	1	1	0.94	0.89	0.86	0.84
N3(-4)-400 + XAV		1	1	1	1	1	1	1
N3(-4)-630 + XAV		0.96	0.92	0.87	0.83	0.78	0.75	0.73
N4(-4)-630...1250, NS4-800...1200-NA		1	1	1	1	1	1	1
N4(-4)-1600		1	1	1	1	0.87	0.85	0.82
N4(-4)-630...1250 + XAV		1	1	1	1	1	1	1
N4(-4)-1600 + XAV		1	0.98	0.93	0.89	0.85	0.83	0.8
Multi-function component adapters								
NZM...3-630...+NZM3-XAD630	with XAD	1	0.96	0.92	0.88	0.84	0.82	0.8

Notes

In determining the maximum permissible current loads at different ambient temperatures, the derating coefficients listed in the table must be considered.
Example:
An NZM2-A250 should be operated at an ambient air temperature of 65 °C.
How high is the permissible rated operational current I_e?
At 65 °C the derating coefficient is 0.85, this means I_e = 250 A x 0.85 = 212.5 A.
The NZM2-A250 may be operated at an ambient temperature of 65 °C with a maximum I_e = 212.5 A.

Active power loss

NZM1, NZM2, NZM3, NZM4

NZM up to 500 A with thermomagnetic release (3 and 4 pole)

	Fixed mounted											
	NZM1-								NS1-		N1-, PN1-	
	A...(-NA)		M...		AF...-NA		S...-CNA		...-NA			
I_n [A]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]
1.2	–	–	–	–	–	–	1.8	413000	–	–	–	–
1.6	–	–	–	–	–	–	–	–	–	–	–	–
2	–	–	–	–	–	–	0.8	66000	–	–	–	–
2.4	–	–	–	–	–	–	–	–	–	–	–	–
3	–	–	–	–	–	–	1.8	66000	–	–	–	–
5	–	–	–	–	–	–	0.7	9180	–	–	–	–
8	–	–	–	–	–	–	1.8	9180	–	–	–	–
12	–	–	–	–	–	–	0.7	1670	–	–	–	–
15	–	–	–	–	5.5	8180	–	–	–	–	–	–
18	–	–	–	–	–	–	1.6	1670	–	–	–	–
20	9.8	8180	–	–	9.8	8180	–	–	–	–	–	–
25	8.8	4680	–	–	8.8	4680	–	–	–	–	–	–
26	–	–	–	–	–	–	2.0	1050	–	–	–	–
30	–	–	–	–	8.2	3030	–	–	–	–	–	–
32	9.3	3030	–	–	–	–	–	–	–	–	–	–
33	–	–	–	–	–	–	3.4	1050	–	–	–	–
35	–	–	–	–	8.2	2220	–	–	–	–	–	–
40	10.7	2220	13.5	2810	10.7	2220	2.7	562	–	–	–	–
45	–	–	–	–	10.7	1760	–	–	–	–	–	–
50	13.2	1760	14.1	1880	13.2	1760	4.2	562	–	–	–	–
60	–	–	–	–	12.9	1190	–	–	–	–	–	–
63	14.2	1190	14.9	1250	–	–	6.7	562	6.7	562	6	380
70	–	–	–	–	12.5	850	–	–	–	–	–	–
80	16.3	850	20.8	1085	16.3	850	10.8	562	–	–	–	–
90	–	–	–	–	17.7	730	–	–	–	–	–	–
100	21.9	730	23.9	795	21.9	730	16.9	562	16.9	562	11.4	380
110	–	–	–	–	20.7	570	–	–	–	–	–	–
125	26.7	570	–	–	26.7	570	–	–	26.3	562	17.8	380
150	–	–	–	–	–	–	–	–	–	–	–	–
160	36.1	470	–	–	–	–	–	–	–	–	29.2	380
175	–	–	–	–	–	–	–	–	–	–	–	–
200	–	–	–	–	–	–	–	–	–	–	–	–
225	–	–	–	–	–	–	–	–	–	–	–	–
250	–	–	–	–	–	–	–	–	–	–	–	–
300	–	–	–	–	–	–	–	–	–	–	–	–
400												
500												

NZM2/3/4 with electronic release

	Fixed mounted			
	NZM2-...		N2-..., PN2-...		N2-4-...-S1-DC (N+L1+L2+L3)	
I_n [A]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]
200	–	–	–	–	44	275
250	52	275	48	256	–	–
	NZM3-...		**N3-..., PN3-...**		**N3-4-...-S1-DC** (N+L1+L2+L3)	
I_n [A]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]
450	–	–	–	–	122	150
630	119	100	107	90	–	–
	NZM4-...		**N4-...**		**N4-4-...-S1-DC** (N+L1+L2+L3)	
I_n [A]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]
1250	–	–	–	–	231	37
1400	–	–	–	–	290	37
1600	284	37	284	37	–	–

Additional plug-in units

	NZM1-...	
I_n [A]	P [W]	B [µohms]
125	14	300
	NZM2-...	
I_n [A]	P [W]	B [µohms]
250	19	100

Additional withdrawable units

	NZM3-...	
I_n [A]	P [W]	B [µohms]
630	83	70
	NZM4-...	
I_n [A]	P [W]	B [µohms]
1600	77	10

Fixed mounted															
NZM2-								**NS2-**		**N2-, PN2-**		**NZM3-**	
A...(-NA)		**M...**		**AF...-NA**		**S...-CNA**		**...-NA**				**A.../S...**	
P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]	P [W]	B [µohms]
–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	5.8	750000	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	7.8	450000	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	0.3	4600	–	–	–	–	–	–
–	–	–	–	–	–	0.9	4600	–	–	–	–	–	–
–	–	–	–	–	–	0.5	1200	–	–	–	–	–	–
–	–	–	–	2.9	4250	–	–	–	–	–	–	–	–
–	–	–	–	–	–	1.2	1200	–	–	–	–	–	–
5.1	4250	5.1	4250	5.1	4250	–	–	–	–	–	–	–	–
8	4250	8	4250	5.9	3140	–	–	–	–	–	–	–	–
–	–	–	–	–	–	1.6	780	–	–	–	–	–	–
–	–	–	–	8.5	3140	–	–	–	–	–	–	–	–
9.6	3140	9.6	3140	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	2.5	780	–	–	–	–	–	–
–	–	–	–	10.3	2800	–	–	–	–	–	–	–	–
13.4	2800	13.4	2800	13.4	2800	1.5	317	–	–	–	–	–	–
–	–	–	–	13.8	2270	–	–	–	–	–	–	–	–
17	2270	17	2270	17	2270	2.4	317	–	–	–	–	–	–
–	–	–	–	18.4	1700	–	–	–	–	–	–	–	–
20.2	1700	20.2	1700	–	–	3.8	317	–	–	–	–	–	–
–	–	–	–	15.7	1070	–	–	–	–	–	–	–	–
20.5	1070	20.5	1070	20.5	1070	6.1	317	–	–	–	–	–	–
–	–	–	–	20.8	855	–	–	–	–	–	–	–	–
25.7	855	25.7	855	25.7	855	9.5	317	–	–	–	–	–	–
–	–	–	–	21.4	589	–	–	–	–	–	–	–	–
27.6	589	27.6	589	27.6	589	14.9	317	–	–	–	–	–	–
–	–	–	–	33.6	500	–	–	–	–	–	–	–	–
38.4	500	38.4	500	–	–	24.3	317	24.3	317	19.7	256		
–	–	–	–	36.8	400	–	–	–	–	–	–		
48	400	48	400	48	400	38	317	38	317	30.7	256		
–	–	–	–	47.1	310	–	–	–	–	–	–		
58.1	310	–	–	58.1	310	59.4	317	59.4	317	48	256	68	364
83.7	310	–	–	83.7	310	85.6	317	–	–	–	–	79	256
												72	151
												93	124

Notes:

The values stated in the table apply for 3 and 4 pole fixed mounted devices with an equal load distribution.
On 4 pole devices the current in the neutral conductor is equal to zero.
The total resistive load is the measured value for a 3 pole or a 4 pole switch (independent of I_n and the type of release).

The total resistive load for a switch or withdrawable plug results from: the resistive value for fixed mounting + resistive value for plug-in or withdrawable.
The heat dissipation can be calculated with the formula: $P = 3 \times R \times I^2$

Terminal capacities

NZM…, PN…, NS…, N…

					NZM1, PN1, N1, NS1 160 A	I_n[1] A	NZM2, PN2, N2, NS2 300 A	I_n[1] A	NZM3, PN3, N3, NS3 630 A	I_n[1] A
Terminal capacities										
Standard equipment					Box terminal	–	Screw terminal	–	Screw terminal	–
Accessories					Screw terminals Tunnel terminals Rear terminal bolts		Box terminal Tunnel terminals Rear terminal bolts		Box terminal Tunnel terminals Rear terminal bolts	
Copper conductors and cables										
Box terminal	Solid			mm²	1 x (10 – 16) 2 x (6 – 16)	160	1 x (10 – 16) 2 x (4 – 16)	300	2 x 16	500
	Stranded			mm²	1 x (25 – 70)[3] 2 x (6 – 25)		1 x (25 – 185) 2 x (25 – 70)		1 x (35 – 240) 2 x (25 – 120)	
Tunnel terminal	Solid Stranded			mm²	1 x 16	160	1 x 16	300	–	–
		1-hole		mm²	1 x (25 – 95)		1 x (25 – 185)		1 x (25 – 185)	350
		Double-hole		mm²	–	–	–	–	1 x (50 – 240) 2 x (50 – 240)	630 2 x 185
		4-hole		mm²	–	–	–	–	–	–
Screw terminals and connection on rear										
Directly on switch	Solid			mm²	1 x (10 – 16) 2 x (6 – 16)	160	1 x (10 – 16) 2 x (4 – 16)	300	1 x 16 2 x 16	630 2 x 185
	Stranded			mm²	1 x (25 – 70)[3] 2 x 25		1 x (25 – 185) 2 x (25 – 70)		1 x (25 – 240) 2 x (25 – 240)	
Module plate	1-hole	min.		mm²	–	–	–	–	–	–
		max.		mm²	–	–	–	–	–	–
Module plate	2-hole	min.		mm²	–	–	–	–	–	–
		max.		mm²	–	–	–	–	–	–
Connection width extension				mm²					2 x 300	630 2 x 185
Aluminium conductors and cables										
Tunnel terminal	Solid Stranded			mm²	1 x 16	160	1 x 16	250	1 x 16	350
		1-hole		mm²	1 x (25 – 95)		1 x (25 – 185)		1 x (25 – 185)[2]	
		Double-hole		mm²	–	–	–	–	1 x (50 – 240) 2 x (50 – 240)	630
		4-hole		mm²	–	–	–	–	–	–
Screw terminals and connection on rear										
Directly on switch	Solid			mm²	1 x (10 – 16) 2 x (10 – 16)	160	1 x (10 – 16) 2 x (10 – 16)	250	1 x 16 2 x (10 – 16)	400
	Stranded			mm²	1 x (25 – 35) 2 x (25 – 35)		1 x (25 – 50) 2 x (25 – 50)		1 x (25 – 120) 2 x (25 – 120)	
Module plate	1-hole	min.		mm²	–	–	–	–	–	–
	1-hole	max.		mm²	–	–	–	–	–	–
Module plate	2-hole			mm²	–	–	–	–	–	–
Connection width extension				mm²						
Copper strip (number of segments x width x segment thickness)										
Box terminal		min.		mm	2 x 9 x 0.8	160	2 x 9 x 0.8	300	6 x 16 x 0.8	630
		max.		mm	9 x 9 x 0.8		10 x 16 x 0.8 (2 x) 8 x15.5 x 0.8		10 x 24 x 1.0 + 5 x 24 x 1.0 (2 x) 8 x 24 x 1.0	
Single flat cable terminal		min.		mm	–	–	–	–	–	–
		max.		mm	–	–	–	–	–	–
Module plate	1-hole			mm	–	–	–	–	–	–
Screw terminals and connection on rear										
Copper strip, perforated		min.		mm	–	–	2 x 16 x 0.8	300	6 x 16 x 0.8	630
Copper strip, perforated		max.		mm	–	–	10 x 24 x 0.8		10 x 32 x 1.0 + 5 x 32 x 1.0	
Connection width extension				mm²	–	–	–	–	(2 x) 10 x 50 x 1.0	
Copper bar (width x thickness)										
Screw terminals and connection on rear										
Screw terminals					M6	–	M8	–	M10	–
Directly on switch		min.		mm	12 x 5	160	16 x 5	300	20 x 5	630
		max.		mm	16 x 5		24 x 8		30 x 10 +30 x 5	
Module plate	1-hole	min.		mm	–	–	–	–	–	–
		max.		mm	–	–	–	–	–	–
Module plate	2-hole			mm	–	–	–	–	–	–
Connection width extension		min.		mm	–	–	–	–	–	630
		max.		mm	–	–	–	–	2 x (10 x 50)	10 x 40

Notes

[1] The rated currents I_n have been determined according to IEC/EN 60947 (switchgear standard) and generally relate to the max. defined cross-sections. They are given for general reference here. The engineering standards which apply in each case must be observed.

[2] To 240 mm² can be connected depending on the make of cable.

[3] To 95 mm² can be connected depending on the make of cable.

Terminal capacities

NS…, NZM…-NA

NZM4, N4, NS4 1600 A	I_n[1] A		NZM…1…NA, NS1…NA	NZM…2…NA, NS2…NA	NZM…3…NA, NS3…NA	NZM…4…NA, NS4…NA
Screw terminal	–	–	Box terminal	Screw terminal	Screw terminal	Screw terminal
Tunnel terminals Rear terminal bolts Strip terminal		–	Screw terminals Tunnel terminals Rear terminal bolts	Box terminal Tunnel terminals Rear terminal bolts	Box terminal Tunnel terminals Rear terminal bolts	Tunnel terminals Rear terminal bolts Strip terminal
–	–	AWG	1 x (12 – 6)	1 x (12 – 6)	–	–
–	–	AWG/kcmil	1 x (4 – 2/0)	1 x (4 – 350)	1 x (2 – 500)	–
–	–	AWG	1 x 6	1 x 6	1 x 6	–
–	–	AWG/kcmil	1 x (4 – 3/0)	1 x (4 – 350)	1 x (4 – 350)	–
–	–	AWG/kcmil	–	–	1 x (0 – 500) 2 x (0 – 500)	–
4 x (50 – 240)	1400	AWG/kcmil	–	–	–	4 x (0 – 500)
–	–	AWG	1 x (12 – 6) 2 x (9 – 6)	1 x (12 – 6)	–	–
1 x (120 – 185) 4 x (50 – 185)	1250	AWG/kcmil	1 x (4 – 2/0)	1 x (4 – 3/0)	1 x (4 – 350) 2 x 350	1 x (250 – 350) 4 x (0 – 350)
1 x (120 – 300)	1000	kcmil	–	–	–	1 x (250 – 600)
2 x (95 – 300)		AWG/kcmil	–	–	–	2 x (3/0 – 600)
2 x (95 – 185)	1400	AWG/kcmil	–	–	–	2 x (3/0 – 350)
4 x (35 – 185)		AWG/kcmil	–	–	–	4 x (2 – 350)
4 x 300 6 x (95 – 240)	1600 4 x 240	AWG/kcmil			2 x 500	4 x 600 6 x (3/0 – 500)
–	–	AWG	–	–	–	–
–	–	AWG/kcmil	–	–	–	–
–	–	AWG/kcmil	–	–	–	–
4 x (50 – 240)	1400	AWG/kcmil	–	–	–	–
–	–	AWG	–	–	–	–
–	–	AWG/kcmil	–	–	–	–
1 x (185 – 240)	Please inquire	kcmil	–	–	–	–
2 x (70 – 185)	Please inquire	AWG/kcmil	–	–	–	–
4 x 50	–	AWG	–	–	–	–
2 x 240 6 x (70 – 240)	Please inquire	AWG/kcmil				–
–	–	mm	2 x 9 x 0.8	2 x 9 x 0.8	6 x 16 x 0.8	–
–	–	mm	9 x 9 x 0.8	10 x 16 x 0.8	10 x 24 x 1.0 + 5 x 24 x 1.0 (2 x) 8 x 24 x 1.0	–
6 x 16 x 0.8	1100	mm	–	–	–	6 x 16 x 0.8
(2 x) 10 x 32 x 1.0		mm	–	–	–	(2 x) 10 x 32 x 1.0
(2 x) 10 x 50 x 1.0	1250 (2 x) 10 x 40 x 1.0	mm	–	–	–	(2 x) 10 x 50 x 1.0
(2 x) 10 x 50 x 1.0	1600	mm	–	2 x 16 x 0.8	6 x 16 x 0.8	(2 x) 10 x 50 x 1.0
(2 x) 10 x 50 x 1.0		mm	–	10 x 16 x 0.8	10 x 32 x 1.0 + 5 x 32 x 1.0	(2 x) 10 x 50 x 1.0
(2 x) 10 x 80 x 1.0	1600 2 x (10 x 50 x 1.0)	mm	–	–	(2 x) 10 x 50 x 1.0	(2 x) 10 x 80 x 1.0
M10	–	–	M6	M8	M10	M10
25 x 5	1600	mm	12 x 5	16 x 5	20 x 5	25 x 5
2 x (50 x 10) 2 x (80x 10)		mm	16 x 5	20 x 5	30 x 10 +30 x 5	2 x (50 x 10)
25 x 5	1250 2 x (40 x 10)	mm	–	–	–	25 x 5
2 x (50 x 10)		mm	–	–	–	2 x (50 x 10)
2 x (50 x 10)	1600	mm	–	–	–	2 x (50 x 10)
60 x 10	1600 2 x (50 x 10)	mm	–	–	–	60 x 10
2 x (80 x 10)		mm	–	–	2 x (10 x 50)	2 x (80 x 10)

Temperature dependency

N...S1-DC

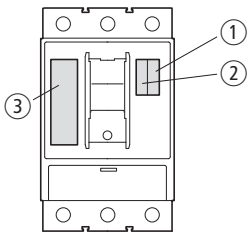
Basic devices	Jumper kits	Reduction of the rated operational current (derating) under particular ambient conditions									
		Contact protection	Mounting position	Temperature compensation coefficient							
				20 °C	30 °C	40 °C	50 °C	55 °C	60 °C	65 °C	70 °C
Switch-disconnectors											
N2-4-160-S1-DC	+NZM2-4-XKV2P	IP2X	v	1	1	1	1	1	1	1	1
			h	1	1	1	1	1	1	1	1
N2-4-200-S1-DC	+NZM2-4-XKV2P	IP2X	v	1	1	1	1	1	1	1	0.95
			h	1	1	1	1	1	1	0.95	0.92
N3-4-320(400)-S1-DC	+NZM3-4-XKV2P	IP2X	v	1	1	1	1	1	1	1	1
			h	1	1	1	1	1	1	1	1
	+NZM3-4-XKVI2P	IP00	v	1	1	1	1	1	1	1	1
			h	1	1	1	1	1	1	1	1
N3-4-500-S1-DC	+NZM3-4-XKVI2P-K	IP00	v	1	1	1	1	1	1	1	0.97
			h	1	1	1	1	1	1	0.97	0.95
	+NZM3-4-XKVI2P	IP00	v	1	1	1	1	0.97	0.95	0.92	0.89
			h	1	1	1	0.97	0.95	0.92	0.89	0.87
	+NZM3-4-XKV2P-K	IP1X	v	1	1	1	1	1	0.98	0.95	0.92
			h	1	1	1	1	0.97	0.94	0.91	0.89
	+NZM3-4-XKV2P-K	IP2X	v	1	1	1	0.95	0.92	0.89	0.86	0.83
			h	1	1	0.98	0.93	0.9	0.87	0.84	0.81
N4-4-800(1000)-S1-DC	+NZM4-4-XKV2P	IP2X	v	1	1	1	1	1	1	1	1
			h	1	1	1	1	1	1	1	1
N4-4-1250-S1-DC	+NZM4-4-XKV2P	IP2X	v	1	1	1	1	1	1	1	0.97
			h	1	1	1	1	1	1	0.97	0.95
N4-4-1400-S1-DC	+NZM4-4-XKV2P	IP2X	v	1	1		0.94	0.92	0.9	–	–
			h	1	1	0.97	0.91	–	–	–	–
	+NZM3-4-XKV2P-1400	IP00	v	1	1	1	1	1[1)]	1[1)]	1[1)]	0.97
			h	1	1	1	1	1[1)]	1[1)]	1[1)]	0.97

Notes

Mounting position:
v = vertical, h = horizontal
Incomer and outgoer at bottom or top, freely selectable.
[1)] Incomer at from bottom only.

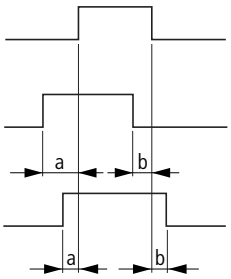
			At AC = 50/60 Hz	M22-K...	M22-CK...	XHIV
Auxiliary contacts						
Rated operating voltage						
AC voltage		U_e	V AC	500	230	500
DC voltage		U_e	V DC	220	220	220
Conventional thermal current		$I_{th} = I_e$	A	4	4	4
Rated operational current						
AC-15	115 V	I_e	A	4	4	4
	230 V	I_e	A	4	4	4
	400 V	I_e	A	2	–	2
	500 V	I_e	A	1	–	1
DC-13	24 V	I_e	A	3	3	3
	42 V	I_e	A	1.7	1	1.5
	60 V	I_e	A	1.2	0.8	0.8
	110 V	I_e	A	0.8	0.5	0.5
	220 V	I_e	A	0.3	0.2	0.2
Short-circuit protection						
Max. fuse			A gG/gL	10	10	10
Max. miniature circuit-breaker			A	PKZM0-10/FAZ-B6	FAZ-B6/B1	FAZ-B6
Early make times compared to main contacts on make and break (switching times on manual operation).			ms	–	–	NZM1, PN1, N(S)1: approx. 20 NZM2, PN2, N(S)2: approx. 20 NZM3, PN3, N(S)3: approx. 20 NZM4, N(S)4: approx. 90 With NZM4/N(S)4 the HIV does **not** feature early break.
Terminal capacities						
Solid or flexible conductor with ferrule			mm²	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)	1 x (0.5 – 1.5) 2 x (0.5 – 0.75)	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)
			AWG	1 x (18 – 14) 2 x (18 – 14)	1 x (20 – 18) 2 x (20 – 18)	1 x (18 – 14) 2 x (18 – 14)
UL/CSA						
Rated operational current		I_e	A	10 A … 600 V AC 1 A – 250 V DC		2.5 A – 240 V AC 1 A – 250 V DC
Heavy Pilot Duty				A600/P300 via 300 V AC same polarity		C300/R300

Maximum equipment and position of the built-in accessories



	③ -XHIV(2S) or -XA or -XU	② HIA	① HIN
NZM1, N(S)1	1	1	1
NZM2, N(S)2	1	1	2
NZM3, N(S)3	1	1	3
NZM4, N(S)4	1	2	3
PN1	1	–	1
PN2	1	–	2
PN3	1	–	3

Time differences ON-OFF



Main contact

Auxiliary contact, early make (HIV)

Auxiliary contact, normal (HIN)

Notes On combination with remote operator NZM-XR..., the right slot for standard auxiliary contacts HIN can be equipped only with single contacts.

	Time difference a (ms)						Time difference b (ms)					
	Manual operation			Motor drive			Manual operation			Motor drive		
	HIV	HIN		HIV	HIN		HIV	HIN		HIV	HIN	
		K10	K01		K10	K01		K10	K01		K10	K01
NZM1	20[2)]	0	2.5	–	–	–	20[2)]	0	2.5	–	–	–
NZM2	20[2)]	3.5	6.5	Not permissible	2.5	4.5	20[2)]	3	4.5	Not permissible	3	4
NZM3	20[2)]	4	8	Not permissible	2	4	20[2)]	3.5	8	Not permissible	3	6.5
NZM4	90[2)]	7	11	Not permissible	Please inquire	Please inquire	0[1)2)]	12	15	Not permissible	Please inquire	Please inquire

Notes
[1)] With NZM4/N(S)4 the HIV does **not** feature early break.
[2)] Minimum value, as it is dependent on the switching speed.

			NZM1(2/3)-XU…	NZM4-XU…
Undervoltage releases				
Rated control voltage				
AC voltage at 50/60 Hz	U_s	V AC	24...600	24...600
DC voltage	U_s	V DC	12...250	12...250
Operating range				
Drop-out voltage		x U_s	0.35 – 0.7	0.35 – 0.7
Pick-up voltage		x U_s	0.85 – 1.1	0.85 – 1.1
Power consumption				
AC voltage				
AC pick-up rating		VA	1.5	3.6
AC consumption when closed		VA	1.5	3.6
DC voltage				
DC pick-up rating		W	0.8	2.5
DC consumption when closed		W	0.8	2.5
Max. opening delay (response time until the main circuits open)		ms	19	23
Minimum signal duration		ms	10 – 15	10 – 15
Terminal capacities				
Solid or flexible conductor with ferrule		mm²	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)
		AWG	1 x (18 – 14) 2 x (18 – 14)	1 x (18 – 14) 2 x (18 – 14)

			UVU-NZM
Undervoltage releases, off-delayed			
Rated operating voltage			
AC voltage at 50/60 Hz	U_e	V AC	24, 220 – 550
DC voltage	U_e	V DC	24
Inrush current (peak value)	I_e	mA	< 500
Power consumption		VA	50
Deceleration time	t_{sd}	ms	70 – 4000
With additional external capacitor 90,000 µF ≧ 35 V		s	To 16
With additional external capacitor 30,000 µF ≧ 35 V		s	To 8
Terminal capacities			
Solid or flexible conductor with ferrule		mm²	1 x (0.5 – 2.5) 2 x (0.5 – 1.5)

			NZM-XCM
Capacitor unit for shunt release			
Rated operating voltage	U_e	V AC	
Rated operational current	I_e	mA	
Inrush current (peak value)	I_e	A	
Terminal capacity			
Solid or flexible conductor with ferrule		mm²	1 x (0.5 – 2.5)
		AW G	1 x (20 – 14) 2 x (20 – 16)

			NZM1(2/3)-XA…	NZM4-XA…	NZM2/3-XA...-MNS	NZM4-XA...-MNS
Shunt releases (for power circuit breaker)						
Rated control voltage						
AC voltage	U_s	V AC	12...440	12...440	230	230
DC voltage	U_s	V DC	12...440	12...440	–	–
Frequency range		Hz	0 – 400	0 – 400	50/60	50/60
Operating range						
AC voltage		x U_s	0.7...1.1	0.7...1.1	0.1...1.1	0.1...1.1
DC voltage		x U_s	0.7...1.1	0.7...1.1	–	–
Power consumption						
AC/DC pick-up rating		VA/W	2.5	2.5	–	–
AC/DC consumption when closed		VA/W	2.5	2.5	–	–
Maximum power consumption at 110 % U_s (230 V 50 Hz)		A	–	–	0.5	1
Max. opening delay (response time until the main circuits open)		ms	20	22	20	22
Max. duty factor		ms	∞	∞	1000 ms	1000 ms
Minimum signal duration		ms	10 – 15	10 – 15	10 – 15	10 – 15
Terminal capacity						
Solid or flexible conductor with ferrule		mm²	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)	1 x (0.75 – 2.5) 2 x (0.75 – 2.5)
		AWG	1 x (18 – 14) 2 x (18 – 14)	1 x (18 – 14) 2 x (18 – 14)	1 x (18 – 14) 2 x (18 – 14)	1 x (18 – 14) 2 x (18 – 14)

				NZM2-XRD...	NZM2-XR…	NZM3-XR…	NZM4-XR…
Remote operators							
Rated control voltage							
AC voltage		U_s	V AC	100...440	110...440	110...440	110...440
DC voltage		U_s	V DC	24...250	24...250	24...250	24...250
Operating range							
AC voltage		U_s		0.85...1.1	0.85...1.1	0.85...1.1	0.85...1.1
DC voltage		U_s		0.85...1.1	0.85...1.1	0.85...1.1	0.85...1.1
Rated operational power							
AC voltage	110 V … 130 V AC		VA	550	350	350	350
	208 V … 240 V AC		VA	550	350	350	350
	380 V … 440 V AC		VA	650	350	350	350
DC voltage	24 V … 30 V DC		W	450	250 (max. 17A 30 ms)	250	250
	110 V … 130 V DC		W	450	250	250	250
	220 V … 250 V DC		W	450	250	250	250
Total make time			ms	110-170	60	80	100
Total opening delay			ms	110-170	300	1000	3000
Minimum signal duration							
With switch on			ms	100	30	30	30
With switch off			ms	100	150	250	500
Lifespan, mechanical		Operations		20000	20000	15000	10000
Maximum operating frequency			Ops/h	120	120	60	20
Terminal capacities							
Solid or flexible conductor with ferrule			mm²	0.75 – 2.5	0.75 – 2.5	0.75 – 2.5	0.75 – 2.5
			AWG	18 – 14	18 – 14	18 – 14	18 – 14

			PFR-003	PFR-03	PFR-5
Electrical					
Standards			IEC/EN 60947-2, IEC 755, IEC 1008, IEC 1009		
Sensitivity			Pulse-current sensitive, type A		
Rated control voltage	U_s	V AC	230 ±20% (50/60 Hz)		
Motor rating	P_e	W	3	3	3
Rated fault currents	$I_{\triangle n}$	A	0.03	0.3	0.03, 0.1, 0.3, 0.5, 1, 3, 5
Deceleration time	t_v	s	0.02 (non-delayed)	0.02 (non-delayed)	0.02, 0.1, 0.3, 0.5, 1, 3, 5
Relay contacts			1 built-in changeover contact	1 built-in changeover contact	1 built-in changeover contact
Rated operating voltage of the relay contacts		V AC/DC	250/100	250/100	250/100
Rated operational current of the relay contacts		A	6	6	6
Fault current early warning		Hz	–	–	0.5 = 25% – 50% $I_{\triangle n}$ 1 = 50% – 75% $I_{\triangle n}$ 2 = 75% – 100% $I_{\triangle n}$
Mechanical					
Standard front dimension		mm	45	45	45
Device height		mm	85	85	85
Built-in width		mm	36	36	36
Mounting			Quick attachment for top-hat rail DIN 46277, EN 50022		
Terminals top and bottom			Box terminals		
Terminal protection			Finger and back-of-hand proof BGV A2, VDE 106 Part 100		
Terminal capacities		mm²	2 x 0.75 – 2.5 solid, 2 x 0.75 – 1.5 flexible/with sleeve		
Sealing facility for setting buttons			–	–	Yes

			NZM1(-4)-XFI30R NZM1(-4)-XFI300R NZM1(-4)-XFIR	**NZM1(-4)-XFI30U NZM1(-4)-XFI300U NZM1(-4)-XFIU**	**+NZM2-4-XFI30 +NZM2-4-XFI**	**+NZM2-4-XFIA30 +NZM2-4-XFIA NZMH2...-XFIA30**
Electrical						
Standards			IEC/EN 60947-2			
Sensitivity			Pulse-current sensitive, type A			
Min. operating voltage						
For detecting type A/AC fault currents			80 V (dependent on mains power)	80 V (dependent on mains power)	0 V (independent of mains power)	0 V (independent of mains power)
For detecting type B fault currents			–	–	–	50 V (dependent on mains power)
Suitable for use in			Three- and single-phase systems	Three-phase systems	Three- and single-phase systems	Three- and single-phase systems
Rated operating voltage	U_e	V AC	200…415 (3~)	200…415 (3~)	280…690	50…400 (3~)
Rated frequency	*f*	Hz	50/60	50/60	50/60	50/60
Number of poles			3/4	3/4	3/4	3/4
Rated operational current range	I_n	A	15…160	15…100	15…250	15…250
Rated fault currents	$I_{\triangle n}$	A				
NZM1(-4)-XFI30R			0.03			
NZM1(-4)-XFI300R			0.3			
NZM1(-4)-XFIR			0.03-0.1-0.3-0.5-1-3			
NZM1(-4)-XFI30U				0.03		
NZM1(-4)-XFI300U				0.3		
NZM1(-4)-XFIU				0.03-0.1-0.3-0.5-1-3		
+NZM2-4-XFI30					0.03	
+NZM2-4-XFI					0.1-0.3-1-3	
+NZM2-4-XFIA30						0.03
+NZM2-4-XFIA						0.3-1
NZMH2...-XFIA30						0.03
Detection range of fault current			50/60 Hz	50/60 Hz	50/60 Hz	With AC voltage: 0 – 100 kHz With pulsed DC voltage: 50 Hz
Rated ultimate short-circuit making and rated breaking capacity	$I_{\triangle m}$	A	= I_{CU}	= I_{CU}	= I_{CU}	= I_{CU}
Fault current early warning			≧ 0.3 x $I_{\triangle n}$	≧ 0.3 x $I_{\triangle n}$	–	–
Shock resistance (IEC 60068-2-27)			20 (half-sinusoidal shock 20 ms)			
Lifespan, mechanical (50 % with fault current)	Operations		20000	20000	≧ 2000	≧ 2000 NZMH2: 20000
Mechanical						
Standard front dimension		mm	45	45	96	96
Mounting			On right side	Bottom	Bottom	Bottom
Mounting position			Vertical and 90° in all directions			
Feeder			NZM1 from above	NZM1 from above	Any	Bottom
Degree of protection			IP20 in the operating component area			
Ambient temperature		°C	–5…+40	–5…+40	–25…+70	–25…+70
Terminal capacities						
Flexible without ferrule		mm^2	Same as NZM1 standard terminal			
Flexible with ferrule		mm^2	Same as NZM1 standard terminal			
Sealability			Yes, setting buttons			

			DMI
General			
Dimensions (W x H x D)		mm	107.5 x 90 x 53
Modular spacing (space units)			6 SU (space units) wide
Weight		kg	0.3
Mounting			Top-hat rail IEC/EN 60715, 35 mm
Ambient climatic conditions			
Operating ambient temperature		°C	0 to +55
Built-in position			Horizontal/vertical
Condensation			Prevent condensation by means of suitable measures
LCD display (clearly legible)		°C	0 to +55
Storage/transport		°C	-40 to +70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5...95
Air pressure (in operation)		hPa	795...1080
Corrosion resistance			
IEC/EN 60068-2-42	4 days SO_2	cm^3/m^3	10
IEC/EN 60068-2-43	4 days H_2S	cm^3/m^3	1
Ambient mechanical conditions			
Pollution degree			2
Degree of protection IEC/EN 60529			IP20
Vibrations (IEC/EN 60068-2-6)			
Constant amplitude 0.15 mm		Hz	10...57
Constant acceleration, 2 g		Hz	57...150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11		Shocks	18
Drop IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1
Power supply			
Rated operating voltage	U_e	V DC	24
Permissible range		V DC	20.4...28.8
Residual ripple		%	≦ 5
Input current at 24 V DC		mA	210
Voltage dips (IEC/EN 61131-2)		ms	10
Power loss at 24 V DC		W	5

			EASY221-CO	EASY222-DN	NZM-XDMI-DPV1
General					
Standards			EN 55011, EN 55022, EN 61000-4, IEC 60068-2-6, IEC 60068-2-27		
Dimensions (W x H x D)		mm	35.5 x 90 x 58 (2 space units)	35.5 x 90 x 58 (2 space units)	35.5 x 90 x 58 (2 space units)
Weight		kg	0.15	0.15	0.15
Mounting			Top-hat rail EN 50022, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories)		
Terminal capacity					
Solid		mm^2	0.2x4 (AWG 22 – 12)	0.2x4 (AWG 22 – 12)	0.2x4 (AWG 22 – 12)
Flexible with ferrule		mm^2	0.2x2.5 (AWG 22 – 12)	0.2x2.5 (AWG 22 – 12)	0.2x2.5 (AWG 22 – 12)
Standard screwdriver		mm	3.5 x 0.8	3.5 x 0.8	3.5 x 0.8
Max. tightening torque		Nm	0.6	0.6	0.6
Ambient climatic conditions					
Operating ambient temperature		°C	-25 to 55, low temperatures to IEC 60068-2-1, high temperatures to IEC 60068-2-2		
Condensation			Prevent condensation by means of suitable measures		
Storage		°C	40 – 70	40 – 70	40 – 70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 – 95	5 – 95	5 – 95
Air pressure (in operation)		hPa	795 – 1080	795 – 1080	795 – 1080
Corrosion resistance					
IEC/EN 60068-2-42	4 days SO_2	cm^3/m^3	10	10	10
IEC/EN 60068-2-43	4 days H_2S	cm^3/m^3	1	1	1
Ambient mechanical conditions					
Pollution degree			2	2	2
Degree of protection (IEC/EN 60529)			IP20	IP20	IP20
Vibrations (IEC/EN 60068-2-6)					
Constant amplitude 0.15 mm		Hz	10 – 57	10 – 57	10 – 57
Constant acceleration, 2 g		Hz	57 – 150	57 – 150	57 – 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	18	18	18
Drop (IEC/EN 60 068-2-31)	Drop height	mm	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	1	1	1
Mounting position			horizontal x vertical	horizontal x vertical	horizontal x vertical
Electromagnetic compatibility (EMC)					
Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)					
Air discharge		kV	8	8	8
Contact discharge		kV	6	6	6
Electromagnetic fields (IEC/EN 61000-4-3, RFI)		V/m	10	10	10
Radio interference suppression (EN 55011)			EN 55011 Class B EN 55022 Class B		EN 55011 Class A EN 55022 Class A
Burst impulse (IEC/EN 61000-4-4, Level 3)					
Supply cables		kV	2	2	2
Signal cables		kV	2	2	2
High-energy pulses (surge) (IEC/EN 61000-4-5, Level 2)		kV	0.5 (supply cables, symmetrical)		
Immunity to line-conducted interference (IEC/EN 61000-4-6)		V	10	10	10

			EASY221-CO	EASY222-DN	NZM-XDMI-DPV1
Insulation resistance					
Clearances and creepage distances			EN 50178, UL 508, CSA C22.2, No. 142		
Insulation resistance			EN 50178		
Power supply					
Rated operating voltage	U_e	V	24 (-15/+20 %)	24 (-15/+20 %)	24 (-15/+20 %)
Permissible range		V DC	20.4 – 28.8	20.4 – 28.8	20.4 – 28.8
Ripple		%	< 5	< 5	< 5
At 24 V DC		mA	typ. 200	typ. 200	typ. 200
Voltage dips (IEC/EN 61131-2)		ms	10	10	10
Heat dissipation at 24 V DC		W	4.8	4.8	4.8
Polarity reversal protection					
Power supply			Yes	Yes	Yes
LED indicators					
Power supply			RUN LED (RUN): green	Module status LED (MS): green	Power LED (POW): green
LED display			LED ERROR (ERR): red	Network status LED (NS): red/green	PROFIBUS-DP LED (BUS): red
Network					
Terminal type			RJ45	5 pole, pluggable screw terminal	SUB-D 9 pole, socket
Potential isolation			Between bus and power supply (simple), between bus and power supply and NZM-XDMI612 (safe isolation)	Between bus and power supply (simple), between bus and power supply and NZM-XDMI612 (safe isolation)	Between bus and power supply (simple), between bus and power supply and NZM-XDMI612
Function			CANopen slave	DeviceNet slave	PROFIBUS-DP slave
Interface			CAN	CAN	RS 485
Bus protocol			CANopen	DeviceNet	PROFIBUS-DP
Baud rates			Automatic search up to 1 MBit/s	Automatic search up to 500 kBit/s	Automatic search up to 12 MBit/s
Bus terminating resistors			Separate external bus termination required (120 Ω) NZM-XDMI612	Separate external bus termination required (120 Ω) NZM-XDMI612	Separate external bus termination required
Bus addresses			1 – 127 addressed via display	0 – 63 addressed via display	1 – 126 via DMI
Services					
Cyclical			All data R1 – R16, S1 – S8	All data R1 – R16, S1 – S8	Status On/Off, tripped (detailed), load early warnings, phase currents $I_1/I_2/I_3$[A], remote operator acutation, display/ operation NZM-XDMI612, inputs/outputs, motor starter functions
Acyclical			Read/write, real-time, day, summer/winter time, all parameters of the easy function relay	Read/write, real-time, day, summer/winter time, all parameters of the easy function relay	Display/match protection protection settings, event list, identification, hours of operation, switching operations, time

			NZM-XSWD-704
General			
Standards			IEC/EN 61131-2 EN 50178
Dimensions (W x H x D)		mm	35 x 90 x 101
Weight		kg	0.1
Mounting			Top-hat rail IEC/EN 60715, 35 mm
Built-in position			Vertical
Ambient mechanical conditions			
Degree of protection (IEC/EN 60529)			IP20
Vibrations (IEC/EN 61131-2:2008)			
Constant amplitude 3.5 mm		Hz	5 … 8.4
Constant acceleration, 1 g		Hz	8.4 … 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Shocks	9
Drop (IEC/EN 60068-2-31)	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3
Electromagnetic compatibility (EMC)			
Overvoltage category			II
Pollution degree			2
Electrostatic discharge (IEC/EN 61131-2:2008)			
Air discharge (Level 3)		kV	8
Contact discharge (Level 2)		kV	4
Electromagnetic fields (IEC/EN 61131-2:2008)			
80 -1000 MHz		V/m	10
1.4-2 GHz		V/m	3
2-2.7 GHz		V/m	1
Radio interference suppression (SmartWire-Darwin)			EN 55011 Class A
Burst (IEC/EN 61131-2:2008, Level 3)			
Supply cables		kV	2
Signal cables		kV	1
SmartWire-Darwin cables		kV	1
Surge (IEC/EN 61131-2:2008, Level 1)			–
Radiated RFI (IEC/EN 61131-2:2008, Level 3)		V	10
Ambient climatic conditions			
Operating ambient temperature (IEC 60068-2)		°C	–25 … +55
Condensation			Prevent with suitable measures
Storage		°C	–40…70
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 … 95
SmartWire-Darwin interface			
Station type			SmartWire-Darwin station (slave)
Baud rate setting			Automatic
SmartWire-Darwin status		LED	Green
Connection			8-pin connector Connection plug: External device plug SWD4-8SF2-5
Power consumption (15 V SWD supply)			See separate table
Supply and I/O connection			
Connection type			Push-In
Solid		mm^2	0.2-1.5 (AWG 24-16)
Flexible with ferrule[1)]		mm^2	0.25-1.5
24 V DC supply for output supply			
Rated operating voltage	U_e	V	–
Input voltage residual ripple		%	–
Polarity reversal protection reversal			–

Notes [1)] Minimum length 8 mm.

			NZM-XSWD-704
Digital inputs			
Number			2
Input current		mA	Typically 4 at 24 V DC
Voltage level to IEC/EN 61131-2			
Limit value type 1			Low < 5 V DC; High > 15 V DC
Input delay			High → Low typically < 0.2 ms Low → High typically < 0.2 ms
Status display inputs		LED	Yellow
Digital semiconductor outputs			
Number			2
Output current		A	0.2 at 24 V DC
Short-circuit tripping current		A	–
Lamp load	R_{LL}	W	–
Overload proof			Yes, with diagnostics
Switching capacity			EN 60947-5-1 utilization category DC-13
Relay outputs			
Number			–
Contact type			–
Operations			
Utilization category AC-1, 250 V, 6 A			–
Utilization category AC-15, 250 V, 3 A			–
Utilization category DC-13, 24 V, 1 A			–
Safe disconnection		V AC	–
Minimum load current		mA	–
Response/reset time		ms	–
Bounce duration		ms	–
Short-circuit protection			–
Status display outputs		LED	–
Potential isolation			
Inputs for SmartWire-Darwin			Yes
Semiconductor outputs to SmartWire-Darwin			Yes
Semiconductor outputs to inputs			–
Relays to SmartWire-Darwin			–
Relays to inputs			–
Relays to relays			–

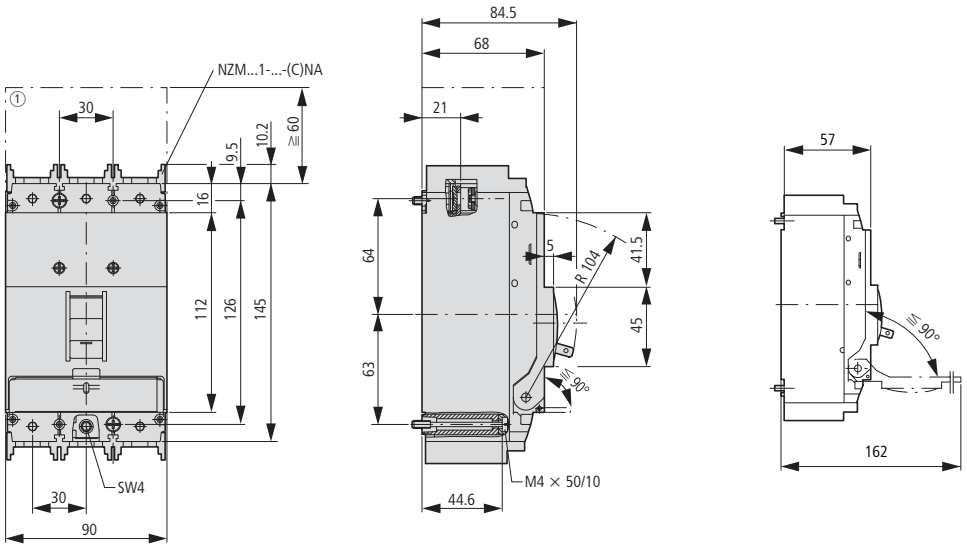
Measuring and communication module

NZM-...XMC

		NZM2-XMC-S0	NZM3-XMC-S0	NZM2/3-XMC-MB
General				
Dimensions	mm	209 × 91 × 132 (3 pole) 251 × 91 × 132 (4 pole)	209 × 91 × 132 (3 pole) 251 × 91 × 132 (4 pole)	209 × 91 × 132 (3 pole) 251 × 91 × 132 (4 pole)
Weight	g	850 (3 pole) 975 (4 pole)	850 (3 pole) 975 (4 pole)	850 (3 pole) 975 (4 pole)
Material characteristic		UL94-V0	UL94-V0	UL94-V0
Environmental conditions				
Operating temperature	°C	-15-+65	-15-+65	-15-+65
Storage temperature	°C	-40-+80	-40-+80	-40-+80
Humidity (non-condensed)	%	5-95	5-95	5-95
Maximum operating altitude	m	2000	2000	2000
IP protection class		IP 20	IP 20	IP 20
Supply				
Voltage	V DC	18 – 36	18 – 36	18 – 36
Maximum current	mA	200	200	200
Conductors		Phoenix Contact GMVSTBR 2.5-2-ST-7.62	Phoenix Contact GMVSTBR 2.5-2-ST-7.62	Phoenix Contact GMVSTBR 2.5-2-ST-7.62
Voltage measurement				
Rated operating voltage	V AC	690	690	690
Maximum surge voltage at 8/20 ms	kV	8	8	8
Maximum voltage	V AC	800	800	800
Surge impedance (impedance)	kohms	1	1	1
Frequency	Hz	45-65	45-65	45-65
Accuracy		0.4 % measured value +0.05 % FS	0.4 % measured value +0.05 % FS	0.4 % measured value +0.05 % FS
Overvoltage category according to EN61010		CAT IV (600 V)	CAT IV (600 V)	CAT IV (600 V)
Current measurement				
Rated operational current	A AC	300	500	300 (NZM2)/500 (NZM3)
Maximum current	A AC	350	740	30
Maximum current impulse 1s	kA	30	30	30
Frequency	Hz	45-200	45-200	45-200
Category EN61010		CAT IV-600 V	CAT IV-600 V	CAT IV-600 V
Power measurement				
Maximum power (per phase)	kWh	-	-	280
Accuracy		-	-	0.95 % measurement + 0.05 % FS
Accuracy, active power		Class 1 (IEC62053-21)	Class 1 (IEC62053-21)	Class 1 (IEC62053-21)
Accuracy, reactive energy		-	-	Class 2 (IEC62053-23)
Pulse output				
Output type		NPN-isolated transistor	NPN-isolated transistor	NPN-isolated transistor
VCE max	V	80	80	80
VCE sat	V	0.4	0.4	0.4
Ic max	mA	50	50	50
Ic recommended	mA	10	10	10
Isolation	kV	3	3	3
Max. switching frequency	Hz	2	2	4
Pulse width	ms	120	120	≥ 20
Pulse rate power	Pulses/kW h	15	7.5	
Digital output				
Type		-	-	
Maximum voltage	V	-	-	350
Maximum current	mA	-	-	120
Isolation	kV	-	-	2.5
Digital input				
Maximum voltage	V	-	-	50
VIHmax	V	-	-	3
MODBUS output-RS485				
Data rate	bit/s	-	-	9600, 19200, 38400, 56000, 57600
Stop bits		-	-	1, 2
Parity		-	-	None, odd, even
Isolation	kV	-	-	3
Output – display				
DC supply voltage	V DC	-	-	5
Maximum current	mA	-	-	180

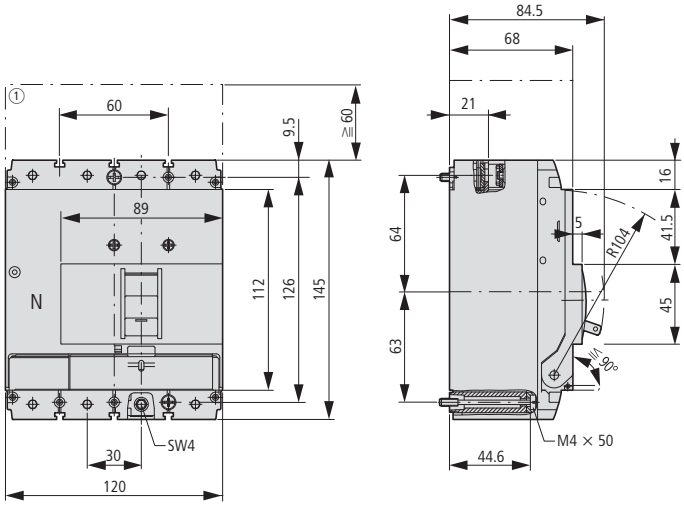
Dimensions

Circuit-breakers
Switch-disconnectors
3 pole
NZMB1
NZMC1
NZMN1
NZMH1
PN1
N1
NS1



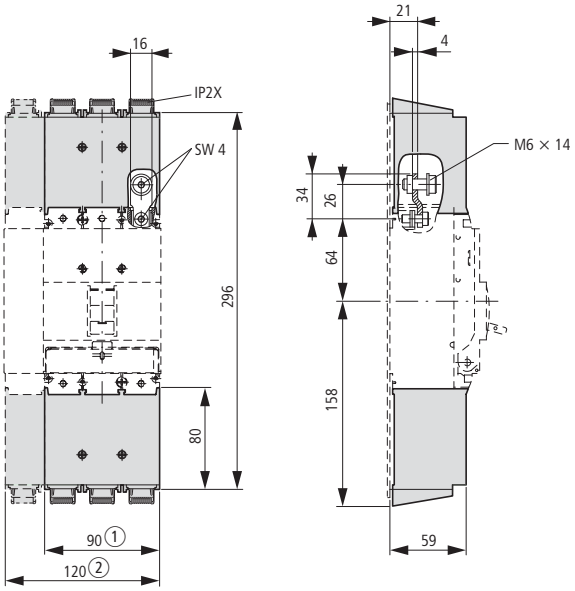
① Blow-out area, minimum distance to other parts ≧ 60 mm

Circuit-breakers
Switch-disconnectors
4 pole
NZMB1-4
NZMC1-4
NZMN1-4
NZMH1-4
PN1-4
N1-4



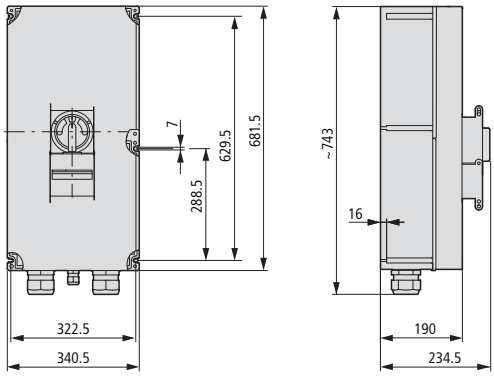
① Blow-out area, minimum distance to other parts ≧ 60 mm

Covers
NZM1(-4)-XKSA
Screw terminals
NZM1(-4)-XKS
IP2X protection against contact with a finger for cover
NZM1(-4)-XIPA



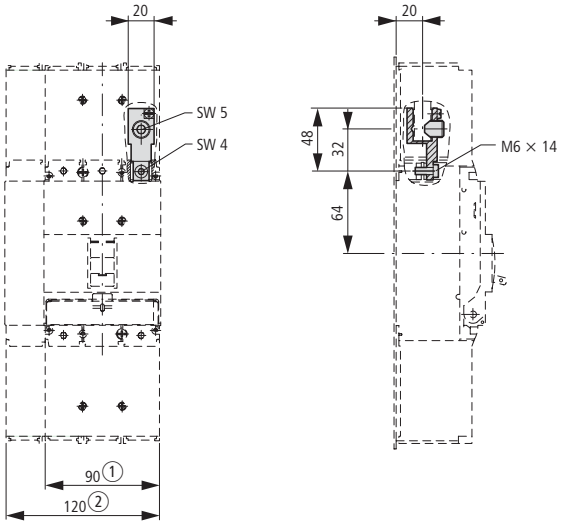
① 3 pole
② 4 pole

Switch-disconnectors
ATEX22-type
3 pole
PN1../ATEX22



Tunnel terminal

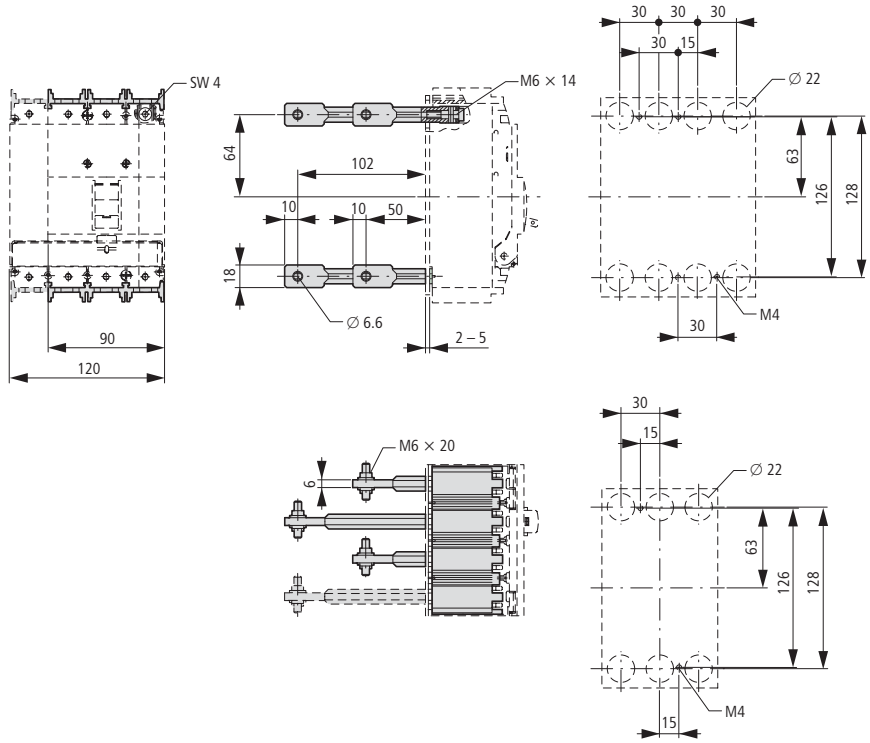
NZM1(-4)-XKA



① 3 pole
② 4 pole

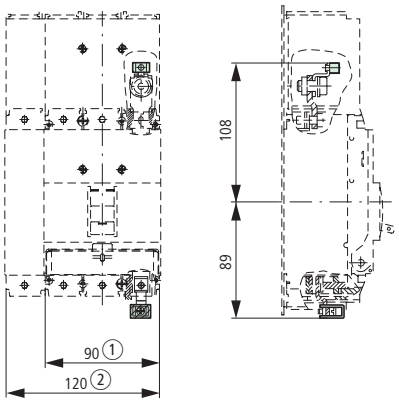
Rear terminal bolts

NZM1(4)-XKR



Control cable terminals

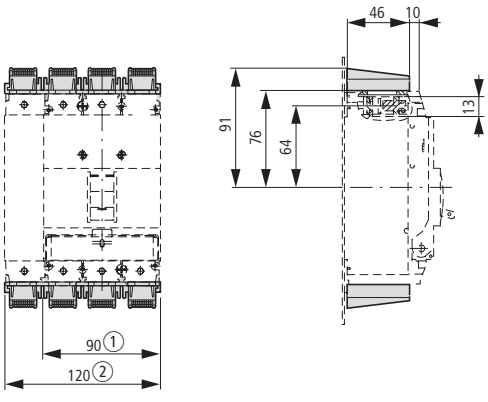
NZM1-XIPK, NZM-XSTK



① 3 pole
② 4 pole

IP2X protection against contact with finger

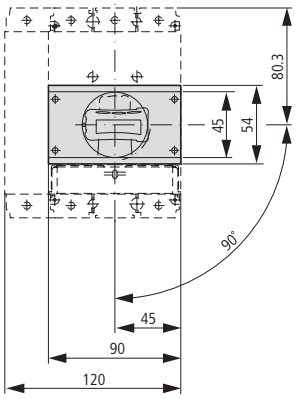
NZM1(-4)-XIPK

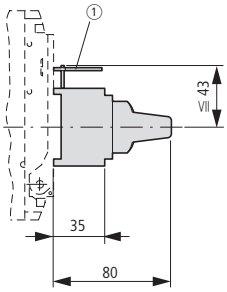


Rotary mechanism

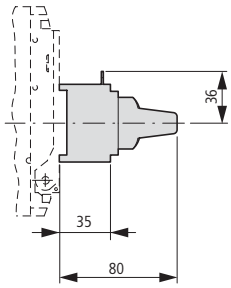
Rotary handle on circuit-breaker

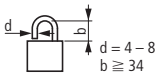
NZM1-XDV
NZM1-XDVR





NZM1-XDTV

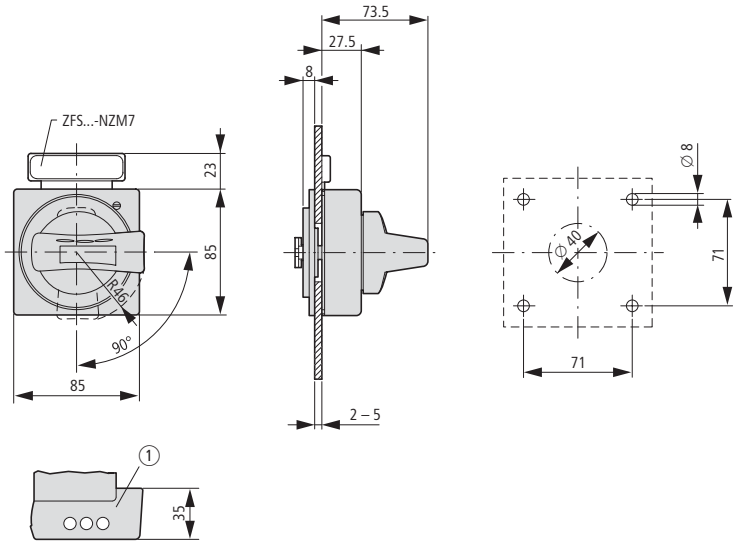


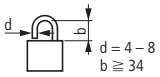


① Up to 3 padlocks

Door coupling rotary handles

NZM1-XTVD(V)(R)(-NA)

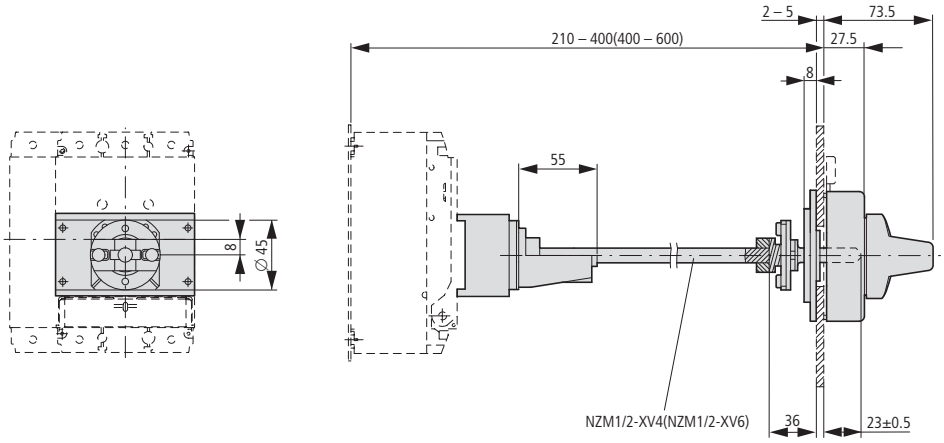




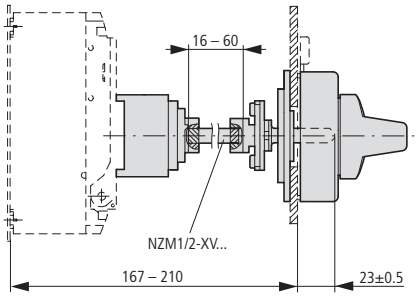
① Up to 3 padlocks

Door coupling rotary handle with extension shaft

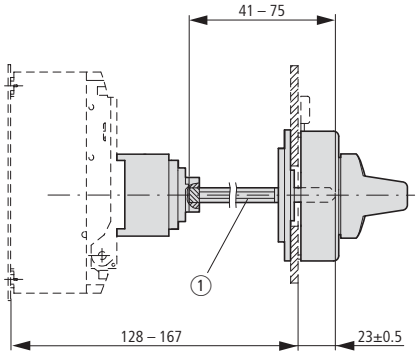
NZM1-XTVD(V)(R)(-NA)
NZM1/2-XV4(6)



NZM1-XTVD(V)(R)-60(-NA)

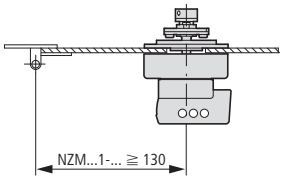


NZM1-XTVD(V)(R)-0(-NA)



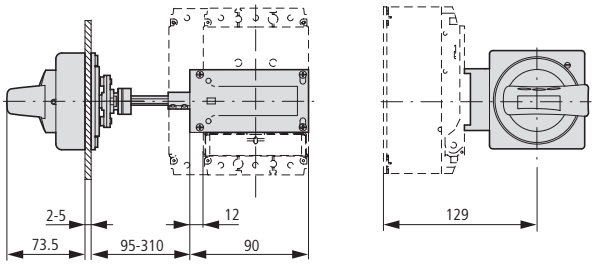
① Special tip

Minimum distance of door coupling rotary handle from door pivot point

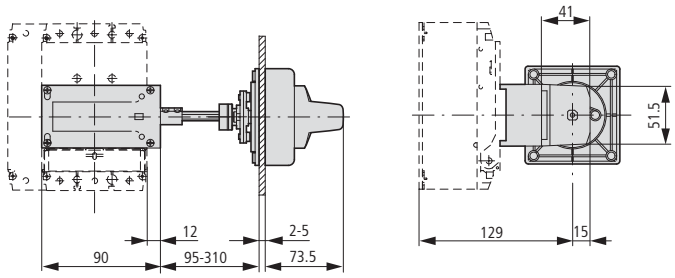


Main switch assembly kit for side wall installation

NZM1-XS(R)-L

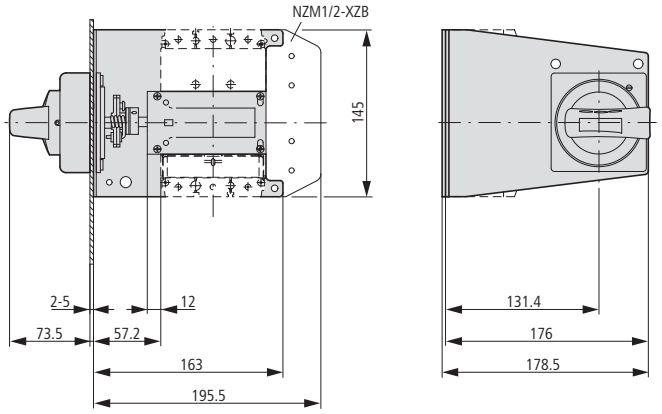


NZM1-XS(R)-R

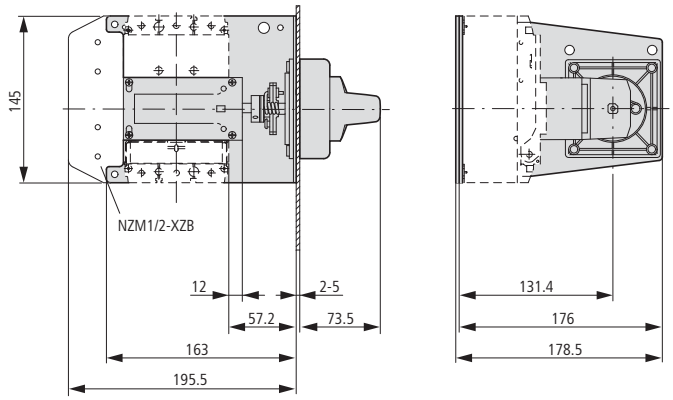


Main switch assembly kit for side wall installation with mounting bracket

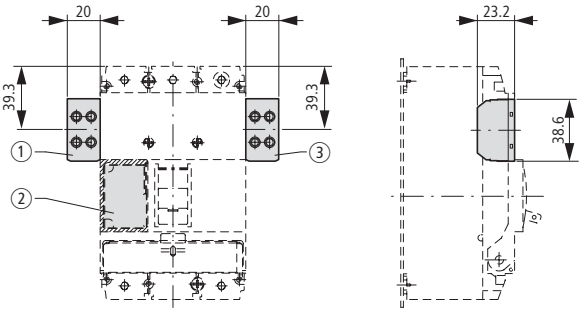
NZM1-XS(R)M-L



NZM1-XS(R)M-R



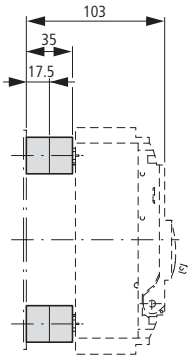
Undervoltage releases
Shunt releases (for power circuit breaker)
Early-make auxiliary contacts



① NZM1-XA(HIV)
NZM1-XU(HIV)(20)
NZM1-XHIV
② NZM1-XA(HIV)(L)
NZM1-XU(V)(HIV)(L)(20)
NZM1-XHIV(L)
③ NZM1-XHIVR

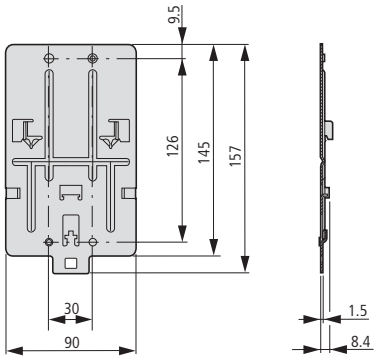
Spacers

NZM1/2-XAB



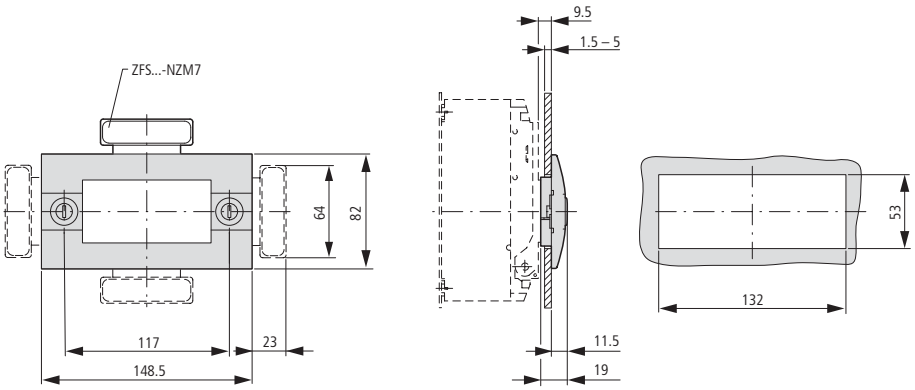
Clip plate

NZM1-XC35



Insulating surround

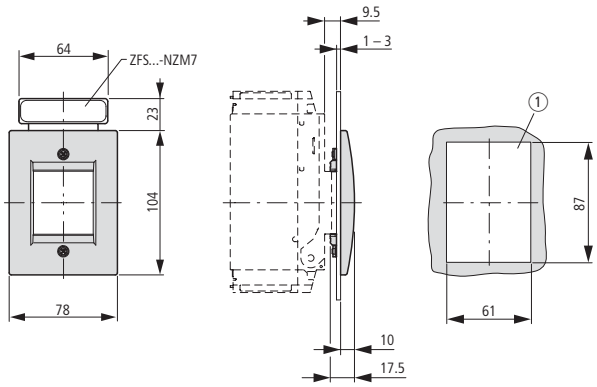
NZM1-XBR



Mounting aperture

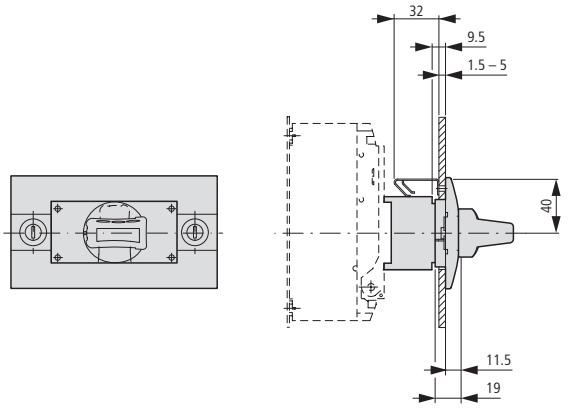
Insulating surround

NZM1-XBRS

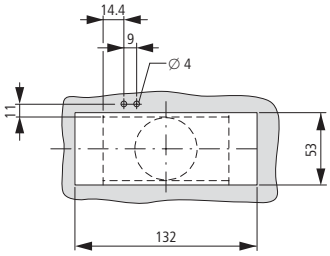


Rotary handle on switch with door interlock

NZM1-XDTV(R)

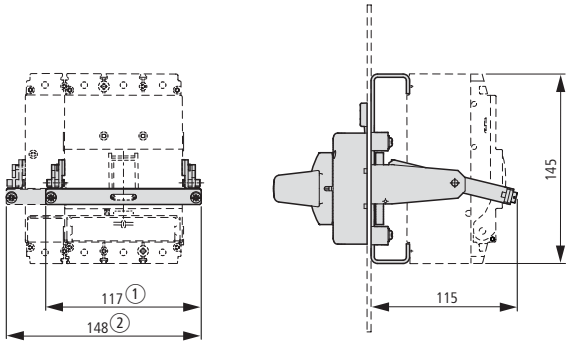


Mounting aperture



Rear-mounted drives

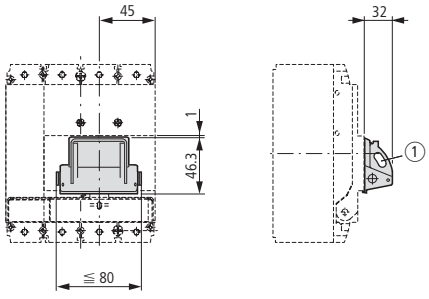
NZM1-XRAV(R)
NZM1-4-XRAV(R)

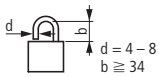


① NZM1-XRAV(R)
② NZM1-4-XRAV(R)

Toggle lever locking device

NZM-XKAV

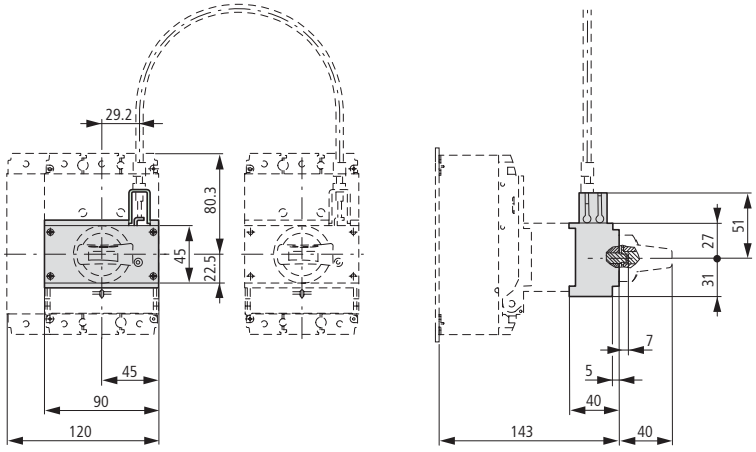




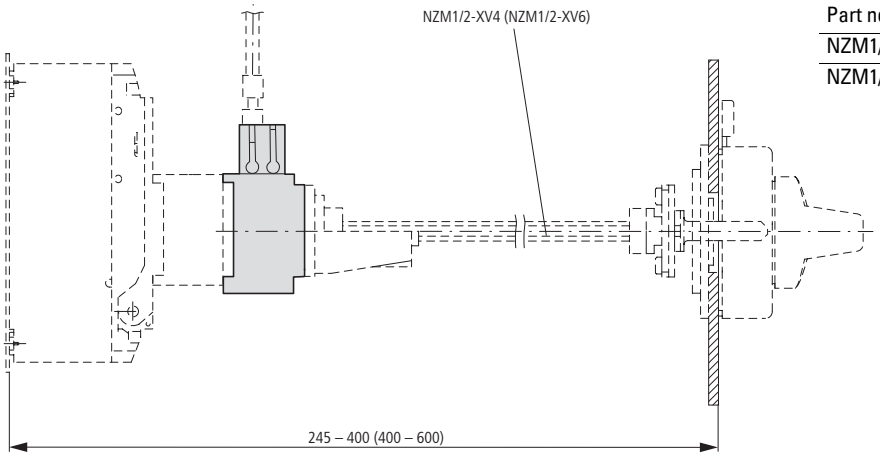
Up to 3 padlocks

Mechanical interlock

NZM1-XMV + NZM1-XDV(R)

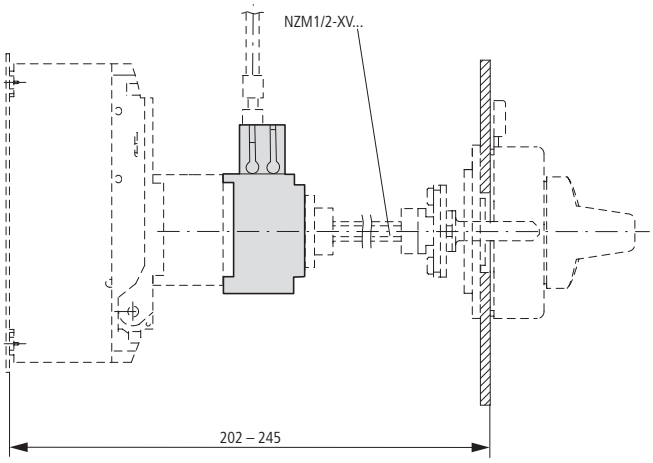


NZM1-XMV + NZM1-XTVD(V)(R)

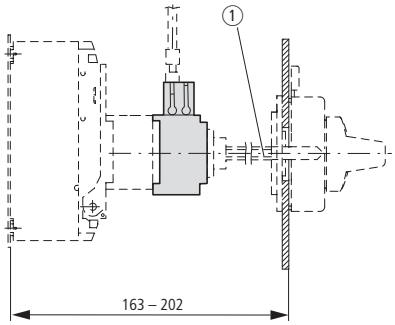


Part no.	x
NZM1/2-XV4	245 – 400
NZM1/2-XV6	400 – 600

NZM1-XMV + NZM1-XTVD(V)(R)-60



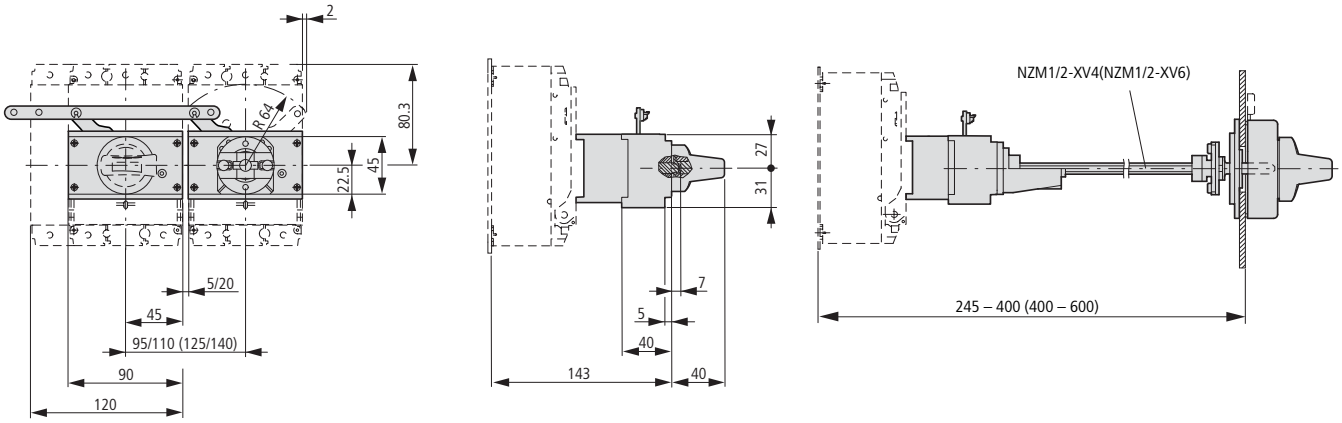
NZM1-XMV + NZM1-XTVD(V)(R)-0



① Special tip

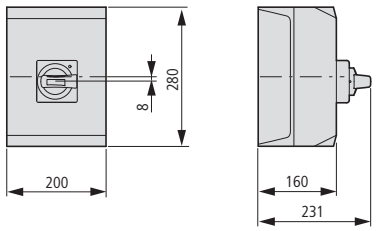
Paralleling mechanism

PN1-XPA

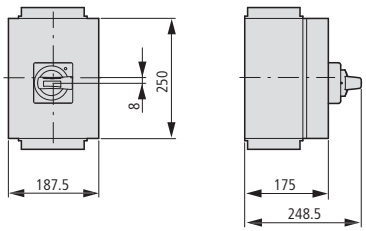


Insulated enclosures

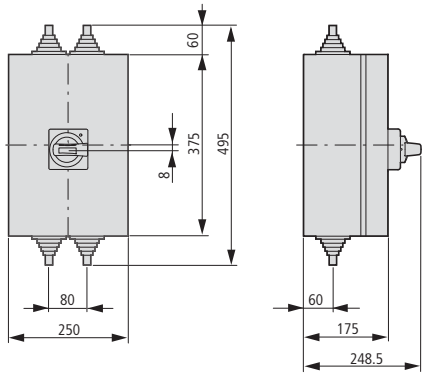
NZM1-XCIK5-T...



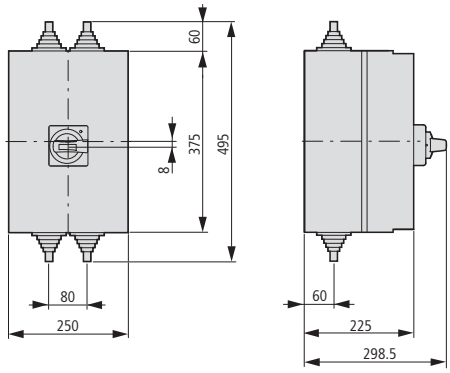
NZM1-XCI23-T...



NZM1-XCI43-T...

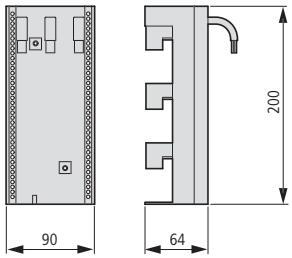


NZM1-XCI43/2-T...



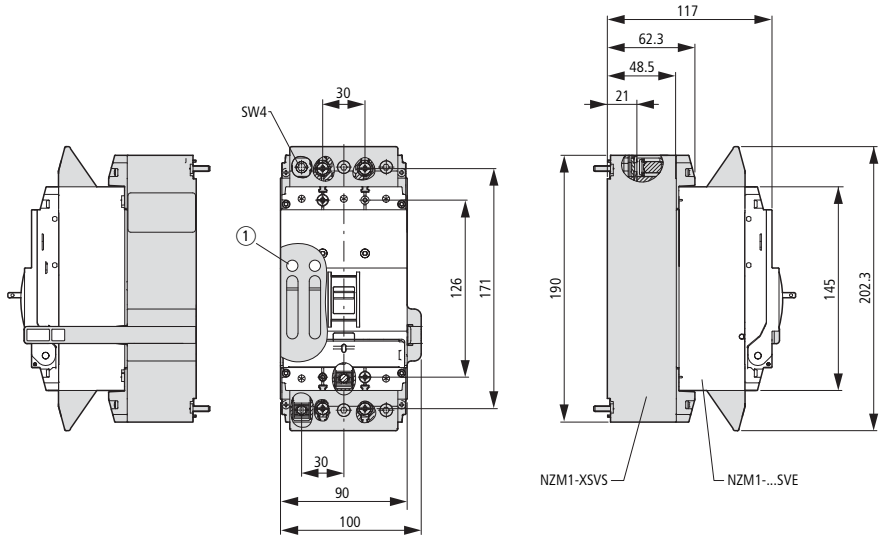
Component adapter

NZM1-XAD160

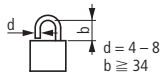


Plug-in units

NZM1-XSVS with
NZM.1-...-SVE
N1-...-SVE

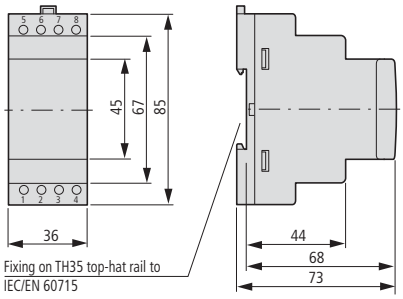


① Up to 2 padlocks



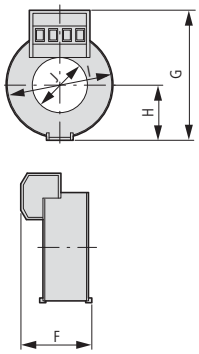
Residual-current relays

PFR-003
PFR-03
PFR-5

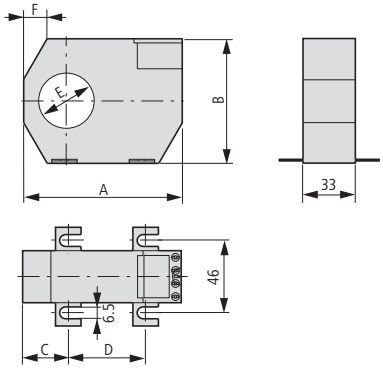


Ring-type transformer

PFR-W-20…30



PFR-W-35...210

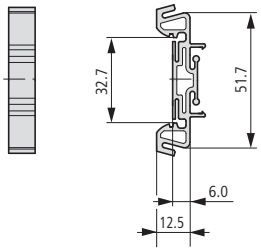


Part no.	F	G	H	I	J
PFR-W-20	32	60	24	46	21
PFR-W-30	32	70	30	59	30

	A	B	C	D	E	F
PFR-W-35	100	79	26	48.5	35	35
PFR-W-70	130	110	32	66	70	52
PFR-W-105	170	146	38	94	105	72
PFR-W-140	220	196	48.5	123	140	97
PFR-W-210	299	284	69	161	210	141

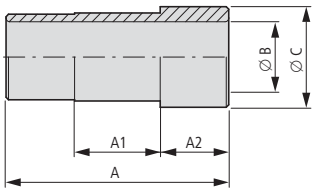
Mounting clip

PFR-WC



Magnetic shielding

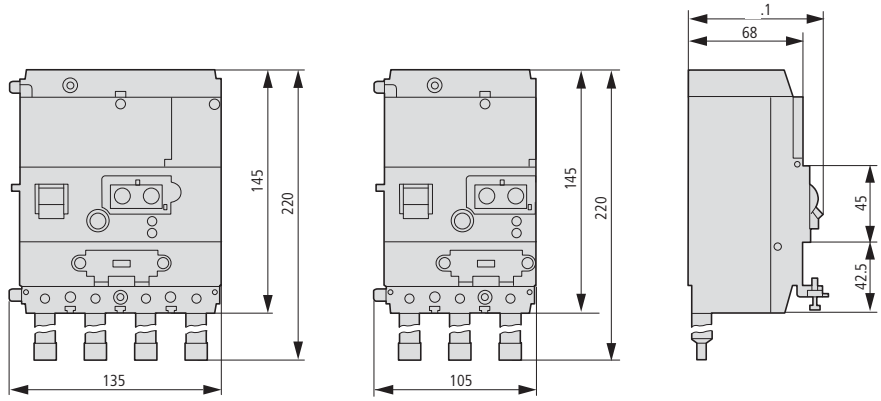
PFR-WMA



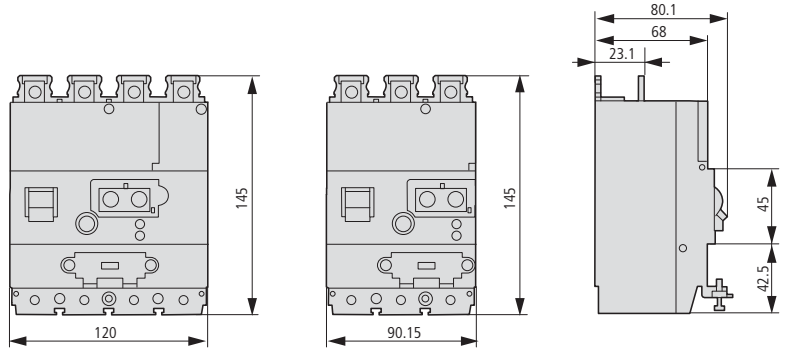
Part no.	A	B	C	A1	A2
PFR-WMA-35	91	28	40	35	28
PFR-WMA-70	105	62	75	35	35
PFR-WMA-105	153	98	110	35	60
PFR-WMA-140	153	133	145	35	60
PFR-WMA-210	153	203	215	35	60

Earth-fault release

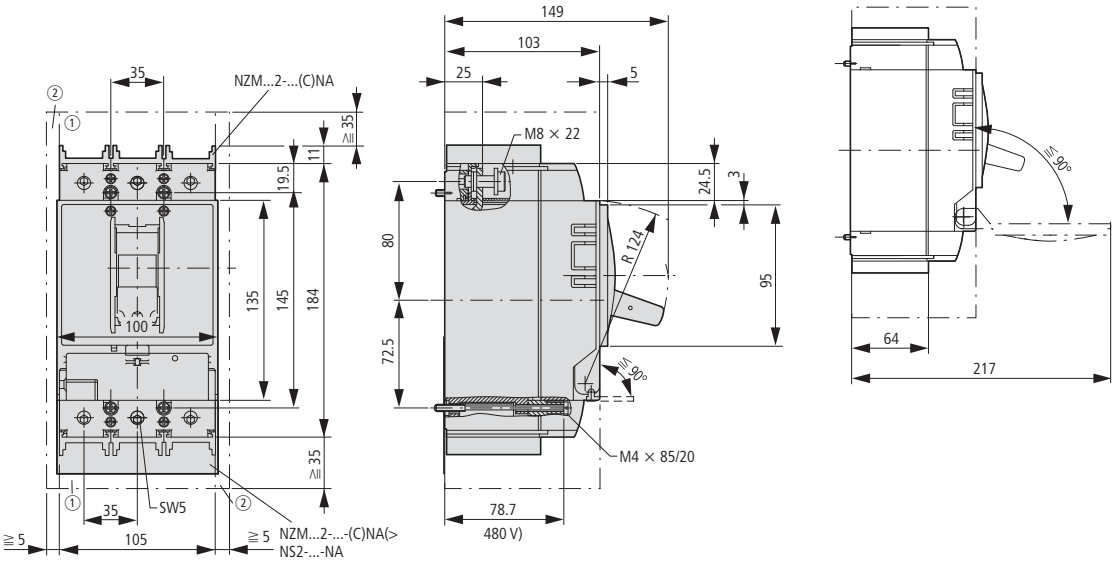
NZM1(-4)-XFI...R



NZM1(-4)-XFI...U

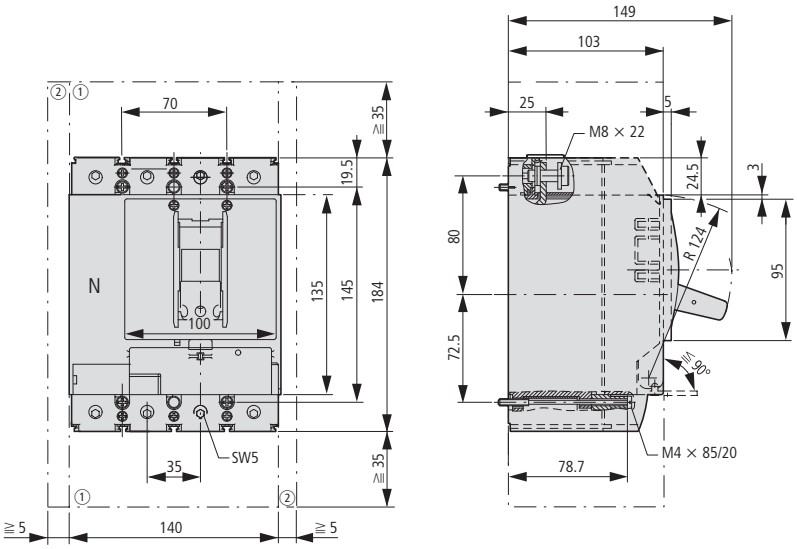


Circuit-breakers
Switch-disconnectors
3 pole
NZMB2
NZMC2
NZMN2
NZMH2
PN2
N2
NS2



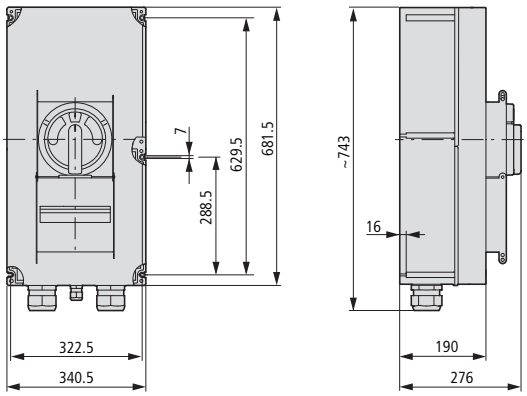
① Blow-out area, minimum distance to other parts ≧ 35 mm
② Minimum distance to adjacent parts ≧ 5 mm

Circuit-breakers
Switch-disconnectors
4 pole
NZMB2-4
NZMC2-4
NZMN2-4
NZMH2-4
PN2-4
N2-4



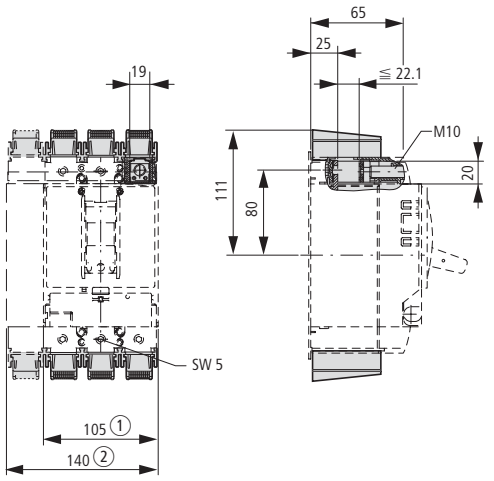
① Blow-out area, minimum distance to other parts ≧ 35 mm
② Minimum distance to adjacent parts ≧ 5 mm

Switch-disconnectors
ATEX22-type
3 pole
PN2.../ATEX22



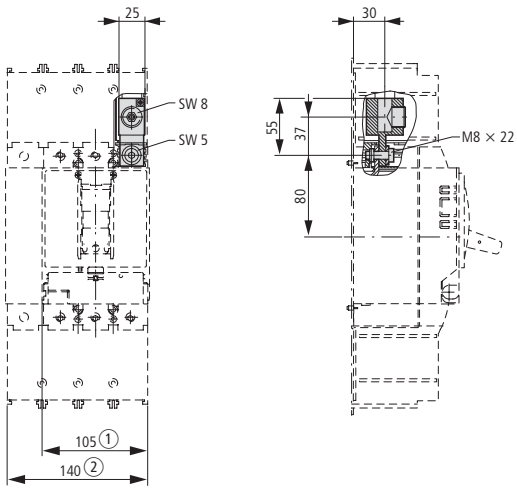
Box terminal
(+)NZM2(-4)-...-XKC(O)(U)

IP2X protection against contact with finger
NZM2(-4)-XIPK



① 3 pole
② 4 pole

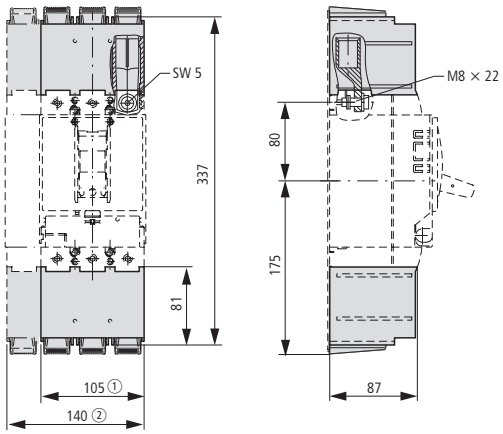
Tunnel terminal
NZM2(-4)-XKA



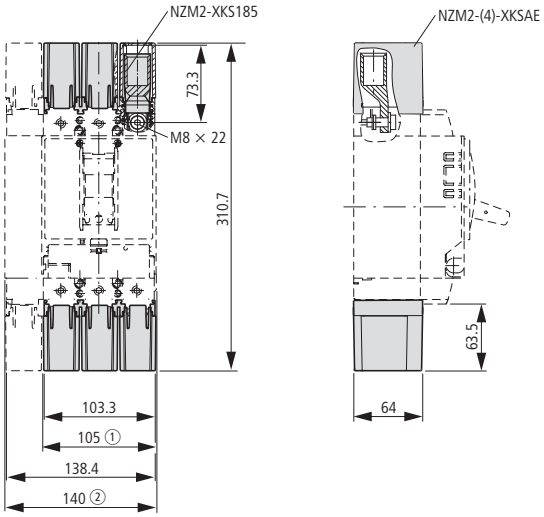
Covers
NZM2(-4)-XKSA

Cable lug
NZM2-XKS185

IP2X protection against contact with a finger for cover
NZM2(-4)-XIPA

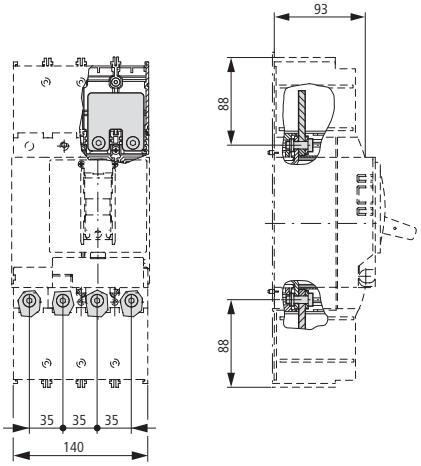


Cable lug cover
NZM2-(4)-XKSAE

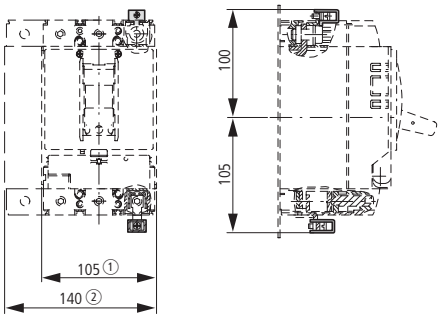


① 3 pole
② 4 pole

Jumper kit
NZM2-4-XKVP



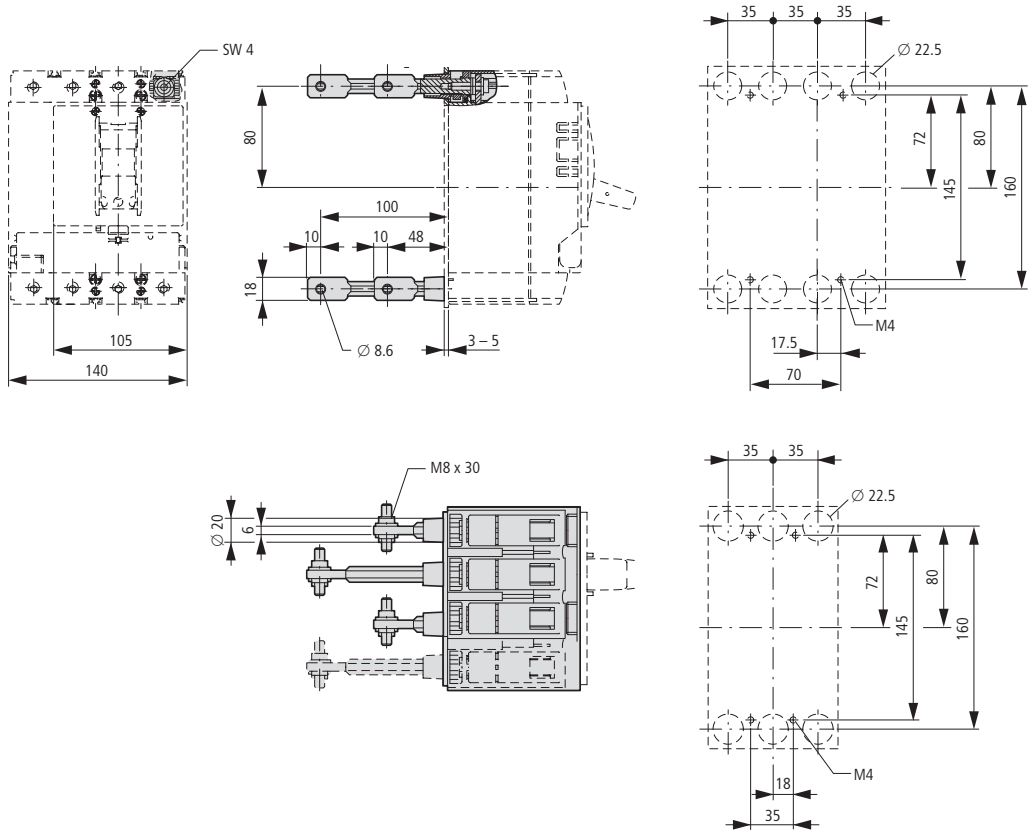
Control cable terminals
NZM2-XSTS
NZM-XSTK



① 3 pole
② 4 pole

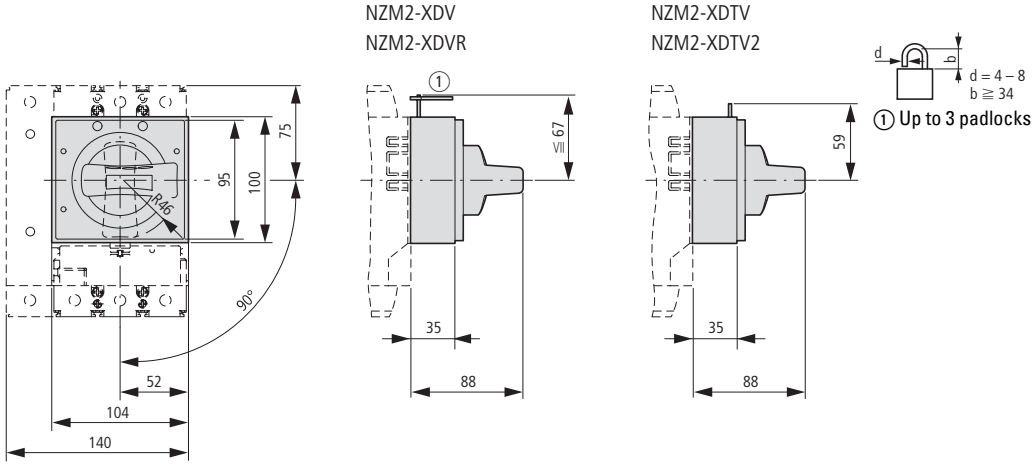
Rear terminal bolts

(+)NZM2(-4)-XKR(0)(U)



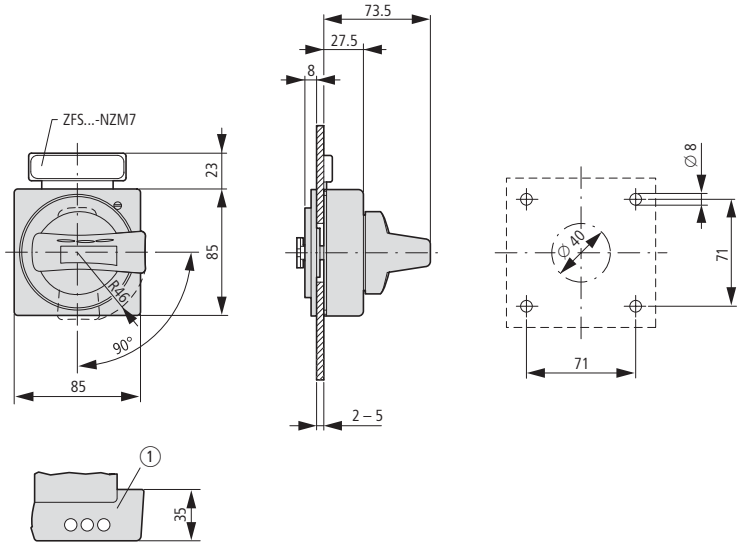
Rotary mechanism

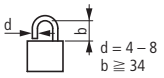
Rotary handle on circuit-breaker



Door coupling rotary handles

NZM2-XTVD(V)(R)...

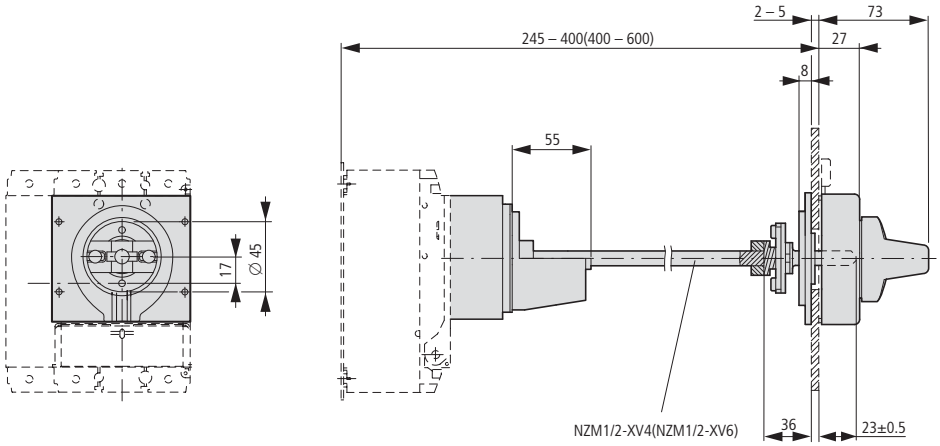




① Up to 3 padlocks

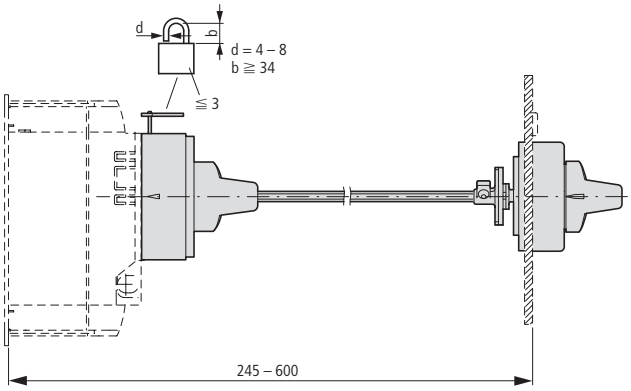
Door coupling rotary handle with extension shaft

NZM2-XTVD(V)(R)(-NA)
NZM1/2-XV4(6)



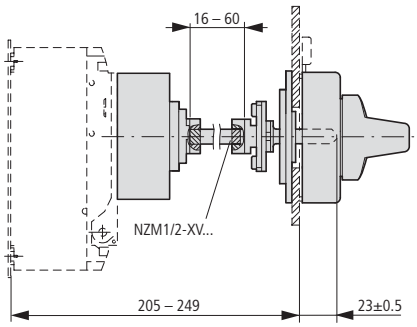
Main switch assembly kit with additional rotary handle

NZM2-XHB-DA(R)(-NA)

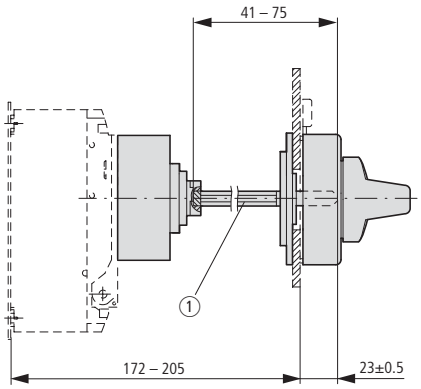


Door coupling rotary handle with extension shaft

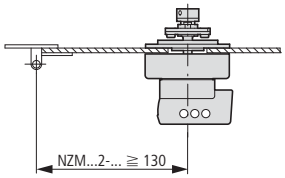
NZM2-XTVD(V)(R)-60(-NA)



NZM2-XTVD(V)(R)-0(-NA)



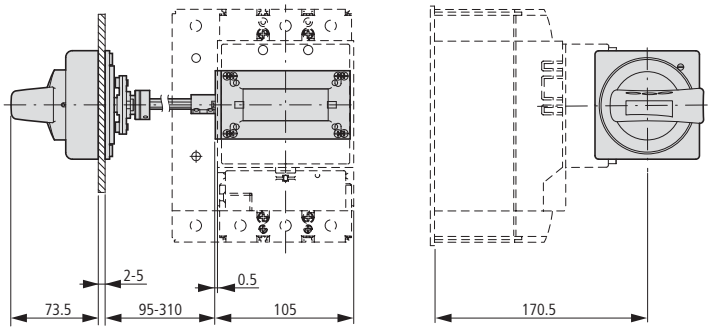
Minimum distance of door coupling rotary handle from door pivot point



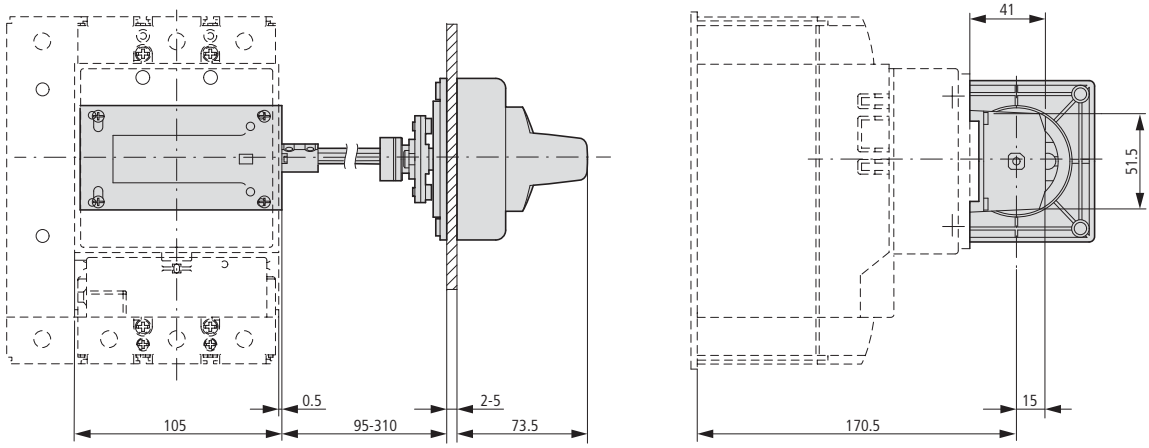
① Special tip

Main switch assembly kit for side wall installation

NZM2-XS(R)-L

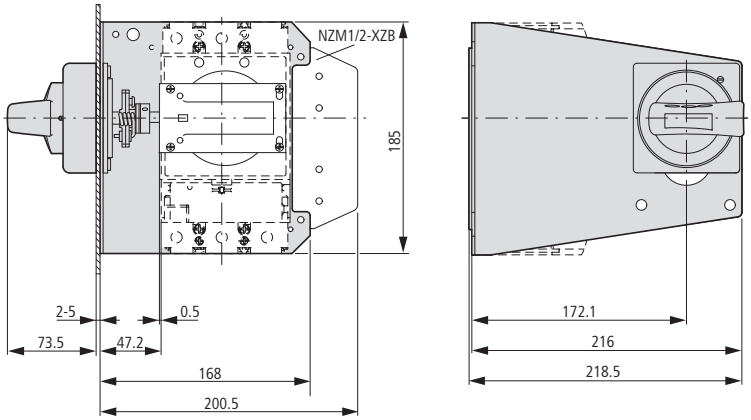


NZM2-XS(R)-R

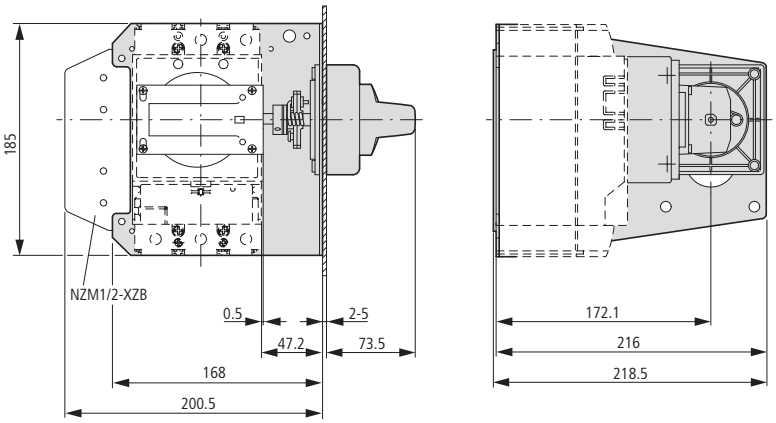


Main switch assembly kit for side wall installation with mounting bracket.

NZM2-XS(R)M-L

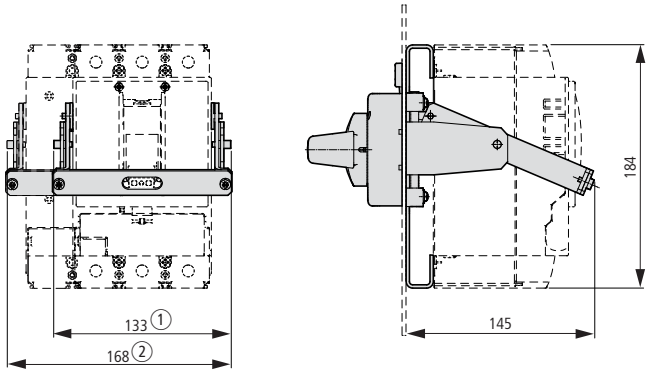


NZM2-XS(R)M-R



Rear-mounted drives

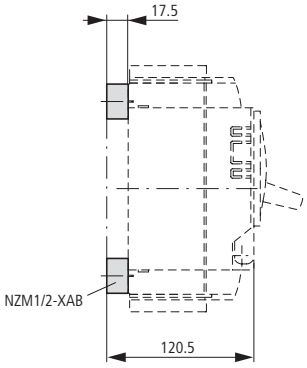
NZM2(-4)-XRAV(R)



① NZM2-XRAV(R)
② NZM2-4-XRAV(R)

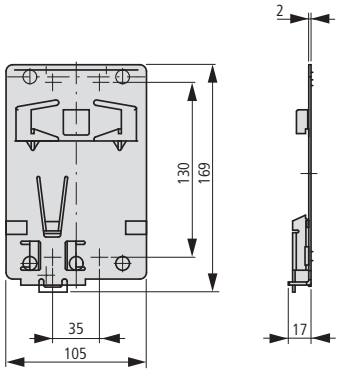
Spacers

NZM1/2-XAB



Clip plate

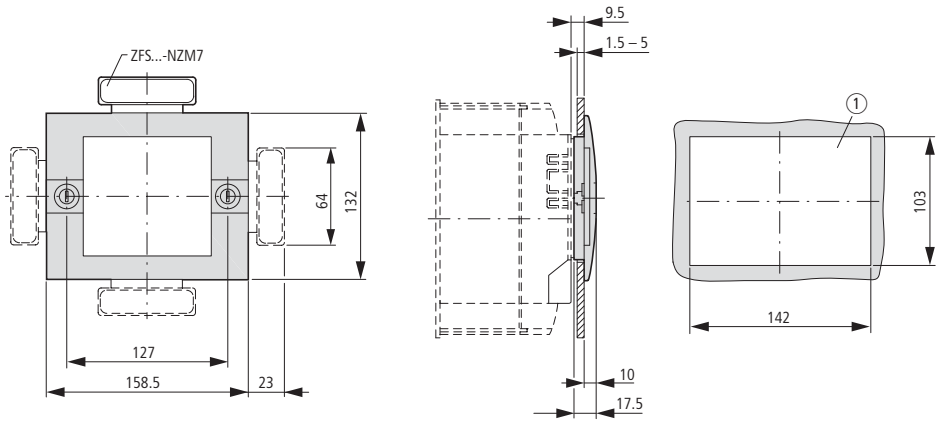
NZM2-XC75



Insulating surround

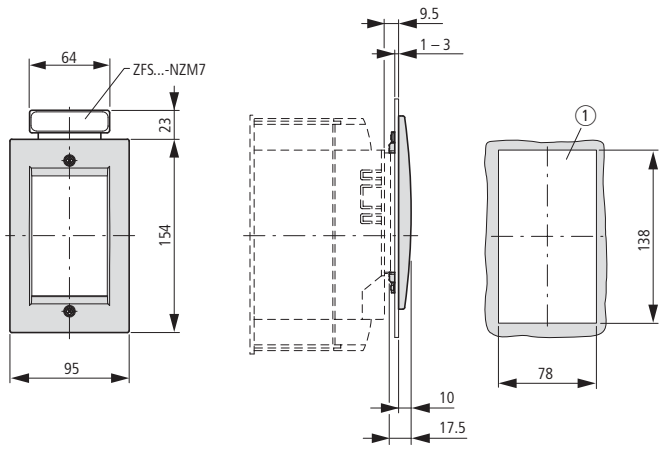
NZM2-XBR

① Mounting aperture



NZM2/3-XBRS

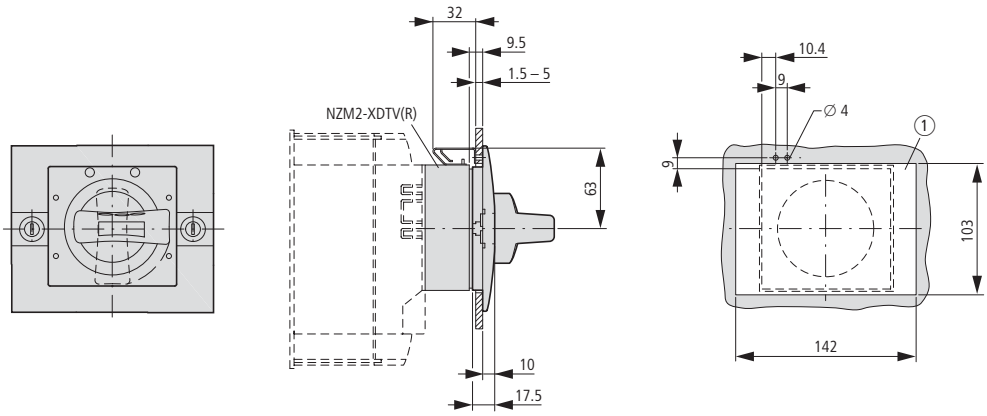
① Mounting aperture



Rotary handle on switch with door interlock

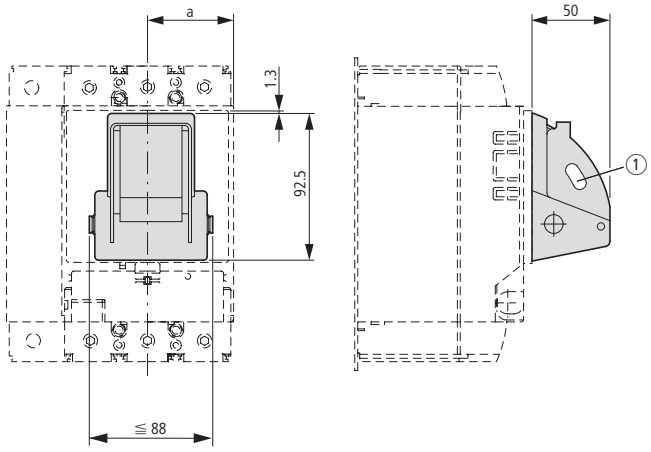
NZM2-XDTV(R)

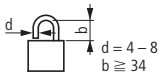
① Mounting aperture



Toggle lever locking device

NZM2/3-XKAV



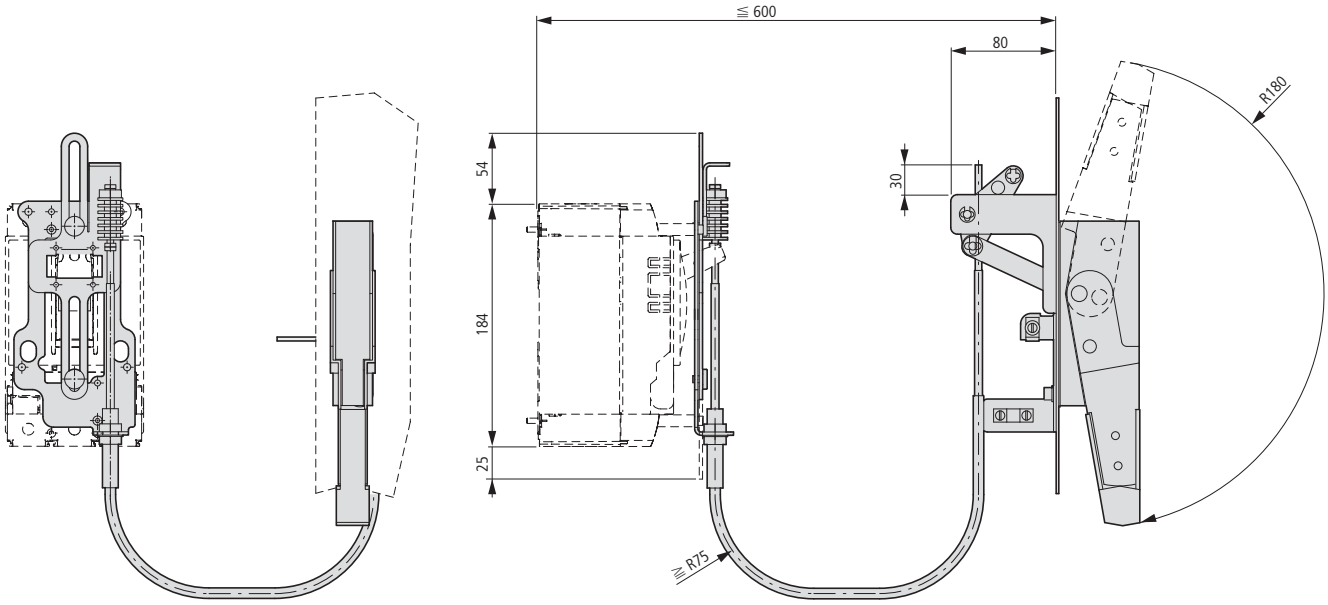


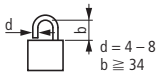
① Up to 3 padlocks

Part no.	a
NZM2, PN2, N2	52.5
NZM3, PN3, N3	70

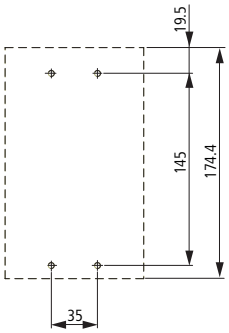
Side-mounted handle

NZM2...-XSH...





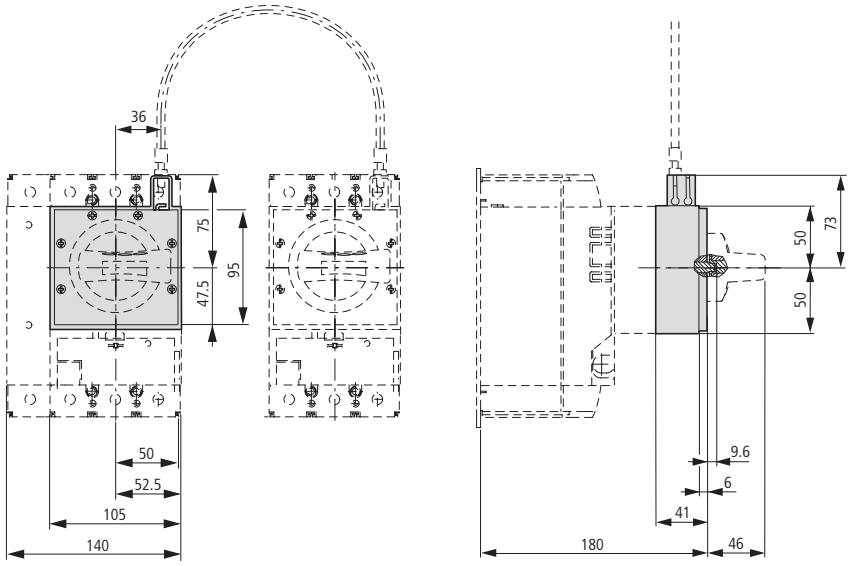
① Up to 3 padlocks



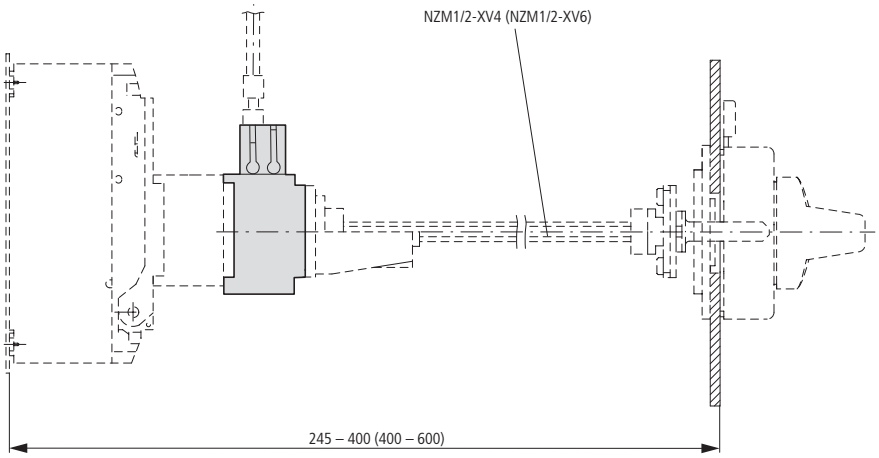
Drilling template

Mechanical interlock

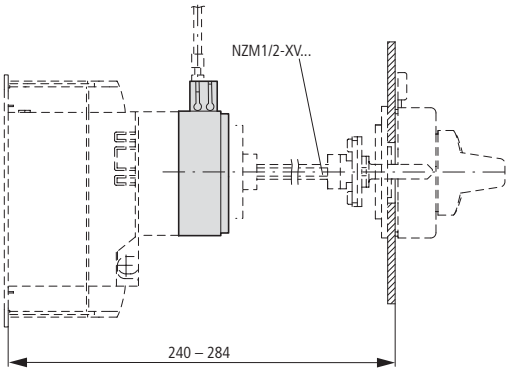
NZM2-XMV + NZM2-XD



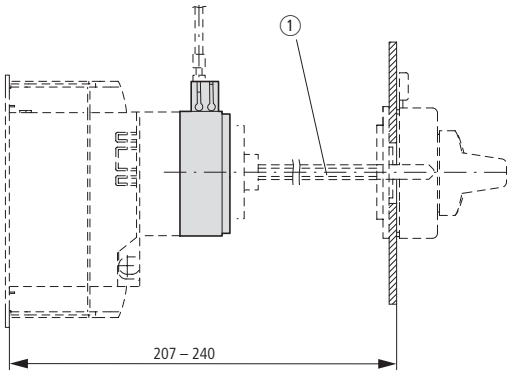
NZM2-XMV + NZM2-XTVD(V)(R)



NZM2-XMV + NZM2-XTVD(V)(R)-60



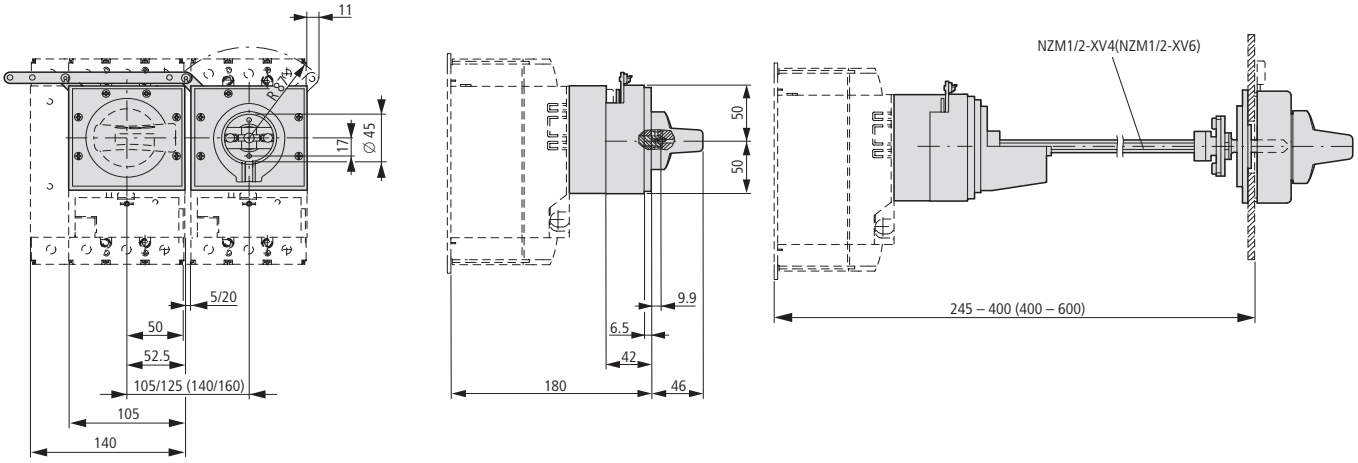
NZM2-XMV + NZM2-XT(V)D(V)(R)-0



① Special tip

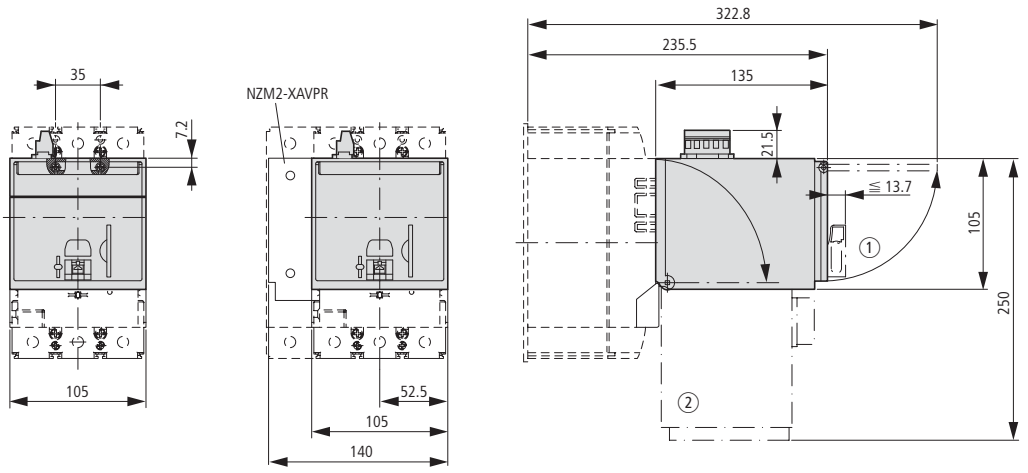
Paralleling mechanism

PN2-XPA

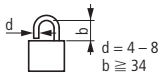


Remote operators

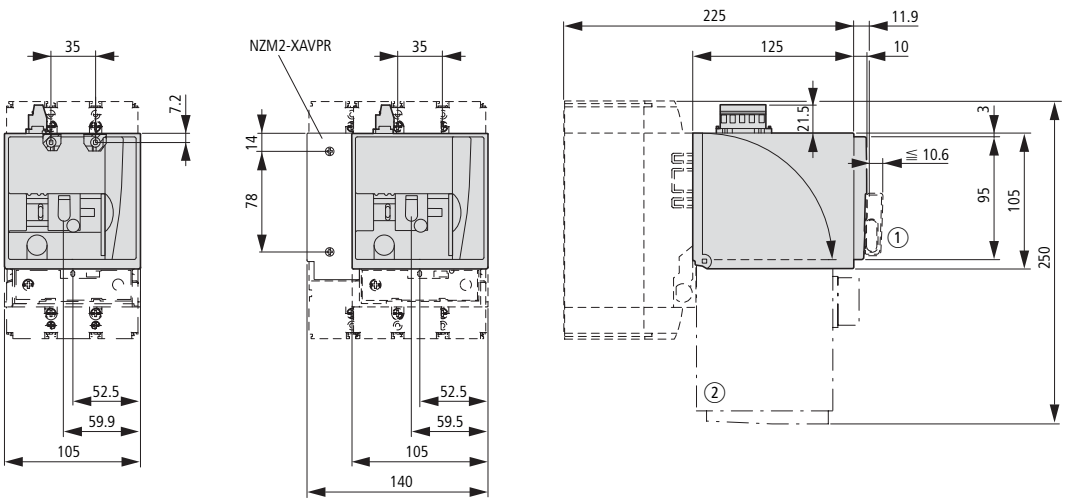
NZM2-XR…



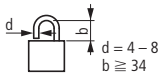
① Up to 3 padlocks
② Remote operator folded



NZM2-XRD…

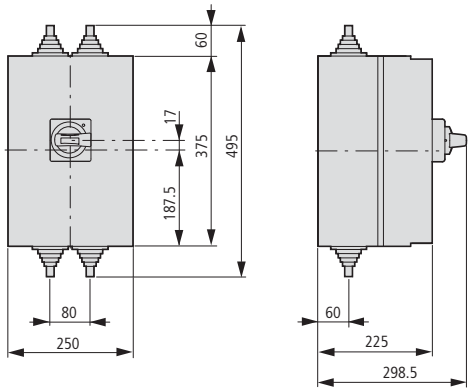


① Up to 3 padlocks
② Remote operator folded

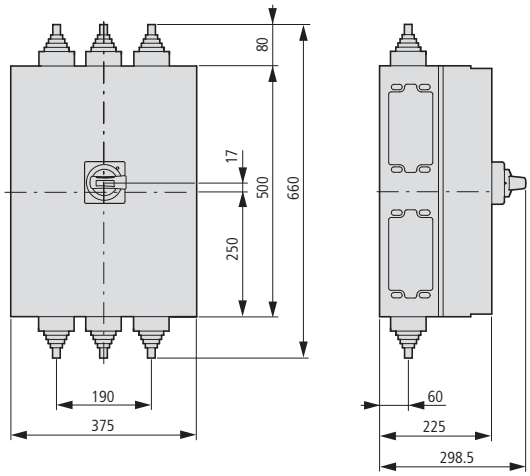


Insulated enclosures

NZM2-XCI43-T...

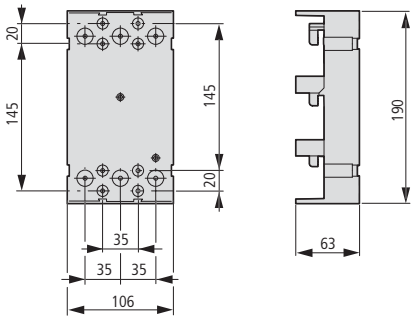


NZM2-XCI45-T...



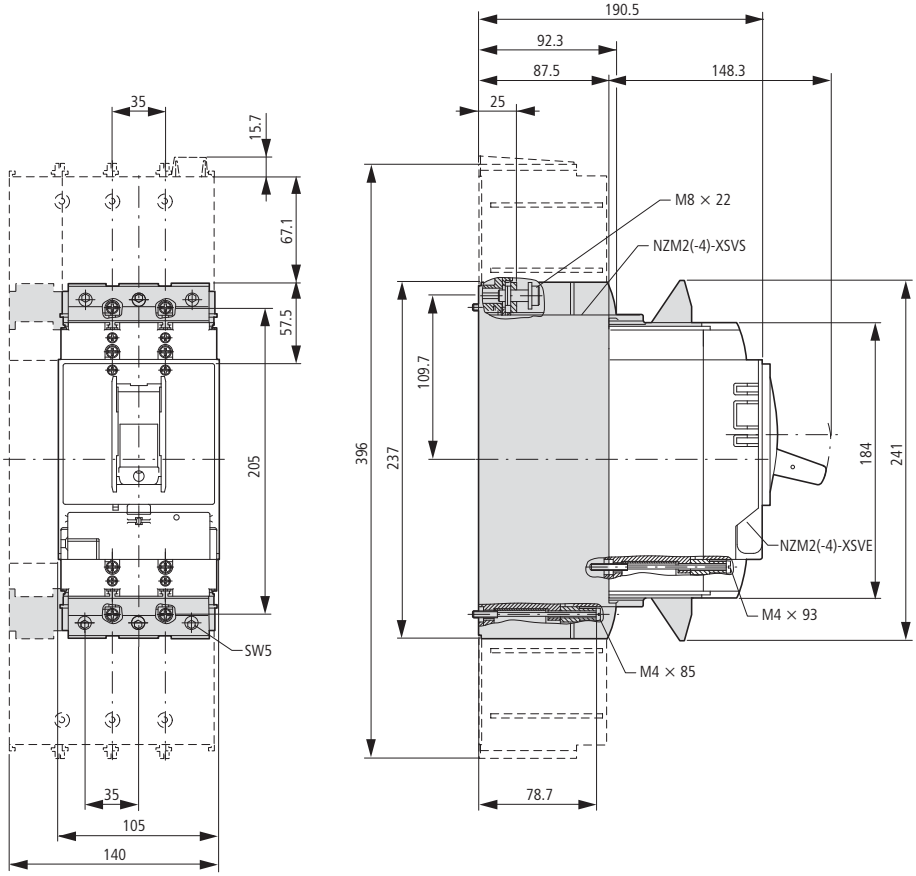
Component adapter

NZM2-XAD250



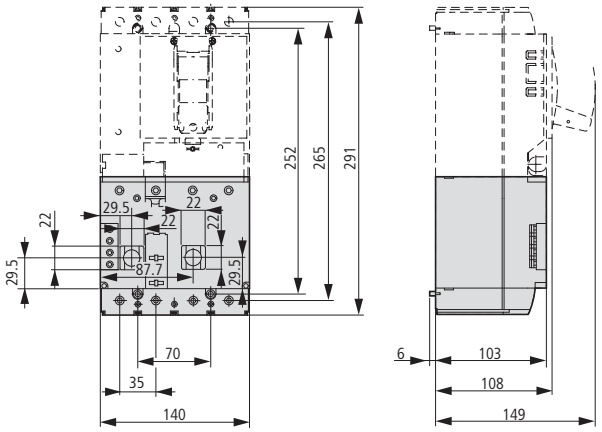
Plug-in units

NZM2-...-SVE
N2-...SVE
NZM2(-4)-XSVS



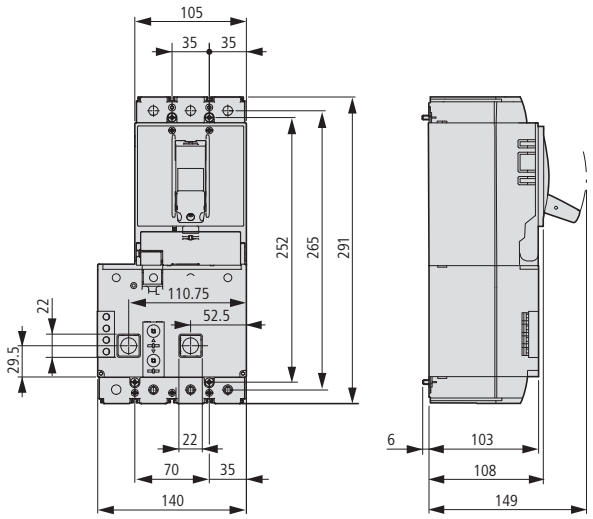
Earth-fault release

NZM2(-4)-XFI...



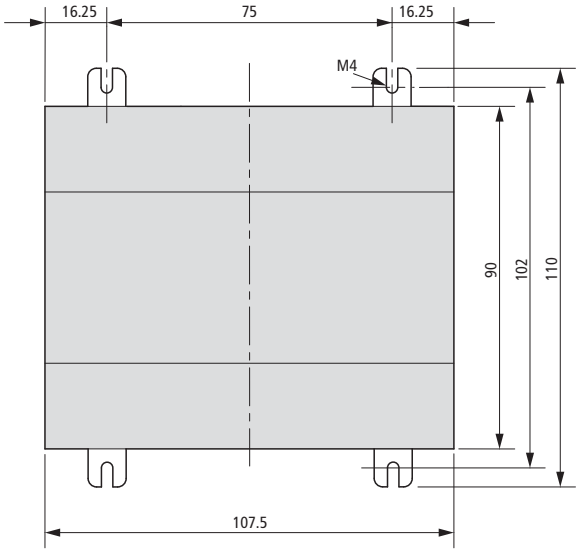
Earth-fault release

NZMH2…-XFIA30

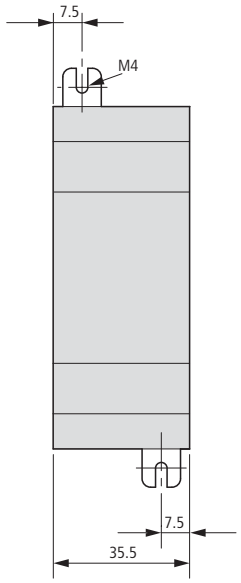


Data management interface (DMI module)

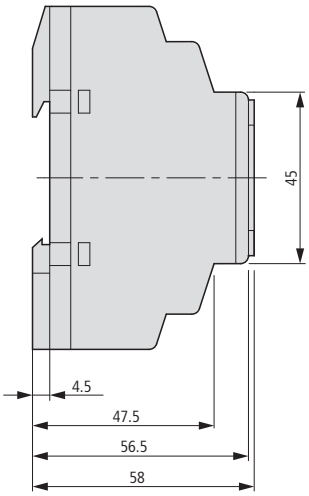
NZM-XDMI612



NZM-XDMI-DPV1
EASY2...



NZM-XDMI...
EASY2...

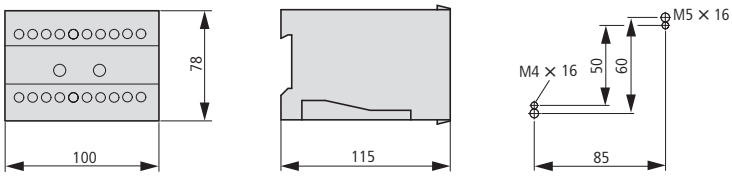


Undervoltage releases, off-delayed

UVU-NZM

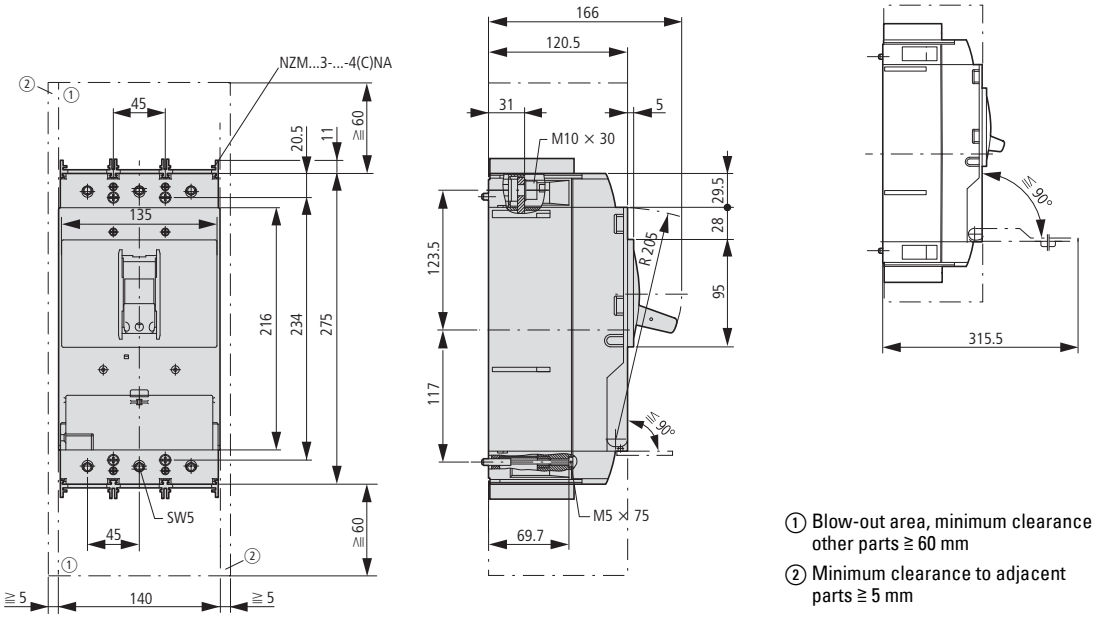
Capacitor unit

NZM-XCM



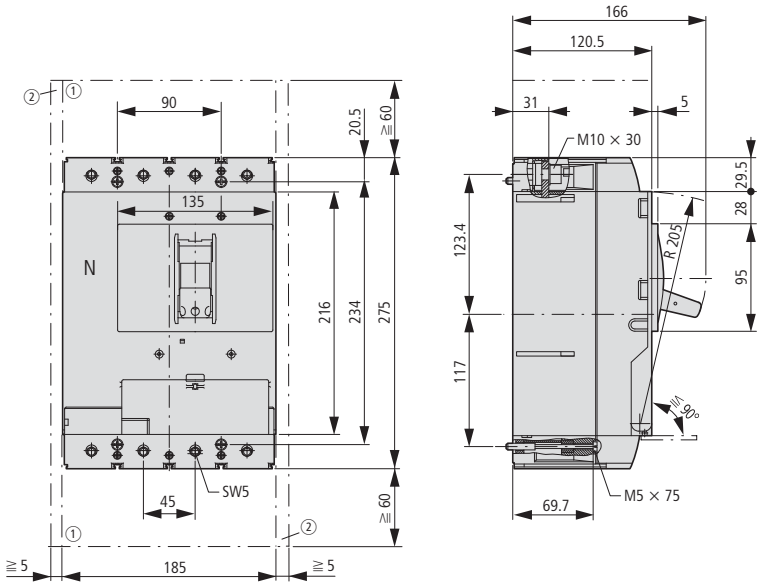
Circuit-breakers
Switch-disconnectors
3 pole
NZMC3

PN3
N3
NS3



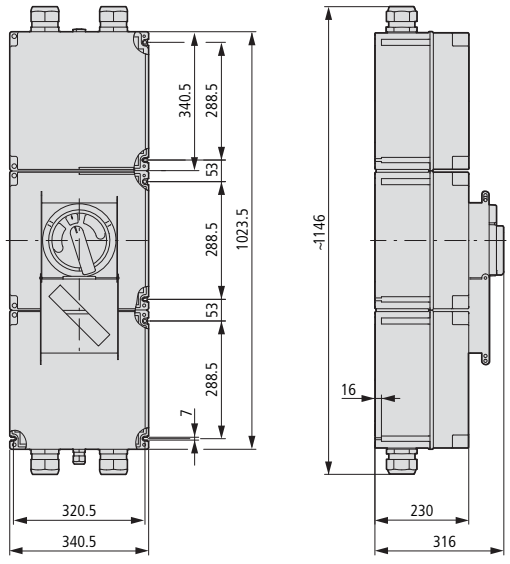
① Blow-out area, minimum clearance to other parts ≧ 60 mm
② Minimum clearance to adjacent parts ≧ 5 mm

Circuit-breakers
Switch-disconnectors
4 pole
NZMC3-4
NZMN3-4
NZMH3-4
PN3-4
N3-4



① Blow-out area, minimum clearance to other parts ≧ 60 mm
② Minimum clearance to adjacent parts ≧ 5 mm

Switch-disconnectors
ATEX22-type
3 pole
PN3.../ATEX22

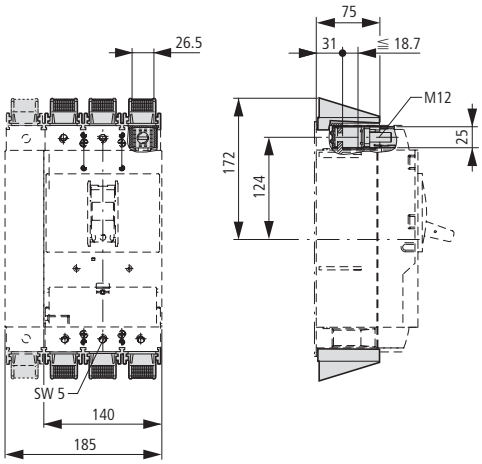


Box terminal

(+)NZM3(-4)-XKC(O)(U)

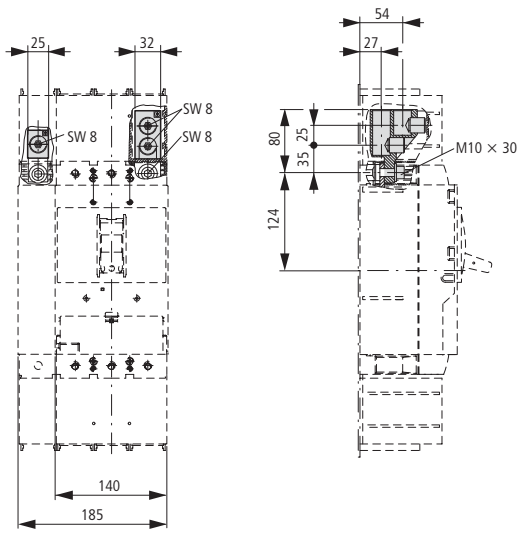
IP2X protection against contact with finger

NZM3(-4)-XIPK



Tunnel terminal

NZM3(-4)-XKA1(2)



Cover

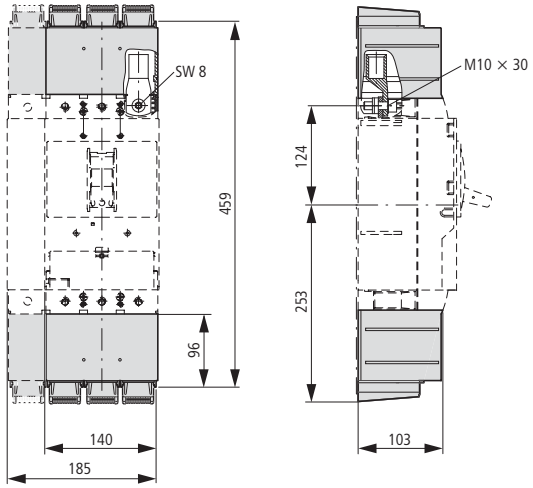
NZM3(-4)-XKSA

Cable lug

NZM3-XKS185

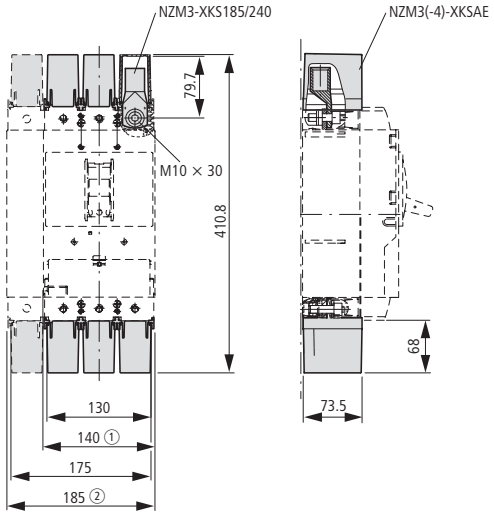
IP2X protection against contact with a finger

NZM3(-4)-XIPA



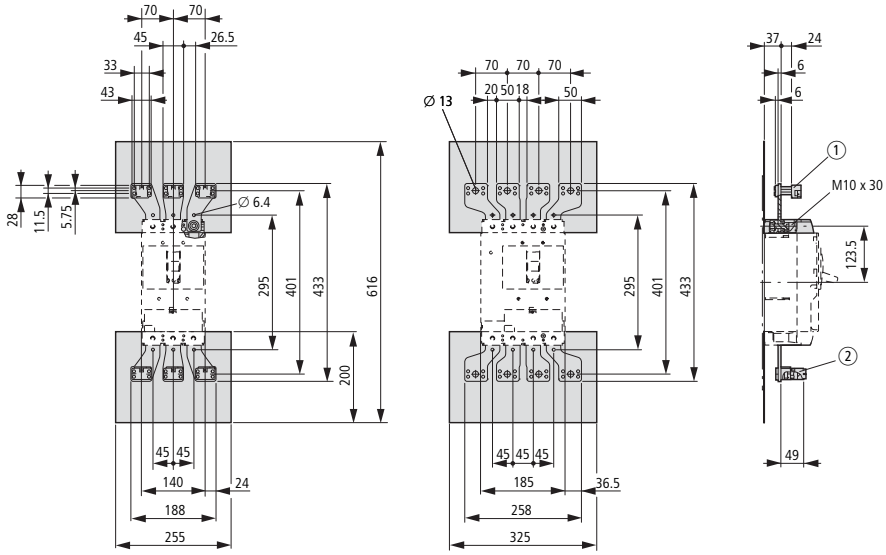
Cable lug cover

NZM3-(4)-XKSAE



① 3 pole
② 4 pole

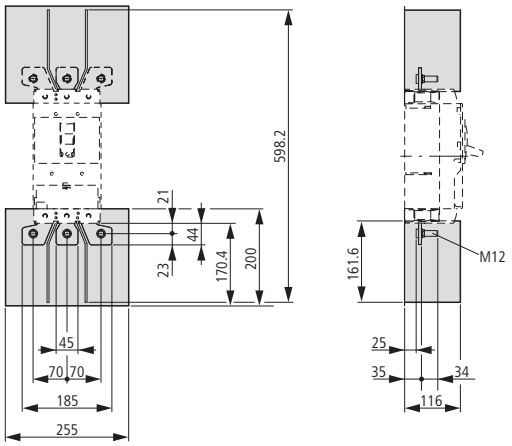
Connection width extension
NZM3(-4)-XKV70
Terminals
NZM3(-4)-XK22X21
NZM3(-4)-XK300



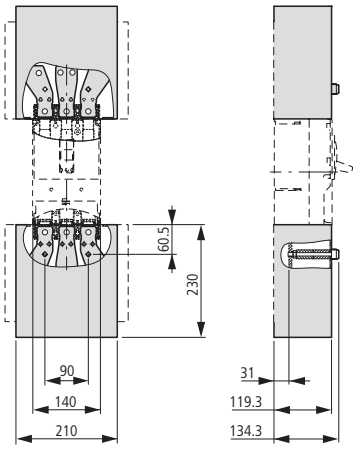
Length with phase isolators approx. 599 mm

① NZM3(-4)-XK22X21
② NZM3(-4)-XK300

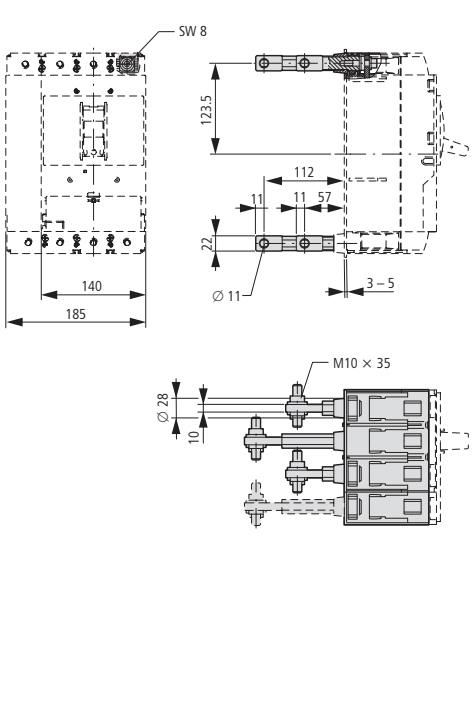
Connection width extension
NZM3-XKV70KB



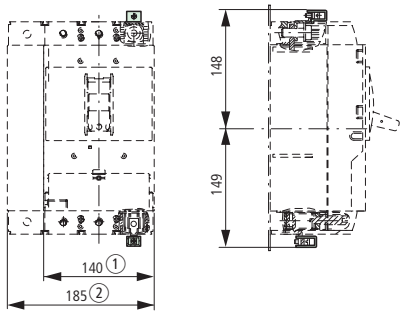
Connection width extension
NZM3-XKV70-2
Cover, large
NZM3-XKSAV



Rear terminal bolts
(+)NZM3(-4)-XKR(O)(U)



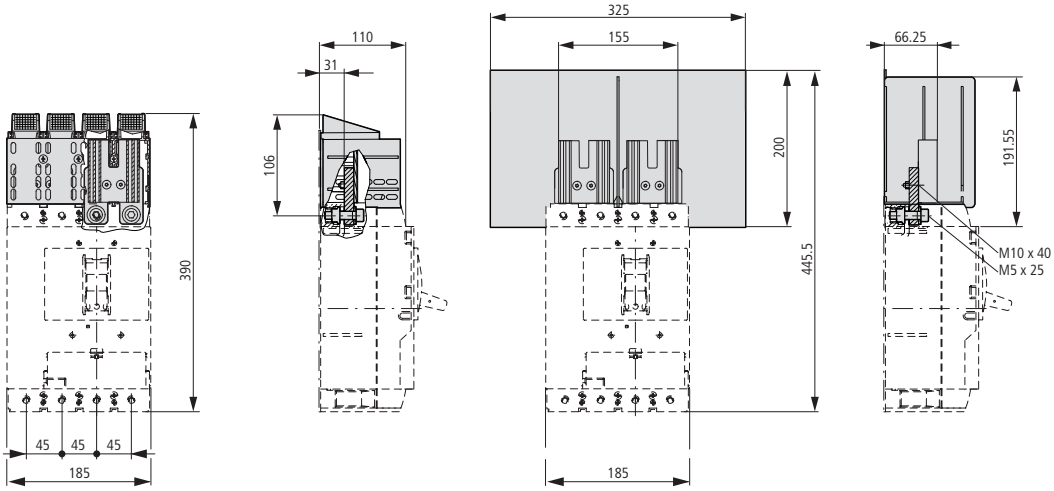
Control cable terminals
NZM3/4-XSTS
NZM-XSTK



① 3 pole
② 4 pole

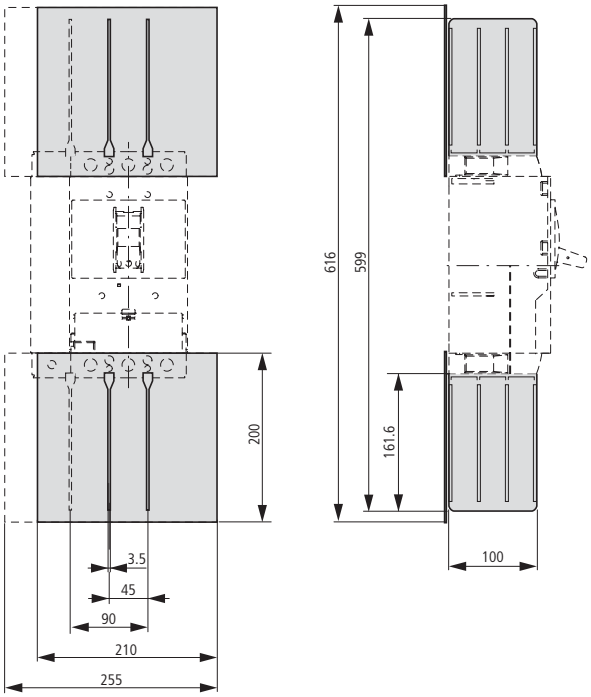
Jumper kit

NZM3(-4)-XKV2P...



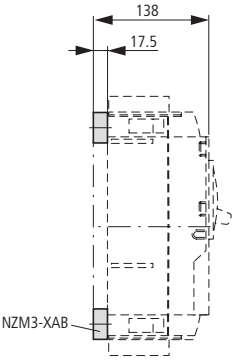
Phase isolators

NZM3-4-XKP



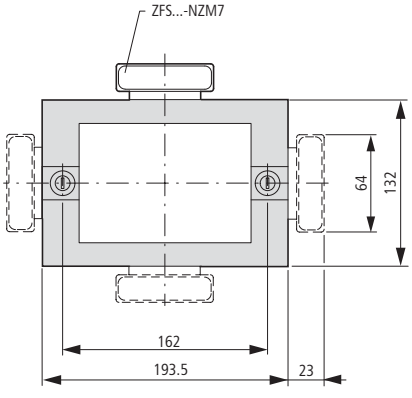
Spacers

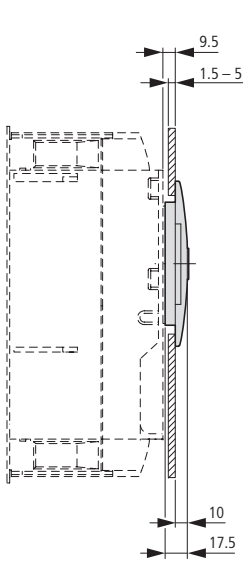
NZM3-XAB



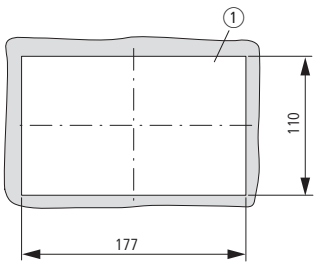
Insulating surround

NZM3-XBR



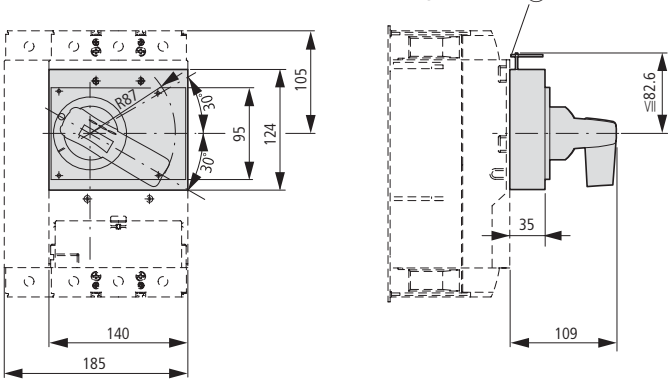


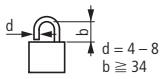
① Mounting aperture



Rotary drive

Rotary handle on circuit-breaker

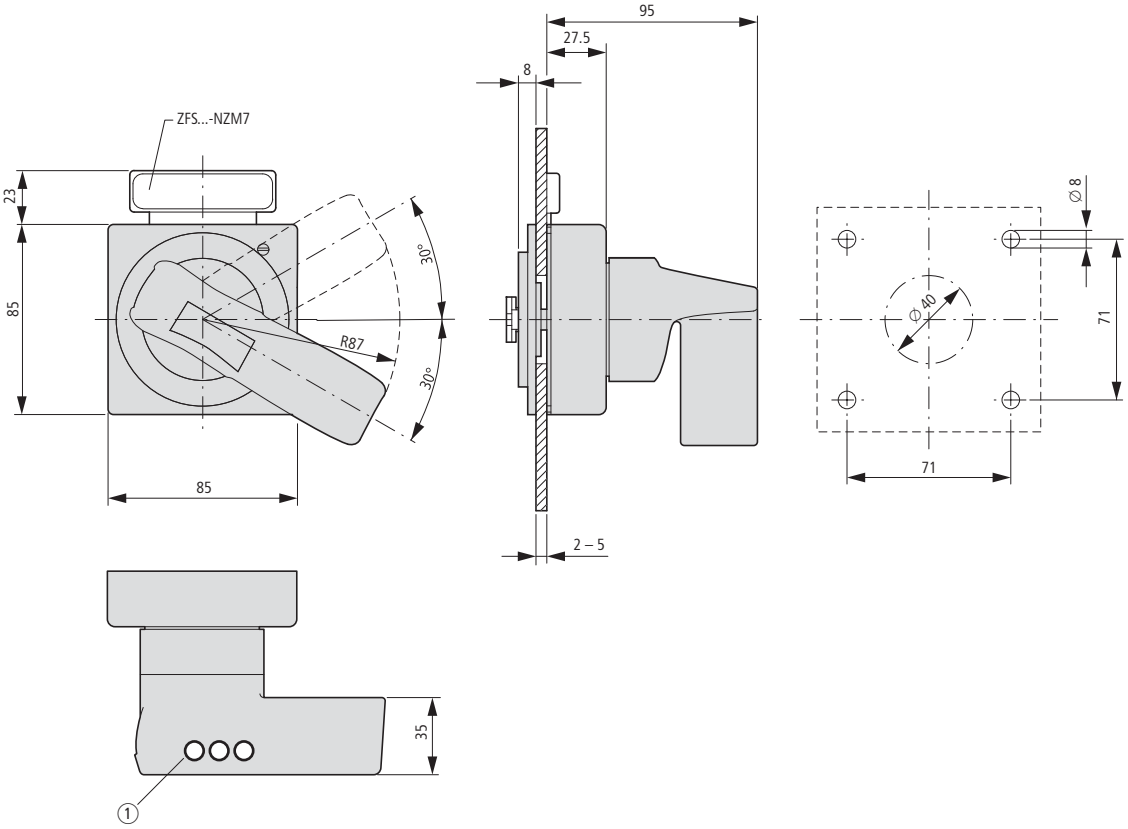


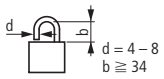


① Up to 3 padlocks

Door coupling rotary handles

NZM3-XTVD(V)(R)...

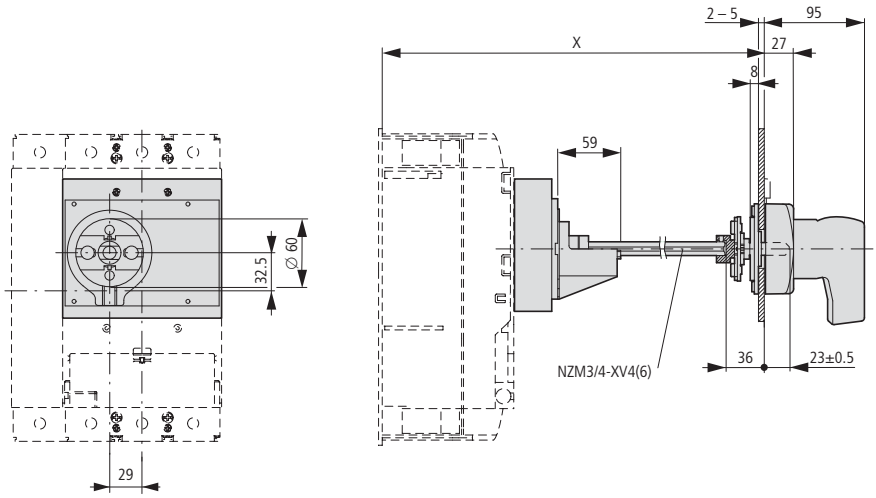




① Up to 3 padlocks

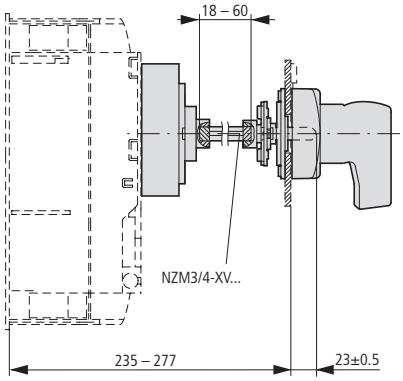
Door coupling rotary handle with extension shaft

NZM3-XTVDV(R)(-NA)
NZM3/4-XV4(6)

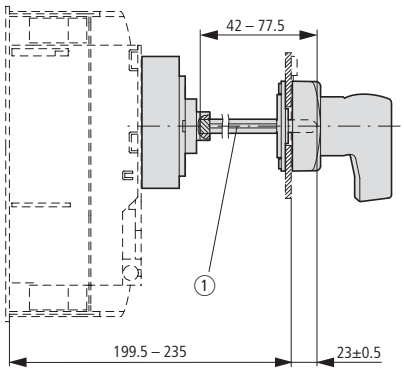


Part no.	x
NZM3/4-XV4	270 – 400
NZM3/4-XV6	400 – 600

NZM3-XTVDV(R)-60(-NA)

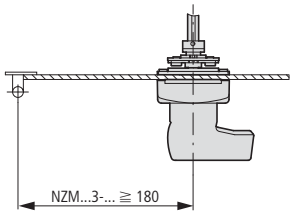


NZM3-XTVDV(R)-0(-NA)



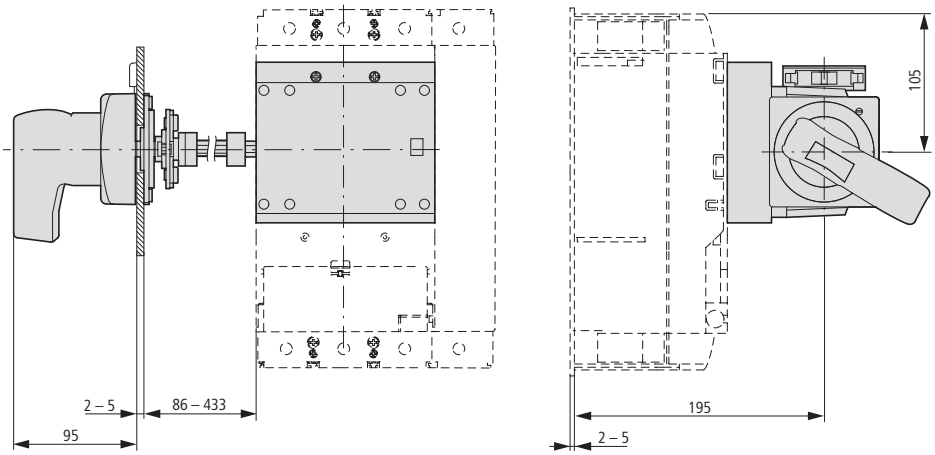
① Special tip

Minimum distance of door coupling rotary handle from door pivot point

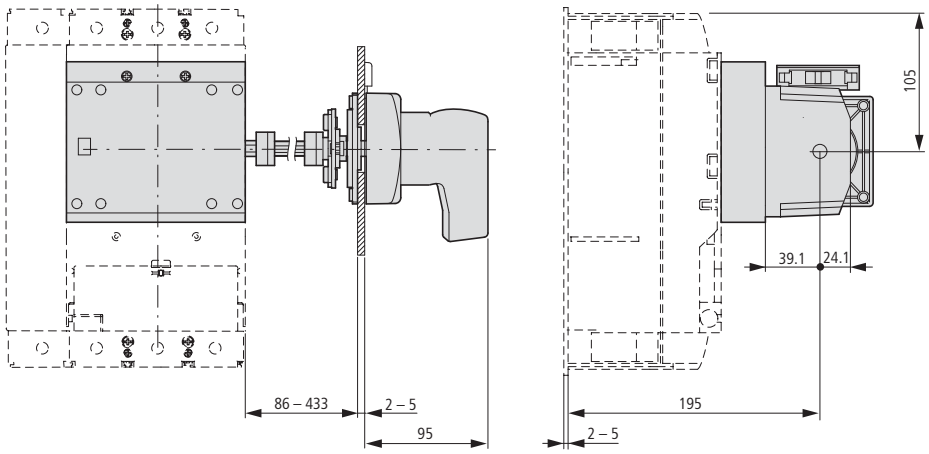


Main switch assembly kit for side wall installation

NZM3-XS(R)-L

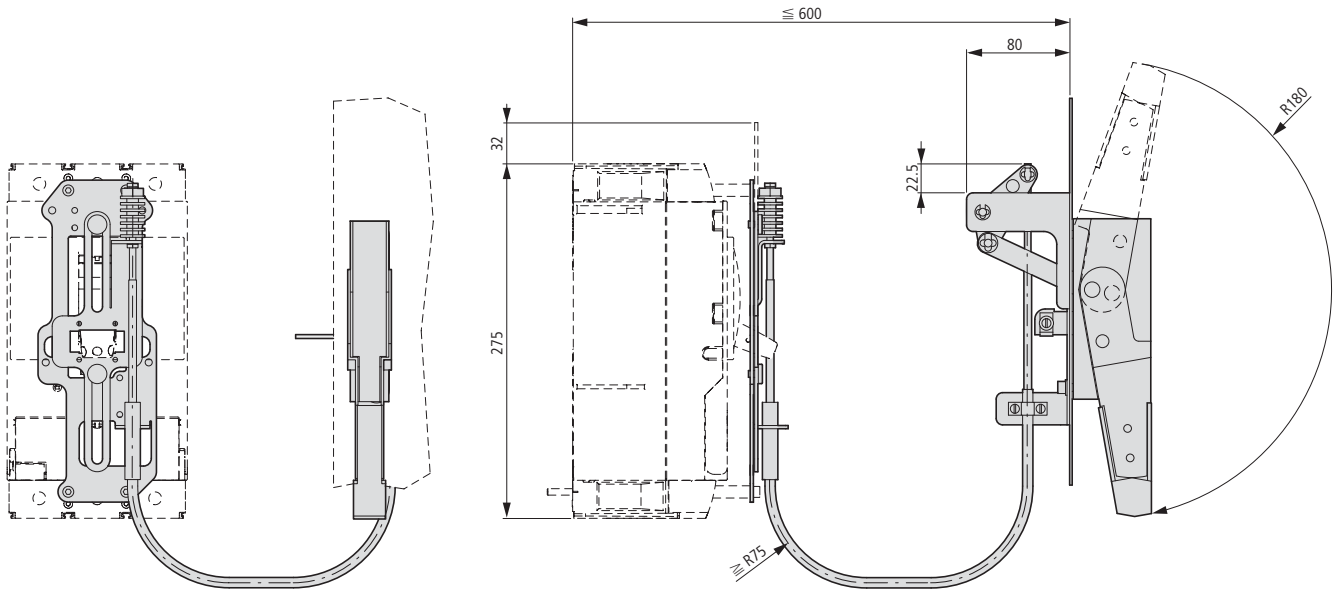


NZM3-XS(R)-R



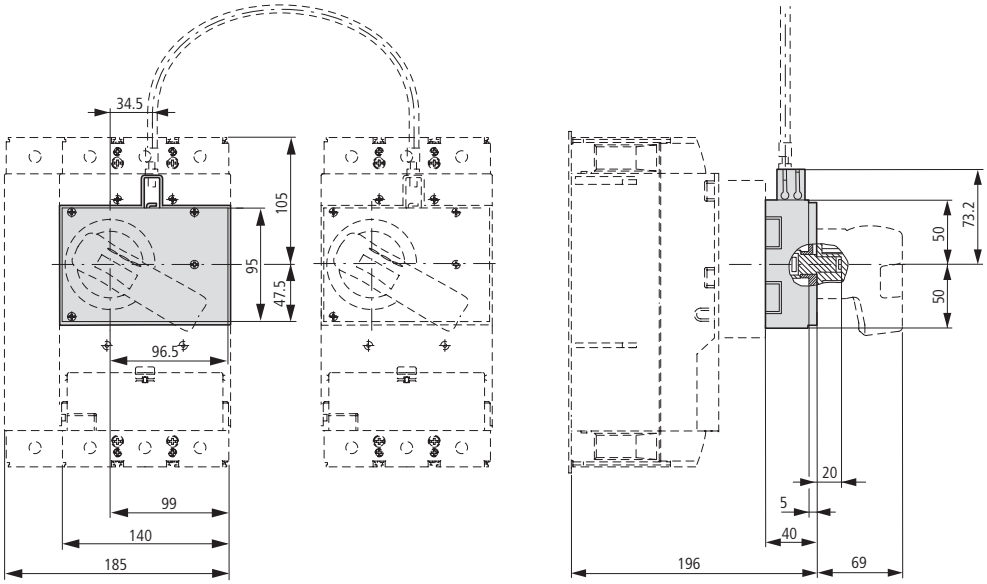
Side-mounted handle

NZM3... XSH...

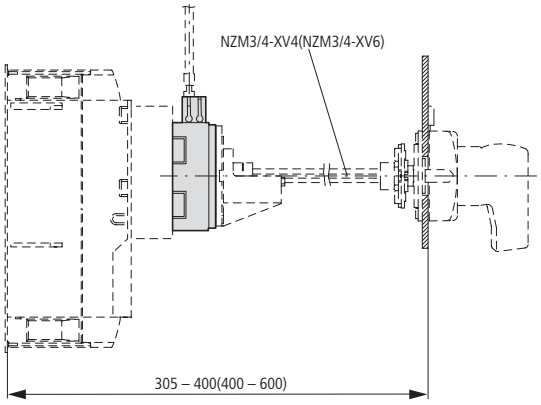


Mechanical interlock

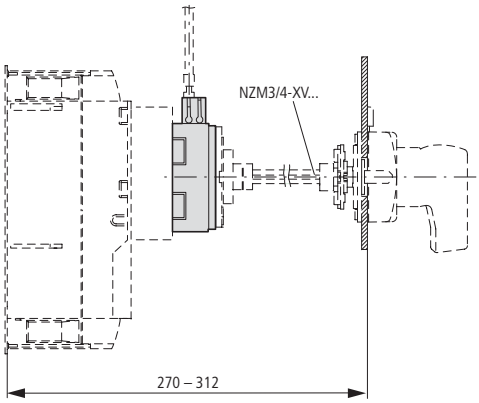
NZM3-XMV + NZM3-XDV(R)



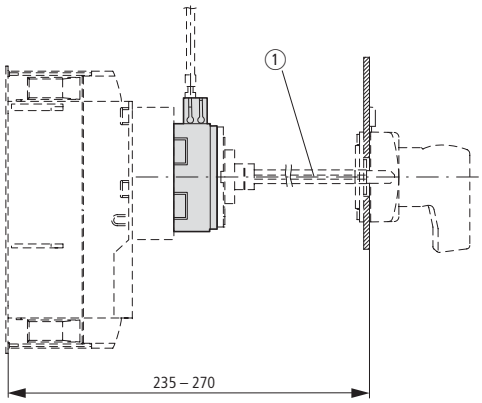
NZM3-XMV + NZM3-XTVD(V)(R)



NZM3-XMV + NZM3-XTVD(V)(R)-60



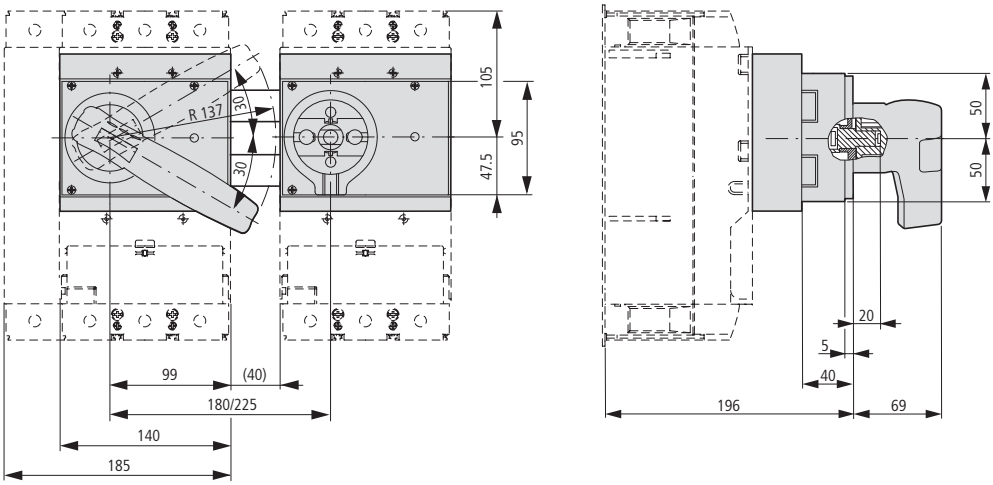
NZM3-XMV + NZM3-XTVD(V)(R)-0



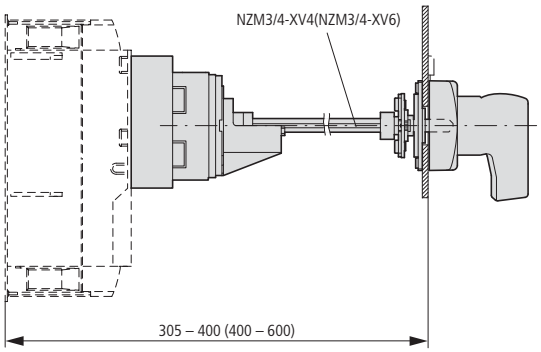
① Special tip

Paralleling mechanism

PN3-XPA

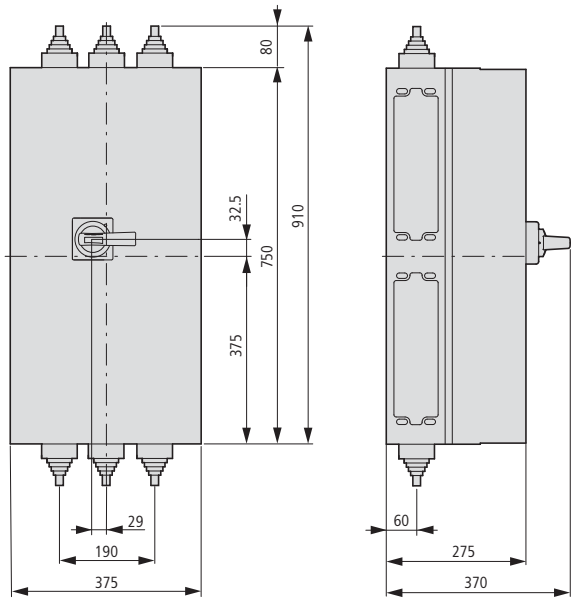


PN3-XPA



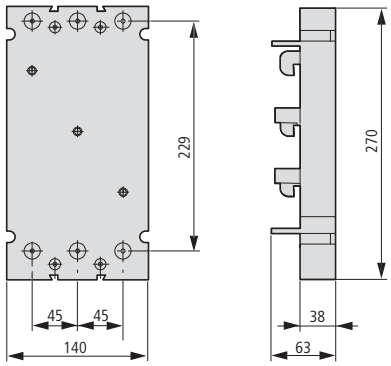
Insulated enclosures

NZM3-XCI48-TD



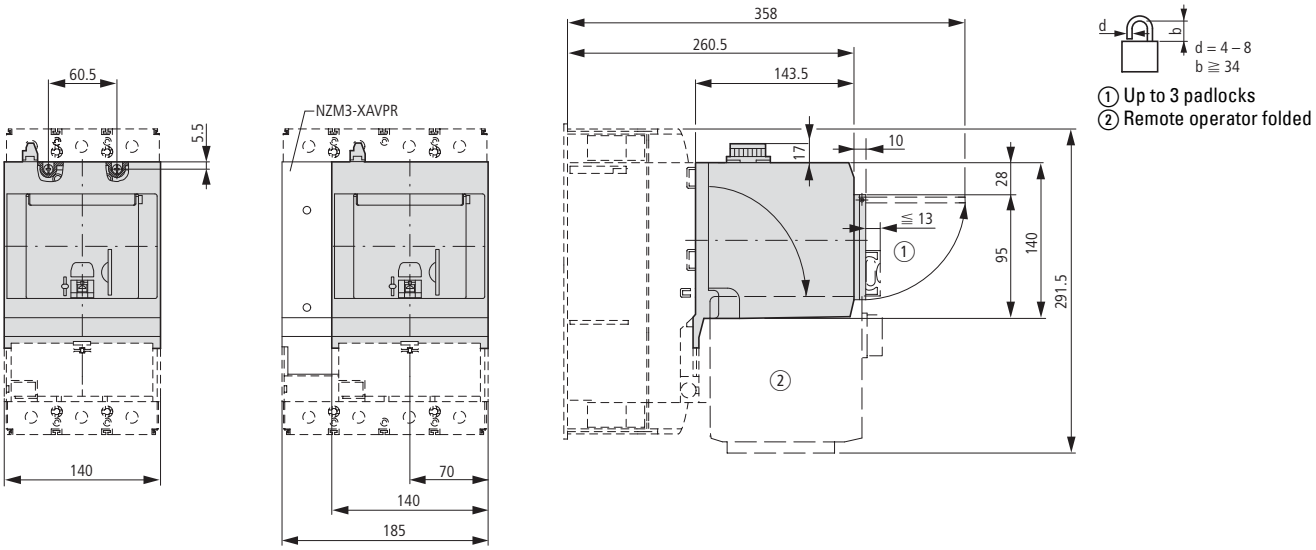
Component adapter

NZM3-XAD550



Remote operators

NZM3-XR…

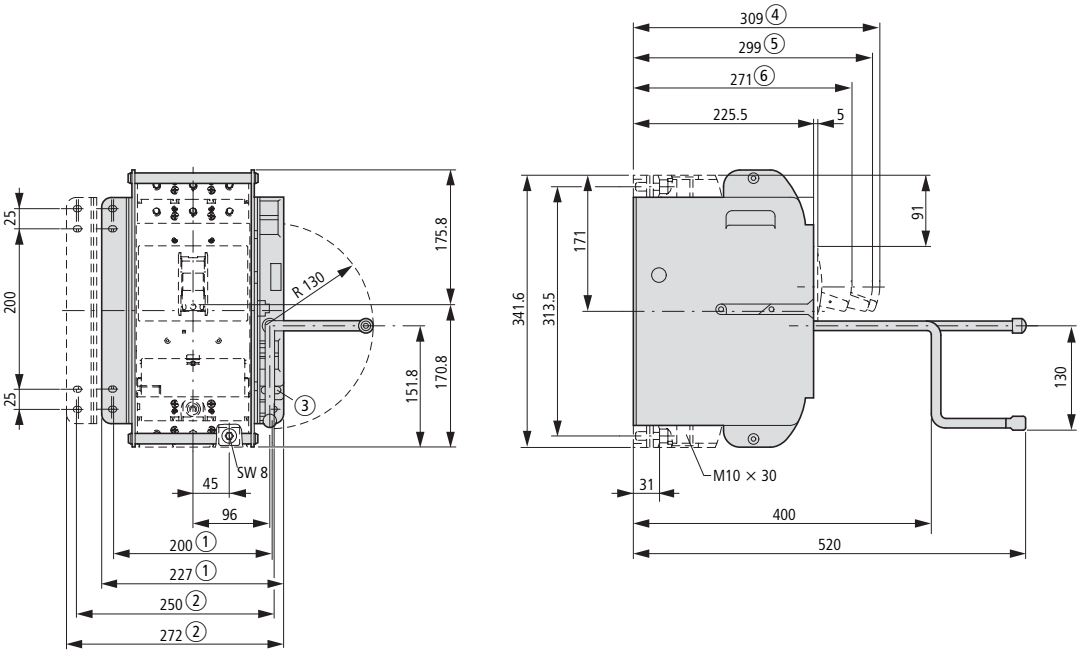


Withdrawable unit with auxiliary plug-in adapter

NZM3-...-SVE

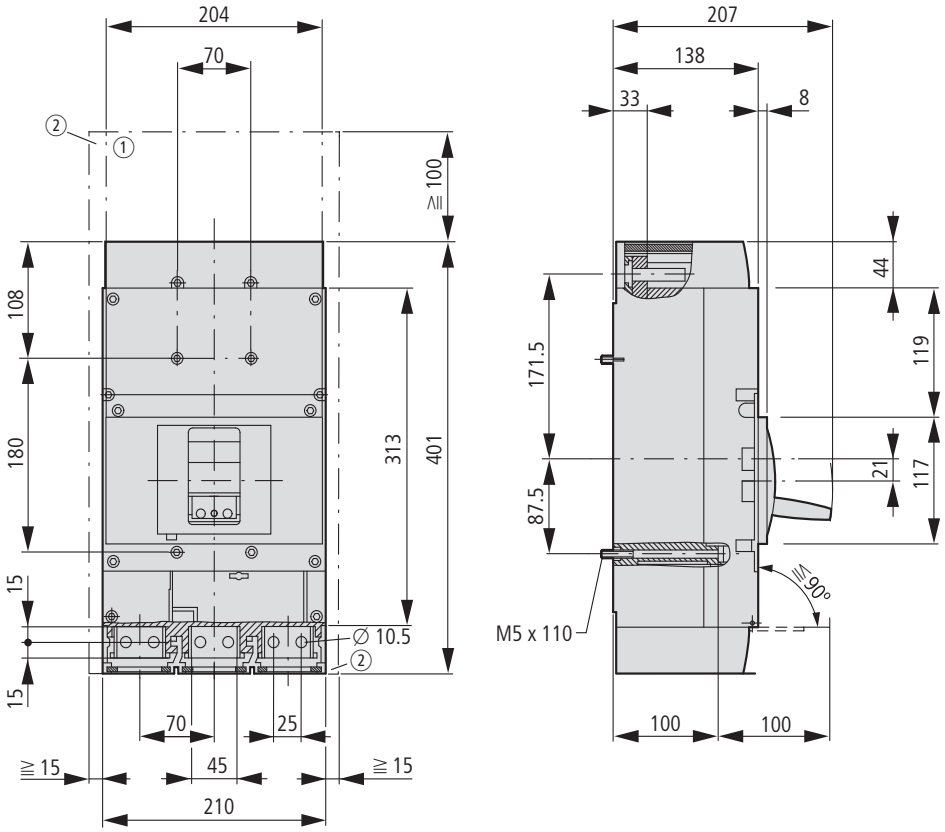
N3...-SVE

NZM3-XSVS



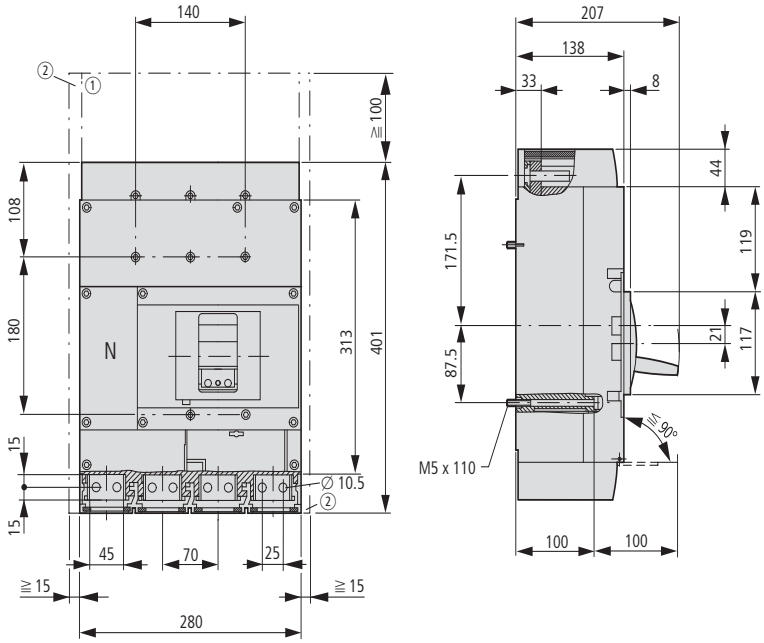
Circuit-breakers
Switch-disconnectors

3 pole
NZMN4
NZMH4
N4
NS4



① Blow-out area, minimum clearance to other parts ≧ 100 mm up to 690 V; ≧ 200 mm up to 1000 V
② Minimum clearance to adjacent parts ≧ 15 mm

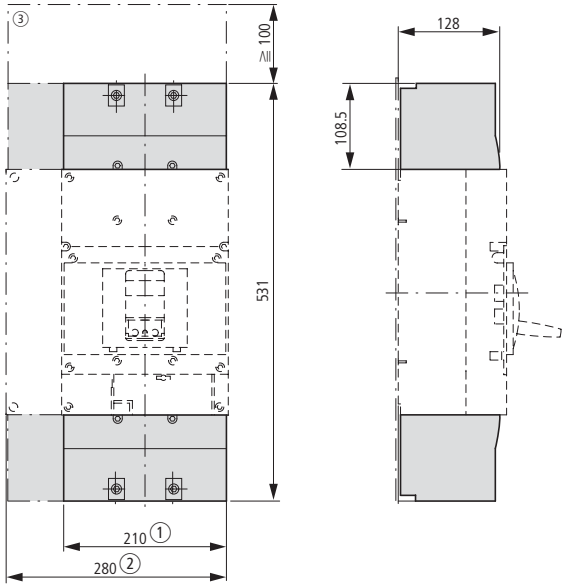
4 pole
NZMN4-4
NZMH4-4
N4-4



① Blow-out area, minimum clearance to other parts ≧ 100 mm
② Minimum clearance to adjacent parts ≧ 15 mm

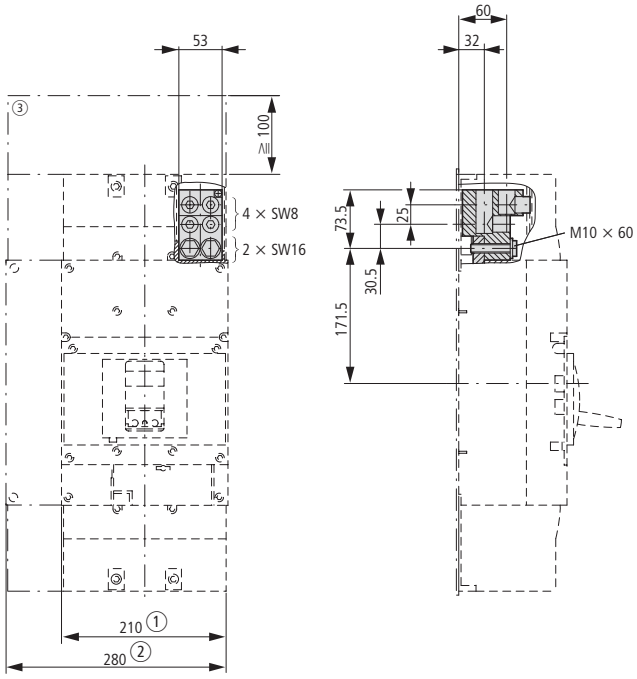
Covers

NZM4(-4)-XKSA



Tunnel terminal

NZM4-4-XKA



① 3 pole
② 4 pole
③ Clearance from conductive parts ≧ 100 mm up to 690 V; ≧ 200 mm up to 1000 V

Screw terminals

Module plate

1-hole

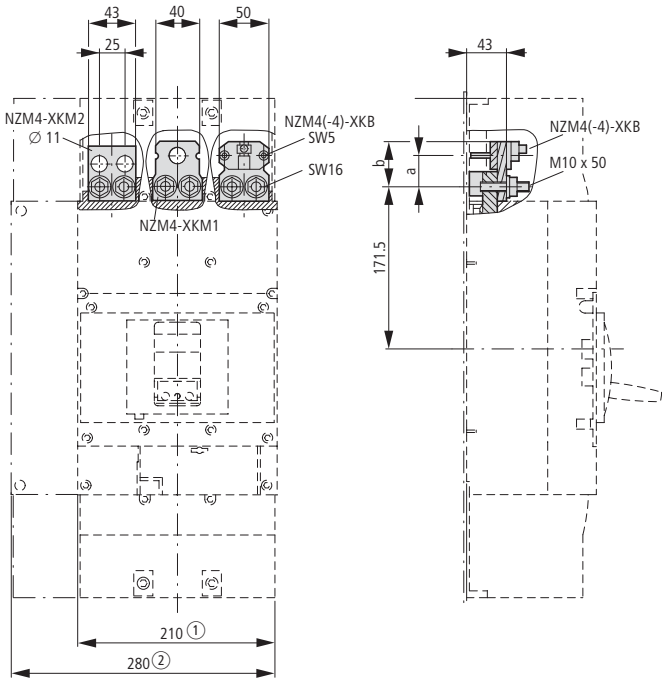
NZM4(-4)-XKM1

2-hole

NZM4(-4)-XKM2

Flat cable terminal

NZM4(-4)-XKB

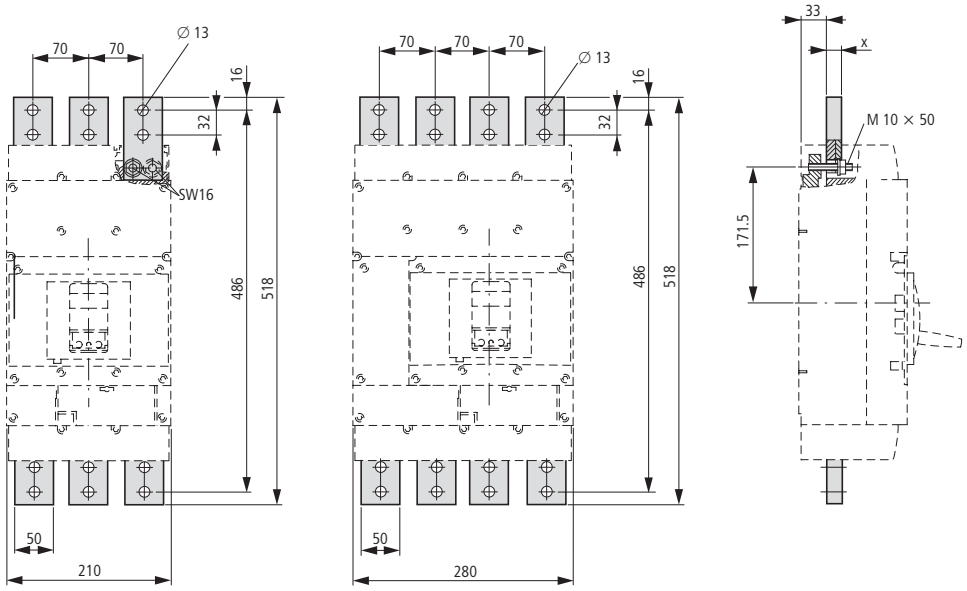


Part no.	a	b
NZM4(-4)-XKM1	36	47
NZM4(-4)-XKM2	32	40
NZM4(-4)-XKB	–	47

① 3 pole
② 4 pole
③ Clearance from conductive parts
≧ 100 mm up to 690 V;
≧ 200 mm up to 1000 V

Module plate
2 hole, vertical

NZM4(-4)-XKM2S...



Part no.	x
NZM4(-4)-XKM2S-1250	12
NZM4(-4)-XKM2S-1600	20

Connection width extension

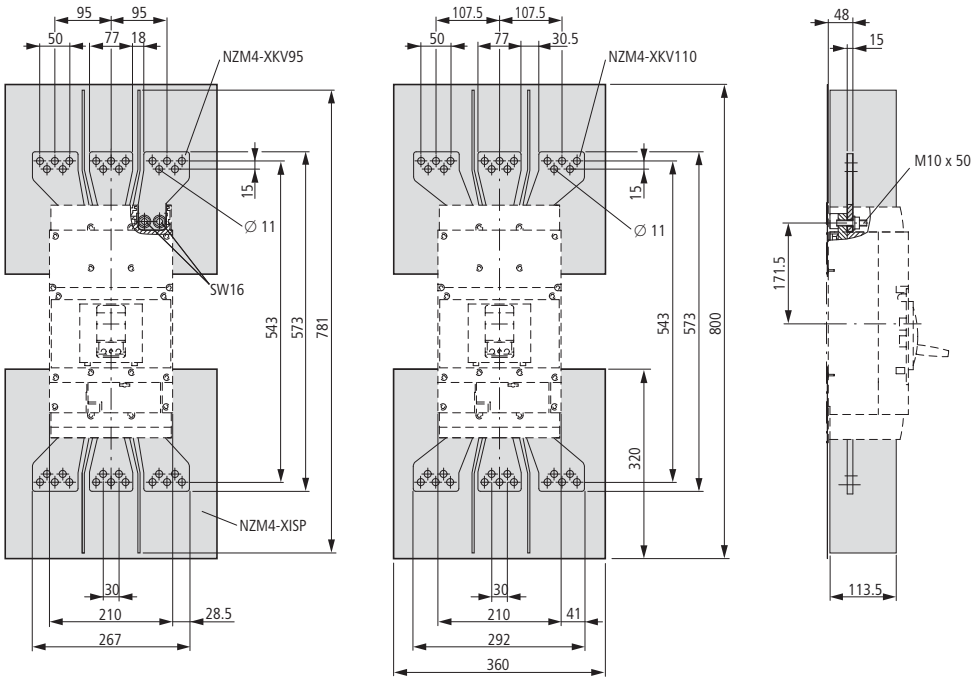
NZM4-XKV95
NZM4-XKV110

Insulation plate

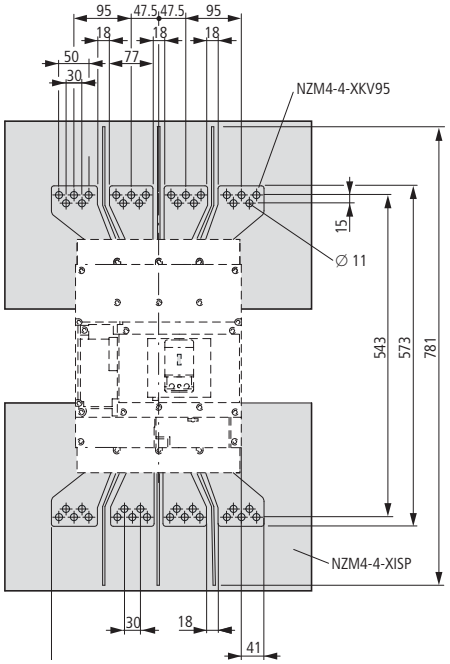
NZM4-XISP

Phase isolators

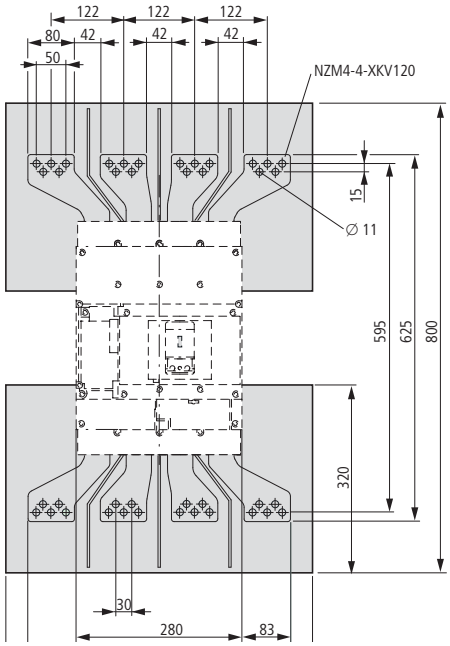
NZM4-XKP



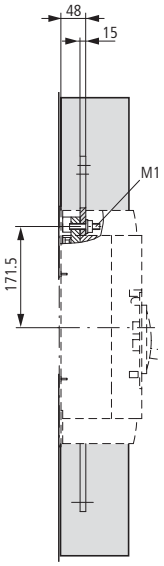
NZM4-4-XKV95



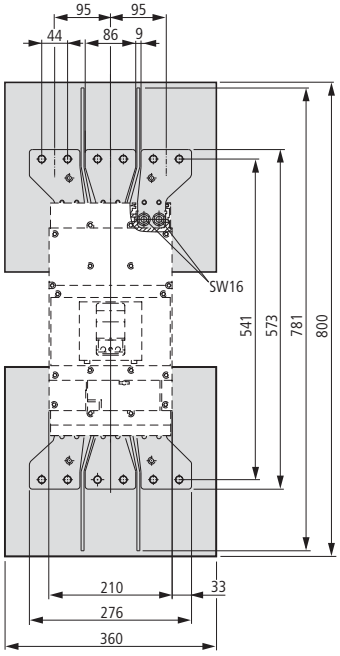
NZM4-4-XKV120

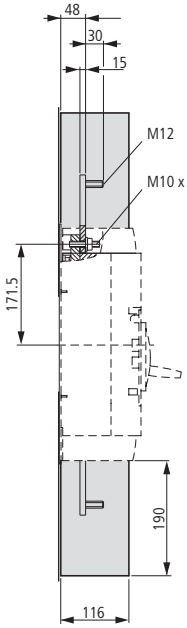


NZM4-4-XISP
NZM4-4-XKP

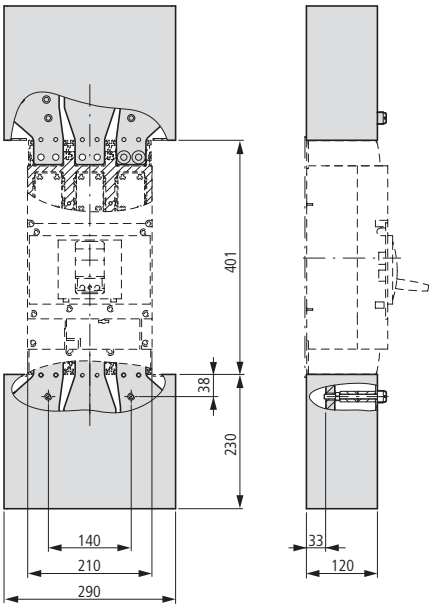


Connection width extension
NZM4-XKV95-2KB



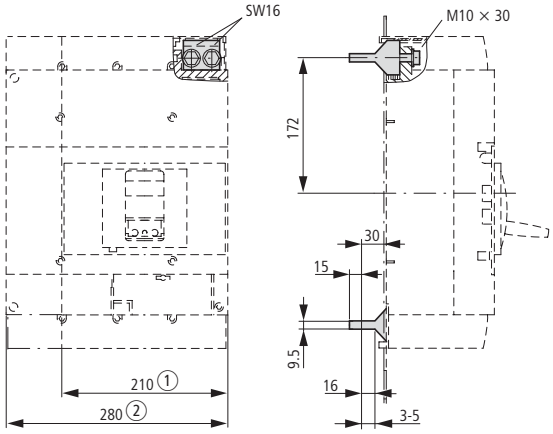


Cover, large
NZM4-XKSAV

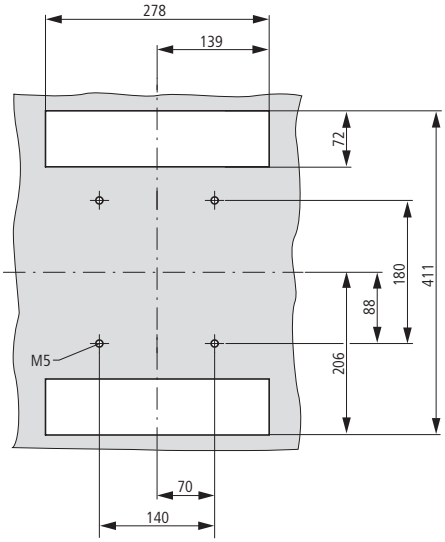


Rear terminal bolts

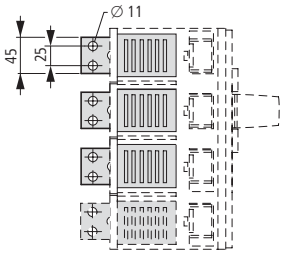
NZM4(-4)-XKR

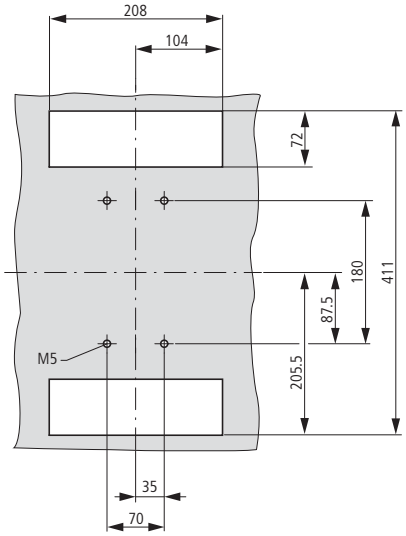


Fitting on mounting plate



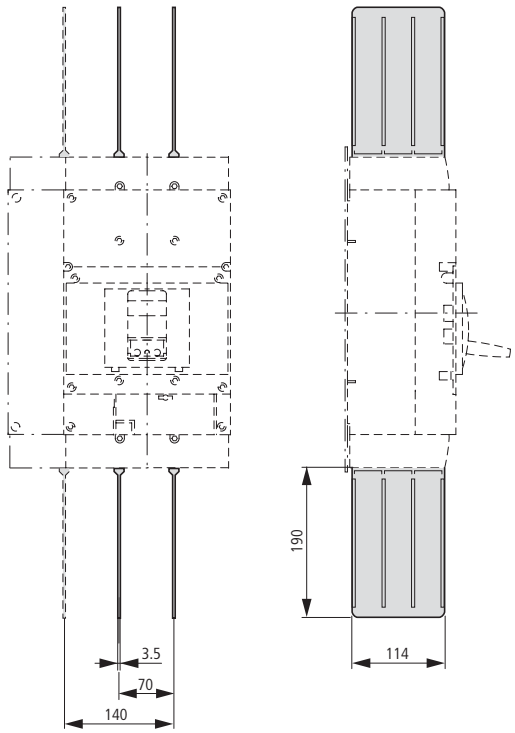
Rear connection possible also rotated by 90°.
① 3 pole
② 4 pole





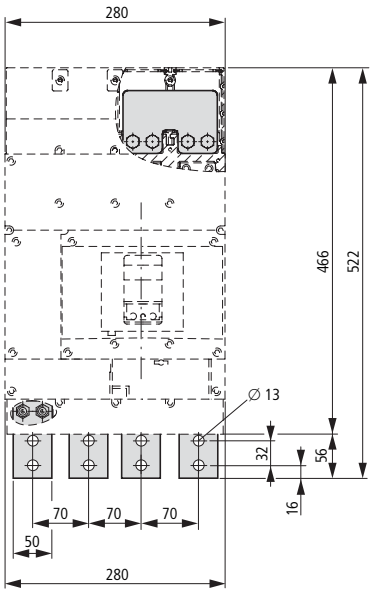
Phase isolators

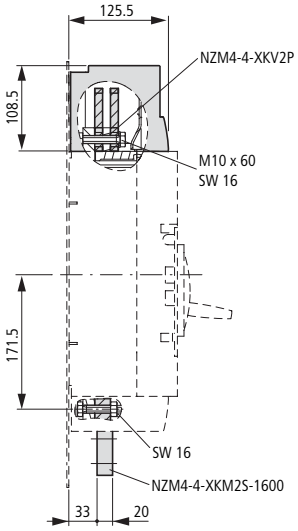
NZM4(-4)-XKP



Jumper kit

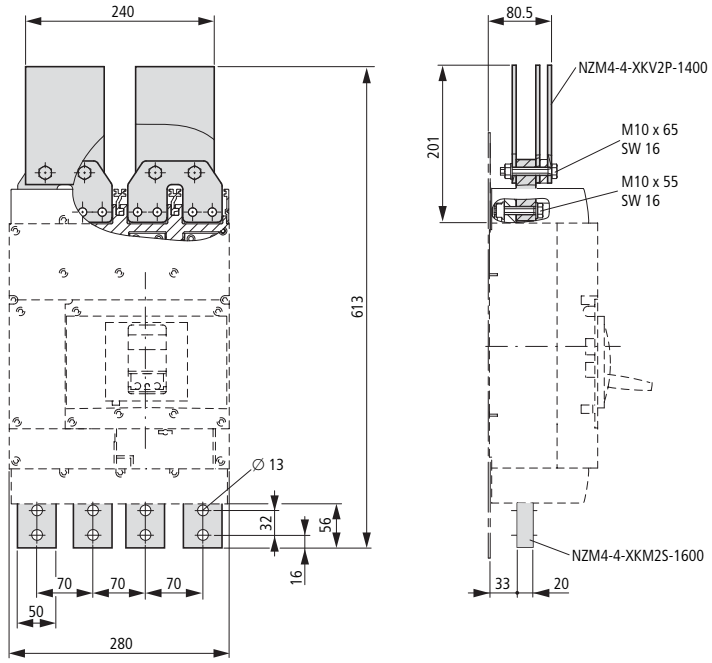
NZM4-4-XKV2P





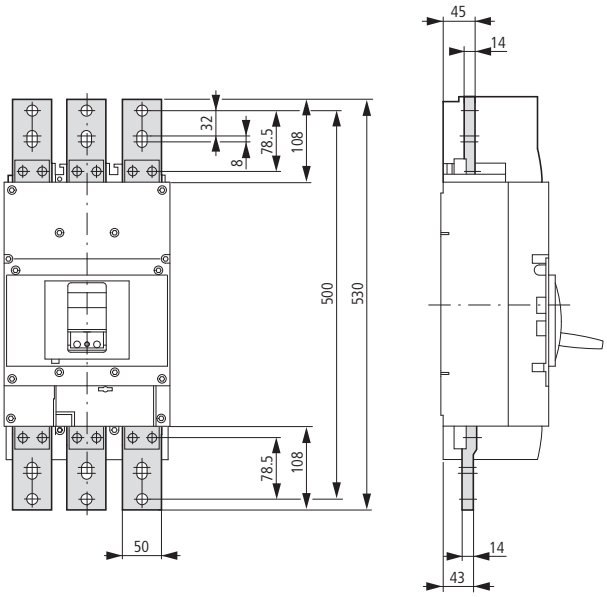
Jumper kit

NZM4-4-XKV2P-1400

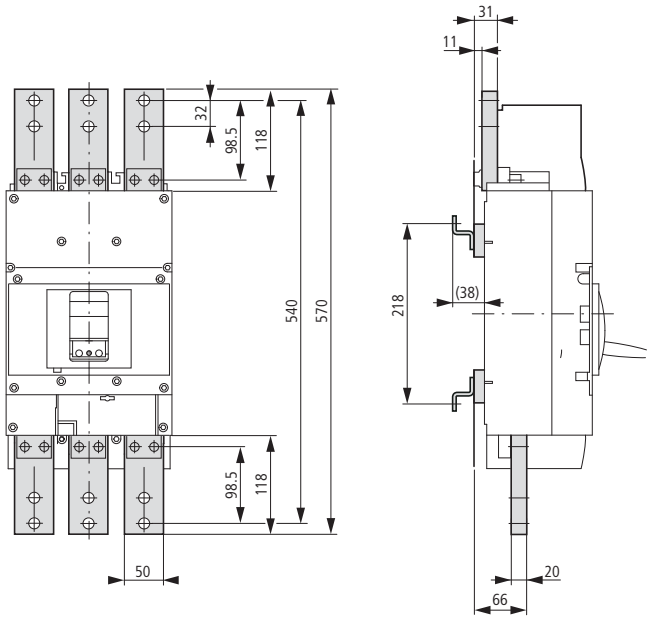


Adapter kit

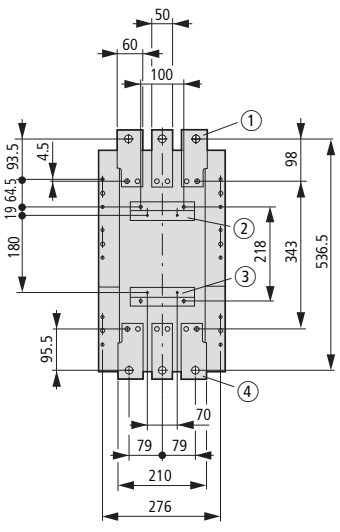
NZM4-XAS14-1250



NZM4-XAS14-1600



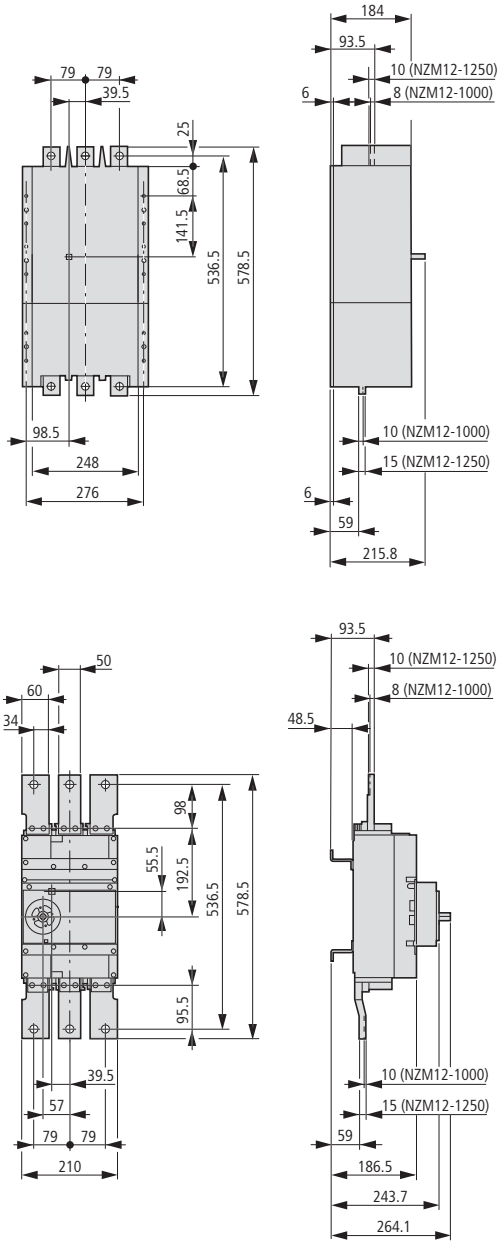
Drilling template NZM12-1000 (1250) conversion to NZM4



① Module plate NZM4-XAS12-1000(1250)
② Holes for mounting bracket NZM4-XAS12(M5)
③ Mounting bracket NZM4-XAS12
④ Mounting rail NZM12

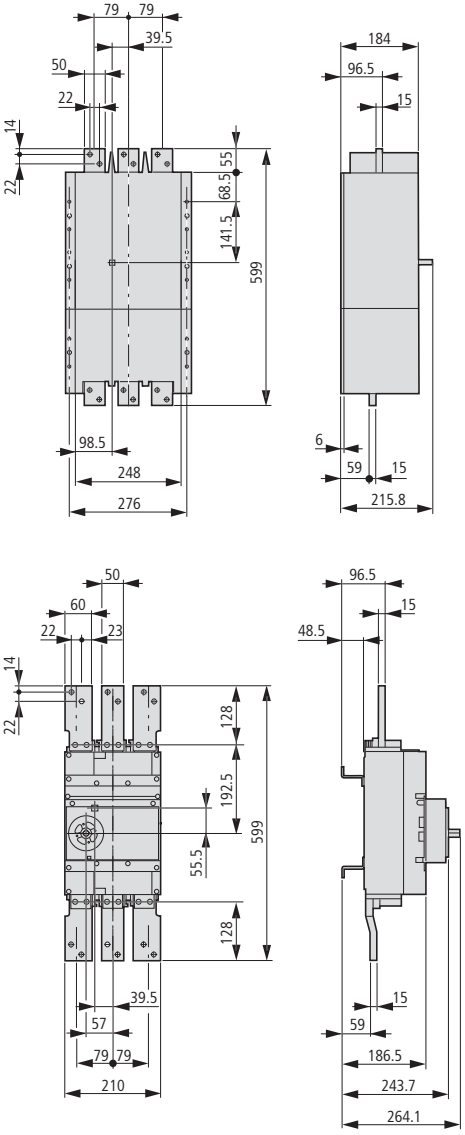
Replacement of NZM12-1000(1250) with NZM4 with module plate, fixed mounting on mounting plate

NZM4-XAS12-1000(1250)



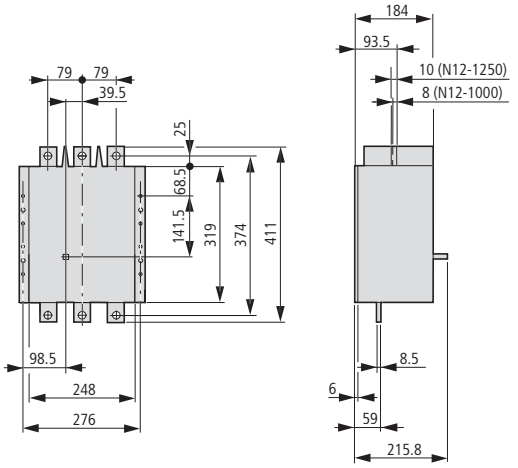
Replacement of NZM12-1600 with NZM4 with module plate, fixed mounting on mounting plate

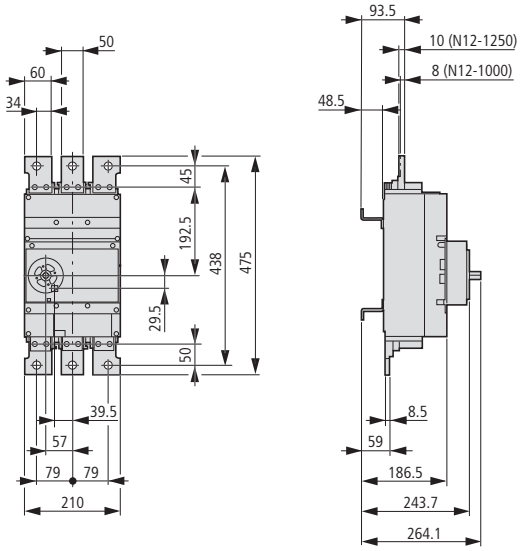
NZM4-XAS12-1600



Replacement of N12-1000(1250) with N4 with module plate, fixed mounting on mounting plate

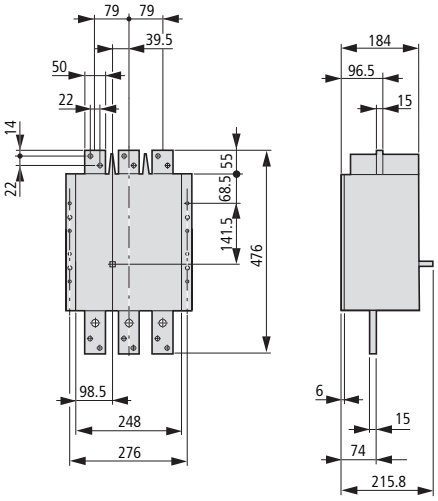
N4-XAS12-1000(1250)

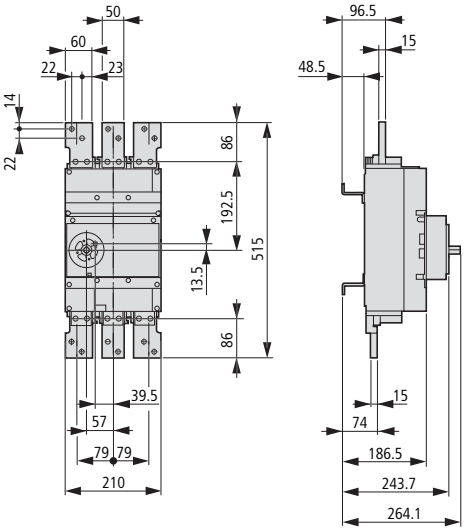




Replacement of N12-1600 with N4 with module plate, fixed mounting on mounting plate

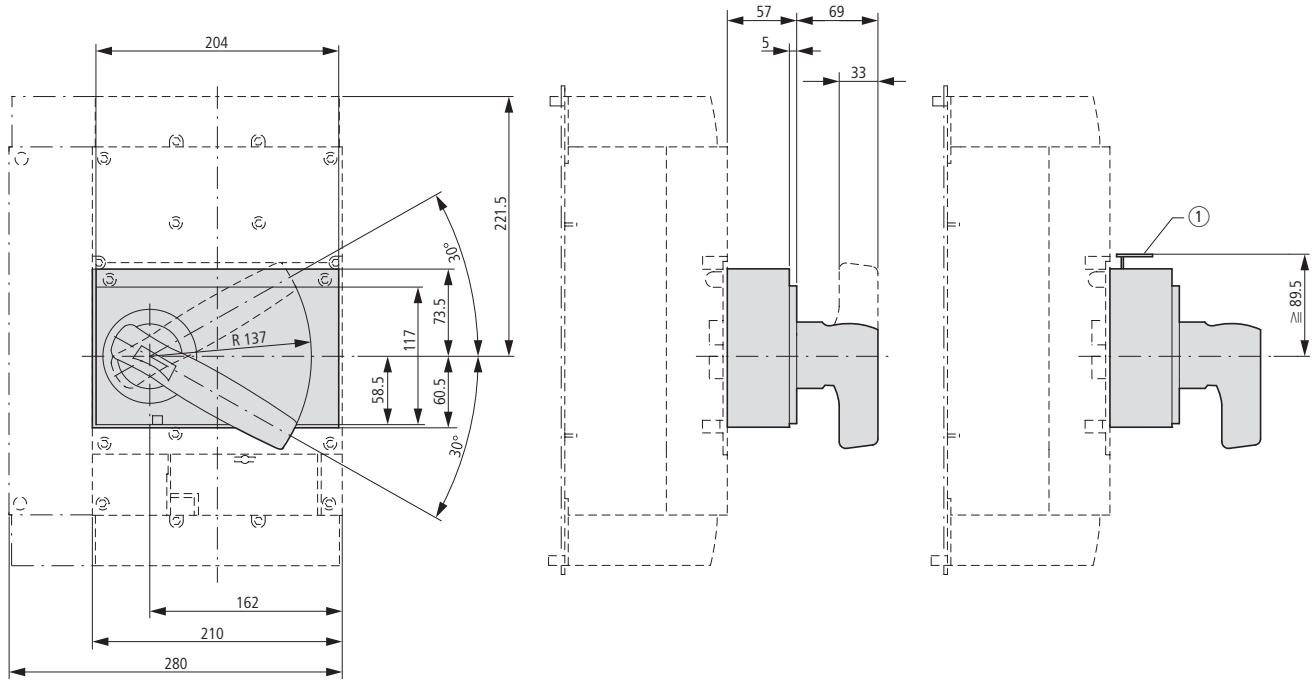
N4-XAS12-1600

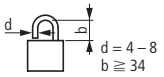




Rotary handle on circuit-breaker

NZM4-XDV(R)

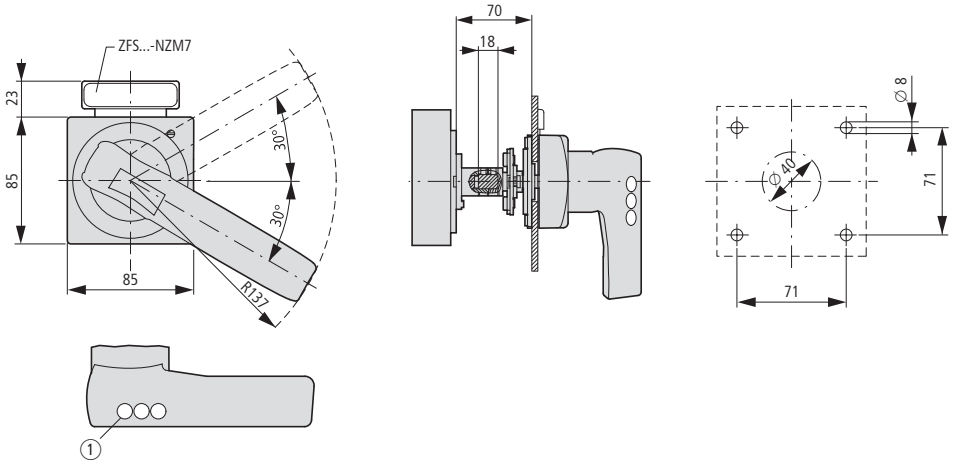


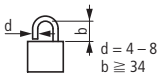


① Up to 3 padlocks

Door coupling rotary handles

NZM4-XTVD(V)(R)...

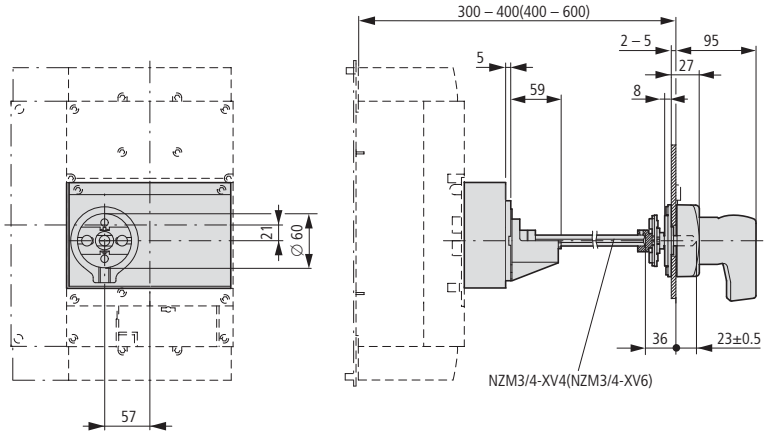




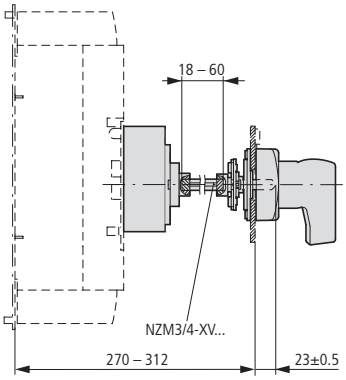
① Up to 3 padlocks

Door coupling rotary handle with extension shaft

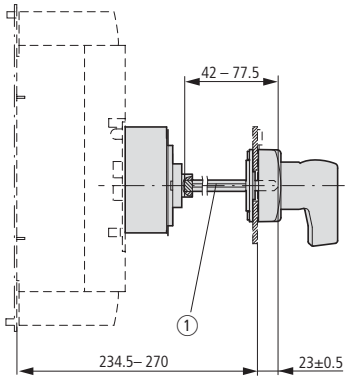
NZM4-XTVD(V)(R)(-NA)
NZM3/4-XV4(6)



NZM4-XTVD(V)(R)-60(-NA)

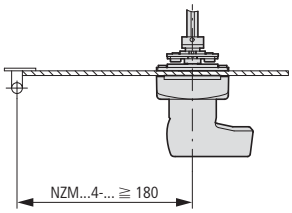


NZM4-XTVD(V)(R)-0(-NA)



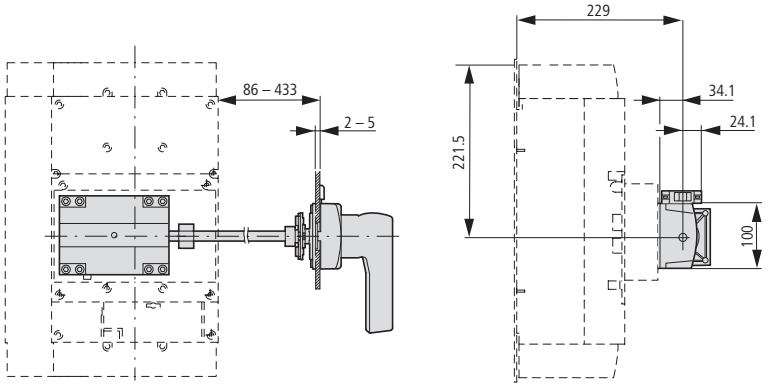
① Special tip

Minimum distance of door coupling rotary handle from door pivot point



Main switch assembly kit for side wall installation

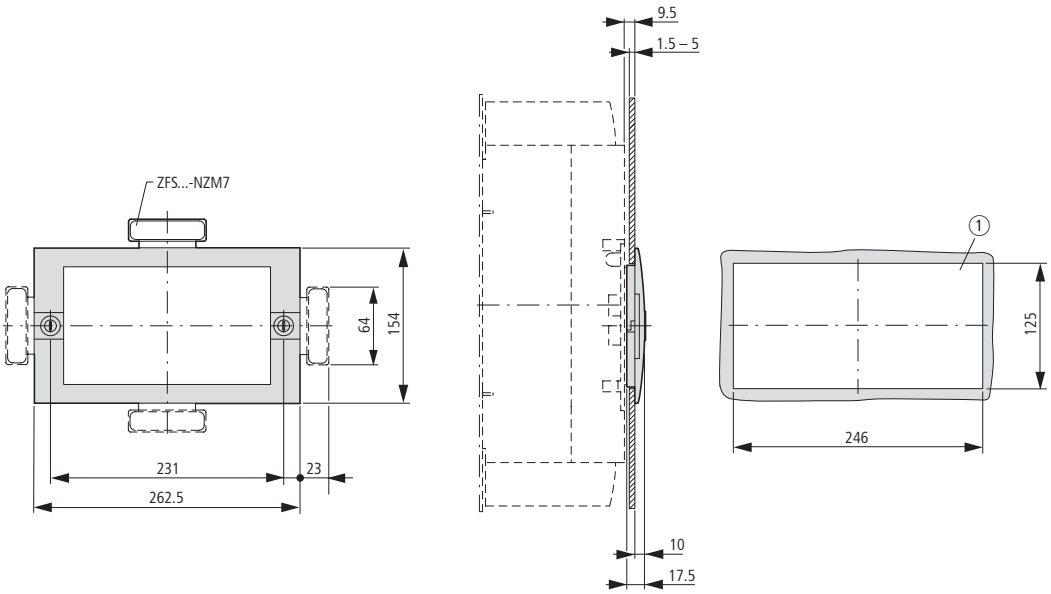
NZM4-XS(R)-L
NZM4-XS(R)-R



Insulating surround

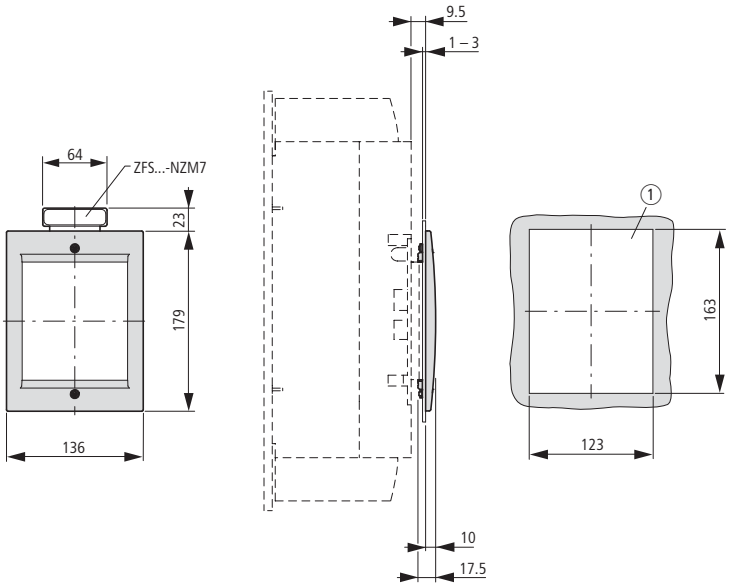
NZM4-XBR

① Mounting aperture



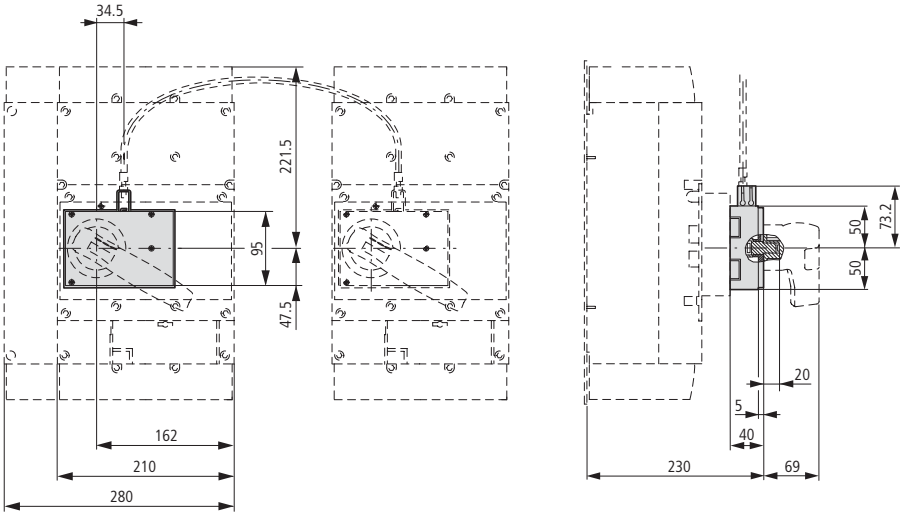
NZM4-XBRS

① Mounting aperture



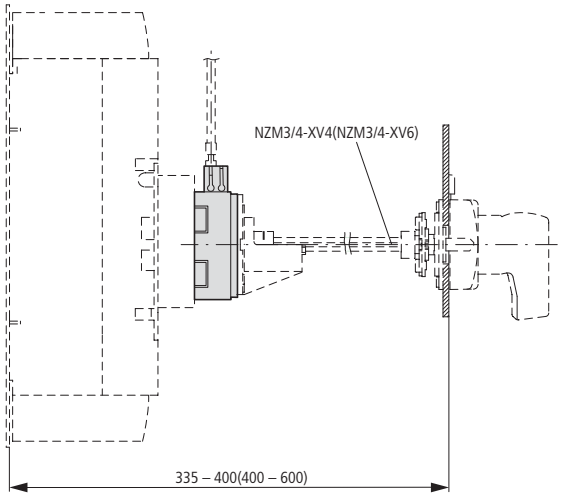
Mechanical interlock

NZM4-XMV + NZM4-XDV(R)

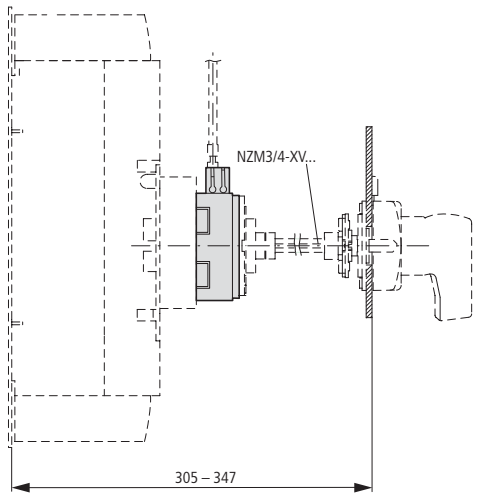


Mechanical interlock

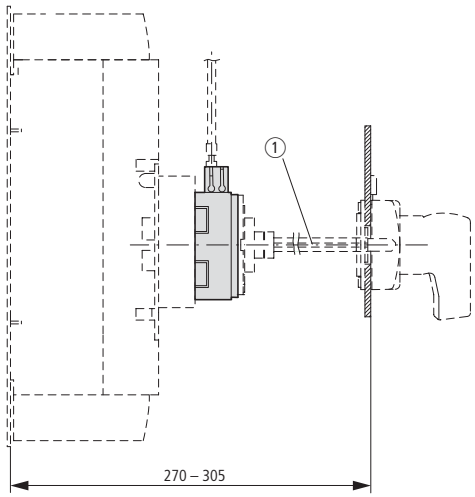
NZM4-XMV + NZM4-XTVD(V)(R)



NZM4-XMV + NZM4-XTVD(V)(R)-60



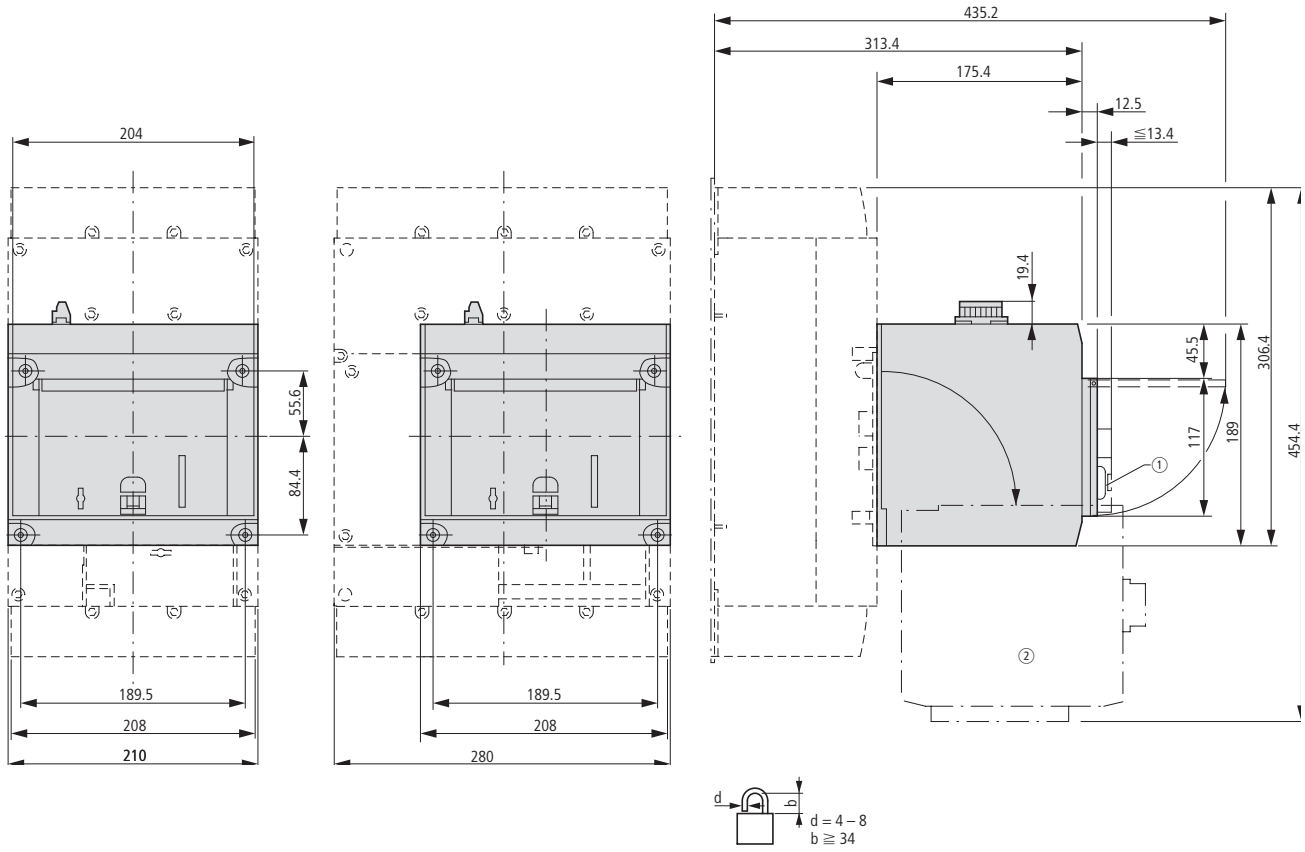
NZM4-XMV + NZM4-XTVD(V)(R)-0



① Special tip

Remote operators

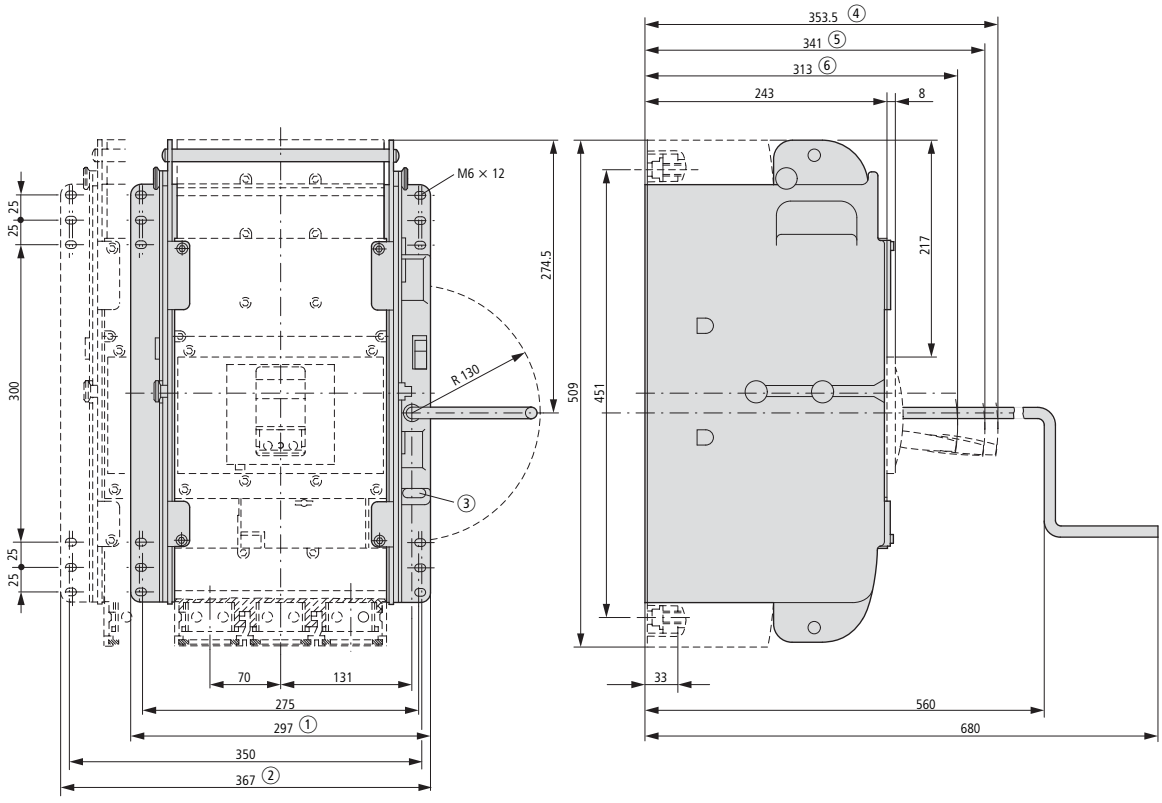
NZM4-XR…



① Up to 3 padlocks
② Remote operator folded

Withdrawable unit

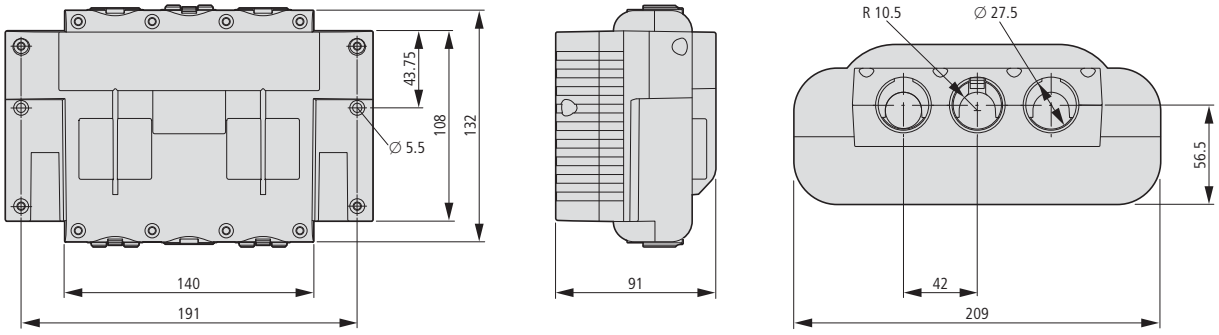
+NZM4-4-XAV



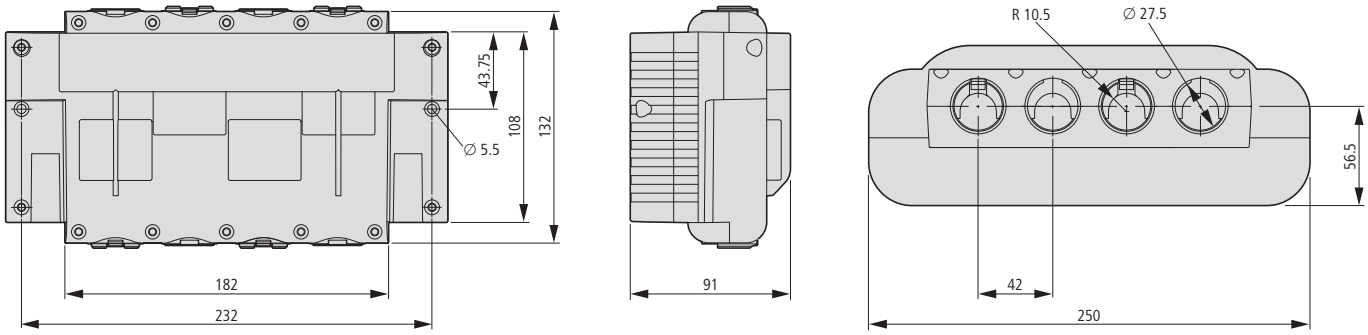
① 3 pole
② 4 pole
③ Up to 3 padlocks
④ Disconnected
⑤ Test
⑥ Connected

Measuring and communication module

NZM2 (3)...XMC-SO(MB)

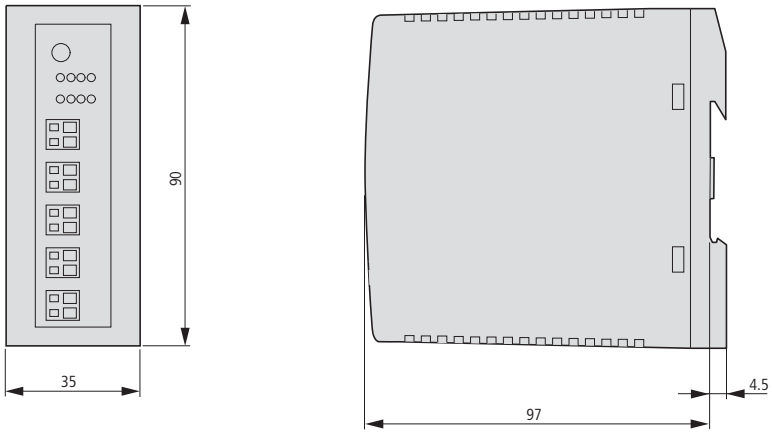


NZM2 (3)(-4)...XMC-SO(MB)



Communication interface for SmartWire-Darwin

NZM-XSWD-704



Circuit-breakers IZM up to 6300 A
Switch-disconnectors IN up to 6300 A

With the new IZM series, Eaton presents a complete offering of air circuit-breakers (ACB) up to 6300 A. Five construction sizes make it possible to select the most economical switch for each project.
The new star is the circuit-breaker IZMX16. This innovative concept allows economical construction of two circuit-breakers within a field width of 600 mm.
There is no greater performance within such small space.

Eaton After Sales Service
Testing switching devices in compliance with regulations applicable to this technology
→ Chapter 22

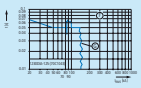
Basic devices IZM
Switching capacity 440 V AC, $I_{cu} = I_{cs}$ from 42 – 100 kA +++ 3 or 4 pole +++ electronic releases for system protection, selective and universal protection, universal protection with power measurement +++ rated operational current from 630 – 6300 A +++ rated operating voltage U_e 1100 V for IZM32…3200-1100V

High availability
Withdrawable units +IZM-CAS… +++ Main terminal kits IZM-T… +++ mechanical interlocks IZM-MIL…

Comprehensive fixed mounted accessories
Motor operator IZM…M… +++ Shunt release IZM…ST… +++ Closing release IZM…-SR… +++ Undervoltage release IZM…-UV… +++ Auxiliary contact IZM…-AS… +++ Latch check switch IZM…LCS… +++ Trip indicator auxiliary switch IZM…-OTS +++ Mechanical interlocks

Worldwide novelty ARMS™ – greater safety for maintenance personnel
If there is an accidental arc, the ARMS™ system (Arcflash Reduction Maintenance System) shuts down faster than a short circuit trip device. In connection with IZM, additional components from the accidental arc protection system ARCON provide incremental protection against accidental arcing.

Circuit-breakers IZMX16, switch-disconnectors INX16 from 630 A to 1600 A



Circuit-breaker IZM26, switch-disconnector IN26 from 800 A to 6300 A

IZMX16, INX16

I_{cu}/I_{cs} at U_e = 440/690 V AC I_{cu}: Rated ultimate short-circuit breaking capacity at rated operational voltage U_e I_{cs}: Rated service short-circuit breaking capacity at rated operational voltage U_e		**Basic switching capacity (B)**		**Normal switching capacity (N)**		**High switching capacity (H)**	
Circuit-breakers	Rated operational current I_n A	440 V AC I_{cu} / I_{cs} kA/kA	690 V AC I_{cu} / I_{cs} kA/kA	440 V AC I_{cu} / I_{cs} kA/kA	690 V AC I_{cu} / I_{cs} kA/kA	440 V AC I_{cu} / I_{cs} kA/kA	690 V AC I_{cu} / I_{cs} kA/kA
IZMX16							
	630 - 1600	42/42	42/42	50/50	42/42	65/50	42/42

I_{cw} at U_e = 440/690 V AC I_{cw} at t = 1 s I_{cw}: Rated short-time withstand current		**Basic switching capacity (B)**	**Normal switching capacity (N)**	**High switching capacity (H)**
Circuit-breaker, switch-disconnector	Rated operational current I_n A	440/690 V AC I_{cw} kA	440/690 V AC I_{cw} kA	440/690 V AC I_{cw} kA
IZMX16				
	630 - 1600	42	42	42

I_cm at U_e = 440/690 V AC I_{cm}: Rated short-circuit making capacity (Peak value) at rated operational voltage U_e		**Basic switching capacity (B)**	**Normal switching capacity (N)**	**High switching capacity (H)**
Switch-disconnector	Rated operational current I_n A	440/690 V AC I_{cm} kA	440/690 V AC I_{cw} kA	440/690 V AC I_{cw} kA
INX 16				
	630 - 1600	88	88	88

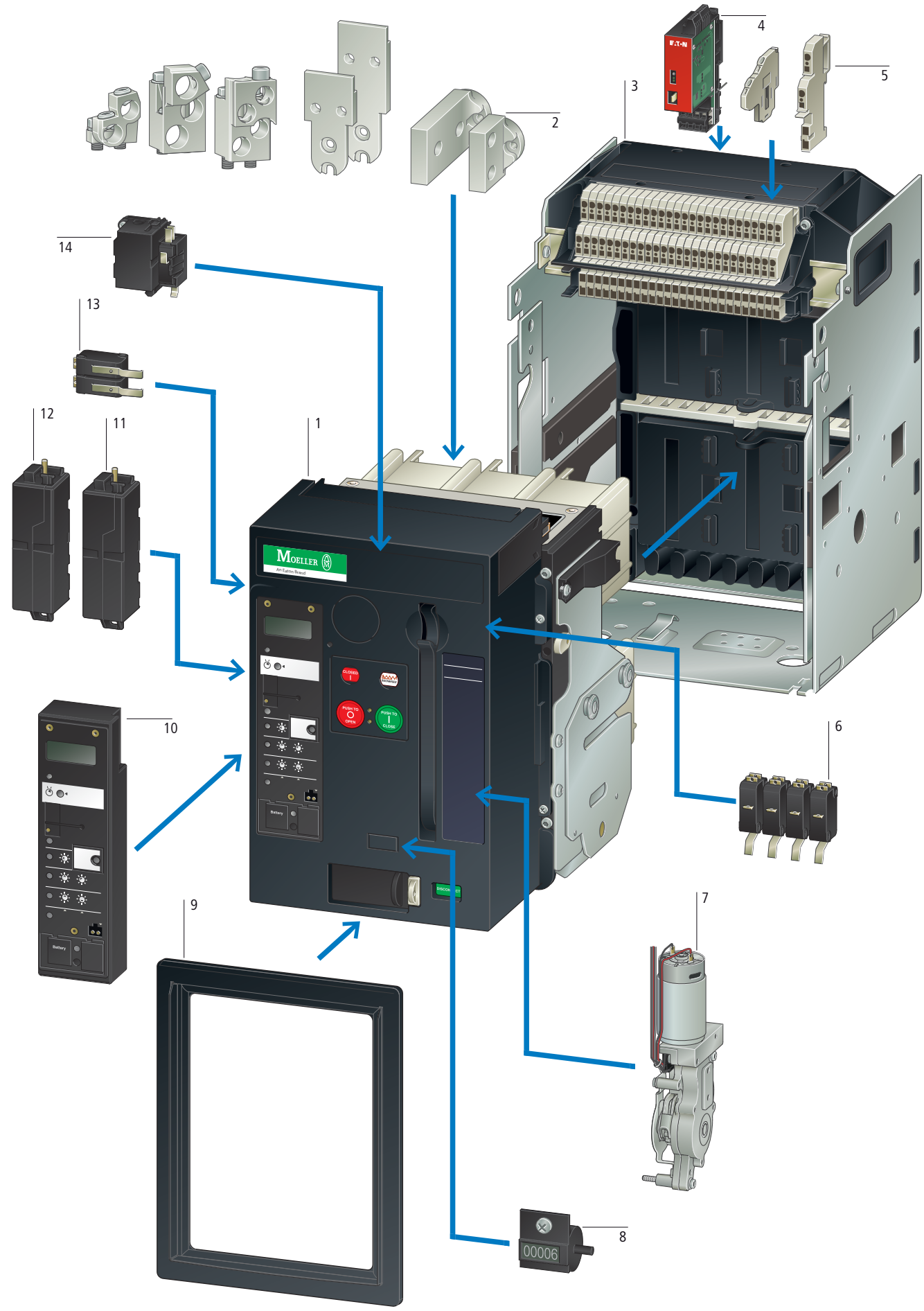
IZMX16

		IZMX16…A…	**IZMX16…V…**	**IZMX16…U…**
		System protection DTA Digitrip 520	Selectivity protection DTV Digitrip 520	Universal protection DTU Digitrip 520M
				
Current range		200 A - 1600 A	200 A - 1600 A	200 A - 1600 A
RMS value monitoring		●	●	●
Protective functions				
General				
Ordering options		LI	LSI, LSIG	LSI, LSIG, LSIA
Rating plug (I_n)		●	●	●
Overtemperature trip		●	●	●
Overload protection	**L**			
Overload trip		(0.5 - 1.0) x I_n	(0.5 - 1.0) x I_n	(0.5 - 1.0) x I_n
Delay time I^2t at 6 x I_r		2 - 24 s	2 - 24 s	2 - 24 s
Thermal memory		●	●	●
Short-time delayed short-circuit protection	**S**			
Delayed short-circuit protection		-	(2 - 10) x I_r	(2 - 10) x I_r
Short delay time I^2t at 8 x I_r		-	100 - 500 ms	100 - 500 ms
Short delay time, flat characteristic curve		-	100 - 500 ms	100 - 500 ms
Zone selectivity ZSI[1]		○	○	○
Non-delayed short-circuit protection	**I**			
Non-delayed short-circuit protection		(2 - 10) x I_n	(2 - 12) x I_n	(2 - 12) x I_n
Switch-off function		●	●	●
Closing releases MCR		●	●	●
Optional ground fault protection	**G**			
Ground/fault alarm		-	-	○[1]
Ground/fault protection release		-	(0.25 - 1.0) x I_n[3]	(0.25 - 1.0) x I_n[3]
Short delay time I^2t at 0.625 x I_n		100 - 500 ms	100 - 500 ms	100 - 500 ms
Short delay time, flat characteristic curve		100 - 500 ms	100 - 500 ms	100 - 500 ms
Zone selectivity ZSI[1]		○	○	○
Thermal memory		●	●	●
Neutral conductor-conductor protection	**N**	●	●	●
System diagnostics				
Status/Overload LED		-	●	●
Cause of trip LEDs		-	●	●
Current at trip point (display indication)		-	-	●[1]
Ground fault release/alarm remote signaling (relay contact)	**A**	-	-	●[1]
Overload alarm monitoring	**A**	-	-	●[1]
System monitor				
Digital display		-	-	4-digit LCD
Field bus communication		-	-	Optional: Modbus, PROFIBUS
Additional functions				
Test possibility[2]		-	Hand held test unit	Hand held test unit
Maintenance mode ARMS (Arc Flash Reduction Maintenance System™)		-	-	○[1]

Notes

I_n = rating plug (rate current module) = rated operational current current transformer
I_r = Set value overload trip (= rated operational current of system)
[1] Requires external 24 V DC control voltage supply.
[2] Hand-held tester for simulating of secondary current
[3] In combination with ARMS function limited to 1200 A.
● Standard
○ Optional

System overview



Key to type references

IZM	X16	B	3	-	A	06	W
IN		N	4		V	08	F
		H			U	10	
						12	
						16	

IZM, IN = Product family

Frame size
X16: Compact ACB, 630 - 1600 A

Switching capacity
B = Basic
N = Normal
H = High

Number of poles
3: 3 pole
4: 4 pole

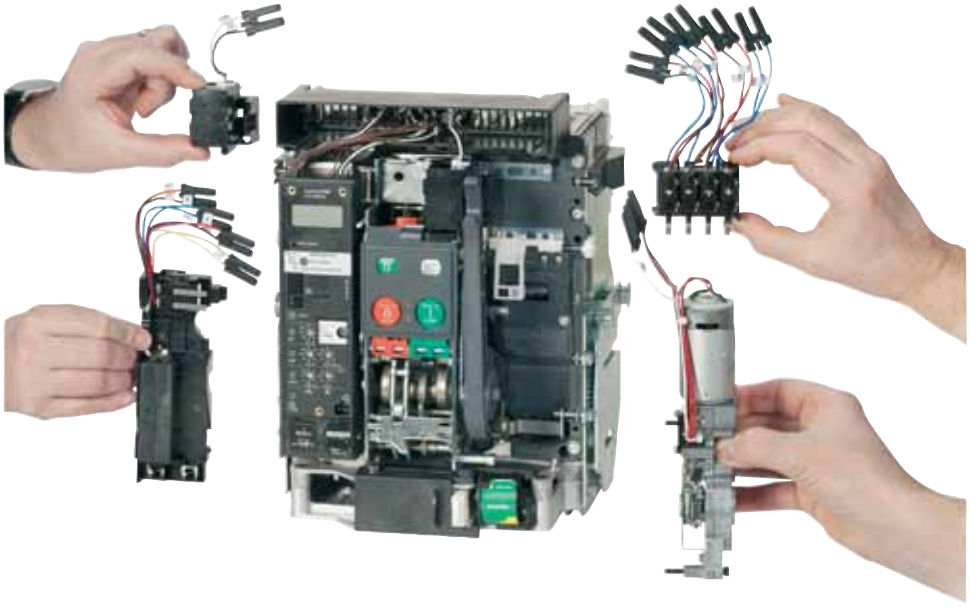
Trip type
A = System protection = Digitrip 520 LI
V = Selective trip = Digitrip 520 LSI(G)
U = Universal protection = Digitrip 520MC LSI(G)

Rated operational current
06: 630 A
08: 800 A
10: 1000 A
12: 1250 A
16: 1600 A

Model
W = Withdrawable units
F = Fixed mounted

IZMX16, INX16

Space-saving circuit-breakers with useful accessories



IZMX16

The innovative concept of the IZMX16 makes it possible to install two withdrawable circuit-breakers in a 600 mm wide section. This enables more economical section design and also saves operating space. This additional performance in a minimum of space goes far beyond the standard available worldwide.

Applications

The circuit-breakers can be used in four main application areas depending on the type of equipment to be protected:
- System protection,
- Motor protection,
- Transformer protection,
- Generator protection.

These key applications make different demands on the switches, which are met with a range of control units.

Switches with closing release
They are particularly suitable for synchronization tasks.

Coupler switches
Beside the IZMX16 circuit-breakers, INX16 switch-disconnectors are available. These are used, for example, as coupler switches between different power supplies.

Modular design

The retrofitting of accessories is made considerably easy thanks to the efficient "plug & work" technology. Accessory drawers and snap-fit mechanisms makes it possible to fit the latest accessories with virtually no tools. This allows you to respond flexibly to changing requirements within your system.

Standard scope of delivery as usual

- With the new IZMX16, you select a basic device that is already fitted with an electronic release.
- The standard mounting is on a horizontal mounting plate or on horizontal traverses in the switching cabinet. The IZMX16 can also be fastened to vertical mounting plates.
- With four-pole devices, the neutral conductor is arranged on the left (front view).
- The neutral conductor can be loaded 100% like the phase conductors.
- The circuit-breakers are provided with a standard mechanical reclosing lockout. After an overload trip, the fault is usually examined first of all. After the fault is identified and rectified, the mechanical reclosing lockout is reset by pressing the red mechanical trip indicator on the front of the circuit-breaker.
- An "Automatic Reset" can be ordered as an option. This enables the circuit-breaker to be restored to operation immediately at any time after the spring-operated stored energy mechanism is retensioned. In these applications compulsory fault analysis is intentionally avoided.
- The number of control cable terminals depends on the accessories fitted.
- If a cassette is ordered without the basic device, this can be already fitted with the maximum number of control cable terminals. For greater economy in large plants, the cassette is also offered without control circuit terminals so that fitting can be carried out later at the installation or when the required accessories are determined at a later time.
- 2 changeover contacts are provided as standard for ON/OFF status indication.
- A coding mechanism between the basic device and the cassette prevents impermissible combinations ("Rejection Interlock").

Expanded standard scope of delivery for IZXM16

Some order types from the past can no longer be found since the following options are now already part of the standard scope of delivery:
- The door escutcheon is now always included in the scope of delivery. With withdrawable designs this is supplied with the cassette (withrawable unit).
- On withdrawable units the circuit-breaker can be pulled out to inspect the arc chutes. With fixed units, it is recommended that sufficient space is provided above the circuit-breaker to enable inspection. An additional cover is not required.
- All basic devices that are provided with universal protection (with Digitrip 520M…), now feature a display.
- On each circuit-breaker the integrated Digitrip electronic release is factory fitted with a sealable protective cover.
- If a motor operator is ordered, the "Spring-operated stored energy mechanism tensioned" indicator switch is automatically provided.

Other benefits of the IZMX16

- The design of the main terminal offers maximum flexibility. The horizontal terminal can be rotated simply at the installation so that it can also be used as a vertical connection. With withdrawable units, additional terminal pieces can even be dispensed with.
  The cassette of the IZMX16 offers an integrated flange terminal to which the system busbars can be connected directly. For this reason, the main terminal pieces for IZMX16 are not part of the standard scope of delivery. Don't forget to order additionally required terminal pieces if needed.
- Thanks to the separate mounting position, a switching operations counter can now be used also independently of a motor operator.
- Withdrawable unit operation:
  The unit is actuated with a hand crank supplied as a standard feature and has a secure position in the basic device. This is now possible also with a standard tool (square drive socket 1/4").

External 24 V supply

- The standard protection functions of the IZMX16 operate generally independently of an external control voltage supply. The power supply of the electronics unit, for example for overload and short-circuit protection, is implemented via the current transformers integrated in the circuit-breaker.
- The universal release unit with display can be fed with a 24 V DC supply if required so that the display function can also be used without a load. An external 24 V DC power supply is needed if communication functions are required.

Communication capability

The communication-capability of the IZMX16 circuit-breakers open up new possibilities in power distribution. It provides all important operational information and passes this on. This increases system transparency and shortens the response times to states such as overcurrent, phase asymmetry and overvoltage.

A rapid intervention in a process can, for example, prevent downtimes and help to schedule maintenance activities and therefore boost plant availability.

A Modbus interface is offered as an alternative in addition to the Profibus interface.

Greater safety for maintenance personnel with ARMS™

If the IZMX16 is fitted with the newly patented ARMS system (Arcflash Reduction Maintenance System™), a non-delayed immediate disconnection is ensured in the event of an arc fault. This disconnection is even faster than that of a non-delayed short-circuit release.

This function can be activated directly on the circuit-breaker or via an external switch, such as when maintenance personnel enter a hazardous area. Other components of the ARCON arc fault protection system, in conjunction with the IZMX16, enable an expansion of arc fault protection in stages.
ARCON on the Internet:
www.moeller.net/arcon

Selection criteria for IZMX16 circuit-breakers

Fundamental criteria for the selection of circuit-breakers:

- Max short-circuit current $I_{k\,max}$ at the circuit-breaker' point of installation: this value determines the short-circuit breaking capacity or the short-circuit current carrying capacity of the circuit-breaker. It is compared with the I_{cu}, I_{cs} and I_{cw} values of the switch and essentially determines its size (see Technical data).
- Rated operational current I_n which should flow through the respective branch circuit:
  This value must not be greater than the maximum switch rated operational current of the circuit-breaker. The rated operational current can be adjusted down using additional rated operational current modules.
- Ambient temperature of the circuit-breaker: This is generally the internal temperature in the control panel. Observe the derating values with increased ambient temperature (see Technical data).
- Circuit-breaker type: fixed mounted or withdrawable units, 3 or 4 pole.
- Minimum short-circuit current, which flows through the switching device: The release must recognize this value as a short-circuit and may react with a trip.
- Protection functions of the circuit-breaker: This is determined by the selection of the respective overcurrent release.

Documentation

Operating manual
AWB1230-1628de (deutsch)
AWB1230-1628en (english)

CurveSelect characteristics program

Display characteristic curves according to specific settings and assess their interaction effectively:
www.moeller.net/de/support

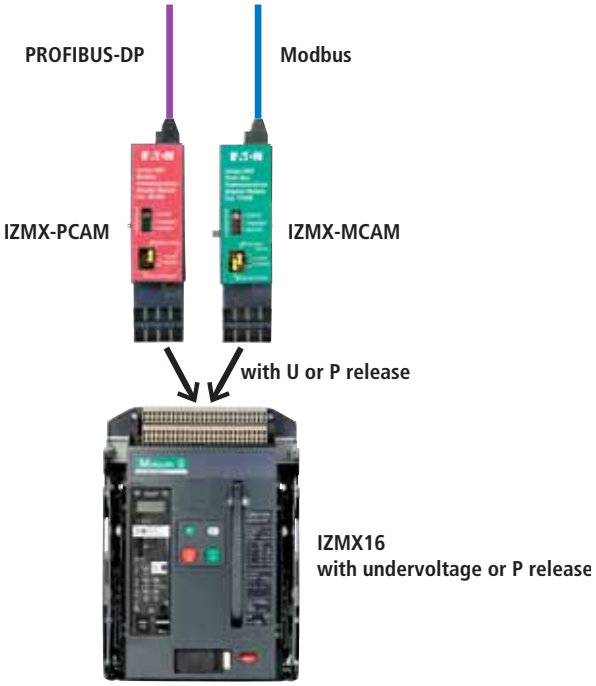
Components for IZMX16 communication

For the IZMX16, PROFIBUS-DP or Modbus RTU are optionally available as fieldbus connections. Communication modules IZMX-PCAM and IZMX-MCAM are compact units for direct mounting in the auxiliary terminal strip. On retrofitting, four modular terminals are replaced with one communication module. This is possible for both for fixed and withdrawable units. The terminals provide all data available in the trip block to the fieldbus, including switching state, current, voltage, power, energy, and diagnostic information such as overcurrent, phase asymmetry and overvoltage. Through the bus the motor operator can also be remotely controlled.

Requirements

The communications modules can be used in combination with IZMX16 circuit-breakers …-U or IZMX16…-P… (in preparation) circuit-breakers.

Configuration



PROFIBUS-DP configuration

Communications module IZMX-PCAM has a 9-pin D-Sub socket for connection to PROFIBUS. The module works as a slave on PROFIBUS-DP; the data is defined through a standardized device master data file, which permits smooth integration of IZMX in a DP line.

- On the PROFIBUS-DP side the module supports automatic baud rate detection; the PROFIBUS-DP bus address is set through the trip unit's display. The maximum cable length is 2.4 km.
- To operate the IZMX-PCAM, a supply voltage of 24 V DC is required.
- The data connection to the circuit-breaker is implemented internally through a serial high--speed data connection.

Data access via PROFIBUS-DP

The data on PROFIBUS-DP are offered according to the profile for low-voltage switchgear (LVSG) of PROFIBUS International (PROFIBUS and PROFINET User Group). Five different data structures with varying numbers of parameters are available through the device master data file. This allows a data filter to be easily implemented, which simplifies integration of the IZM data into the control system.

Modbus configuration

Communications module IZMX-MCAM has a plug-in screw terminal for connection to Modbus. The module operates as a Modbus slave.

- Baud rate, data format and address (max. 247) for Modbus are set with the input keys of the trip unit. The maximum cable length is 1.2 km.
- The Modbus must be terminated with a 120 Ω terminating resistor.
- To operate the IZMX-PCAM, a supply voltage of 24 V DC is required.
- The data connection to the circuit-breaker is implemented internally through a serial high-speed data connection.

Data access via Modbus

The data is contained in comprehensive data tables. Each data point is available as floating-point (IEEE) or fixed-point value. This variance allows the integration of the IZMX to be adapted to the Modbus architecture. This enables a simple means of implementing a data filter, which facilitates the integration of IZMX data in the control system.

Documentation

Operator manual
For device series IZM26:
AWB1230-1621de (deutsch)
AWB1230-1621en (english)
AWB1230-1622de (deutsch)
AWB1230-1622en (english)

For device series IZMX16:
AWB1230-1623de (deutsch)
AWB1230-1623en (english)
AWB1230-1624de (deutsch)
AWB1230-1624en (english)

Ordering

Switching capacity	Rated operational current	**Setting range** Overload releases	Short-circuit releases: Delayed	Short-circuit releases: Non-delayed	Fixed **Part no.** Article no.	**Price** See price list	Withdrawable **Part no.** Article no. Cassette must be ordered separately.	**Price** See price list	Std. pack
I_{cu}/I_{cs} kA/kA	$I_n = I_u$ A	I_r A	$I_{sd} = I_r$ x …	$I_i = I_n$ x …					
3 pole									
Circuit-breakers for selective protection (Digitrip 520 M)									
Main terminals must be separately ordered.									
42/42	630	315 - 630	–	2 - 10, OFF	**IZMX16B3-A06F** 123341		**IZMX16B3-A06W** 122818		1 off
	800	400 - 800			**IZMX16B3-A08F** 123342		**IZMX16B3-A08W** 122819		
	1000	500 - 1000			**IZMX16B3-A10F** 123343		**IZMX16B3-A10W** 122820		
	1250	625 - 1250			**IZMX16B3-A12F** 123344		**IZMX16B3-A12W** 122849		
	1600	800 - 1600			**IZMX16B3-A16F** 123345		**IZMX16B3-A16W** 122850		
50/50	630	315 - 630			**IZMX16N3-A06F** 123366		**IZMX16N3-A06W** 123085		
	800	400 - 800			**IZMX16N3-A08F** 123367		**IZMX16N3-A08W** 123087		
	1000	500 - 1000			**IZMX16N3-A10F** 123368		**IZMX16N3-A10W** 123090		
	1250	625 - 1250			**IZMX16N3-A12F** 123369		**IZMX16N3-A12W** 123092		
	1600	800 - 1600			**IZMX16N3-A16F** 123370		**IZMX16N3-A16W** 123094		
65/50	630	315 - 630			**IZMX16H3-A06F** 123391		**IZMX16H3-A06W** 123141		
	800	400 - 800			**IZMX16H3-A08F** 123392		**IZMX16H3-A08W** 123142		
	1000	500 - 1000			**IZMX16H3-A10F** 123393		**IZMX16H3-A10W** 123143		
	1250	625 - 1250			**IZMX16H3-A12F** 123394		**IZMX16H3-A12W** 123144		
	1600	800 - 1600			**IZMX16H3-A16F** 123395		**IZMX16H3-A16W** 123145		
4 pole									
Circuit-breakers for universal protection (Digitrip 520 M)									
Main terminals must be separately ordered.									
42/42	630	315 - 630	–	2 - 10, OFF	**IZMX16B4-A06F** 123466		**IZMX16B4-A06W** 123201		1 off
	800	400 - 800			**IZMX16B4-A08F** 123467		**IZMX16B4-A08W** 123207		
	1000	500 - 1000			**IZMX16B4-A10F** 123468		**IZMX16B4-A10W** 123213		
	1250	625 - 1250			**IZMX16B4-A12F** 123469		**IZMX16B4-A12W** 123219		
	1600	800 - 1600			**IZMX16B4-A16F** 123470		**IZMX16B4-A16W** 123220		
50/50	630	315 - 630			**IZMX16N4-A06F** 123491		**IZMX16N4-A06W** 123241		
	800	400 - 800			**IZMX16N4-A08F** 123492		**IZMX16N4-A08W** 123242		
	1000	500 - 1000			**IZMX16N4-A10F** 123493		**IZMX16N4-A10W** 123243		
	1250	625 - 1250			**IZMX16N4-A12F** 123494		**IZMX16N4-A12W** 123244		
	1600	800 - 1600			**IZMX16N4-A16F** 123495		**IZMX16N4-A16W** 123245		
65/50	630	315 - 630			**IZMX16H4-A06F** 123516		**IZMX16H4-A06W** 123266		
	800	400 - 800			**IZMX16H4-A08F** 123517		**IZMX16H4-A08W** 123267		
	1000	500 - 1000			**IZMX16H4-A10F** 123518		**IZMX16H4-A10W** 123268		
	1250	625 - 1250			**IZMX16H4-A12F** 123519		**IZMX16H4-A12W** 123269		
	1600	800 - 1600			**IZMX16H4-A16F** 123525		**IZMX16H4-A16W** 123270		

Switching capacity	Rated operational current	**Setting range** Overload releases	Short-circuit releases		Fixed **Part no.** Article no.	**Price** See price list	Withdrawable **Part no.** Article no. Cassette must be ordered separately.	**Price** See price list	Std. pack
			Delayed	Non-delayed					
I_{cu}/I_{cs} kA/kA	$I_n = I_u$ A	I_r A	$I_{sd} = I_r$ x …	$I_i = I_n$ x …					
3 pole ircuit-breaker for selective protection Main terminals must be separately ordered.									
42/42	630	315 – 630	2 - 10	2 - 12, OFF	**IZMX16B3-V06F** 123346		**IZMX16B3-V06W** 122851		1 off
	800	400 – 800			**IZMX16B3-V08F** 123347		**IZMX16B3-V08W** 122918		
	1000	500 – 1000			**IZMX16B3-V10F** 123348		**IZMX16B3-V10W** 122920		
	1250	625 – 1250			**IZMX16B3-V12F** 123349		**IZMX16B3-V12W** 122922		
	1600	800 – 1600			**IZMX16B3-V16F** 123350		**IZMX16B3-V16W** 122924		
50/50	630	315 – 630			**IZMX16N3-V06F** 123371		**IZMX16N3-V06W** 123097		
	800	400 – 800			**IZMX16N3-V08F** 123372		**IZMX16N3-V08W** 123099		
	1000	500 – 1000			**IZMX16N3-V10F** 123373		**IZMX16N3-V10W** 123101		
	1250	625 – 1250			**IZMX16N3-V12F** 123374		**IZMX16N3-V12W** 123103		
	1600	800 – 1600			**IZMX16N3-V16F** 123375		**IZMX16N3-V16W** 123106		
65/50	630	315 – 630			**IZMX16H3-V06F** 123396		**IZMX16H3-V06W** 123146		
	800	400 – 800			**IZMX16H3-V08F** 123397		**IZMX16H3-V08W** 123147		
	1000	500 – 1000			**IZMX16H3-V10F** 123398		**IZMX16H3-V10W** 123148		
	1250	625 – 1250			**IZMX16H3-V12F** 123399		**IZMX16H3-V12W** 123149		
	1600	800 – 1600			**IZMX16H3-V16F** 123405		**IZMX16H3-V16W** 123150		
4 pole circuit-breakers for universal protection (Digitrip 520 M) Main terminals must be separately ordered.									
42/42	630	315 – 630	2 - 10	2 - 12, OFF	**IZMX16B4-V06F** 123471		**IZMX16B4-V06W** 123221		1 off
	800	400 – 800			**IZMX16B4-V08F** 123472		**IZMX16B4-V08W** 123222		
	1000	500 – 1000			**IZMX16B4-V10F** 123473		**IZMX16B4-V10W** 123223		
	1250	625 – 1250			**IZMX16B4-V12F** 123474		**IZMX16B4-V12W** 123224		
	1600	800 – 1600			**IZMX16B4-V16F** 123475		**IZMX16B4-V16W** 123225		
50/50	630	315 – 630			**IZMX16N4-V06F** 123496		**IZMX16N4-V06W** 123246		
	800	400 – 800			**IZMX16N4-V08F** 123497		**IZMX16N4-V08W** 123247		
	1000	500 – 1000			**IZMX16N4-V10F** 123498		**IZMX16N4-V10W** 123248		
	1250	625 – 1250			**IZMX16N4-V12F** 123499		**IZMX16N4-V12W** 123249		
	1600	800 – 1600			**IZMX16N4-V16F** 123500		**IZMX16N4-V16W** 123250		
65/50	630	315 – 630			**IZMX16H4-V06F** 123531		**IZMX16H4-V06W** 123271		
	800	400 – 800			**IZMX16H4-V08F** 123537		**IZMX16H4-V08W** 123272		
	1000	500 – 1000			**IZMX16H4-V10F** 123543		**IZMX16H4-V10W** 123273		
	1250	625 – 1250			**IZMX16H4-V12F** 123549		**IZMX16H4-V12W** 123274		
	1600	800 – 1600			**IZMX16H4-V16F** 123555		**IZMX16H4-V16W** 123275		

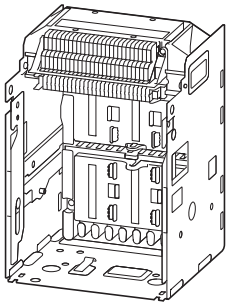
Switching capacity	Rated operational current	**Setting range** Overload releases	Short-circuit releases		Fixed **Part no.** Article no.	**Price** See price list	Withdrawable **Part no.** Article no. Cassette must be ordered separately.	**Price** See price list	Std. pack
			Delayed	Non-delayed					
I_{cu}/I_{cs} kA/kA	$I_n = I_u$ A	I_r A	$I_{sd} = I_r$ x …	$I_i = I_n$ x …					
3 pole circuit-breakers for universal protection (Digitrip M) Main terminals must be separately ordered.									
42/42	630	315 – 630	2 - 10	2 - 12, OFF	**IZMX16B3-U06F** 123351		**IZMX16B3-U06W** 122940		1 off
	800	400 – 800			**IZMX16B3-U08F** 123352		**IZMX16B3-U08W** 122941		
	1000	500 – 1000			**IZMX16B3-U10F** 123353		**IZMX16B3-U10W** 122979		
	1250	625 – 1250			**IZMX16B3-U12F** 123354		**IZMX16B3-U12W** 122984		
	1600	800 – 1600			**IZMX16B3-U16F** 123355		**IZMX16B3-U16W** 123020		
50/50	630	315 – 630			**IZMX16N3-U06F** 123376		**IZMX16N3-U06W** 123109		
	800	400 – 800			**IZMX16N3-U08F** 123377		**IZMX16N3-U08W** 123111		
	1000	500 – 1000			**IZMX16N3-U10F** 123378		**IZMX16N3-U10W** 123114		
	1250	625 – 1250			**IZMX16N3-U12F** 123379		**IZMX16N3-U12W** 123129		
	1600	800 – 1600			**IZMX16N3-U16F** 123380		**IZMX16N3-U16W** 123130		
65/50	630	315 – 630			**IZMX16H3-U06F** 123411		**IZMX16H3-U06W** 123151		
	800	400 – 800			**IZMX16H3-U08F** 123417		**IZMX16H3-U08W** 123152		
	1000	500 – 1000			**IZMX16H3-U10F** 123423		**IZMX16H3-U10W** 123153		
	1250	625 – 1250			**IZMX16H3-U12F** 123429		**IZMX16H3-U12W** 123154		
	1600	800 – 1600			**IZMX16H3-U16F** 123435		**IZMX16H3-U16W** 123155		
4 pole circuit-breakers for selective protection (Digitrip 520 M LSI) Main terminals must be separately ordered.									
42/42	630	315 – 630	2 - 10	2 - 12, OFF	**IZMX16B4-U06F** 123476		**IZMX16B4-U06W** 123226		1 off
	800	400 – 800			**IZMX16B4-U08F** 123477		**IZMX16B4-U08W** 123227		
	1000	500 – 1000			**IZMX16B4-U10F** 123478		**IZMX16B4-U10W** 123228		
	1250	625 – 1250			**IZMX16B4-U12F** 123479		**IZMX16B4-U12W** 123229		
	1600	800 – 1600			**IZMX16B4-U16F** 123480		**IZMX16B4-U16W** 123230		
50/50	630	315 – 630			**IZMX16N4-U06F** 123501		**IZMX16N4-U06W** 123251		
	800	400 – 800			**IZMX16N4-U08F** 123502		**IZMX16N4-U08W** 123252		
	1000	500 – 1000			**IZMX16N4-U10F** 123503		**IZMX16N4-U10W** 123253		
	1250	625 – 1250			**IZMX16N4-U12F** 123504		**IZMX16N4-U12W** 123254		
	1600	800 – 1600			**IZMX16N4-U16F** 123505		**IZMX16N4-U16W** 123255		
65/50	630	315 – 630			**IZMX16H4-U06F** 123561		**IZMX16H4-U06W** 123276		
	800	400 – 800			**IZMX16H4-U08F** 123567		**IZMX16H4-U08W** 123277		
	1000	500 – 1000			**IZMX16H4-U10F** 123573		**IZMX16H4-U10W** 123278		
	1250	625 – 1250			**IZMX16H4-U12F** 123579		**IZMX16H4-U12W** 123279		
	1600	800 – 1600			**IZMX16H4-U16F** 123580		**IZMX16H4-U16W** 123285		

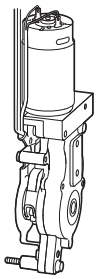
Compact open switch-disconnectors, 3- and 4 pole

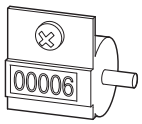
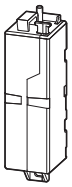
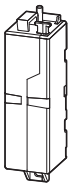
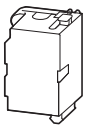
INX16

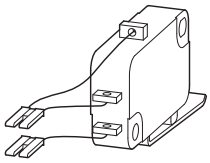
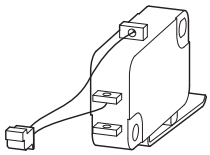
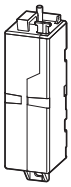
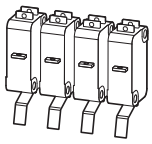
HPL18012EN

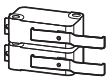
Rated short-circuit making capacity I_{cm} kA	Rated operational current $I_n = I_u$ A	Rated short-time withstand current t = 1 s I_{cw} kA	Fixed **Part no.** Article no.	**Price** See price list	Withdrawable **Part no.** Article no. Cassette must be separately ordered.	**Price** See price list	Std. pack
3 pole switch-disconnectors: Main terminals must be separately ordered.							
88	630	42	**INX16B3-06F** 123361		**INX16B3-06W** 123073		1 off
	800		**INX16B3-08F** 123362		**INX16B3-08W** 123076		
	1000		**INX16B3-10F** 123363		**INX16B3-10W** 123078		
	1250		**INX16B3-12F** 123364		**INX16B3-12W** 123080		
	1600		**INX16B3-16F** 123365		**INX16B3-16W** 123083		
4 pole switch-disconnectors: Main terminals must be separately ordered.							
88	630	42	**INX16B4-06F** 123486		**INX16B4-06W** 123236		1 off
	800		**INX16B4-08F** 123487		**INX16B4-08W** 123237		
	1000		**INX16B4-10F** 123488		**INX16B4-10W** 123238		
	1250		**INX16B4-12F** 123489		**INX16B4-12W** 123239		
	1600		**INX16B4-16F** 123490		**INX16B4-16W** 123240		

	Rated operational current I_n A	Rated ultimate short-circuit breaking capacity I_{cu} kA	Pole	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Withdrawable units								
Cassettes Equipment supplied: arcing chamber cover, coding to basic device								
	≦ 1600	≦ 65	3	IZMX16…3-...W INX16…3-...W	**IZMX-CAS163-1600** 101537		1 off	Without control circuit terminals
					+IZMX-CAS163-1600 101536			With control circuit terminals according to ordered options
					IZMX-CAS163-1600-SEC 123986			Fully equipped with control circuit terminals
	≦ 1600	≦ 65	4	IZMX16…4-...W INX16…4-...W	**IZMX-CAS164-1600** 101539			Without control circuit terminals
					+IZMX-CAS164-1600 101538			With control circuit terminals according to ordered options
					IZMX-CAS164-1600-SEC 124175			Fully equipped with control circuit terminals
Shutter protection against direct contact When the switch is withdrawn from its connected position, the shutters automatically cover the cassette's live main terminals.								
	800 - 1600	–	3	(+)IZMX-CAS163…	**IZMX-SH163** 101542		1 off	–
					+IZMX-SH163 101541			
			4	(+)IZMX-CAS164…	**IZMX-SH164** 101544			
					+IZMX-SH164 101543			

	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Motor operator						
The motor automatically tensions the spring-operated stored energy mechanism for remote or local actuation. A signaling switch for the "Spring-operated stored energy mechanism tensioned" message is included as standard.						
	24 DC	IZMX16… INX16…	**IZMX-M16-24DC** 123594		1 off	For retrofitting, two additional control circuit terminal blocks are required. → Page 18/19
	24 DC	IZMX16… INX16…	**+IZMX-M16-24DC** 123593			
	48 DC	IZMX16… INX16…	**IZMX-M16-48DC** 123596			
	48 DC	IZMX16… INX16…	**+IZMX-M16-48DC** 123595			
	110 - 125 DC	IZMX16… INX16…	**IZMX-M16-110DC** 123598			
	110 - 125 DC	IZMX16… INX16…	**+IZMX-M16-110DC** 123597			
	220 - 250 DC	IZMX16… INX16…	**IZMX-M16-220DC** 123600			
	220 - 250 DC	IZMX16… INX16…	**+IZMX-M16-220DC** 123599			
	110 - 127 AC	IZMX16… INX16…	**IZMX-M16-110AC** 123602			
	110 - 127 AC	IZMX16… INX16…	**+IZMX-M16-110AC** 123601			
	220 - 240 AC	IZMX16… INX16…	**IZMX-M16-230AC** 123604			
	220 - 240 AC	IZMX16… INX16…	**+IZMX-M16-230AC** 123603			

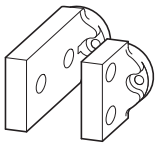
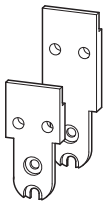
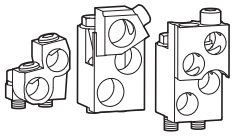
	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Switching operations counter Counts the number of On-Off operations. Can also be installed without motor operator.						
	–	IZMX16… INX16…	**IZMX-OC16** 123606		1 off	–
	–	IZMX16… INX16…	**+IZMX-OC16** 123605		1 off	–
Voltage releases A closing release can be combined with a voltage release and an undervoltage release or with two voltage releases.						
Shunt releases						
	24 DC	IZMX16… INX16…	**IZMX-ST24DC** 123608		1 off	An additional control circuit terminal block is required for retrofitting. → Page 18/19
			+IZMX-ST24DC 123607			
	48 DC		**IZMX-ST48DC** 123656			
			+IZMX-ST48DC 123616			
	110 - 125 DC 110 - 127 AC		**IZMX-ST110AD** 123728			
			+IZMX-ST110AD 123696			
	220 - 250 DC 208 - 240 AC		**IZMX-ST230AD** 123730			
			+IZMX-ST230AD 123729			
2nd shunt release Cannot be combined with an undervoltage release.						
	24 DC	IZMX16… INX16…	**+IZMX-STS24DC** 123731		1 off	An additional control circuit terminal block is required for retrofitting. → Page 18/19
	48 DC		**+IZMX-STS48DC** 123732			
	110 - 125 DC 110 - 127 AC		**+IZMX-STS110AD** 123733			
	220 - 250 DC 208 - 240 AC		**+IZMX-STS230AD** 123734			
Closing releases without latch check switch						
	24 DC	IZMX16… INX16…	**IZMX-SR24DC** 123736		1 off	An additional control circuit terminal block is required for retrofitting. → Page 18/19
			+IZMX-SR24DC 123735			
	48 DC		**IZMX-SR48DC** 123738			
			+IZMX-SR48DC 123737			
	110 - 125 DC 110 - 127 AC		**IZMX-SR110AD** 123740			
			+IZMX-SR110AD 123739			
	220 - 250 DC 208 - 240 AC		**IZMX-SR230AD** 123742			
			+IZMX-SR230AD 123741			

	Rated control voltage U_s V	For use with	**Part no.** Article no. / **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Voltage releases						
Latch check switch, 1 changeover contact						
	–	IZMX16… INX16…	**IZMX-LCS16** 123885		1 off	For external application
	–		**+IZMX-LCS16** 123884			
	–		**IZMX-LCS16-SR** 123887			For use with closing release IZMX16-SR...
	–		**+IZMX-LCS16-SR** 123886			
Under voltage release Cannot be combined with a second voltage release.						
	24 DC	IZMX16… INX16…	**IZMX-UVR24DC** 123744		1 off	An additional control circuit terminal block is required for retrofitting. → Page 18/19
			+IZMX-UVR24DC 123743			
	48 DC		**IZMX-UVR48DC** 123748			
			+IZMX-UVR48DC 123747			
	110 - 125 DC 110 - 127 AC		**IZMX-UVR110AD** 123801			
			+IZMX-UVR110AD 123761			
	220 - 250 DC 208 - 240 AC		**IZMX-UVR220AD** 123873			
			+IZMX-UVR220AD 123841			
Auxiliary contacts						
Standard auxiliary switch for On-Off signaling The basic device already contains two changeover contacts. Two additional changeover contacts possible.						
	–	IZMX16… INX16…	**IZMX-AS22** 123881		1 off	Three additional control circuit terminal blocks are required for retrofitting. → Page 18/19
			+IZMX-AS22 123880			

	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article No. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Trip indication and reset options					
Trip-indicating auxiliary switch Overcurrent trip switch (OTS) with two changeover contacts.					
	IZMX16…	**IZMX-OTS** 123889		1 off	Three additional control circuit terminal blocks are required for retrofitting.
		+IZMX-OTS 123888			
Automatic reset The switch can be switched on again immediately after a trip. The switch does not contain the mechanical trip-indicator (red pin). Cannot be combined with remote reset.					
	IZMX16…	**IZMX-RA** 123898		1 off	–
		+IZMX-RA 123897			–
Locking facilities					
Locking of ON/OFF buttons Padlockable front cover for On-Off pushbutton.					
	IZMX16… INX16…	**IZMX-PLPC16** 123946		1 off	–
		+IZMX-PLPC16 123906			–
Key locking in safe Off The "Safe Off" locking feature prevents switching on. Neither remote nor local switching on is possible.					
	IZMX16… INX16…	**IZMX-KLP-SO16-CASTELL** 124184		1 off	Castell installation kit without lock cylinder.
		IZMX-KLP-SO16-RONIS 124186			Ronis installation kit without lock cylinder.
		IZMX-KLP-SO16-KIRK 126481			Kirk installation kit without lock cylinder.
		IZMX-KLP-SO16-CES 126479			CES installation kit without lock cylinder.

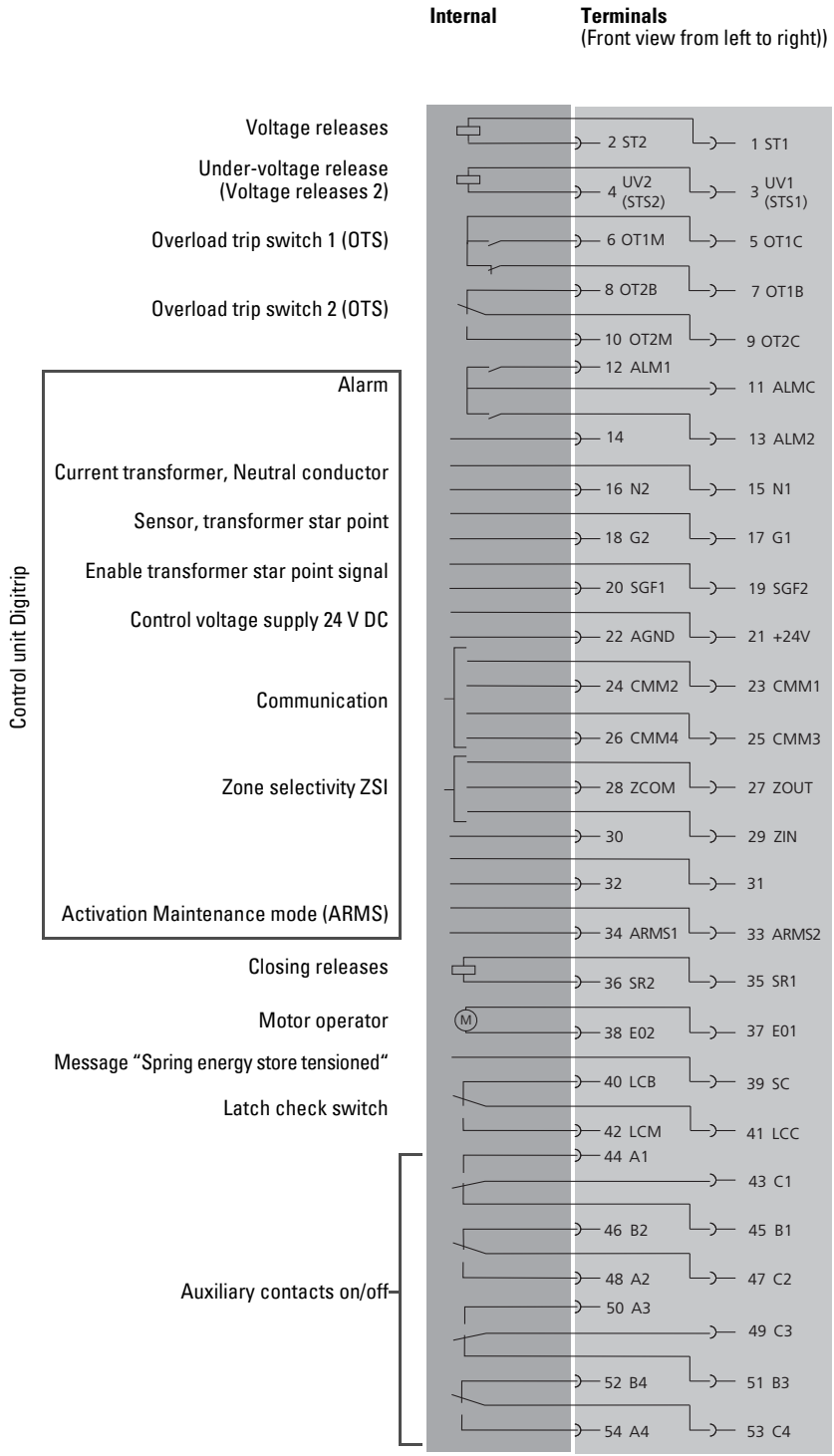
	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Options and accessories for trip units						
Trip unit for system protection Type A (Digitrip 520)	–		**IZMX-DTA** 124012		1 off	–
Control unit for selective protection	–		**IZMX-DTV** 124013		1 off	–
Add-on functions for Type Vcircuit-breakers (equipped with Digitrip 520LSI)						
Ground fault protection	–	IZMX16…-V… (Digitrip 520LSI)	**+IZMX-DTV-EP** 124016		1 off	–
Zone selectivity Zone selectivity shortens the stagger times in the range of the delayed short-circuit protection.	–	IZMX16…-V… (Digitrip 520LSI)	**+IZMX-DTV-ZSI** 124017		1 off	–
Control unit for universal protection Standard for all circuit-breakers Type U: • Display • Communication-capability • Overload alarm signal Instead of the overload alarm (HLA) either the function ground-fault protection (EP) or ground-fault alarm (EA) can be selected. For fieldbus communications a communications module must be selected in addition.	–		**IZMX-DTU** 124014		1 off	–
Add-on functions for circuit-breakers Type U (equipped with Digitrip 520M)						
Ground fault protection With ground-fault protection instead of overload alarm.	24 DC	IZMX16…-U… (Digitrip 520M)	**+IZMX-DTU-EP** 124018		1 off	24 V DC control voltage required
Ground alarm With ground-fault alarm instead of overload alarm.	24 DC	IZMX16…-U… (Digitrip 520M)	**+IZMX-DTU-EA** 124019		1 off	
ARMS Function The ARMS (Arcflash Reduction Maintenance System™) function enhances personnel safety by reducing the tripping time through a short-circuit protection bypass in the event of an arcing fault.	24 DC	IZMX16…-U… (Digitrip 520M)	**+IZMX-DTU-ARMS** 124020		1 off	
Zone selectivity Zone selectivity decreases the time delays in time selective coordination.	24 DC	IZMX16…-U… (Digitrip 520M)	**+IZMX-DTU-ZSI** 124021		1 off	
Communication modules						
Communication module Modbus	–	IZMX16…	**IZMX-MCAM** 122892		1 off	When retrofitting, four additional control circuit terminal blocks are required. → Page 18/19
Communication module PROFIBUS	–	IZMX16…	**IZMX-PCAM** 122913		1 off	
Test device Hand-held tester for Digitrip Hand-held tester (100 - 240 V AC)	–	IZMX16... IZM26...	**IZM-TEST-KIT** 124161		1 off	–

	Rated operational current I_n A	For use with	Part no. Article no. / Part no. suffix "+IZM..." Article no. for ordering with basic device	Price See price list	Std. pack	Notes
Options and accessories for electronic releases						
Rating plugs (Rate current modules), 3 pole, 4 pole The rated current can be reduced by changing the rating plug, for example, in order to adapt to changed conditions in the application. The rating plug's nominal value must be less than or equal to the basic device's rated current. The rating plug can be replaced on site without replacing the transformer.						
	200	$I_u \leqq 800$ A	**IZMX-RP16A-200** 124027		1 off	–
	200	$I_u \leqq 800$ A	**+IZMX-RP16-200** 124026			
	250	$I_u \leqq 800$ A	**IZMX-RP16A-250** 124029			
	250	$I_u \leqq 800$ A	**+IZMX-RP16-250** 124028			
	300	$I_u \leqq 800$ A	**IZMX-RP16A-300** 124031			
	300	$I_u \leqq 800$ A	**+IZMX-RP16-300** 124030			
	400	$I_u \leqq 800$ A	**IZMX-RP16A-400** 124033			
	400	1000 A $\leqq I_u \leqq$ 1250 A	**IZMX-RP16B-400** 124034			
	400	$I_u \leqq 1250$ A	**+IZMX-RP16-400** 124032			
	500	$I_u \leqq 800$ A	**IZMX-RP16A-500** 124036			
	500	1000 A $\leqq I_u \leqq$ 1250 A	**IZMX-RP16B-500** 124037			
	500	$I_u \leqq 1250$ A	**+IZMX-RP16-500** 124035			
	630	$I_u \leqq 800$ A	**IZMX-RP16A-630** 124039			
	630	1000 A $\leqq I_u \leqq$ 1250 A	**IZMX-RP16B-630** 124040			
	630	800 A $\leqq I_u \leqq$ 1250 A	**+IZMX-RP16-630** 124038			
	800	$I_u \leqq 800$ A	**IZMX-RP16A-800** 124042			
	800	1000 A $\leqq I_u \leqq$ 1250 A	**IZMX-RP16B-800** 124043			
	800	$I_u = 1600$ A	**IZMX-RP16C-800** 124051			
	800	1000 A $\leqq I_u \leqq$ 1600 A	**+IZMX-RP16-800** 124041			
	1000	1000 A $\leqq I_u \leqq$ 1250 A	**IZMX-RP16B-1000** 124131			
	1000	$I_u = 1600$ A	**IZMX-RP16C-1000** 124156			
	1000	1250 A $\leqq I_u \leqq$ 1600 A	**+IZMX-RP16-1000** 124091			
	1250	$I_u \leqq 1250$ A	**IZMX-RP16B-1250** 124158			
	1250	$I_u = 1600$ A	**IZMX-RP16C-1250** 124159			
	1250	$I_u = 1600$ A	**+IZMX-RP16-1250** 124157			
	1600	$I_u = 1600$ A	**IZMX-RP16C-1600** 124160			
Current sensor for neutral conductor						
Measuring current sensor for reading off the N conductor. Allows, for example, ground-fault protection in four-conductor systems with three-pole circuit-breakers.	–	IZMX16…	**IZMX-CT16-N** 124188		1 off	An additional control circuit terminal block is required for retrofitting. → Page 18/19

		Rated operational current I_n A	Pole	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Main terminal kits							
Main terminals are not supplied as standard with the basic devices and cassettes. This universal adapter can be used both as horizontal and as vertical connector. Each set contains the connections for top and bottom. 3 pole = 6 off; 4 pole = 8 off							
	Rear universal connection for fixed/withdrawable mounting	800 - 1600	3	IZMX16…3-W INX16…3-W	**IZMX-THV163** 124181		1 off
			4	IZMX16…4-W INX16…4-W	**IZMX-THV164** 124177		
	Rear universal connection (long) for fixed/withdrawable mounting	800 - 1600	3	IZMX16…3-W INX16…3-W	**IZMX-THVL163** 124233		
			4	IZMX16…4-W INX16…4-W	**IZMX-THVL164** 124234		
	Front universal connection (long) for withdrawable mounting	800 - 1600	3	IZMX16…3-W INX16...3-W	**IZMX-TFL163** 124183		
			4	IZMX16…4-W INX16...4-W	**IZMX-TFL164** 124179		
Tunnel terminals							
For use only in combination with front universal connection IZMX-TFL...							
	For connecting cables with 50-240 mm²	800 - 1600	–	IZMX16…3- INX16…3-	**IZMX-TCA16-2** 124230		1 off
	For connecting cables with 95-185 mm²		–		**IZMX-TCA16-3** 124231		
	For connecting cables with 120-240 mm²		–		**IZMX-TCA16-4** 124232		
General accessories							
Control circuit terminal blocks for fixed mounting							
	Control circuit terminals, 8 blocks	–	–	IZMX16…F INX16…F	**IZMX-SEC16-TB8-F** 124166		1 off
	Control circuit terminals, 20 blocks	–	–	IZMX16…F INX16…F	**IZMX-SEC16-TB20-F** 124167		
	Control circuit terminals, 30 blocks	–	–	IZMX16…F INX16…F	**IZMX-SEC16-TB30-F** 124168		
Control circuit terminal blocks for withdrawable blocks							
	Control circuit terminals, 8 blocks	–	–	IZMX16…W INX16…W	**IZMX-SEC16-TB8-W** 124162		1 off
	Control circuit terminals, 20 blocks	–	–	IZMX16…W INX16…W	**IZMX-SEC16-TB20-W** 124163		
	Control circuit terminals, 30 blocks	–	–	IZMX16…W INX16…W	**IZMX-SEC16-TB30-W** 124165		
Protective cover, IP55							
	The protective cover allows a higher protection type.	–	–	IZMX16… INX16…	**IZMX-DC 16** 124171		1 off
Blank cover for door cutout, IP41							
	Cover for a door cutout (reserved compartment)	–	–	IZMX16… INX16…	**IZMX-BC16** 124172		1 off
Replacement coding, basic device to cassette							
	This is a spare part. The coding is supplied as standard with withdrawable switches.	–	–	IZMX16…W INX16…W	**IZMX-CRB16** 124173		1 off
Replacement hand lever							
	This is a spare part. The hand lever is supplied as standard with withdrawable switches.	–	–	IZMX16…W INX16…W	**IZMX-LT16** 124174		1 off
Spare door seal, IP41							
	This is a spare part. The door sealing frame is supplied as standard with fixed mounting.	–	–	IZMX16…F INX16…F	**IZMX16-DEG-F** 124335		1 off
	This is a spare part. The door sealing frame is supplied as standard with withdrawable units.	–	–	IZMX16…W INX16…W	**IZMX16-DEG-W** 124390		1 off

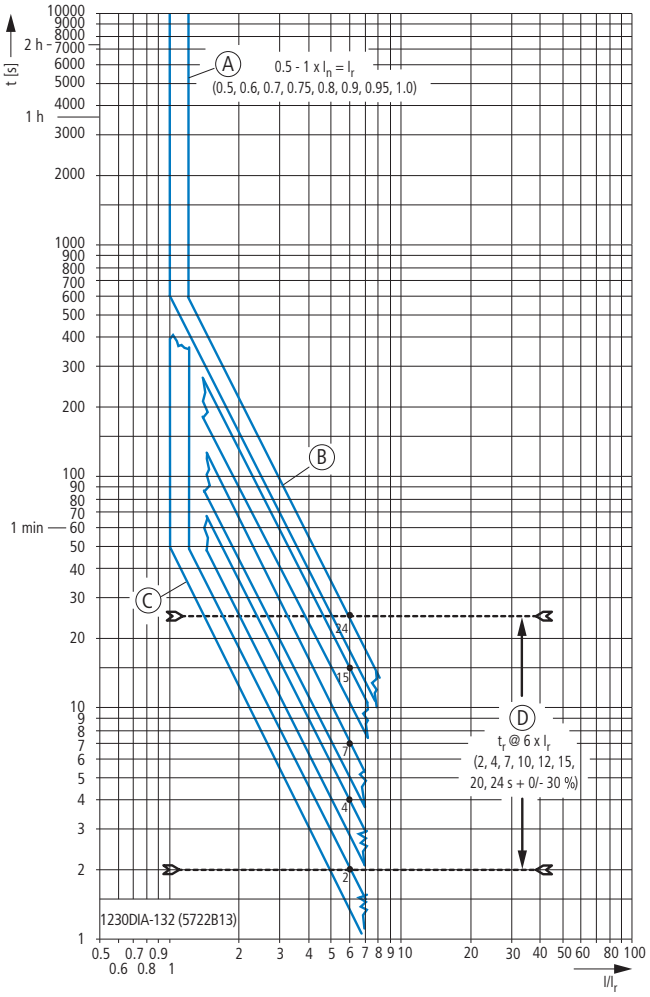
Terminal assignment of control circuit terminals

IZMX16



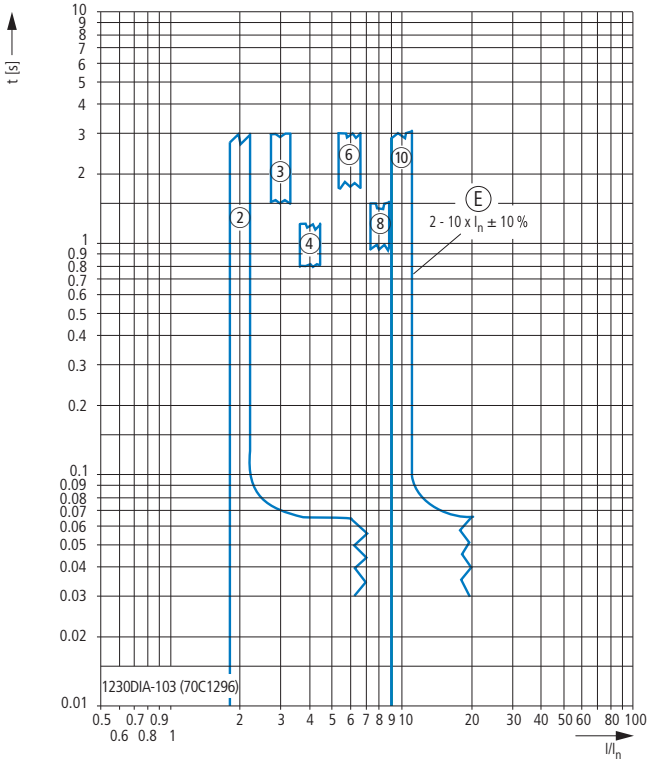
IZMX16…A… Tripping characteristics for selective protection
Overload protection (L) and non-delayed short-circuit protection (I)

L-protection: Adjustable
See Notes 1, 2, 3.



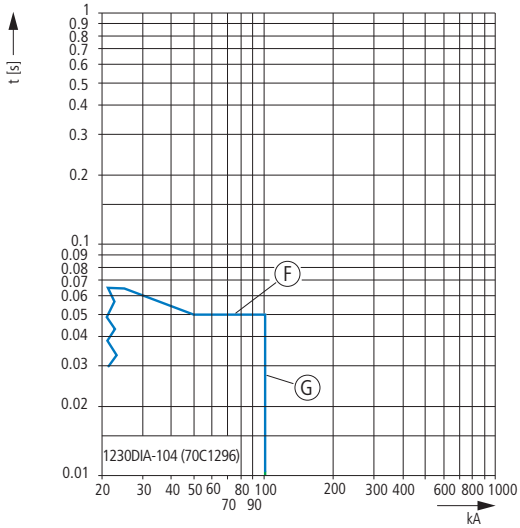
A Set values for overload protection
B Maximum total opening delay
C Minimum total opening delay
D Set values for long delay

I-protection: Adjustable
See Notes 3, 4, 5, 6, 7.



E Set values for non-delayed short-circuit protection

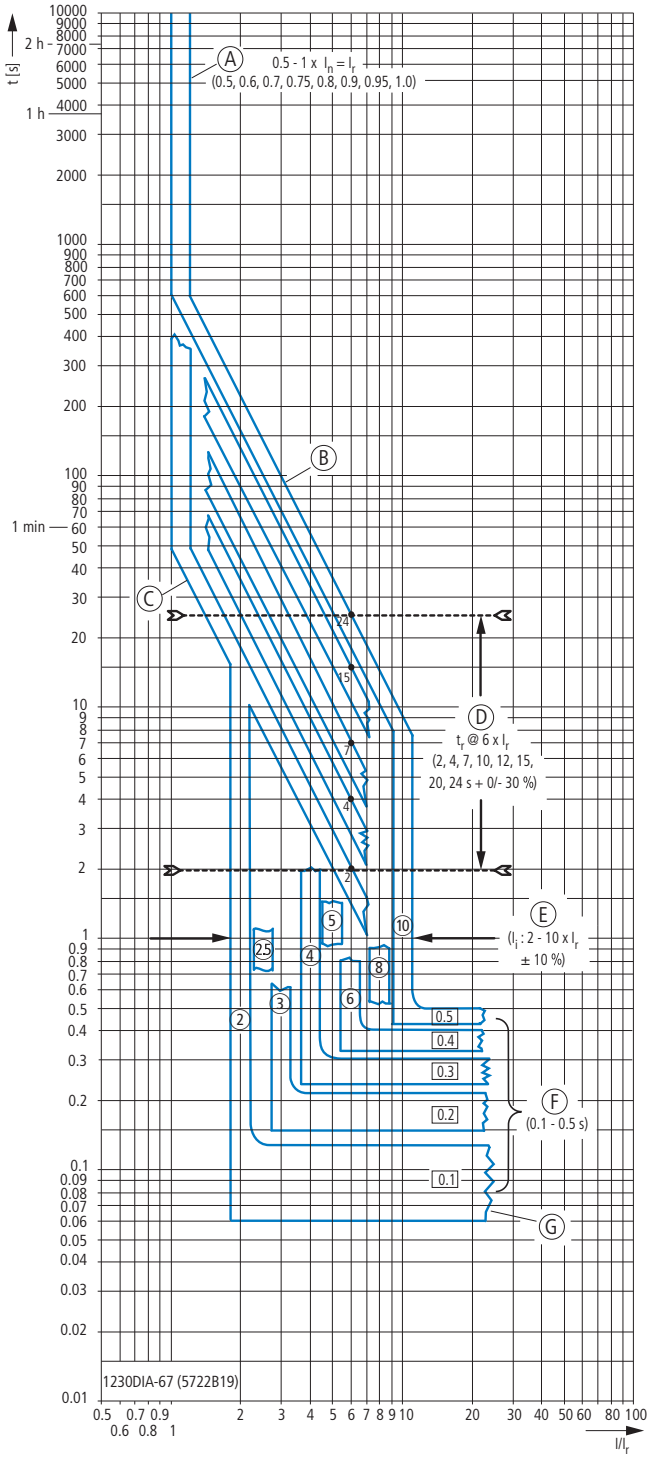
I-protection: For high short-circuit currents
See Notes 3, 4, 5, 6, 7.



F Set values for short-time delayed short-circuit protection with flat characteristic curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

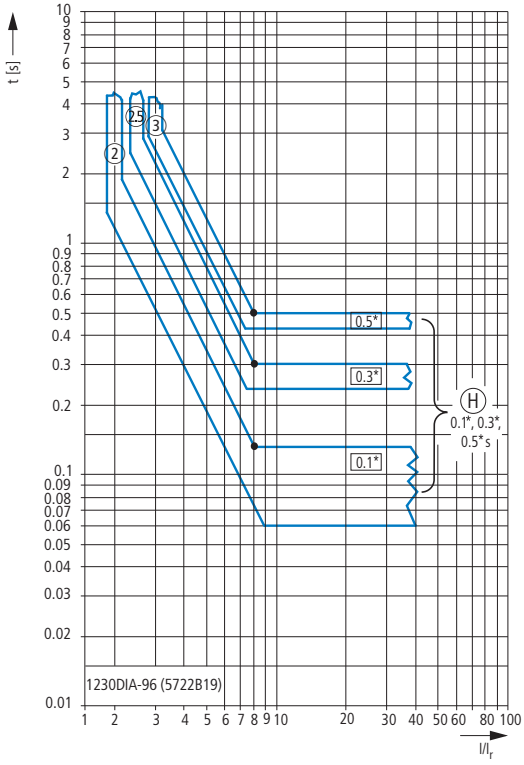
IZMX16…V(U)... Tripping characteristics for selectivity protection and universal protection
Overload protection (L) and short-time delayed short-circuit protection (S)

L-Protection: I²t-Characteristic curve and S-Protection: flat characteristic curve
See Notes 1 to 7.



A Set values for overload protection
B Maximum total opening delay
C Minimum total opening delay
D Set values for long delay
E Set value non-delayed short-circuit protection I_i
F Set values for short-time delayed short-circuit protection with flat characteristic curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

S-Protection: I²t-Characteristic curve
See Notes 1 to 7.



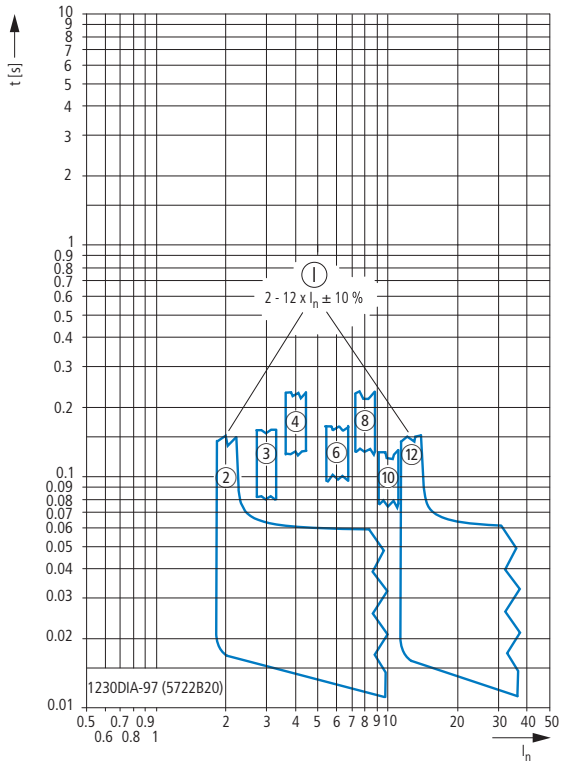
H The characteristic curve for the overload release can extend up to the M1 set value.

IZMX16…V(U)... Tripping characteristics for selectivity protection and universal protection

Non-delayed short-circuit protection (I)

I-protection: Adjustable

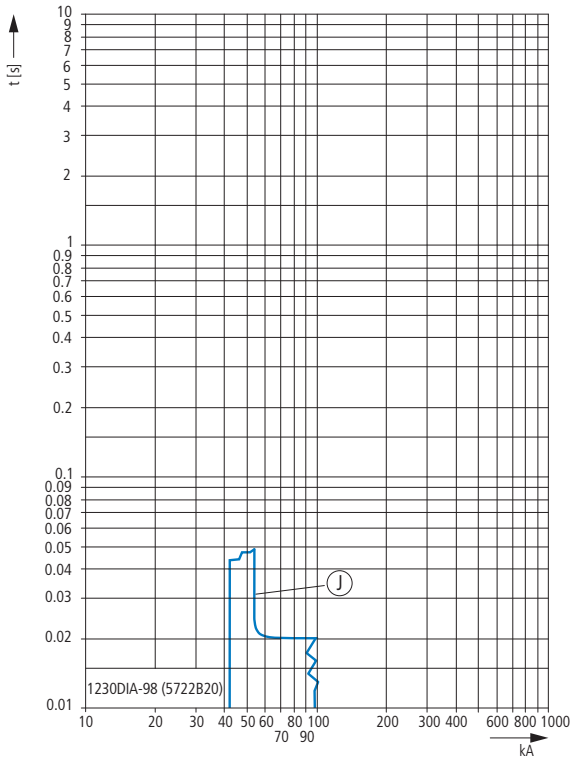
See Notes 2, 6, 8, 9, 10, 11.



I Available set values for non-delayed short-circuit protection I_{sd}

I-protection: For high short-circuit currents

See Notes 2, 6, 8, 9, 10, 11.

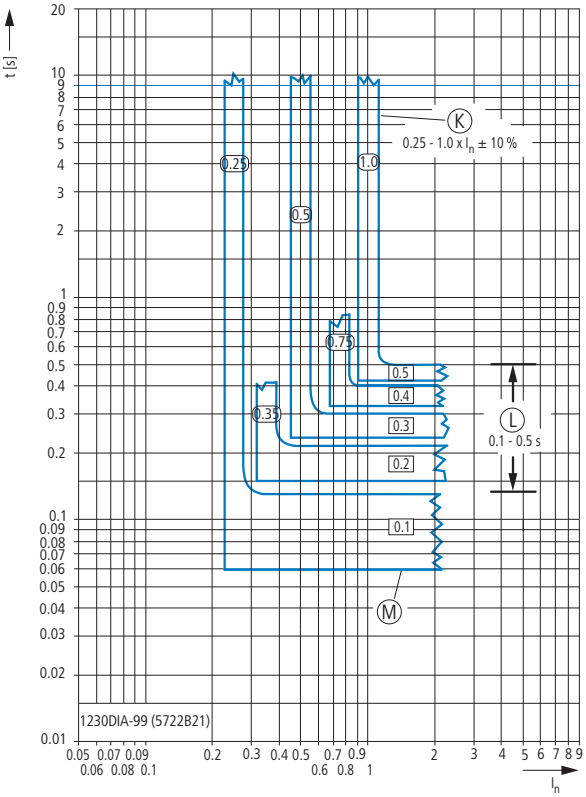


J Short-circuit release for very high currents

IZMX16…V(U)... Option Ground fault protection +IZMX-DTV(U)-EP

G: Ground fault protection, flat characteristic curve

See Notes 2, 6, 12, 13, 14, 15, 16.



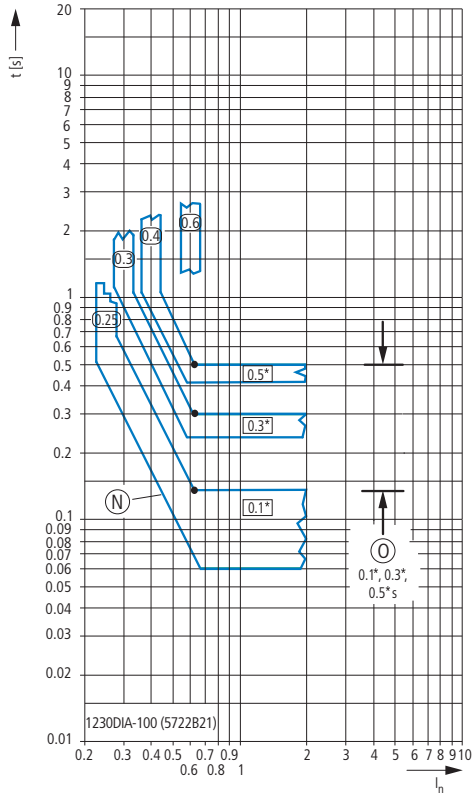
K Set values for short-time delay at I²t characteristic curve

L Set values for ground-fault protection

M Set values for ground-fault protection delay at flat characteristic curve

G: Ground fault protection, I²t-Characteristic curve

See Notes 2, 6, 12, 13, 14, 15, 16.



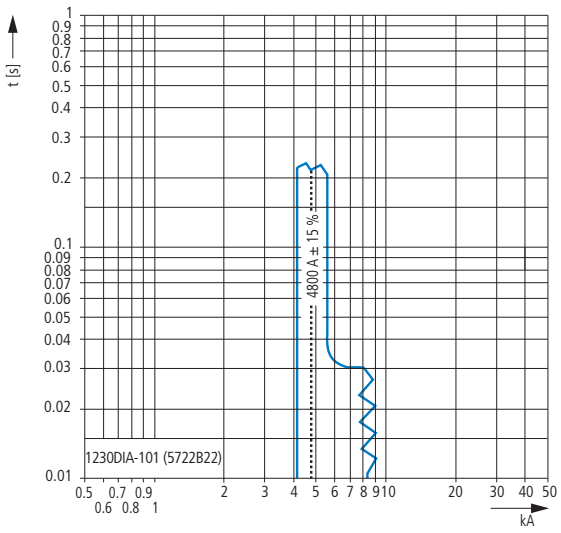
N Flat characteristic curve for the delay time fault protection

O I²t characteristic for ground-fault protection delay time

IZMX16…U... Option Maintenance mode option +IZMX-DTU-ARMS

ARMS-maintenance mode

See Notes 2, 6, 11, 17, 18, 19, 20.



A Set values for overload protection I_r
B Maximum total opening delay
C Minimum total opening delay
D Set value for long delay t_r
E Set value non-delayed short-circuit protection I_i
F Set values for short-time delayed short-circuit protection with flat characteristic curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.
H The characteristic curve for the overload release can extend up to the M1 set value.
I Available set values for non-delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
K Set values for short-time delay at I^2t characteristic curve
L Set values for ground-fault protection
M Set values for ground-fault protection delay at flat characteristic curve
N Flat characteristic curve for the delay time fault protection
O I^2t characteristic for ground-fault protection delay time

1 The trip unit has a thermal memory, which can shorten the value in the overload range. This function plays a role whenever a current is higher than the overload release's value and which is then isolated by a downstream circuit-breaker or the circuit-breaker itself. On a subsequent overload current the circuit-breaker will trip more quickly than normal. The reduced value is inversely proportional to the time expired since the last overload. After about five minutes the thermal memory is reset.

2 The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

3 The overload release trips at 110 % I_r with a tolerance of ±10 % (indicated by the "Unit Status" LED). The short-time delayed short-circuit release I_{sd} is activated at a pick-up time of conventionally 100 % with a tolerance of ±10 %.

4 When zone selectivity (ZSI) is activated in the short-time delayed short-circuit release and no blocking signal is applied, the minimum time value (0.10 s) applies irrespective of the short-time delay settings.

5 The upper lines of the I^2t characteristic curves are horizontal from a value of 8 × I_r (indicated by the points).

6 The listed overall switch-off times include the response times of the trip unit, the opening times of the switch and the time required to switch off the current.

7 The characteristic curves apply to applications in a temperature range from -20 °C to +55 °C. Temperatures over +85 °C cause automatic tripping, indicated by an orange-colored LED. The circuit-breaker must be selected according to the temperature-dependent derating values from the table in the technical data.

8 The non-delayed short-circuit release is activated at a response value of conventionally 100 % with a tolerance of ±10 %.

9 The non-delayed short-circuit release can be disabled by the user with an additional Off position.

10 All trip units feature an additional, permanently set non-delayed short-circuit release, which becomes active at a peak value of 90 kA. Tripping by this short-circuit release is indicated by a flashing INST LED. This protective function remains active when non-delayed tripping is set to Off.

11 The listed overall switch-off times are conservative and take into account the trip unit's maximum response times, the circuit-breaker's maximum opening delays and the longest current interruption times with regard to factors that contribute to worst-case conditions, such as maximum rated operational voltage, single-phase interruptions and minimum power factor. Fast breaking times are possible but depend on the system conditions and the circuit-breaker model.

12 The ground-fault release is activated at a response value of conventionally 100 % with a tolerance of ±10 %.

13 Unless otherwise specified, the current value tolerances are ±10 % of the values shown in the diagram.

14 In combination with ARMS function, ground-fault protection is limited to 1200 A.

15 When zone selectivity (ZSI) is activated in ground-fault protection and no blocking signal is applied, the minimum time value (flat characteristic curve) applies irrespective of the settings.

16 The upper lines of the I^2t characteristic curves are horizontal from a value of 0.625 × I_r (indicated by the points).

17 The maintenance mode function (ARMS) must be activated with a switch or through the communications terminals for these characteristic curves to apply. A blue LED indicates that the maintenance mode settings are active.

18 The shown switch-off times apply for connection to an additional auxiliary power supply.

19 Tripping by the ARMS Maintenance Mode Trip is indicated by the non-delayed short-circuit protection LED.

20 The tolerance is ±15 %.

Rating plugs (Plus types)

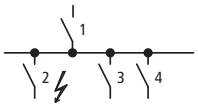
I_u [A] / I_n [A]	630	800	1000	1250	1600
200	+IZMX-RP16-200				
250	+IZMX-RP16-250				
300	+IZMX-RP16-300				
400	+IZMX-RP16-400				
500	+IZMX-RP16-500				
630	Standard	+IZMX-RP16-630			
800		Standard	+IZMX-RP16-800		
1000			Standard	+IZMX-RP16-1000	
1250				Standard	+IZMX-RP16-1250
1600					Standard

Rating plugs (individual types)

I_u [A] / I_n [A]	630	800	1000	1250	1600
200	IZMX-RP16A-200				
250	IZMX-RP16A-250				
300	IZMX-RP16A-300				
400	IZMX-RP16A-400		IZMX-RP16B-400		
500	IZMX-RP16A-500		IZMX-RP16B-500		
630	IZMX-RP16A-630		IZMX-RP16B-630		
800		IZMX-RP16A-800	IZMX-RP16B-800		IZMX-RP16C-800
1000			IZMX-RP16B-1000		IZMX-RP16C-1000
1250				IZMX-RP16B-1250	IZMX-RP16C-1250
1600					IZMX-RP16C-1600

Selectivity: incoming circuit-breaker, outgoing circuit-breaker

IZMX16…



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{Icu} : Rated short-circuit breaking capacity
I_i: Set value non-delayed short-circuit releases

Selectivity 415 V AC
between circuit-breakers enables the separate disconnection of faulty system sections.

Selectivity exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 remain operational.

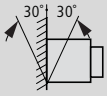
Selection:
Provided that the short-circuit current does not exceed those values specified ($I_{cc\ rms}$).
These details represent the limits of selectivity.
Both circuit-breakers will switch off with higher short-circuit currents.
On IZM circuit-breakers with V, U, D releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

	Incoming circuit-breaker (1)		**IZMX16...-A**															**IZMX16...-V**					
		I_n [A]	630	630	630	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	630	630	630	800	800	800
		I_{cu} [kA]	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65
		I_i [A]	6300	6300	6300	8000	8000	8000	10000	10000	10000	12500	12500	12500	16000	16000	16000	7560	7560	7560	9600	9600	9600
Outgoing circuit-breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
			Prospective short-circuit current ($I_{cc\ rms}$ in kA)																				
NZMB(C)(N)(H)1-A(M)…	20	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	25	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	32	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	40	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	50	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	63	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	80	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	100	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	125	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
	160	25 - 100	6	6	6	9	9	9	15	15	15	T(25)	T(25)	T(25)	T	T	T(50)	T	T	T	T	T	T
NZMB(C)(N)(H)2-A(M)(V)…	20	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	25	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	32	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	40	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	50	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	63	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	80	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	90	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	100	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	125	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	140	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	160	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	200	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	220	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	250	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
	300	25 - 150	8	8	8	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)…	220	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	250	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	320	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	350	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	400	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	450	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	500	36 - 150	6	6	6	7	7	7	9	9	9	12	12	12	18	18	18	T	T	T	T	T	T
	630	36 - 150	–	–	–	7	7	7	9	9	9	12	12	12	18	18	18	–	–	–	T	T	T
NZMN(H)4-A(M)(V)…	550	50 - 100	6	6	6	7	7	7	9	9	9	12	12	12	15	15	15	T	T	T	T	T	T
	630	50 - 100	–	–	–	7	7	7	9	9	9	12	12	12	15	15	15	–	–	–	T	T	T
	800	50 - 100	–	–	–	–	–	–	9	9	9	12	12	12	15	15	15	–	–	–	–	–	–
	875	50 - 100	–	–	–	–	–	–	9	9	9	12	12	12	15	15	15	–	–	–	–	–	–
	1000	50 - 100	–	–	–	–	–	–	–	–	–	12	12	12	15	15	15	–	–	–	–	–	–
	1250	50 - 100	–	–	–	–	–	–	–	–	–	–	–	–	15	15	15	–	–	–	–	–	–
	1400	50 - 100	–	–	–	–	–	–	–	–	–	–	–	–	15	15	15	–	–	–	–	–	–
	1600	50 - 100	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

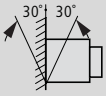
Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

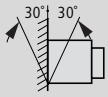
IZMX16…-V									**IZMX16…-U**														
1000	1000	1000	1250	1250	1250	1600	1600	1600	630	630	630	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600
42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65	42	50	65
12000	12000	12000	15000	15000	15000	19200	19200	19200	7560	7560	7560	9600	9600	9600	12000	12000	12000	15000	15000	15000	19200	19200	19200
B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
Prospective short-circuit current ($I_{cc\ rms}$ in kA)																							
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

IZMX16...

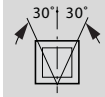
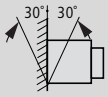
					IZMX16B…06…	IZMX16B…08…	IZMX16B…10…
General							
Standards					IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Ambient temperature	Storage			°C	-40 - +70 (devices with LCD display -20 - +70)		
	Operation (open)			°C	-25 - +70 (devices with LCD display -20 - +70)		
Mounting position							
Utilization category					B	B	B
Protection type					IP20, IP54 with protective cover		
Direction of incoming supply					Any	Any	Any
Main contacts							
Rated operational current = Rated uninterrupted current			$I_n = I_u$	A	630	800	1000
Rated uninterrupted current at 50 °C[1)]			I_u	A	599	760	950
Rated uninterrupted current at 60 °C[1)]			I_u	A	567	720	900
Rated uninterrupted current at 70 °C[1)]			I_u	A	504	640	800
Rated impulse withstand voltage			U_{imp}	V AC	8000	8000	8000
Rated operational voltage			U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V			I_{IT}	kA	21	21	21
Use in IT electrical power networks up to U = 690 V			I_{IT}	kA	-	-	-
Overvoltage category/pollution degree					III/3	III/3	III/3
Rated insulation voltage			U_i	V	1000	1000	1000
Switching capacity							
Rated short-circuitmaking capacity	Up to 440 V50/60 Hz		I_{cm}	kA	88	88	88
	Up to 690 V 50/60 Hz		I_{cm}	kA	88	88	88
Rated short-time withstand current 50/60 Hz	t = 1 s		I_{cw}	kA	42	42	42
	t = 3 s		I_{cw}	kA	-	-	-
Rated short-circuit breaking capacity I_{cn}							
IEC/EN 60947 Operating sequence I_{cu} O-t-CO							
Up to 240 V 50/60 Hz			I_{cu}	kA	42	42	42
Up to 440 V 50/60 Hz			I_{cu}	kA	42	42	42
Up to 690 V 50/60 Hz			I_{cu}	kA	42	42	42
Up to 1100 V 50/60 Hz			I_{cu}	kA	-	-	-
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO							
Up to 240 V 50/60 Hz			I_{cs}	kA	42	42	42
Up to 440 V 50/60 Hz			I_{cs}	kA	42	42	42
Up to 690 V 50/60 Hz			I_{cs}	kA	42	42	42
Up to 1100 V 50/60 Hz			I_{cs}	kA	-	-	-
Switching times							
Total opening delay				ms	20	20	20
Closing delay				ms	25	25	25
Closing delay electrical (via closing release)				ms	30	30	30
Opening delay electrical (via shunt release / undervoltage release)				ms	25/50	25/50	25/50
Opening delay via trip electronics (non-delayed short-circuit release)				ms	25	25	25
Lifespan	Mechanical, without maintenance		Operations		12500	12500	12500
	Mechanical, with maintenance		Operations		20000	20000	20000
	Electrical, without maintenance		Operations		10000	10000	10000
	Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency			Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading	Fixed			W	36	59	92
	Withdrawable			W	50	80	125
Weight							
Fixed	3 pole			kg	15	15	15
	4 pole			kg	20	20	20
Withdrawable	3 pole			kg	39	39	39
	4 pole			kg	47	47	47
Empty cassette	3 pole			kg	18	18	18
	4 pole			kg	21	21	21

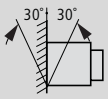
Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within a switchgear assembly. The expected internal temperatures can be estimated according to the applicable IEC Standards.

IZMX16B…12…	**IZMX16B…16…**	**IZMX16N…06…**	**IZMX16N…08…**	**IZMX16N…10…**	**IZMX16N…12…**	**IZMX16N…16…**
IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
-40 - +70 (devices with LCD display -20 - +70)						
-25 - +70 (devices with LCD display -20 - +70)						
						
B	B	B	B	B	B	B
IP20, IP54 with protective cover						
Any	Any	Any	Any	Any	Any	Any
1250	1600	630	800	1000	1250	1600
1188	1520	599	760	950	1188	1520
1125	1440	567	720	900	1125	1440
1000	1280	504	640	800	1000	1280
8000	8000	8000	8000	8000	8000	8000
690	690	690	690	690	690	690
21	21	21	21	21	21	21
-	-	-	-	-	-	-
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
88	88	105	105	105	105	105
88	88	88	88	88	88	88
42	42	42	42	42	42	42
-	-	-	-	-	-	-
42	42	85	85	85	85	85
42	42	50	50	50	50	50
42	42	42	42	42	42	42
-	-	-	-	-	-	-
42	42	50	50	50	50	50
42	42	50	50	50	50	50
42	42	42	42	42	42	42
-	-	-	-	-	-	-
20	20	20	20	20	20	20
25	25	25	25	25	25	25
30	30	30	30	30	30	30
25/50	25/50	25/50	25/50	25/50	25/50	25/50
25	25	25	25	25	25	25
12500	12500	12500	12500	12500	12500	12500
20000	20000	20000	20000	20000	20000	20000
10000	10000	10000	10000	10000	10000	10000
10000	10000	10000	10000	10000	10000	10000
60	60	60	60	60	60	60
132	235	36	59	92	132	235
180	320	50	80	125	180	320
15	15	15	15	15	15	15
20	20	20	20	20	20	20
39	39	39	39	39	39	39
47	47	47	47	47	47	47
18	18	18	18	18	18	18
21	21	21	21	21	21	21

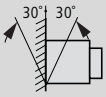
					IZMX16H…06…	IZMX16H…08…
General						
Standards					IEC/EN 60947	IEC/EN 60947
Ambient temperature	Storage			°C	-40 - +70 (devices with LCD display -20 - +70)	
	Operation (open)			°C	-25 - +70 (devices with LCD display -20 - +70)	
Mounting position						
Utilization category					B	B
Protection type					IP20, IP54 with protective cover	
Direction of incoming supply					Any	Any
Main contacts						
Rated operational current = Rated uninterrupted current			$I_n = I_u$	A	630	800
Rated uninterrupted current at 50 °C[1)]			I_u	A	599	760
Rated uninterrupted current at 60 °C[1)]			I_u	A	567	720
Rated uninterrupted current at 70 °C[1)]			I_u	A	504	640
Rated impulse withstand voltage			U_{imp}	V AC	8000	8000
Rated operational voltage			U_e	V AC	690	690
Use in IT electrical power networks up toU = 440 V			I_{IT}	kA	21	21
Use in IT electrical power networks up toU = 690 V			I_{IT}	kA	-	-
Overvoltage category/pollution degree					III/3	III/3
Rated insulation voltage			U_i	V	1000	1000
Switching capacity						
Rated short-circuit making capacity	Up to 440 V 50/60 Hz		I_{cm}	kA	137	137
	Up to 690 V 50/60 Hz		I_{cm}	kA	88	88
Rated short-time withstand current 50/60 Hz	t = 1 s		I_{cw}	kA	42	42
	t = 3 s		I_{cw}	kA	-	-
Rated short-circuit breaking capacity I_{cn}						
IEC/EN 60947 Operating sequence I_{cu} O-t-CO						
Up to 240 V 50/60 Hz			I_{cu}	kA	85	85
Up to 440 V 50/60 Hz			I_{cu}	kA	65	65
Up to 690 V 50/60 Hz			I_{cu}	kA	42	42
Up to 1100 V 50/60 Hz			I_{cu}	kA	-	-
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO						
Up to 240 V 50/60 Hz			I_{cs}	kA	65	65
Up to 440 V 50/60 Hz			I_{cs}	kA	50	50
Up to 690 V 50/60 Hz			I_{cs}	kA	42	42
Up to 1100 V 50/60 Hz			I_{cs}	kA	-	-
Switching times						
Total opening delay				ms	20	20
Closing delay				ms	25	25
Closing delay electrical (via closing release)				ms	30	30
Opening delay electrical (via shunt release / undervoltage release)				ms	25/50	25/50
Opening delay via trip electronics (non-delayed short-circuit release)				ms	25	25
Lifespan						
Mechanical, without maintenance			Operations		12500	12500
Mechanical, with maintenance			Operations		20000	20000
Electrical, without maintenance			Operations		10000	10000
Electrical, with maintenance			Operations		10000	10000
Maximum operating frequency			Operations/h		60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading						
Fixed				W	36	59
Withdrawable				W	50	80
Weight						
Fixed	3 pole			kg	15	15
	4 pole			kg	20	20
Withdrawable	3 pole			kg	39	39
	4 pole			kg	47	47
Empty cassette	3 pole			kg	18	18
	4 pole			kg	21	21

Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within a switchgear assembly. The expected internal temperatures can be estimated according to the applicable IEC Standards.

IZMX16H…10…	**IZMX16H…12…**	**IZMX16H…16…**
IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
-40 - +70 (devices with LCD display -20 - +70)		
-25 - +70 (devices with LCD display -20 - +70)		
		
B	B	B
IP20, IP54 with protective cover		
Any	Any	Any
1000	1250	1600
950	1188	1520
900	1125	1440
800	1000	1280
8000	8000	8000
690	690	690
21	21	21
-	-	-
III/3	III/3	III/3
1000	1000	1000
137	137	137
88	88	88
42	42	42
-	-	-
85	85	85
65	65	65
42	42	42
-	-	-
65	65	65
50	50	50
42	42	42
-	-	-
20	20	20
25	25	25
30	30	30
25/50	25/50	25/50
25	25	25
12500	12500	12500
20000	20000	20000
10000	10000	10000
10000	10000	10000
60	60	60
92	132	235
125	180	320
15	15	15
20	20	20
39	39	39
47	47	47
18	18	18
21	21	21

				INX16B…06…	**INX16B…08…**	**INX16B…10…**
General						
Standards				IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Ambient temperature						
Storage			°C	-40 - +70	-40 - +70	-40 - +70
Operation (open)			°C	-25 - +70 (devices with LCD display -20 - +70)		
Mounting position						
Utilization category				B	B	B
Protection type				IP20, IP54 with protective cover	IP20, IP54 with protective cover	IP20, IP54 with protective cover
Direction of incoming supply				Any	Any	Any
Main contacts						
Rated operational current = Rated uninterrupted current	$I_n = I_u$		A	630	800	1000
Rated uninterrupted current at 50 °C[1)]	I_u		A	599	760	950
Rated uninterrupted current at 60 °C[1)]	I_u		A	567	720	900
Rated uninterrupted current at 70 °C[1)]	I_u		A	504	640	800
Rated impulse withstand voltage	U_{imp}		V AC	8000	8000	8000
Rated operational voltage	U_e		V AC	690	690	690
Use in IT electrical power networks up toU = 440 V	I_{IT}		kA	21	21	21
Use in IT electrical power networks up toU = 690 V	I_{IT}		kA	-	-	-
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage	U_i		V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity						
Up to 440 V 50/60 Hz	I_{cm}		kA	88	88	88
Up to 690 V 50/60 Hz	I_{cm}		kA	88	88	88
Rated short-time withstand current 50/60 Hz						
t = 1 s	I_{cw}		kA	42	42	42
t = 3 s	I_{cw}		kA	-	-	-
Switching times						
Total opening delay			ms	20	20	20
Closing delay			ms	25	25	25
Closing delay electrical (via closing release)			ms	30	30	30
Opening delay electrical (via shunt release / undervoltage release)			ms	25/50	25/50	25/50
Lifespan						
Mechanical, without maintenance	Operations			12500	12500	12500
Mechanical, with maintenance	Operations			20000	20000	20000
Electrical, without maintenance	Operations			10000	10000	10000
Electrical, with maintenance	Operations			10000	10000	10000
Maximum operating frequency	Operations/h			60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading						
Fixed			W	36	59	92
Withdrawable			W	50	80	125
Weight						
Fixed						
3 pole			kg	15	15	15
4 pole			kg	20	20	20
Withdrawable						
3 pole			kg	39	39	39
4 pole			kg	47	47	47
Empty cassette						
3 pole			kg	18	18	18
4 pole			kg	21	21	21

Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within a switchgear assembly. The expected internal temperatures can be estimated according to the applicable IEC Standards.

INX16B…12…	**INX16B…16…**
IEC/EN 60947	IEC/EN 60947
-40 - +70	-40 - +70
-25 - +70 (devices with LCD display -20 - +70)	
	
B	B
IP20, IP54 with protective cover	
Any	Any
1250	1600
1188	1520
1125	1440
1000	1280
8000	8000
690	690
21	21
-	-
III/3	III/3
1000	1000
88	88
88	88
42	42
-	-
20	20
25	25
30	30
25/50	25/50
12500	12500
20000	20000
10000	10000
10000	10000
60	60
132	235
180	320
15	15
20	20
39	39
47	47
18	18
21	21

Notes

IZMX-AS22, IZMX-OTS, IZMX-S..., IZMX-U...

			Auxiliary contacts IZMX-AS22	Overload trip IZMX-OTS	IZMX-LCS16(-SR)
Rated breaking capacity					
Inductive load					
250 V AC		A	10	10	10
125 V DC		A	0.5	0.5	0.5
250 V DC		A	0.25	0.25	0.25

			Voltage releases				Closing releases			
			IZMX-ST24DC IZMX-STS24DC	IZMX-ST48DC IZMX-STS48DC	IZMX-ST110AD IZMX-STS110AD	IZMX-ST230AD IZMX-STS230AD	IZMX-SR24DC	IZMX-SR48DC	IZMX-SR110AD	IZMX-SR230AD
Rated control voltage										
AC 50/60 Hz	U_s	V	–	–	110 - 127	208 - 240	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	110 - 125	220 - 250	24	48	110 - 125	220 - 250
Power consumption										
AC		VA	–	–	(pick-up 450)	(pick-up 450)	–	–	(pick-up 450)	(pick-up 450)
DC		W	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 450)	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 450)
Response time of the circuit-breaker with U_s		ms	35	35	35	35	40	40	40	40
Operating range										
Drop-out voltage										
AC operated, 50/60 Hz	Drop-out	x U_c	–	–	–	–	–	–	–	–
Pick-up voltage										
	pick-up	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard

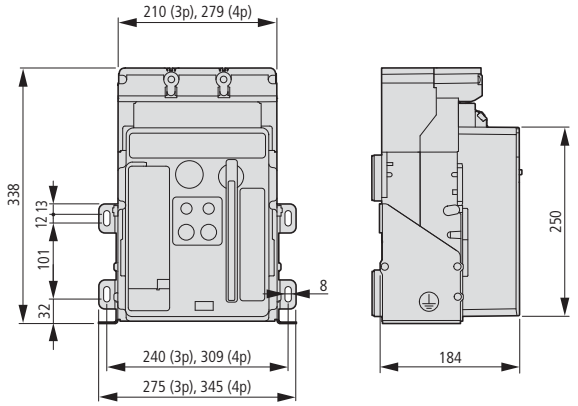
			Under-voltage releases			
			IZMX-UVR24DC	IZMX-UVR48DC	IZMX-UVR110AD	IZMX-UVR220AD
Rated control voltage						
AC 50/60 Hz	U_s	V	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	110 - 125	220 - 250
Power consumption						
AC		VA	–	–	5 (pick-up 890)	5 (pick-up 910)
DC		W	5 (pick-up 500)	5 (pick-up 850)	5 (pick-up 890)	5 (pick-up 910)
Response time of the circuit-breaker with U_s		ms	50	50	50	50
Operating range						
Drop-out voltage						
AC operated, 50/60 Hz	Drop-out	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard
Pick-up voltage						
	pick-up	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard

			Motor operator					
			IZMX-M16-24DC	**IZMX-M16-48DC**	**IZMX-M16-110AC**	**IZMX-M16-110DC**	**IZMX-M16-230AC**	**IZMX-M16-220DC**
Rated control voltage								
AC 50/60 Hz	U_s	V	–	–	110 - 127	–	220 - 240	–
DC	U_s	V	24	48	–	110 - 125	–	220 - 250
Necessary time required for charging of the spring-operated stored energy mechanism at 1 x U_s		s	3	3	3	3	4	4
Rated operational current	I_n	A	5	3	2	1	1	1
Starting current		A	25	15	6	5	10	10
Power consumption								
AC 50/60 Hz		VA	–	–	280	280	280	280
DC		W	150	150	150	150	150	280

Dimensions

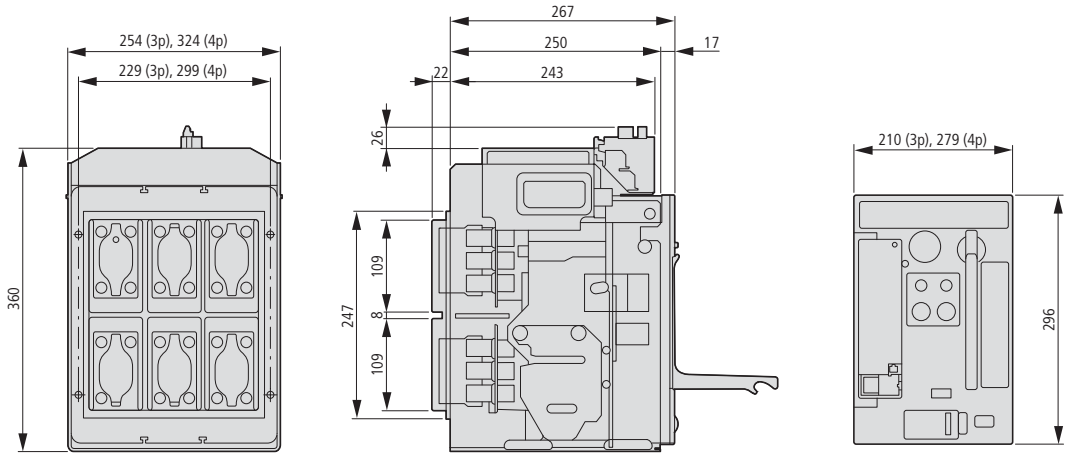
INX16, IZMX16 fixed mounted

INX16…F, IZMX16…F



INX16, IZMX16 withdrawable units

INX16…W, IZMX16…W



IZM26

I_{cu} = I_{cs} at U_e = 440/690 (1100) V AC
I_{cu}: Rated ultimate short-circuit breaking capacity at rated operational voltage U_e
I_{cs}: rated service short-circuit breaking capacity at rated operational voltage U_e

Circuit-breaker	Rated operational current I_n A	Basic switching capacity (B) 440/690 V AC I_{cu} /I_{cs} kA/kA	Normal switching capacity (N) 440/690 V AC I_{cu} /I_{cs} kA/kA	High switching capacity (H) 440/690 V AC I_{cu} /I_{cs} kA/kA	(S) 1100 V AC I_{cu} /I_{cs} kA/kA
IZM20	800 - 1600	50/50	65/65	-	-
IZM20	2000	50/50	65/65	-	-
IZM32	800 - 1600	65/65	85/85	100/85	-
IZM32	2000 - 3200	65/65	85/85	100/85	-
IZM40	4000	-	85/65	100/65	-
IZM63	4000 - 6300	-	85/85	100/100	-
IZM32S	3200	-	-	-	25

I_{cu} = I_{cs} at U_e = 440/690 (1100) V AC
I_{cw} at t = 1 s/t = 3 s
I_{cw}: Rated short-time withstand current

Circuit-breaker	Rated operational current I_n A	Basic switching capacity (B) t = 1 s/t = 3s I_{cw} /I_{cw} kA/kA	Normal switching capacity (N) t = 1 s/t = 3s I_{cw} /I_{cw} kA/kA	High switching capacity (H) t = 1 s/t = 3s I_{cw} /I_{cw} kA/kA
IZM20	800 - 1600	50/-	65/40	-
IZM20	2000	50/30	65/40	-
IZM32	800 - 1600	65/-	85/65	85/65
IZM32	2000 - 3200	65/50	85/65	85/65
IZM40	4000	-	85/65	100/65
IZM63	4000 - 6300	-	85/65	100/65

I_{cm} at Ue = 440/690 V AC I_{cm}: Rated short-circuit making capacity (Peak value) at rated operational voltage U_e		**Basic switching capacity (B)**	**Normal switching capacity (N)**	**High switching capacity (H)**	**(S)**
		440/690 V AC	440/690 V AC	440/690 V AC	1100 V AC
Switch-disconnector	Rated operational current I_n A	I_{cm} kA	I_{cm} kA	I_{cm} kA	I_{cm} kA
IN20	800 - 1600	105	143	-	-
IN20	2000	105	143	-	-
IN32	800 - 1600	143	187	-	-
IN32	2000 - 3200	143	187	-	-
IN40	4000	-	187	220	-
IN63	4000 - 6300	-	187	220	-
IN32S	3200	-	-	-	52

I_{cm} at U_e = 440/690 V AC I_{cw} at t = 1 s/t = 3 s I_{cw}: Rated short-time withstand current		**Basic switching capacity (B)**	**Normal switching capacity (N)**	**High switching capacity (H)**
		t = 1 s/t = 3s	t = 1 s/t = 3s	t = 1 s/t = 3s
Switch-disconnector	Rated operational current I_n A	I_{cw} /I_{cw} kA/kA	I_{cw} /I_{cw} kA/kA	I_{cw} /I_{cw} kA/kA
IN20	800 - 1600	50/-	65/40	-
IN20	2000	50/30	65/40	-
IN32	800 - 1600	65/-	85/65	-
IN32	2000 - 3200	65/50	85/65	-
IN40	4000	-	85/65	100/65
IN63	4000 - 6300	-	85/65	100/65

		IZM26 ...-A... System protection DTA Digitrip 520 LI	**IZM26 ...-V...** Selectivity protection DTV Digitrip 520 LSI(G)	**IZM26 ...-U...** Universal protection DTU Digitrip 520MC LSI(G)	**IZM26 ...-P...** Universal protection with power measurement DTP Digitrip 1150i LSI(G)
					
Current range		200 A – 3200 A	200 A – 6300 A	200 A – 6300 A	200 A – 6300 A
RMS value monitoring		●	●	●	●
Protective functions					
General					
Ordering options		LI	LSI, LSIG	LSI, LSIG, LSIA	LSI, LSIG, LSIA
Rating plug (I_n)		●	●	●	●
Overtemperature trip		●	●	●	●
Overload protection	**L**				
Overload trip		(0.4 - 1.0) x I_n	(0.4 - 1.0) x I_n	(0.4 - 1.0) x I_n	(0.4 - 1.0) x I_n
Long delay time I^2t at 6 x I_r		2 - 24 s	2 - 24 s	2 - 24 s	2 - 24 s
Long delay time I^4t		–	–	–	1 - 5 s
Thermal memory		●	●	●	●
Overload alarm signal		–	–	○[1]	○[1]: (0.5 - 1.0) x I_r
Short-time delayed short-circuit protection	**S**				
Short delay pickup		–	(2 - 10) x I_r and M1[2]	(2 - 10) x I_r and M1[2]	(2 - 10) x I_r and M1[2]
Short delay time I^2t at 8 x I_r		–	100 - 500 ms	100 - 500 ms	100 - 500 ms
Short delay time, flat characteristic curve		–	100 - 500 ms	100 - 500 ms	100 - 500 ms
Zone selectivity ZSI[1]		–	○	○	○
Non-delayed short-circuit protection	**I**				
Non-delayed short-circuit protection		(2 - 10) x I_n	(2 - 10) x I_n and M1[2]	(2 - 10) x I_n and M1[2]	(2 - 10) x I_n and M1[2]
Switch-off function		–	●	●	●
Closing releases MCR		●	●	●	●
Ground operational fault protection	**G**				
Ground/fault alarm		–	–	○1)	○1)
Ground fault protection release		–	(0.25 - 10) x I_n	(0.25 - 10) x I_n[3]	(0.25 - 10) x I_n[3]
Short delay time I^2t at 0.625 x I_n		–	100 - 500 ms	100 - 500 ms	100 - 500 ms
Short delay time, curve		–	100 - 500 ms	100 - 500 ms	100 - 500 ms
Zone selectivity ZSI[1]		–	○	○	○
Thermal memory		–	●	●	●
Neutral conductor-conductor protection	**N**	●	Only for type LSI	Only for type LSI	Only for type LSI

Notes

I_n = rating plug (rated current module) = rated operational current current transformer
I_r = Set value overload trip (= Rated operational current of system)
[1] Requires an external 24 V DC control voltage supply.
[2] Additionally available M1 set values:

IZM20
M1 = 14 x I_n for rated operational currents von 200 A to 1250 A
M1 = 12 x I_n for rated operational currents from 1600 A to 2000 A
IZM32
M1 = 14 x I_n for rated operational currents von 200 A to 1250 A
M1 = 12 x I_n for rated operational current from 1600 A to 2500 A
M1 = 10 x I_n for rated operational currents from 3200 A
IZM40
M1 = 12 x I_n for rated operational currents from 4000 A
IZM63
M1 = 14 x I_n for rated operational currents from 2000 A 2500 A
M1 = 12 x I_n for rated operational currents von 3200 A 5000 A
M1 = 10 x I_n for rated operational currents from 6300 A

[3] In combination with ARMS function limited to 1200 A.

● Standard
○ Optional

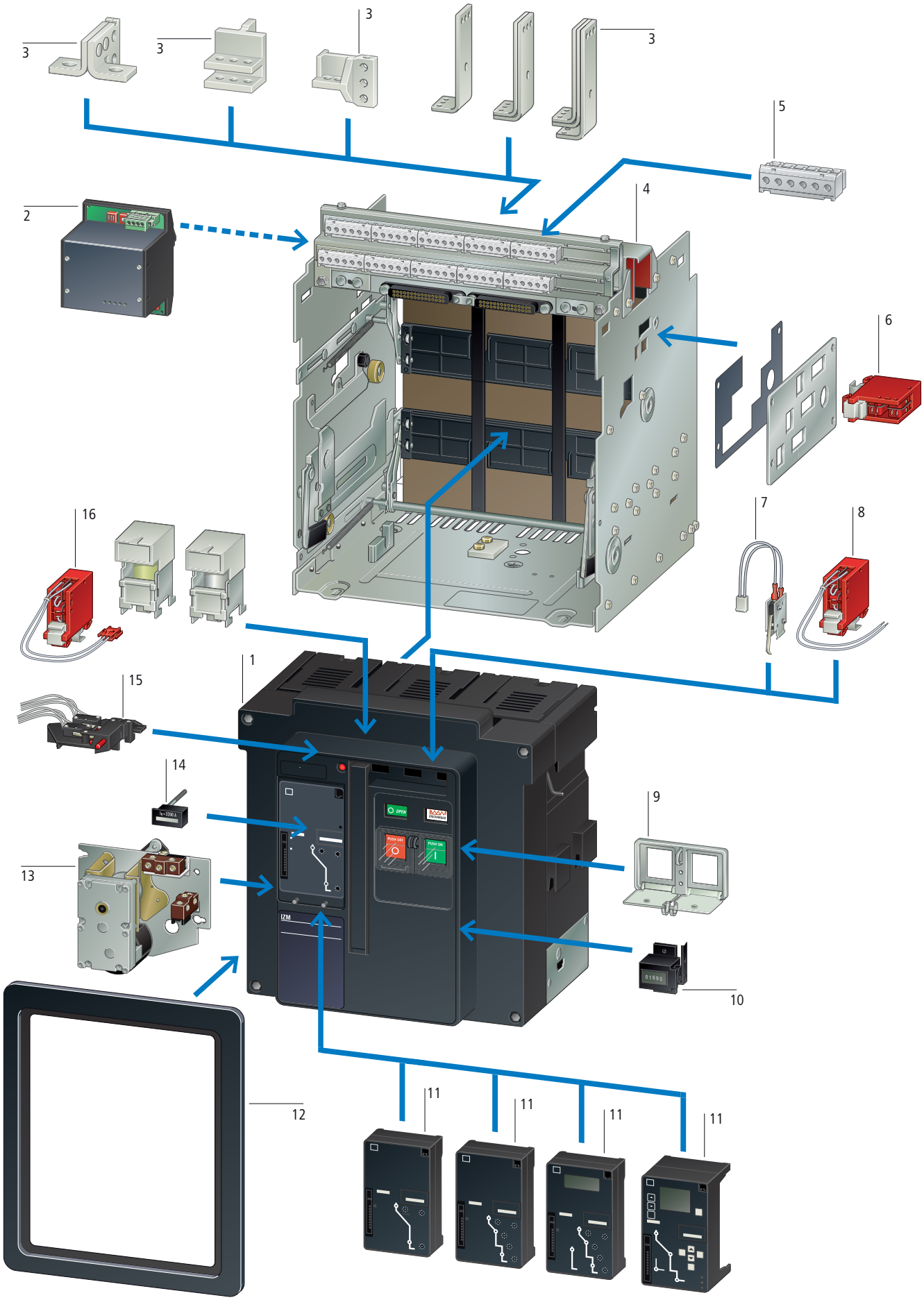
		IZM26 ...-A...	**IZM26 ...-V...**	**IZM26 ...-U...**	**IZM26 ...-P...**
		System protection DTA Digitrip 520 LI	Selectivity protection DTV Digitrip 520 LSI(G)	Universal protection DTU Digitrip 520MC LSI(G)	Universal protection with power measuring DTP Digitrip 1150i LSI(G)
					
System diagnostics					
Cause of trip LEDs		●	●	●	●
Current at trip point		–	–	●[1]	●[1]
Remote signaling contacts	**A**	–	–	●[1]	●[1]
Programmable signal contacts	**A**	–	–	–	●[1]
System monitor					
Digital display		–	–	4-digit LED	24-digit LED
Current display (%)		–	–	●	●
Phase voltage (%)		–	–	–	●
Power and energy (%)		–	–	–	●
Apparent power kVA reference and delivery		–	–	–	●
Reactive power kVAR		–	–	–	●
Power factor		–	–	–	●
Crest factor		–	–	–	●
Power quality, harmonics		–	–	–	●
THD factor (%)		–	–	–	●
Fieldbus communication		–	–	Modbus, PROFIBUS	Modbus, PROFIBUS
Additional functions					
Trip history (3 events)		–	–	–	●
Electronic operations counter		–	–	–	●
Test possibility[2]		Hand held test unit	Hand held test unit	Hand held test unit	Hand held test unit and integrated function
Maintenance mode ARMS		–	–	○[1]	○[1]
Curve-form plotting		–	–	–	●

Notes

I_n = rating plug (rate current module) = rated operational current current transformer
I_r = Set value overload trip (= rated operational current of system)
[1] Requires an external 24 V DC control voltage supply.
[2] Hand-held tester for simulating secondary current

● Standard
○ Optional

System overview



Key to type references

IZM	20	B	3	-	A	08	W
IN	32	N	4		V	10	F
	40	H			U	12	
	63	S			P	16	
						20	
						25	
						32	
						40	
						50	
						63	

IZM, IN = Product family

Frame size
20: Narrow 800 - 2000 A
32: Standard 800 - 3200 A
40: Double narrow 4000 A
63: Double wide 4000 - 6300 A

Switching capacity
B = Basic
N = Normal
H = High
S = Special type for 1100 V (only for size 32, 3200 A)

Number of poles
3: 3 pole
4: 4 pole

Trip type
A= System protection = Digitrip 520 LI
V= Selective protection = Digitrip 520 LSI(G)
U= Universal protection = Digitrip 520MC LSI(G)
P= Universal protection with power measurement = Digitrip 1150i+ LSI(G)

Rated operational current
08: 800 A
10: 1000 A
12: 1250 A
16: 1600 A
20: 2000 A
25: 2500 A
32: 3200 A
40: 4000 A
50: 5000 A
63: 6300 A

Model
W = Withdrawable
F = Fixed

IZM26: Robust safety

Eaton's IZM26 circuit-breakers offer a proven and complete range of air circuit-breakers up to 6300 A. Four sizes enable the ideal circuit-breaker to be selected economically for any project. In this way, only the module width increases with the required rated operational current, enabling the most compact and economical size to be selected.

The particularly rugged circuit-breakers are already in use 100,000 times in harsh industrial environments worldwide. Large material thicknesses and a high short-time withstand current are its characteristic features.

Applications

The circuit-breakers can be used in four main application areas depending on the type of equipment to be protected:
- System protection,
- Motor protection,
- Transformer protection,
- Generator protection.

These key applications make different demands on the switches, which are met with a range of trip units.

Switches with closing release
They are particularly suitable for synchronization tasks.

Coupler switches
Beside the IZM26 circuit-breakers, IN26 switch-disconnectors are available. These are used, for example, as coupler switches between different power supplies.

Modular design

Because components are installed from the front, retrofitting accessories is especially quick and easy. This allows flexible response to changing requirements within the system.

Standard scope of delivery as usual

- With the new IZM26, you also select a basic device that is already fitted with an electronic release and horizontal terminal adapters.
- The standard mounting is on a horizontal mounting plate or on horizontal traverses in the switching cabinet.
- With four-pole devices, the neutral conductor is arranged on the left (front view).
- The neutral conductor can be loaded 100% like the phase conductors.
- The circuit-breakers are provided with a standard mechanical reclosing lockout. After an overload trip, the fault is usually examined first of all. After the fault is identified and rectified, the mechanical reclosing lockout is reset by pressing the red mechanical trip indicator on the front of the circuit-breaker.
- An “Automatic Reset” can be ordered as an option. This enables the circuit-breaker to be restored to operation immediately at any time after the spring-operated stored energy mechanism is retensioned. In these applications compulsory fault analysis is intentionally avoided.
- The number of control cable terminals depends on the accessories fitted.
- If a cassette is ordered without the basic device, this is already fitted with the maximum number of control cable terminals.
- The standard consists of 2 NO contacts and 2 NC contacts for ON/OFF status indication.
- A coding mechanism between the basic device and the cassette prevents impermissible combinations (“Rejection Interlock”).

Expansion of Standardequipment supplied for IZM26

Some order types from the past can no longer be found since the following options are now already part of the standard scope of delivery:
- The door escutcheon is now always included in the scope of delivery. With withdrawable designs this is supplied with the cassette (withdrawable unit).
- On withdrawable units the circuit-breaker can be pulled out to inspect the arc chutes. With fixed units, it is recommended that sufficient space is provided above the circuit-breaker to enable inspection. An additional cover is not required.
- All basic devices that are provided with universal protection (with Digitrip 520M…), now feature a display.
- On each circuit-breaker the integrated Digitrip electronic release is factory fitted with a sealable protective cover.
- If a motor operator is ordered, the “Spring-operated stored energy mechanism tensioned” indicator switch is automatically provided.

Other benefits of the IZM26

- There are still four main variants of overcurrent release units. Only the fourth variant was renamed and is now “P” (as in Power Measurement) instead of “D” (as in Digital trip). On each P circuit-breaker (Digitrip 1150) the power measurement is already an integral part of the electronic release.
- The voltage tap-off for power measurement is integrated in the device so that an additional external voltage transformer is unnecessary. This solution saves costs, space and installation effort.
- Certain applications require the use of an interface to the external control voltage supply (see below). A new feature is that the electronic release can be prepared for an external control voltage supply of 120 V AC or 240 V AC (order option).
- A switching operations counter can now be used thanks to the separate mounting position, also independently of a motor operator.
- Withdrawable unit operation: The unit is actuated with a hand crank supplied. This is now possible also with a standard tool (square drive socket 3/8").
- Four sizes are available to ensure the optimum device for any application. As before, the entire rated operational current range from 800 A to 6300 A can be covered with two sizes.
- Sizes IZM40 and IZM63 are produced in simple terms by doubling sizes IZM20 and IZM32. This consequently provides on the IZM40 and IZM63 two terminals for each phase on the incoming side and on the outgoing side. This facilitates the thermal design of the switchboard and in some switchboard systems simplifies production and reduces the number of busbar adapter variants.
- The phase sequence for the IZM40 and IZM63 is as follows: (NN)AABBCC.
- The IZM for 6300 A is now offered with horizontal connection as standard, thus considerably simplifying the busbar connection for most switchboard systems.

External control voltage supply

- The standard protection functions of the IZM26 operate generally independently of an external control voltage supply. The power supply of the electronics unit, for example for overload and short-circuit protection, is implemented via the current transformers integrated in the circuit-breaker.
- The universal release unit with display can be fed with a 24 V DC/48 V DC supply or a 120 V AC or 240 V AC supply if required so that the display function can also be used without a load. An external power supply is needed if communication functions are required.
- The P release unit should always be operated with an external power supply as it is normally selected due to its extensive control voltage dependent functions.

Communication capability

The communication-capability of the IZM26 circuit-breakers enable them to open up new possibilities in power distribution. They can thus provide and transmit all important operational information. This increases system transparency and shortens the response times to states such as overcurrent, phase asymmetry and overvoltage.

A rapid intervention in a process can, for example, prevent downtimes and help to schedule maintenance activities and therefore boost plant availability.

A Modbus interface is offered as an alternative in addition to the Profibus interface.

Greater safety for maintenance personnel with ARMS™

If the IZM26 is fitted with the newly patented ARMS system (Arcflash Reduction Maintenance System™), a non-delayed immediate disconnection is ensured in the event of an arc fault. This disconnection is even faster than that of a non-delayed short-circuit release..

This function can be activated directly on the circuit-breaker or via an external switch, such as when maintenance personnel enter a hazardous area. Other components from the ARCON protective system, in conjunction with the IZM26 enable arc fault protection in stages. ARCON on the Internet: www.moeller.net/arcon

Selection criteria for IZM26 circuit-breakers

Fundamental criteria for the selection of circuit-breakers:

- Max short-circuit current $I_{k\,max}$ at the circuit-breaker’s point of installation: this value determines the short-circuit breaking capacity or the short-circuit current carrying capacity of the circuit-breaker. It is compared to the I_{cu}, I_{cs} and I_{cw} values of the circuit-breaker and determines essentially its size (see Technical data).
- Rated operational current I_n which should flow through the respective branch circuit:
  This value must not be greater than the maximum switch rated operational current of the circuit-breaker. The rated operational current can be adjusted down using additional rated operational current modules.
- Ambient temperature of the circuit-breaker: This is generally the internal temperature in the control panel. Observe the derating values with increased ambient temperature (see Technical data).
- Circuit-breaker type: fixed mounted or withdrawable units, 3 or 4 pole.
- Minimum short-circuit current, which flows through the switching device: The release must recognize this value as a short-circuit and may react with a trip.
- Protection functions of the circuit-breaker: This is determined by the selection of the respective overcurrent release.

Documentation

Operating manual
AWB1230-1605de (deutsch)
AWB1230-1605en (english)

CurveSelect characteristics program

Display tripping characteristics according to user settings and assess their interaction effectively:
www.moeller.net/de/support

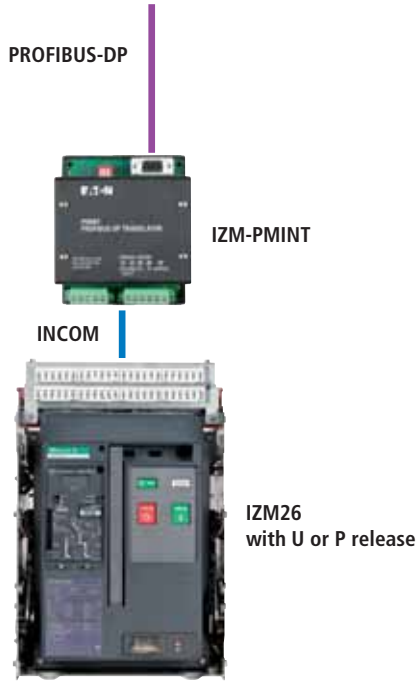
Components for IZM26 communication

The IZM26 series devices can be connected to a PROFIBUS-DP or Modbus RTU filed bus. Interfaces IZM-PMINT and IZM-MMINT are compact devices for mounting on top-hat rails, i.e. independently of the switch. They output all information available in the trip unit to the fieldbus, including switch status, current, voltage, power, and energy, as well as diagnostic information such as overcurrent, phase asymmetry and overvoltage. The fieldbus also facilitates actuation of the motor operator and therefore its remote operation.

Requirements

The communications modules can be used in combination with IZMX26…-U or IZMX26…-P… circuit-breakers.

PROFIBUS-DP configuration



Communications module IZM-PMINT has a 9-pin D-Sub socket for connection to PROFIBUS. The module works as a slave on PROFIBUS-DP; the data is defined through a standardized device master data file, which permits smooth integration of the IZM in a DP line.

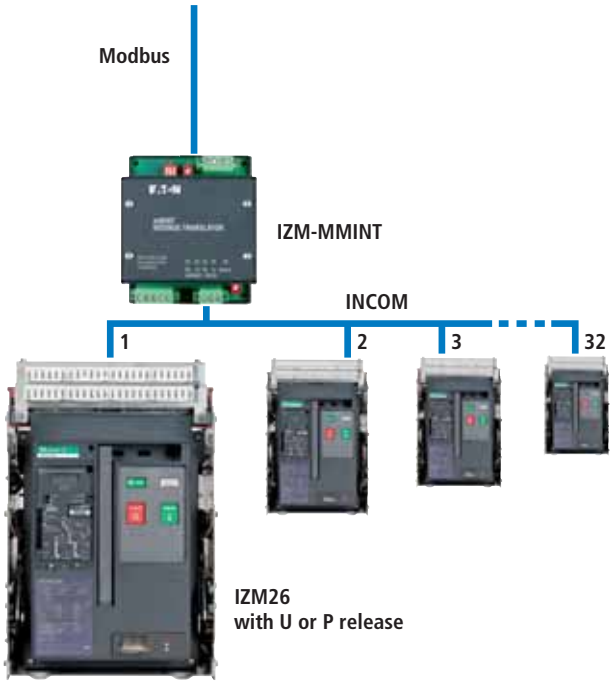
PROFIBUS
- On the PROFIBUS-DP side the module supports automatic baud rate detection; the PROFIBUS-DP bus address is set through the trip unit's display. The maximum cable length is 2.4 km.
- To operate the IZM-PMINT, a supply voltage of 24 V DC or 240 V AC is required.

INCOM
- The data connection to the circuit-breaker is implemented through a serial INCOM data connection. A shielded, twisted-pair data cable (recommended are Belden 9463 or 3073F) can be used.
- The INCOM bus must be terminated with a 100 Ω terminating resistor, connected between the two cable strands at the circuit-breaker end.
- The maximum cable length is 3 km.

Data access via PROFIBUS-DP

The data on PROFIBUS-DP are offered according to the profile for low-voltage switchgear (LVSG) of PROFIBUS International (PROFIBUS and PROFINET User Group). Five different data structures with varying numbers of parameters are available through the device master data file. This allows a data filter to be easily implemented, which simplifies integration of the IZM data into the control system.

Modbus configuration



Communications module IZM-MMINT has a plug-in screw terminal for connection to Modbus. The module operates as a Modbus slave. The interface to the circuit-breaker can be operated as a bus, so that up to 32 IZM26 units can be connected to an IZM-MMINT. This makes the use of the IZM with the Modbus architecture specially efficient.

Modbus
- The baud rate for Modbus communications is selectable with coding switches on the IZM-MMINT; the bus address (up to 247) is set through the display of the trip unit. The maximum cable length is 1.2 km.
- The Modbus must be terminated with a 120 Ω terminating resistor. If the IZM-MMINT is the last device in the network, a built-in terminating resistor can be activated there with a coding switch.
- To operate the IZM-MMINT, a supply voltage of 24 V DC or 240 V AC is required.

INCOM
- The data connection to the circuit-breaker is implemented through a serial INCOM bus connection. A shielded, twisted-pair data cable (recommended are Belden 9463 or 3073F) can be used.
- The INCOM bus must be terminated with a 100 Ω terminating resistor, connected between the two cable strands at the circuit-breaker end.
- The maximum cable length is 3 km.

Data access via Modbus

The data for each circuit-breaker connected to the INCOM bus is contained in comprehensive data tables. Each data point is available as floating-point (IEEE) or fixed--point value. This variance allows the integration of the IZM to be adapted to the Modbus architecture. This allows a data filter to be easily implemented, which simplifies integration of the IZM data into the control system.

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	Std. pack
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							

Circuit-breakers for system protection

Including main terminals at rear and control circuit terminals according to ordered options.

50	800	IZM20	320 – 800	–	2 - 10	**IZM20B3-A08F** 123400		**IZM20B3-A08W** 123160		1 off
	1000		400 – 1000			**IZM20B3-A10F** 123401		**IZM20B3-A10W** 123161		
	1250		500 – 1250			**IZM20B3-A12F** 123402		**IZM20B3-A12W** 123162		
	1600		640 – 1600			**IZM20B3-A16F** 123403		**IZM20B3-A16W** 123163		
	2000		800 – 2000			**IZM20B3-A20F** 123404		**IZM20B3-A20W** 123164		
65	800		320 – 800			**IZM20N3-A08F** 123430		**IZM20N3-A08W** 123190		
	1000		400 – 1000			**IZM20N3-A10F** 123431		**IZM20N3-A10W** 123191		
	1250		500 – 1250			**IZM20N3-A12F** 123432		**IZM20N3-A12W** 123192		
	1600		640 – 1600			**IZM20N3-A16F** 123433		**IZM20N3-A16W** 123193		
	2000		800 – 2000			**IZM20N3-A20F** 123434		**IZM20N3-A20W** 123194		
	800	IZM32	320 – 800			**IZM32B3-A08F** 123899		**IZM32B3-A08W** 123609		
	1000		400 – 1000			**IZM32B3-A10F** 123900		**IZM32B3-A10W** 123610		
	1250		500 – 1250			**IZM32B3-A12F** 123901		**IZM32B3-A12W** 123611		
	1600		640 – 1600			**IZM32B3-A16F** 123902		**IZM32B3-A16W** 123612		
	2000		800 – 2000			**IZM32B3-A20F** 123903		**IZM32B3-A20W** 123613		
	2500		1000 – 2500			**IZM32B3-A25F** 123904		**IZM32B3-A25W** 123614		
	3200		1280 – 3200			**IZM32B3-A32F** 123905		**IZM32B3-A32W** 123615		
85	800		320 – 800			**IZM32N3-A08F** 123939		**IZM32N3-A08W** 123649		
	1000		400 – 1000			**IZM32N3-A10F** 123940		**IZM32N3-A10W** 123650		
	1250		500 – 1250			**IZM32N3-A12F** 123941		**IZM32N3-A12W** 123651		
	1600		640 – 1600			**IZM32N3-A16F** 123942		**IZM32N3-A16W** 123652		
	2000		800 – 2000			**IZM32N3-A20F** 123943		**IZM32N3-A20W** 123653		
	2500		1000 – 2500			**IZM32N3-A25F** 123944		**IZM32N3-A25W** 123654		
	3200		1280 – 3200			**IZM32N3-A32F** 123945		**IZM32N3-A32W** 123655		
100	800		320 – 800			**IZM32H3-A08F** 123979		**IZM32H3-A08W** 123689		
	1000		400 – 1000			**IZM32H3-A10F** 123980		**IZM32H3-A10W** 123690		
	1250		500 – 1250			**IZM32H3-A12F** 123981		**IZM32H3-A12W** 123691		
	1600		640 – 1600			**IZM32H3-A16F** 123982		**IZM32H3-A16W** 123692		
	2000		800 – 2000			**IZM32H3-A20F** 123983		**IZM32H3-A20W** 123693		
	2500		1000 – 2500			**IZM32H3-A25F** 123984		**IZM32H3-A25W** 123694		
	3200		1280 – 3200			**IZM32H3-A32F** 123985		**IZM32H3-A32W** 123695		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$ kA	$I_n = I_u$ A		I_r A	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
Selectively-opening circuit-breakers										
Including main terminals at rear and control circuit terminals according to ordered options.										
50	800	IZM20	320 – 800	2 - 10	2 - 10, OFF	**IZM20B3-V08F** 123406		**IZM20B3-V08W** 123166		1 off
	1000		400 – 1000			**IZM20B3-V10F** 123407		**IZM20B3-V10W** 123167		
	1250		500 – 1250			**IZM20B3-V12F** 123408		**IZM20B3-V12W** 123168		
	1600		640 – 1600			**IZM20B3-V16F** 123409		**IZM20B3-V16W** 123169		
	2000		800 – 2000			**IZM20B3-V20F** 123410		**IZM20B3-V20W** 123170		
65	800		320 – 800			**IZM20N3-V08F** 123436		**IZM20N3-V08W** 123196		
	1000		400 – 1000			**IZM20N3-V10F** 123437		**IZM20N3-V10W** 123197		
	1250		500 – 1250			**IZM20N3-V12F** 123438		**IZM20N3-V12W** 123198		
	1600		640 – 1600			**IZM20N3-V16F** 123439		**IZM20N3-V16W** 123199		
	2000		800 – 2000			**IZM20N3-V20F** 123440		**IZM20N3-V20W** 123200		
	800	IZM32	320 – 800			**IZM32B3-V08F** 123907		**IZM32B3-V08W** 123617		
	1000		400 – 1000			**IZM32B3-V10F** 123908		**IZM32B3-V10W** 123618		
	1250		500 – 1250			**IZM32B3-V12F** 123909		**IZM32B3-V12W** 123619		
	1600		640 – 1600			**IZM32B3-V16F** 123910		**IZM32B3-V16W** 123620		
	2000		800 – 2000			**IZM32B3-V20F** 123911		**IZM32B3-V20W** 123621		
	2500		1000 – 2500			**IZM32B3-V25F** 123912		**IZM32B3-V25W** 123622		
	3200		1280 – 3200			**IZM32B3-V32F** 123913		**IZM32B3-V32W** 123623		
85	800		320 – 800			**IZM32N3-V08F** 123947		**IZM32N3-V08W** 123657		
	1000		400 – 1000			**IZM32N3-V10F** 123948		**IZM32N3-V10W** 123658		
	1250		500 – 1250			**IZM32N3-V12F** 123949		**IZM32N3-V12W** 123659		
	1600		640 – 1600			**IZM32N3-V16F** 123950		**IZM32N3-V16W** 123660		
	2000		800 – 2000			**IZM32N3-V20F** 123951		**IZM32N3-V20W** 123661		
	2500		1000 – 2500			**IZM32N3-V25F** 123952		**IZM32N3-V25W** 123662		
	3200		1280 – 3200			**IZM32N3-V32F** 123953		**IZM32N3-V32W** 123663		
	4000	IZM40	1600 – 4000			**IZM40N3-V40F** 124303		**IZM40N3-V40W** 124193		
	4000	IZM63	1600 – 4000			**IZM63N3-V40F** 124304		**IZM63N3-V40W** 124194		
	5000		2000 – 5000			**IZM63N3-V50F** 124305		**IZM63N3-V50W** 124195		
	6300		2520 – 6300			**IZM63N3-V63F** 124306		**IZM63N3-V63W** 124196		

Switching capacity	Rated operational current	Fame size	**Setting range** Overload release	Short-circuit releases		Fixed mounted **Part no.** Article no.	**Price** See price list	Withdrawable units **Part no.** Article no.	**Price** See price list	Std. pack
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							
Selectively-opening circuit-breakers										
Including main terminals at rear and control circuit terminals according to ordered options.										
100	800	IZM32	320 – 800	2 - 10	2 - 10, OFF	**IZM32H3-V08F** 123987		**IZM32H3-V08W** 123697		1 off
	1000		400 – 1000			**IZM32H3-V10F** 123988		**IZM32H3-V10W** 123698		
	1250		500 – 1250			**IZM32H3-V12F** 123989		**IZM32H3-V12W** 123699		
	1600		640 – 1600			**IZM32H3-V16F** 123990		**IZM32H3-V16W** 123700		
	2000		800 – 2000			**IZM32H3-V20F** 123991		**IZM32H3-V20W** 123701		
	2500		1000 – 2500			**IZM32H3-V25F** 123992		**IZM32H3-V25W** 123702		
	3200		1280 – 3200			**IZM32H3-V32F** 123993		**IZM32H3-V32W** 123703		
	4000	IZM40	1600 – 4000			**IZM40H3-V40F** 124323		**IZM40H3-V40W** 124213		
	4000	IZM63	1600 – 4000			**IZM63H3-V40F** 124324		**IZM63H3-V40W** 124214		
	5000		2000 – 5000			**IZM63H3-V50F** 124325		**IZM63H3-V50W** 124215		
	6300		2520 – 6300			**IZM63H3-V63F** 124326		**IZM63H3-V63W** 124216		
Circuit-breaker for universal protection										
Including main terminals at rear and control circuit terminals according to ordered options.										
50	800	IZM20	320 – 800	2 - 10	2 - 10, OFF	**IZM20B3-U08F** 123412		**IZM20B3-U08W** 123172		1 off
	1000		400 – 1000			**IZM20B3-U10F** 123413		**IZM20B3-U10W** 123173		
	1250		500 – 1250			**IZM20B3-U12F** 123414		**IZM20B3-U12W** 123174		
	1600		640 – 1600			**IZM20B3-U16F** 123415		**IZM20B3-U16W** 123175		
	2000		800 – 2000			**IZM20B3-U20F** 123416		**IZM20B3-U20W** 123176		
65	800		320 – 800			**IZM20N3-U08F** 123442		**IZM20N3-U08W** 123202		
	1000		400 – 1000			**IZM20N3-U10F** 123443		**IZM20N3-U10W** 123203		
	1250		500 – 1250			**IZM20N3-U12F** 123444		**IZM20N3-U12W** 123204		
	1600		640 – 1600			**IZM20N3-U16F** 123445		**IZM20N3-U16W** 123205		
	2000		800 – 2000			**IZM20N3-U20F** 123446		**IZM20N3-U20W** 123206		
	800	IZM32	320 – 800			**IZM32B3-U08F** 123915		**IZM32B3-U08W** 123625		
	1000		400 – 1000			**IZM32B3-U10F** 123916		**IZM32B3-U10W** 123626		
	1250		500 – 1250			**IZM32B3-U12F** 123917		**IZM32B3-U12W** 123627		
	1600		640 – 1600			**IZM32B3-U16F** 123918		**IZM32B3-U16W** 123628		
	2000		800 – 2000			**IZM32B3-U20F** 123919		**IZM32B3-U20W** 123629		
	2500		1000 – 2500			**IZM32B3-U25F** 123920		**IZM32B3-U25W** 123630		
	3200		1280 – 3200			**IZM32B3-U32F** 123921		**IZM32B3-U32W** 123631		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$					
kA	A		A					Cassette must be ordered separately.		
										
Circuit-breaker for universal protection										
Including main terminals at rear and control circuit terminals according to ordered options.										
85	800	IZM32	320 – 800	2 - 10	2 - 10, OFF	**IZM32N3-U08F** 123955		**IZM32N3-U08W** 123665		1 off
	1000		400 – 1000			**IZM32N3-U10F** 123956		**IZM32N3-U10W** 123666		
	1250		500 – 1250			**IZM32N3-U12F** 123957		**IZM32N3-U12W** 123667		
	1600		640 – 1600			**IZM32N3-U16F** 123958		**IZM32N3-U16W** 123668		
	2000		800 – 2000			**IZM32N3-U20F** 123959		**IZM32N3-U20W** 123669		
	2500		1000 – 2500			**IZM32N3-U25F** 123960		**IZM32N3-U25W** 123670		
	3200		1280 – 3200			**IZM32N3-U32F** 123961		**IZM32N3-U32W** 123671		
	4000	IZM40	1600 – 4000			**IZM40N3-U40F** 124307		**IZM40N3-U40W** 124197		
	4000	IZM63	1600 – 4000			**IZM63N3-U40F** 124308		**IZM63N3-U40W** 124198		
	5000		2000 – 5000			**IZM63N3-U50F** 124309		**IZM63N3-U50W** 124199		
	6300		2520 – 6300			**IZM63N3-U63F** 124310		**IZM63N3-U63W** 124200		
100	800	IZM32	320 – 800			**IZM32H3-U08F** 123995		**IZM32H3-U08W** 123705		
	1000		400 – 1000			**IZM32H3-U10F** 123996		**IZM32H3-U10W** 123706		
	1250		500 – 1250			**IZM32H3-U12F** 123997		**IZM32H3-U12W** 123707		
	1600		640 – 1600			**IZM32H3-U16F** 123998		**IZM32H3-U16W** 123708		
	2000		800 – 2000			**IZM32H3-U20F** 123999		**IZM32H3-U20W** 123709		
	2500		1000 – 2500			**IZM32H3-U25F** 124000		**IZM32H3-U25W** 123710		
	3200		1280 – 3200			**IZM32H3-U32F** 124001		**IZM32H3-U32W** 123711		
	4000	IZM40	1600 – 4000			**IZM40H3-U40F** 124327		**IZM40H3-U40W** 124217		
	4000	IZM63	1600 – 4000			**IZM63H3-U40F** 124328		**IZM63H3-U40W** 124218		
	5000		2000 – 5000			**IZM63H3-U50F** 124329		**IZM63H3-U50W** 124219		
	6300		2520 – 6300			**IZM63H3-U63F** 124330		**IZM63H3-U63W** 124220		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$ kA	$I_n = I_u$ A		I_r A	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
Circuit-breaker for universal protection with power monitoring										
Including main terminals at rear and control circuit terminals according to ordered options.										
50	800	IZM20	320 – 800	2 - 10	2 - 10, OFF	**IZM20B3-P08F** 123418		**IZM20B3-P08W** 123178		1 off
	1000		400 – 1000			**IZM20B3-P10F** 123419		**IZM20B3-P10W** 123179		
	1250		500 – 1250			**IZM20B3-P12F** 123420		**IZM20B3-P12W** 123180		
	1600		640 – 1600			**IZM20B3-P16F** 123421		**IZM20B3-P16W** 123181		
	2000		800 – 2000			**IZM20B3-P20F** 123422		**IZM20B3-P20W** 123182		
65	800		320 – 800			**IZM20N3-P08F** 123448		**IZM20N3-P08W** 123208		
	1000		400 – 1000			**IZM20N3-P10F** 123449		**IZM20N3-P10W** 123209		
	1250		500 – 1250			**IZM20N3-P12F** 123450		**IZM20N3-P12W** 123210		
	1600		640 – 1600			**IZM20N3-P16F** 123451		**IZM20N3-P16W** 123211		
	2000		800 – 2000			**IZM20N3-P20F** 123452		**IZM20N3-P20W** 123212		
	800	IZM32	320 – 800			**IZM32B3-P08F** 123923		**IZM32B3-P08W** 123633		
	1000		400 – 1000			**IZM32B3-P10F** 123924		**IZM32B3-P10W** 123634		
	1250		500 – 1250			**IZM32B3-P12F** 123925		**IZM32B3-P12W** 123635		
	1600		640 – 1600			**IZM32B3-P16F** 123926		**IZM32B3-P16W** 123636		
	2000		800 – 2000			**IZM32B3-P20F** 123927		**IZM32B3-P20W** 123637		
	2500		1000 – 2500			**IZM32B3-P25F** 123928		**IZM32B3-P25W** 123638		
	3200		1280 – 3200			**IZM32B3-P32F** 123929		**IZM32B3-P32W** 123639		
85	800		320 – 800			**IZM32N3-P08F** 123963		**IZM32N3-P08W** 123673		
	1000		400 – 1000			**IZM32N3-P10F** 123964		**IZM32N3-P10W** 123674		
	1250		500 – 1250			**IZM32N3-P12F** 123965		**IZM32N3-P12W** 123675		
	1600		640 – 1600			**IZM32N3-P16F** 123966		**IZM32N3-P16W** 123676		
	2000		800 – 2000			**IZM32N3-P20F** 123967		**IZM32N3-P20W** 123677		
	2500		1000 – 2500			**IZM32N3-P25F** 123968		**IZM32N3-P25W** 123678		
	3200		1280 – 3200			**IZM32N3-P32F** 123969		**IZM32N3-P32W** 123679		
	4000	IZM40	1600 – 4000			**IZM40N3-P40F** 124311		**IZM40N3-P40W** 124201		
	4000	IZM63	1600 – 4000			**IZM63N3-P40F** 124312		**IZM63N3-P40W** 124202		
	5000		2000 – 5000			**IZM63N3-P50F** 124313		**IZM63N3-P50W** 124203		
	6300		2520 – 6300			**IZM63N3-P63F** 124314		**IZM63N3-P63W** 124204		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							
Circuit-breaker for universal protection with power monitoring										
Including main terminals at rear and control circuit terminals according to ordered options.										
100	800	IZM32	320 – 800	2 - 10	2 - 10, OFF	**IZM32H3-P08F** 124003		**IZM32H3-P08W** 123713		1 off
	1000		400 – 1000			**IZM32H3-P10F** 124004		**IZM32H3-P10W** 123714		
	1250		500 – 1250			**IZM32H3-P12F** 124005		**IZM32H3-P12W** 123715		
	1600		640 – 1600			**IZM32H3-P16F** 124006		**IZM32H3-P16W** 123716		
	2000		800 – 2000			**IZM32H3-P20F** 124007		**IZM32H3-P20W** 123717		
	2500		1000 – 2500			**IZM32H3-P25F** 124008		**IZM32H3-P25W** 123718		
	3200		1280 – 3200			**IZM32H3-P32F** 124009		**IZM32H3-P32W** 123719		
	4000	IZM40	1600 – 4000			**IZM40H3-P40F** 124331		**IZM40H3-P40W** 124221		
	4000	IZM63	1600 – 4000			**IZM63H3-P40F** 124332		**IZM63H3-P40W** 124222		
	5000		2000 – 5000			**IZM63H3-P50F** 124333		**IZM63H3-P50W** 124223		
	6300		2520 – 6300			**IZM63H3-P63F** 124334		**IZM63H3-P63W** 124224		

Switching capacity	Rated operational current	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
		Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
			Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$	I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A	A							
IZM32 for 1100 V									
Including main terminals at rear and control circuit terminals according to ordered options.									
Circuit-breakers for system protection									
25	3200	1280 – 3200	–	2 - 10	**IZM32S3-A32F-1100V** 123725		**IZM32S3-A32W-1100V** 123721		1 off
Selectively-opening circuit-breakers									
25	3200	1280 – 3200	2 - 10	2 - 10, OFF	**IZM32S3-V32F-1100V** 123726		**IZM32S3-V32W-1100V** 123722		1 off
Circuit-breaker for universal protection									
25	3200	1280 – 3200	2 - 10	2 - 10, OFF	**IZM32S3-U32F-1100V** 123727		**IZM32S3-U32W-1100V** 123723		1 off
Circuit-breaker with circuit-breaker									
25	3200	1280 – 3200	2 - 10	2 - 10, OFF	**IZM32S3-P32F-1100V** 123749		**IZM32S3-P32W-1100V** 123724		1 off

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							

Circuit-breakers for system protection

Including main terminals at rear and control circuit terminals according to ordered options.

50	800	IZM20	320 – 800	–	2 - 10	**IZM20B4-A08F** 123520		**IZM20B4-A08W** 123280		1 off
	1000		400 – 1000			**IZM20B4-A10F** 123521		**IZM20B4-A10W** 123281		
	1250		500 – 1250			**IZM20B4-A12F** 123522		**IZM20B4-A12W** 123282		
	1600		640 – 1600			**IZM20B4-A16F** 123523		**IZM20B4-A16W** 123283		
	2000		800 – 2000			**IZM20B4-A20F** 123524		**IZM20B4-A20W** 123284		
65	800		320 – 800			**IZM20N4-A08F** 123550		**IZM20N4-A08W** 123310		
	1000		400 – 1000			**IZM20N4-A10F** 123551		**IZM20N4-A10W** 123311		
	1250		500 – 1250			**IZM20N4-A12F** 123552		**IZM20N4-A12W** 123312		
	1600		640 – 1600			**IZM20N4-A16F** 123553		**IZM20N4-A16W** 123313		
	2000		800 – 2000			**IZM20N4-A20F** 123554		**IZM20N4-A20W** 123314		
	800	IZM32	320 – 800			**IZM32B4-A08F** 124044		**IZM32B4-A08W** 123754		
	1000		400 – 1000			**IZM32B4-A10F** 124045		**IZM32B4-A10W** 123755		
	1250		500 – 1250			**IZM32B4-A12F** 124046		**IZM32B4-A12W** 123756		
	1600		640 – 1600			**IZM32B4-A16F** 124047		**IZM32B4-A16W** 123757		
	2000		800 – 2000			**IZM32B4-A20F** 124048		**IZM32B4-A20W** 123758		
	2500		1000 – 2500			**IZM32B4-A25F** 124049		**IZM32B4-A25W** 123759		
	3200		1280 – 3200			**IZM32B4-A32F** 124050		**IZM32B4-A32W** 123760		
85	800		320 – 800			**IZM32N4-A08F** 124084		**IZM32N4-A08W** 123794		
	1000		400 – 1000			**IZM32N4-A10F** 124085		**IZM32N4-A10W** 123795		
	1250		500 – 1250			**IZM32N4-A12F** 124086		**IZM32N4-A12W** 123796		
	1600		640 – 1600			**IZM32N4-A16F** 124087		**IZM32N4-A16W** 123797		
	2000		800 – 2000			**IZM32N4-A20F** 124088		**IZM32N4-A20W** 123798		
	2500		1000 – 2500			**IZM32N4-A25F** 124089		**IZM32N4-A25W** 123799		
	3200		1280 – 3200			**IZM32N4-A32F** 124090		**IZM32N4-A32W** 123800		
100	800		320 – 800			**IZM32H4-A08F** 124124		**IZM32H4-A08W** 123834		
	1000		400 – 1000			**IZM32H4-A10F** 124125		**IZM32H4-A10W** 123835		
	1250		500 – 1250			**IZM32H4-A12F** 124126		**IZM32H4-A12W** 123836		
	1600		640 – 1600			**IZM32H4-A16F** 124127		**IZM32H4-A16W** 123837		
	2000		800 – 2000			**IZM32H4-A20F** 124128		**IZM32H4-A20W** 123838		
	2500		1000 – 2500			**IZM32H4-A25F** 124129		**IZM32H4-A25W** 123839		
	3200		1280 – 3200			**IZM32H4-A32F** 124130		**IZM32H4-A32W** 123840		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							
Selectively-opening circuit-breakers										
Including main terminals at rear and control circuit terminals according to ordered options.										
50	800	IZM20	320 – 800	2 - 10	2 - 10, OFF	**IZM20B4-V08F** 123526		**IZM20B4-V08W** 123286		1 off
	1000		400 – 1000			**IZM20B4-V10F** 123527		**IZM20B4-V10W** 123287		
	1250		500 – 1250			**IZM20B4-V12F** 123528		**IZM20B4-V12W** 123288		
	1600		640 – 1600			**IZM20B4-V16F** 123529		**IZM20B4-V16W** 123289		
	2000		800 – 2000			**IZM20B4-V20F** 123530		**IZM20B4-V20W** 123290		
65	800		320 – 800			**IZM20N4-V08F** 123556		**IZM20N4-V08W** 123316		
	1000		400 – 1000			**IZM20N4-V10F** 123557		**IZM20N4-V10W** 123317		
	1250		500 – 1250			**IZM20N4-V12F** 123558		**IZM20N4-V12W** 123318		
	1600		640 – 1600			**IZM20N4-V16F** 123559		**IZM20N4-V16W** 123319		
	2000		800 – 2000			**IZM20N4-V20F** 123560		**IZM20N4-V20W** 123320		
	800	IZM32	320 – 800			**IZM32B4-V08F** 124052		**IZM32B4-V08W** 123762		
	1000		400 – 1000			**IZM32B4-V10F** 124053		**IZM32B4-V10W** 123763		
	1250		500 – 1250			**IZM32B4-V12F** 124054		**IZM32B4-V12W** 123764		
	1600		640 – 1600			**IZM32B4-V16F** 124055		**IZM32B4-V16W** 123765		
	2000		800 – 2000			**IZM32B4-V20F** 124056		**IZM32B4-V20W** 123766		
	2500		1000 – 2500			**IZM32B4-V25F** 124057		**IZM32B4-V25W** 123767		
	3200		1280 – 3200			**IZM32B4-V32F** 124058		**IZM32B4-V32W** 123768		
85	800		320 – 800			**IZM32N4-V08F** 124092		**IZM32N4-V08W** 123802		
	1000		400 – 1000			**IZM32N4-V10F** 124093		**IZM32N4-V10W** 123803		
	1250		500 – 1250			**IZM32N4-V12F** 124094		**IZM32N4-V12W** 123804		
	1600		640 – 1600			**IZM32N4-V16F** 124095		**IZM32N4-V16W** 123805		
	2000		800 – 2000			**IZM32N4-V20F** 124096		**IZM32N4-V20W** 123806		
	2500		1000 – 2500			**IZM32N4-V25F** 124097		**IZM32N4-V25W** 123807		
	3200		1280 – 3200			**IZM32N4-V32F** 124098		**IZM32N4-V32W** 123808		
	4000	IZM40	1600 – 4000			**IZM40N4-V40F** 124358		**IZM40N4-V40W** 124248		
	4000	IZM63	1600 – 4000			**IZM63N4-V40F** 124359		**IZM63N4-V40W** 124249		
	5000		2000 – 5000			**IZM63N4-V50F** 124360		**IZM63N4-V50W** 124250		
	6300		2520 – 6300			**IZM63N4-V63F** 124361		**IZM63N4-V63W** 124251		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							
										
Selectively-opening circuit-breakers										
Including main terminals at rear and control circuit terminals according to ordered options.										
100	800	IZM32	320 – 800	2 - 10	2 - 10, OFF	**IZM32H4-V08F** 124132		**IZM32H4-V08W** 123842		1 off
	1000		400 – 1000			**IZM32H4-V10F** 124133		**IZM32H4-V10W** 123843		
	1250		500 – 1250			**IZM32H4-V12F** 124134		**IZM32H4-V12W** 123844		
	1600		640 – 1600			**IZM32H4-V16F** 124135		**IZM32H4-V16W** 123845		
	2000		800 – 2000			**IZM32H4-V20F** 124136		**IZM32H4-V20W** 123846		
	2500		1000 – 2500			**IZM32H4-V25F** 124137		**IZM32H4-V25W** 123847		
	3200		1280 – 3200			**IZM32H4-V32F** 124138		**IZM32H4-V32W** 123848		
	4000	IZM40	1600 – 4000			**IZM40H4-V40F** 124378		**IZM40H4-V40W** 124268		
	4000	IZM63	1600 – 4000			**IZM63H4-V40F** 124379		**IZM63H4-V40W** 124269		
	5000		2000 – 5000			**IZM63H4-V50F** 124380		**IZM63H4-V50W** 124270		
	6300		2520 – 6300			**IZM63H4-V63F** 124381		**IZM63H4-V63W** 124271		
Circuit-breaker for universal protection										
Including main terminals at rear and control circuit terminals according to ordered options.										
50	800	IZM20	320 – 800	2 - 10	2 - 10, OFF	**IZM20B4-U08F** 123532		**IZM20B4-U08W** 123292		1 off
	1000		400 – 1000			**IZM20B4-U10F** 123533		**IZM20B4-U10W** 123293		
	1250		500 – 1250			**IZM20B4-U12F** 123534		**IZM20B4-U12W** 123294		
	1600		640 – 1600			**IZM20B4-U16F** 123535		**IZM20B4-U16W** 123295		
	2000		800 – 2000			**IZM20B4-U20F** 123536		**IZM20B4-U20W** 123296		
65	800		320 – 800			**IZM20N4-U08F** 123562		**IZM20N4-U08W** 123322		
	1000		400 – 1000			**IZM20N4-U10F** 123563		**IZM20N4-U10W** 123323		
	1250		500 – 1250			**IZM20N4-U12F** 123564		**IZM20N4-U12W** 123324		
	1600		640 – 1600			**IZM20N4-U16F** 123565		**IZM20N4-U16W** 123325		
	2000		800 – 2000			**IZM20N4-U20F** 123566		**IZM20N4-U20W** 123326		
	800	IZM32	320 – 800			**IZM32B4-U08F** 124060		**IZM32B4-U08W** 123770		
	1000		400 – 1000			**IZM32B4-U10F** 124061		**IZM32B4-U10W** 123771		
	1250		500 – 1250			**IZM32B4-U12F** 124062		**IZM32B4-U12W** 123772		
	1600		640 – 1600			**IZM32B4-U16F** 124063		**IZM32B4-U16W** 123773		
	2000		800 – 2000			**IZM32B4-U20F** 124064		**IZM32B4-U20W** 123774		
	2500		1000 – 2500			**IZM32B4-U25F** 124065		**IZM32B4-U25W** 123775		
	3200		1280 – 3200			**IZM32B4-U32F** 124066		**IZM32B4-U32W** 123776		

Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$					
kA	A		A					Cassette must be ordered separately.		
										
Circuit-breaker for universal protection										
Including main terminals at rear and control circuit terminals according to ordered options.										
85	800	IZM32	320 – 800	2 - 10	2 - 10, OFF	**IZM32N4-U08F** 124100		**IZM32N4-U08W** 123810		1 off
	1000		400 – 1000			**IZM32N4-U10F** 124101		**IZM32N4-U10W** 123811		
	1250		500 – 1250			**IZM32N4-U12F** 124102		**IZM32N4-U12W** 123812		
	1600		640 – 1600			**IZM32N4-U16F** 124103		**IZM32N4-U16W** 123813		
	2000		800 – 2000			**IZM32N4-U20F** 124104		**IZM32N4-U20W** 123814		
	2500		1000 – 2500			**IZM32N4-U25F** 124105		**IZM32N4-U25W** 123815		
	3200		1280 – 3200			**IZM32N4-U32F** 124106		**IZM32N4-U32W** 123816		
	4000	IZM40	1600 – 4000			**IZM40N4-U40F** 124362		**IZM40N4-U40W** 124252		
	4000	IZM63	1600 – 4000			**IZM63N4-U40F** 124363		**IZM63N4-U40W** 124253		
	5000		2000 – 5000			**IZM63N4-U50F** 124364		**IZM63N4-U50W** 124254		
	6300		2520 – 6300			**IZM63N4-U63F** 124365		**IZM63N4-U63W** 124255		
100	800	IZM32	320 – 800			**IZM32H4-U08F** 124140		**IZM32H4-U08W** 123850		
	1000		400 – 1000			**IZM32H4-U10F** 124141		**IZM32H4-U10W** 123851		
	1250		500 – 1250			**IZM32H4-U12F** 124142		**IZM32H4-U12W** 123852		
	1600		640 – 1600			**IZM32H4-U16F** 124143		**IZM32H4-U16W** 123853		
	2000		800 – 2000			**IZM32H4-U20F** 124144		**IZM32H4-U20W** 123854		
	2500		1000 – 2500			**IZM32H4-U25F** 124145		**IZM32H4-U25W** 123855		
	3200		1280 – 3200			**IZM32H4-U32F** 124146		**IZM32H4-U32W** 123856		
	4000	IZM40	1600 – 4000			**IZM40H4-U40F** 124382		**IZM40H4-U40W** 124272		
	4000	IZM63	1600 – 4000			**IZM63H4-U40F** 124383		**IZM63H4-U40W** 124273		
	5000		2000 – 5000			**IZM63H4-U50F** 124384		**IZM63H4-U50W** 124274		
	6300		2520 – 6300			**IZM63H4-U63F** 124385		**IZM63H4-U63W** 124275		

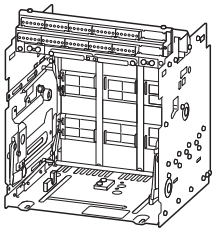
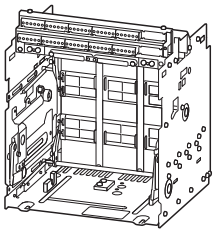
Switching capacity	Rated operational current	Frame size	**Setting range**			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$					
kA	A		A					Cassette must be ordered separately.		
Circuit-breaker for universal protection with power monitoring										
Including main terminals at rear and control circuit terminals according to ordered options.										
50	800	IZM20	320 – 800	2 - 10	2 - 10, OFF	**IZM20B4-P08F** 123538		**IZM20B4-P08W** 123298		1 off
	1000		400 – 1000			**IZM20B4-P10F** 123539		**IZM20B4-P10W** 123299		
	1250		500 – 1250			**IZM20B4-P12F** 123540		**IZM20B4-P12W** 123300		
	1600		640 – 1600			**IZM20B4-P16F** 123541		**IZM20B4-P16W** 123301		
	2000		800 – 2000			**IZM20B4-P20F** 123542		**IZM20B4-P20W** 123302		
65	800		320 – 800			**IZM20N4-P08F** 123568		**IZM20N4-P08W** 123328		
	1000		400 – 1000			**IZM20N4-P10F** 123569		**IZM20N4-P10W** 123329		
	1250		500 – 1250			**IZM20N4-P12F** 123570		**IZM20N4-P12W** 123330		
	1600		640 – 1600			**IZM20N4-P16F** 123571		**IZM20N4-P16W** 123331		
	2000		800 – 2000			**IZM20N4-P20F** 123572		**IZM20N4-P20W** 123332		
	800	IZM32	320 – 800			**IZM32B4-P08F** 124068		**IZM32B4-P08W** 123778		
	1000		400 – 1000			**IZM32B4-P10F** 124069		**IZM32B4-P10W** 123779		
	1250		500 – 1250			**IZM32B4-P12F** 124070		**IZM32B4-P12W** 123780		
	1600		640 – 1600			**IZM32B4-P16F** 124071		**IZM32B4-P16W** 123781		
	2000		800 – 2000			**IZM32B4-P20F** 124072		**IZM32B4-P20W** 123782		
	2500		1000 – 2500			**IZM32B4-P25F** 124073		**IZM32B4-P25W** 123783		
	3200		1280 – 3200			**IZM32B4-P32F** 124074		**IZM32B4-P32W** 123784		
85	800		320 – 800			**IZM32N4-P08F** 124108		**IZM32N4-P08W** 123818		
	1000		400 – 1000			**IZM32N4-P10F** 124109		**IZM32N4-P10W** 123819		
	1250		500 – 1250			**IZM32N4-P12F** 124110		**IZM32N4-P12W** 123820		
	1600		640 – 1600			**IZM32N4-P16F** 124111		**IZM32N4-P16W** 123821		
	2000		800 – 2000			**IZM32N4-P20F** 124112		**IZM32N4-P20W** 123822		
	2500		1000 – 2500			**IZM32N4-P25F** 124113		**IZM32N4-P25W** 123823		
	3200		1280 – 3200			**IZM32N4-P32F** 124114		**IZM32N4-P32W** 123824		
	4000	IZM40	1600 – 4000			**IZM40N4-P40F** 124366		**IZM40N4-P40W** 124256		
	4000	IZM63	1600 – 4000			**IZM63N4-P40F** 124367		**IZM63N4-P40W** 124257		
	5000		2000 – 5000			**IZM63N4-P50F** 124368		**IZM63N4-P50W** 124258		
	6300		2520 – 6300			**IZM63N4-P63F** 124369		**IZM63N4-P63W** 124259		

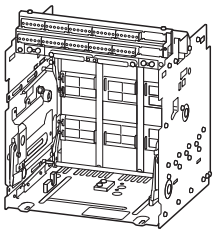
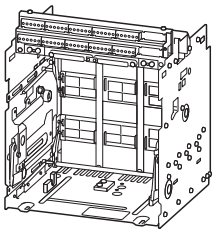
Switching capacity	Rated operational current	Frame size	Setting range			Fixed mounted		Withdrawable units		Std. pack
			Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** see price list	
				Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$		I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A		A							
Circuit-breaker for universal protection with power monitoring										
Including main terminals at rear and control circuit terminals according to ordered options.										
100	800	IZM32	320 – 800	2 - 10	2 - 10, OFF	**IZM32H4-P08F** 124148		**IZM32H4-P08W** 123858		1 off
	1000		400 – 1000			**IZM32H4-P10F** 124149		**IZM32H4-P10W** 123859		
	1250		500 – 1250			**IZM32H4-P12F** 124150		**IZM32H4-P12W** 123860		
	1600		640 – 1600			**IZM32H4-P16F** 124151		**IZM32H4-P16W** 123861		
	2000		800 – 2000			**IZM32H4-P20F** 124152		**IZM32H4-P20W** 123862		
	2500		1000 – 2500			**IZM32H4-P25F** 124153		**IZM32H4-P25W** 123863		
	3200		1280 – 3200			**IZM32H4-P32F** 124154		**IZM32H4-P32W** 123864		
	4000	IZM40	1600 – 4000			**IZM40H4-P40F** 124386		**IZM40H4-P40W** 124276		
	4000	IZM63	1600 – 4000			**IZM63H4-P40F** 124387		**IZM63H4-P40W** 124277		
	5000		2000 – 5000			**IZM63H4-P50F** 124388		**IZM63H4-P50W** 124278		
	6300		2520 – 6300			**IZM63H4-P63F** 124389		**IZM63H4-P63W** 124279		

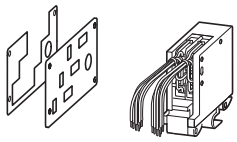
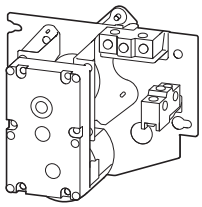
Switching capacity	Rated operational current	Setting range			Fixed mounted		Withdrawable units		Std. pack
		Overload release	Short-circuit releases		**Part no.** Article no.	**Price** See price list	**Part no.** Article no.	**Price** See price list	
			Delayed	Non-delayed					
$I_{cu} = I_{cs}$	$I_n = I_u$	I_r	$I_{sd} = I_r \times \ldots$	$I_i = I_n \times \ldots$			Cassette must be ordered separately.		
kA	A	A							
IZM32 for 1100 V									
Including main terminals at rear and control circuit terminals according to ordered options.									
Circuit-breakers for system protection									
25	3200	1280 – 3200	–	2 - 10	**IZM32S4-A32F-1100V** 123866		**IZM32S4-A32W-1100V** 123750		1 off
Selectively-opening circuit-breakers									
25	3200	1280 – 3200	2 - 10	2 - 10, OFF	**IZM32S4-V32F-1100V** 123867		**IZM32S4-V32W-1100V** 123751		1 off
Circuit-breaker for universal protection									
25	3200	1280 – 3200	2 - 10	2 - 10, OFF	**IZM32S4-U32F-1100V** 123868		**IZM32S4-U32W-1100V** 123752		1 off
Circuit-breaker with circuit-breaker									
25	3200	1280 – 3200	2 - 10	2 - 10, OFF	**IZM32S4-P32F-1100V** 123869		**IZM32S4-P32W-1100V** 123753		1 off

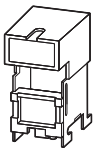
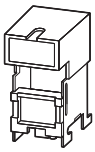
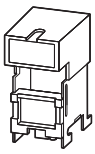
Rated short-circuit making capacity I_{cm} kA	Rated operational current $I_n = I_u$ A	Frame size	Rated short-time withstand current t = 1 s I_{cw} kA	Fixed mounted **Part no.** Article no.	**Price** See price list	Withdrawable units **Part no.** Article no. Cassette must be seperately ordered.	**Price** See price list	Std. pack
Including main terminals at rear and control circuit terminals according to ordered options.								
55	800	IN20	50	**IN20B3-08F** 123424		**IN20B3-08W** 123184		1 off
		IN32	65	**IN32B3-08F** 123931		**IN32B3-08W** 123641		
		IN32	85	**IN32N3-08F** 123971		**IN32N3-08W** 123681		
	1000	IN20	50	**IN20B3-10F** 123425		**IN20B3-10W** 123185		
		IN32	65	**IN32B3-10F** 123932		**IN32B3-10W** 123642		
		IN32	85	**IN32N3-10F** 123972		**IN32N3-10W** 123682		
	1250	IN20	50	**IN20B3-12F** 123426		**IN20B3-12W** 123186		
		IN32	65	**IN32B3-12F** 123933		**IN32B3-12W** 123643		
		IN32	85	**IN32N3-12F** 123973		**IN32N3-12W** 123683		
	1600	IN20	50	**IN20B3-16F** 123427		**IN20B3-16W** 123187		
		IN32	65	**IN32B3-16F** 123934		**IN32B3-16W** 123644		
		IN32	85	**IN32N3-16F** 123974		**IN32N3-16W** 123684		
	2000	IN20	50	**IN20B3-20F** 123428		**IN20B3-20W** 123188		
69	800	IN20	65	**IN20N3-08F** 123454		**IN20N3-08W** 123214		
	1000	IN20	65	**IN20N3-10F** 123455		**IN20N3-10W** 123215		
	1250	IN20	65	**IN20N3-12F** 123456		**IN20N3-12W** 123216		
	1600	IN20	65	**IN20N3-16F** 123457		**IN20N3-16W** 123217		
	2000	IN20	65	**IN20N3-20F** 123458		**IN20N3-20W** 123218		
		IN32	65	**IN32B3-20F** 123935		**IN32B3-20W** 123645		
		IN32	85	**IN32N3-20F** 123975		**IN32N3-20W** 123685		
110	2500	IN32	65	**IN32B3-25F** 123936		**IN32B3-25W** 123646		
	2500	IN32	85	**IN32N3-25F** 123976		**IN32N3-25W** 123686		
	3200	IN32	65	**IN32B3-32F** 123937		**IN32B3-32W** 123647		
	3200	IN32	85	**IN32N3-32F** 123977		**IN32N3-32W** 123687		
138	4000	IN40	85	**IN40N3-40F** 124315		**IN40N3-40W** 124205		
		IN40	100	**IN40H3-40F** 124191		**IN40H3-40W** 124189		
		IN63	85	**IN63N3-40F** 124316		**IN63N3-40W** 124206		
		IN63	100	**IN63H3-40F** 124336		**IN63H3-40W** 124226		
210	3200	IN32	–	**IN32S3-32F-1100V** 123871		**IN32S3-32W-1100V** 123870		
217	5000	IN63	85	**IN63N3-50F** 124317		**IN63N3-50W** 124207		
	5000	IN63	100	**IN63H3-50F** 124337		**IN63H3-50W** 124227		
	6300	IN63	85	**IN63N3-63F** 124318		**IN63N3-63W** 124208		
	6300	IN63	100	**IN63H3-63F** 124338		**IN63H3-63W** 124228		

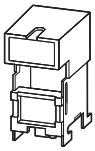
Rated short-circuit making capacity I_{cm} kA	Rated operational current $I_n = I_u$ A	Frame size	Rated short-time withstand current t = 1 s I_{cw} kA	Fixed mounted **Part no.** Article no.	**Price** See price list	Withdrawable units **Part no.** Article no. Cassette must be seperately ordered.	**Price** See price list	Std. pack
Including main terminals at rear and control circuit terminals according to ordered options.								
55	800	IN20	50	**IN20B4-08F** 123544		**IN20B4-08W** 123304		1 off
		IN32	65	**IN32B4-08F** 124076		**IN32B4-08W** 123786		
		IN32	85	**IN32N4-08F** 124116		**IN32N4-08W** 123826		
	1000	IN20	50	**IN20B4-10F** 123545		**IN20B4-10W** 123305		
		IN32	65	**IN32B4-10F** 124077		**IN32B4-10W** 123787		
		IN32	85	**IN32N4-10F** 124117		**IN32N4-10W** 123827		
	1250	IN20	50	**IN20B4-12F** 123546		**IN20B4-12W** 123306		
		IN32	65	**IN32B4-12F** 124078		**IN32B4-12W** 123788		
		IN32	85	**IN32N4-12F** 124118		**IN32N4-12W** 123828		
	1600	IN20	50	**IN20B4-16F** 123547		**IN20B4-16W** 123307		
		IN32	65	**IN32B4-16F** 124079		**IN32B4-16W** 123789		
		IN32	85	**IN32N4-16F** 124119		**IN32N4-16W** 123829		
	2000	IN20	50	**IN20B4-20F** 123548		**IN20B4-20W** 123308		
69	800	IN20	65	**IN20N4-08F** 123574		**IN20N4-08W** 123334		
	1000	IN20	65	**IN20N4-10F** 123575		**IN20N4-10W** 123335		
	1250	IN20	65	**IN20N4-12F** 123576		**IN20N4-12W** 123336		
	1600	IN20	65	**IN20N4-16F** 123577		**IN20N4-16W** 123337		
	2000	IN20	65	**IN20N4-20F** 123578		**IN20N4-20W** 123338		
		IN32	65	**IN32B4-20F** 124080		**IN32B4-20W** 123790		
		IN32	85	**IN32N4-20F** 124120		**IN32N4-20W** 123830		
110	2500	IN32	65	**IN32B4-25F** 124081		**IN32B4-25W** 123791		
	2500	IN32	85	**IN32N4-25F** 124121		**IN32N4-25W** 123831		
	3200	IN32	65	**IN32B4-32F** 124082		**IN32B4-32W** 123792		
	3200	IN32	85	**IN32N4-32F** 124122		**IN32N4-32W** 123832		
138	4000	IN40	85	**IN40N4-40F** 124370		**IN40N4-40W** 124260		
		IN40	100	**IN40H4-40F** 124192		**IN40H4-40W** 124190		
		IN63	85	**IN63N4-40F** 124371		**IN63N4-40W** 124261		
		IN63	100	**IN63H4-40F** 124391		**IN63H4-40W** 124281		
210	3200	IN32	–	**IN32S4-32F-1100V** 123894		**IN32S4-32W-1100V** 123872		
217	5000	IN63	85	**IN63N4-50F** 124372		**IN63N4-50W** 124262		
	5000	IN63	100	**IN63H4-50F** 124392		**IN63H4-50W** 124282		
	6300	IN63	85	**IN63N4-63F** 124373		**IN63N4-63W** 124263		
	6300	IN63	100	**IN63H4-63F** 124393		**IN63H4-63W** 124283		

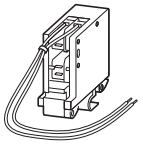
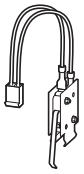
	Rated operational current I_n A	For use with	3 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	4 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack
Withdrawable units							
Cassettes in combination with basic device Standard equipment: • Arc chute cover • Coding between cassette and switch • Horizontal Connection • Door seal							
	≦ 1000	IZM20…W IN20…W	**+IZM-CAS203-1000** 124147		**+IZM-CAS204-1000** 124155		1 off
	≦ 2000	IZM20…W IN20…W	**+IZM-CAS203-2000** 122065		**+IZM-CAS204-2000** 122713		
	≦ 2000	IZM32…W IN32…W	**+IZM-CAS323-2000** 122066		**+IZM-CAS324-2000** 122714		
	≦ 2500	IZM32…W IN32…W	**+IZM-CAS323-2500** 124212		**+IZM-CAS324-2500** 124229		
	2500 - 3200	IZM32…W IN32…W	**+IZM-CAS323-3200** 122067		**+IZM-CAS324-3200** 122715		
Cassettes, ordered separately Standard components fitted to separately ordered cassette: • Arc chute cover • Complete set of control circuit terminals • Coding between cassette and switch • Horizontal Connection • Door seal							
	≦ 1000	IZM20…W IN20…W	**IZM-CAS203-1000** 124107		**IZM-CAS204-1000** 124115		1 off
	≦ 2000	IZM20…W IN20…W	**IZM-CAS203-2000** 122855		**IZM-CAS204-2000** 122863		
	≦ 2000	IZM32…W IN32…W	**IZM-CAS323-2000** 122856		**IZM-CAS324-2000** 122864		
	≦ 2500	IZM32…W IN32…W	**IZM-CAS323-2500** 124123		**IZM-CAS324-2500** 124139		
	2500 - 3200	IZM32…W IN32…W	**IZM-CAS323-3200** 122857		**IZM-CAS324-3200** 122865		
	4000	IZM40…W IN40…W	**IZM-CAS403-4000** 122859		**IZM-CAS404-4000** 122867		
	4000	IZM63…W IN63…W	**IZM-CAS633-4000** 122860		**IZM-CAS634-4000** 122868		
	5000 - 6300	IZM63…W IN63…W	**IZM-CAS633-6300** 122861		**IZM-CAS634-6300** 122869		

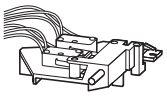
	Rated operational current I_n A	For use with	3 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	4 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack
Withdrawable units							
Cassettes 1100 V in combination with basic device Standard equipment: • Arc chute cover • Coding between cassette and switch • Horizontal Connection • Door seal							
	3200	IZM32…W-1100V IN32…W-1100V	**+IZM-CAS323-3200-1100V** 122712		**+IZM-CAS324-3200-1100V** 122720		1 off
Cassettes 1100 V, ordered separately Standard equipment: • Arc chute cover • Complete set of control circuit terminals • Coding between cassette and switch • Horizontal Connection • Door seal							
	3200	IZM32…W-1100V IN32…W-1100V	**IZM-CAS323-3200-1100V** 122862		**IZM-CAS324-3200-1100V** 122870		1 off
Shutter (touch protection) When the switch is moved out of the CONNECT position, the shutters close automatically to cover the primary contacts.							
	–	IZM20…W IN20…W	**IZM-SH203** 122871		**IZM-SH204** 122875		1 off
		IZM20…W IN20…W	**+IZM-SH203** 122721		**+IZM-SH204** 122725		
		IZM32…W IN32…W	**IZM-SH323** 122872		**IZM-SH324** 122876		
		IZM32…W IN32…W	**+IZM-SH323** 122722		**+IZM-SH324** 122726		
		IZM40…W IN40…W	**IZM-SH403** 122873		**IZM-SH404** 122877		
		IZM40…W IN40…W	**+IZM-SH403** 122723		**+IZM-SH404** 122727		
		IZM63…W IN63…W	**IZM-SH633** 122874		**IZM-SH634** 122878		
		IZM63…W IN63…W	**+IZM-SH633** 122724		**+IZM-SH634** 122728		

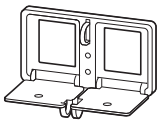
		For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Position signalling switches						
One module each with 4 changeover contacts is possible for indication of each position (extended, Test, retracted). Only one mounting plate is required per withdrawable unit. Each additional auxiliary contact (up to 3) requires 2 secondary terminal blocks IZM-SEC...; alternatively it can be wired directly to external terminals. If a shutter is used, mounting is possible on the right side only.						
	Four changeover contacts: One module without mounting plate	IZM20, 32, 40, 63...W IN20, 32, 40, 63...W	**IZM-CS4** 122879		1 off	–
	Four changeover contacts: One module with mounting plate		**IZM-CS4MB** 122880			
	Eight changeover contacts: Two modules with mounting plate		**IZM-CS8MB** 122881			
	Twelve changeover contacts: Three modules with mounting plate		**IZM-CS12MB** 122882			
Motor drive						
The motor operator electrically tensions the spring-operated stored energy mechanism. For electrical remote On and Off switching, a closing release and a voltage release are required. A signaling switch labeled "Spring-operated stored energy mechanism tensioned" is included as standard.						
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-M24DC** 122927		1 off	If ordered separately a secondary terminal block IZM-SEC-… is necessary for connection. Order separately if required.For terminal assignment, see page 77
			+IZM-M24DC 122729			
			IZM-M48DC 122928			
			+IZM-M48DC 122730			
			IZM-M60DC 123093			
			+IZM-M60DC 123079			
			IZM-M110DC 122929			
			+IZM-M110DC 122731			
			IZM-M220DC 122930			
			+IZM-M220DC 122732			
			IZM-M110AC 122931			
			+IZM-M110AC 122733			
			IZM-M230AC 122932			
			+IZM-M230AC 122734			
Switching cycle counter						
Counts the number of On-Off operations. Can also be used without motor operator.						
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-OC** 122933		1 off	–
			+IZM-OC 122735			

	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Voltage releases						
A closing release can be combined with a shunt release and an undervoltage release or with a second shunt release. (DF: 100%). Suited for uninterrupted operation, which ensures electrical interlocking in Off position.						
Shunt release						
	24 DC	IZM20, 32, 40, 63... IN20, 32,40, 63...	**IZM-ST24DC** 122934		1 off	If ordered separately a secondary terminal block IZM-SEC… is necessary for connection. Order separately if required. For terminal assignment, see page 77
	24 DC		**+IZM-ST24DC** 122736			
	48 DC		**IZM-ST48DC** 122935			
	48 DC		**+IZM-ST48DC** 122737			
	60 DC		**IZM-ST60DC** 122930			
	60 DC		**+IZM-ST60DC** 123914			
	110 - 125 DC 110 - 127 AC		**IZM-ST110AD** 122936			
	110 - 125 DC 110 - 127 AC		**+IZM-ST110AD** 122738			
	220 - 250 DC 208 - 240 AC		**IZM-ST230AD** 122937			
	220 - 250 DC 208 - 240 AC		**+IZM-ST230AD** 122739			
2nd shunt release Can not be combined with an undervoltage release.						
	24 DC	IZM20, 32, 40, 63... IN20, 32,40, 63...	**+IZM-STS24DC** 122740		1 off	If ordered separately a secondary terminal block IZM-SEC… is necessary for connection. Order separately if required. For terminal assignment, see page 77
	48 DC		**+IZM-STS48DC** 122741			
	60 DC		**+IZM-STS60DC** 123922			
	110 - 127 DC 110 - 127 AC		**+IZM-STS110AD** 122742			
	208 - 250 DC 208 - 250 AC		**+IZM-STS230AD** 122743			
Closing releases						
	24 DC	IZM20, 32, 40, 63... IN20, 32,40, 63...	**IZM-SR24DC** 122942		1 off	If ordered separately a secondary terminal block IZM-SEC… is necessary for connection. Order separately if required. For terminal assignment, see page 77
	24 DC		**+IZM-SR24DC** 122744			
	48 DC		**IZM-SR48DC** 122943			
	48 DC		**+IZM-SR48DC** 122745			
	60 VDC		**IZM-SR60DC** 123954			
	60 VDC		**+IZM-SR60DC** 123938			
	110 - 125 DC 110 - 127 AC		**IZM-SR110AD** 122944			
	110 - 125 DC 110 - 127 AC		**+IZM-SR110AD** 122746			
	220 - 250 DC 208 - 240 AC		**IZM-SR230AD** 122945			
	220 - 250 DC 208 - 240 AC		**+IZM-SR230AD** 122747			

		Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Voltage releases							
Undervoltage release Can not be combined with a second shunt release.							
	–	24 DC	IZM20, 32, 40, 63... IN20, 32,40, 63...	**IZM-UVR24DC** 122946		1 off	If ordered separately a secondary terminal block IZM-SEC-… is necessary for connection. Order separately if required. Terminal assignment page 77
		24 DC		**+IZM-UVR24DC** 122748			
		32 DC		**IZM-UVR32DC** 122947			
		32 DC		**+IZM-UVR32DC** 122749			
		48 DC		**IZM-UVR48DC** 122948			
		48 DC		**+IZM-UVR48DC** 122750			
		60 DC		**IZM-UVR60DC** 123970			
		60 DC		**+IZM-UVR60DC** 123962			
		110 - 125 DC		**IZM-UVR110DC** 122949			
		110 - 125 DC		**+IZM-UVR110DC** 122751			
		220 - 250 DC		**IZM-UVR220DC** 122950			
		220 - 250 DC		**+IZM-UVR220DC** 122752			
		110 - 127 AC		**IZM-UVR110AC** 122951			
		110 - 127 AC		**+IZM-UVR110AC** 122753			
		208 - 240 AC		**IZM-UVR230AC** 122952			
		208 - 240 AC		**+IZM-UVR230AC** 122754			
		380 - 415 AC		**IZM-UVR400AC** 122953			
		380 - 415 AC		**+IZM-UVR400AC** 122755			
Time delay modules For combination with an undervoltage release. Delay times: 0.1 s, 0.5 s, 1.0 s, 2.0 s							
	Only in combination with IZM-UVR110AC	120 AC	IZM20, 32, 40, 63... IN20, 32,40, 63...	**IZM-UVR-TD-120AC** 122956		1 off	–
	Only in combination with IZM-UVR230AC	230 AC		**IZM-UVR-TD-230AC** 122957		1 off	

		For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Auxiliary contacts						
Standard auxiliary switch for On-Off signaling 2 NC contacts/N/O contacts are already contained in the basic device. Maximum for IZM20, IN20: 4 N/O or NC contacts (corresponds with an additional AS22). Maximum, for IZM32, IZM40, IZM63: 6 N/O or NC contacts (corresponds with an additional AS44). 6 N/O or NC contacts are possible only when no second shunt release is installed.						
	Additionally 2 NC contact/ NO contact	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**+IZM-AS22** 122758		1 off	–
	Additionally 4 NC contacts/ N/O contacts		**+IZM-AS44** 122759			Cannot be combined with a second shunt release; can not be combined with IZM20, IN20.
	Additionally 2 NC contact/ N/O contact		**IZM-AS22** 122958			If ordered separately a secondary terminal block IZM-SEC-… is necessary for connection. Order separately if required. Terminal assignment page 77
Latch check switch Latch check switch with one changeover contact.						
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-LCS-SR** 122974		1 off	for internal wiring with closing release
			+IZM-LCS-SR 122760			
			IZM-LCS 122959			for external keypad Indication
			+IZM-LCS 122761			

	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Trip indication and reset options						
Trip-indicating auxiliary switch (OTS) Two changeover contacts						
	–	IZM20, 32, 40, 63...	**IZM-OTS** 122960		1 off	If ordered separately a secondary terminal block IZM-SEC-… is necessary for connection. Order separately if required. Terminal assignment page 77
			+IZM-OTS 122762			
Automatic reset The circuit-breaker is immediately ready to close again. Not fitted with mechanical trip indicator (red pin). Can not be combined with remote reset.						
	–	IZM20, 32, 40, 63...	**IZM-RA** 122964		1 off	–
			+IZM-RA 122766			

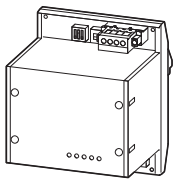
		For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack
Locking facilities					
Padlockable cover of ON/OFF buttons ON-Off pushbutton cover sealable with lead seal and lockable with padlock.					
	Metal, On pushbutton blocked	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**+IZM-PLPC-CB-M** 125820		1 off
	Plastic, On pushbutton blocked		**+IZM-PLPC-CB-P** 125649		
	Metal		**IZM-PLPC-M** 122966		
			+IZM-PLPC-M 122768		
	Plastic		**IZM-PLPC-P** 122965		
			+IZM-PLPC-P 122767		
Key locking in safe Off					
	CES installation kit, without lock cylinder and key	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-KLP-SO-CES** 122968		1 off
			+IZM-KLP-SO-CES 122770		
	Kirk installation kit, without lock cylinder and key		**IZM-KLP-SO-KIRK** 122969		
			+IZM-KLP-SO-KIRK 122771		
	Castell installation kit, without lock cylinder and key		**IZM-KLP-SO-CASTELL** 122970		
			+IZM-KLP-SO-CASTELL 122772		
	Ronis installation kit, without lock cylinder and key		**IZM-KLP-SO-RONIS** 122971		
			+IZM-KLP-SO-RONIS 122773		
Cassette key locking facility This device is fitted to the cassette and prevents a switch being switched on in its operating (Connected) position.					
	Installation on right, without lock cylinder and key	IZM20, 32, 40, 63...W IN20, 32, 40, 63...W	**IZM-KLP-CASS-R** 122972		1 off
	Installation on left, without lock cylinder and key		**IZM-KLP-CASS-L** 122973		1 off

		For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Locking facilities					
Mechanical interlock, fixed mounting					
	Type 2, for 2 circuit-breakers: A normal power supply (A) and an emergency mains supply (B). 1 set of cables also required.	IZM20, 32, 40, 63...F IN20, 32, 40, 63...F	**IZM-MIL2C-F** 122980		1 off
	Type 31, for 3 circuit-breakers: Two normal power supplies (A, C) and an emergency network supply (B). When B in Off, A and C can be switched on. B can be switched on only when A and C are in Off. Two sets of cables required in addition.		**IZM-MIL31C-F** 122981		
	Type 32, for 3 circuit-breakers: Two normal power supplies (A, C) and a coupling (B). Any one or two circuit-breakers can be closed at the same time. Three sets of cables are required in addition.		**IZM-MIL32C-F** 122982		
	Type 33, for 3 circuit-breakers: Three power supplies (A, B, C), normal or emergency network. Only one of the three circuit-breakers can be switched on at any one time. Three sets of cables are required in addition.		**IZM-MIL33C-F** 122983		
Mechanical interlock, withdrawable units					
	Type 2, for 2 circuit-breakers: A normal power supply (A) and an emergency network supply (B). 1 set of cables also required.	IZM20, 32, 40, 63...W IN20, 32, 40, 63...W	**IZM-MIL2C-W** 122985		1 off
	Type 31, for 3 circuit-breakers: Two normal power supplies (A, C) and an emergency network supply (B). When B in Off, A and C can be switched on. B can be switched on only when A and C are in Off. Two sets of cables required in addition.		**IZM-MIL31C-W** 122986		
	Type 32, for 3 circuit-breakers: Two normal power supplies (A, C) and a coupling (B). Any one or two circuit-breakers can be closed at the same time. Three sets of cables are required in addition.		**IZM-MIL32C-W** 122987		
	Type 33, for 3 circuit-breakers: Three power supplies (A, B, C), normal or emergency network. Only one of the three circuit-breakers can be switched on at any one time. Three sets of cables are required in addition.		**IZM-MIL33C-W** 122988		
Cable sets for mechanical interlock Depending on the type of interlock, a particular number of cable connectors is required. With the flexible cable connectors, various different switch arrangements can be implemented. Each set contains two cables.					
	1520 mm long	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-MIL-CAB1520** 122975		1 off
	1830 mm long		**IZM-MIL-CAB1830** 122976		
	2440 mm long		**IZM-MIL-CAB2440** 122977		
	3050 mm long		**IZM-MIL-CAB3050** 122978		

Instruction
For possible switching states, → Page 77

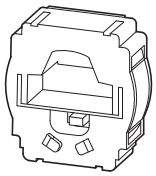
	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack	**Notes**
Options and accessories for electronic releases						
One of the following overcurrent releases (DT = Digitrip) is supplied as standard with every IZM circuit-breaker: • Type A: DT-520LI • Type V: DT-520LSI • Type U: DT-520MC • Type P: DT-1150						
Trip unit for Type A circuit-breaker (equipped with Digitrip 520LI)						
System protection		IZM…-A… (Digitrip 520LI)	**IZM-DTA** 122774		1 off	
Trip unit for Type V circuit-breaker (equipped with Digitrip 520LSI)						
Selectivity protection		IZM…-V… (Digitrip 520MC)	**IZM-DTV** 122775		1 off	
Add-on function for Type V circuit-breaker						
Ground fault protection	–	IZM…-V… (Digitrip 520LSI)	**+IZM-DTV-EP** 122776		1 off	–
Trip unit for Type U circuit-breaker (equipped with Digitrip 520M)						
Universal protection Type U contains the following as standard: • Communication interface • Overload alarm with signalling contact • Prepared for external 24/48 V DC supply (e.g. for display) • (A14 = +24 VDC/A15 = -24 VDC) Only one of the following three options can be selected at a time: Ground-fault protection, ground-fault alarm or overload alarm. For fieldbus communications an interface module IZM-PMINT/IZM-MMINT is required in addition.		IZM…-U… (Digitrip 520LSI)	**IZM-DTU** 122777		1 off	
	240 AC	IZM…-U… (Digitrip 520MC)	**+IZM-DTU-HA2** 122779		1 off	Not in combination with ground-fault protection or alarm
With ground-fault protection instead of overload alarm, prepared for 24/48 V DC.	24/48 DC		**+IZM-DTU-EP** 122780		1 off	Not in combination with overload or ground-fault alarm
With ground-fault protection instead of overload alarm, prepared for 240 V AC.	240 AC		**+IZM-DTU-EP2** 122782		1 off	Not in combination with overload or ground-fault alarm
With ground-fault alarm instead of overload alarm, prepared for 24/48 V DC.	24/48 DC		**+IZM-DTU-EA** 122783		1 off	Not in combination with overload alarm or ground-fault protection
With ground-fault alarm instead of overload alarm, prepared for 240 V AC.	240 AC		**+IZM-DTU-EA2** 122785		1 off	Not in combination with overload alarm or ground-fault protection
Through a simple, reliable means, the ARMS (Arcflash Reduction Maintenance System™) function can reduce the Off time for enhanced safety. Must be specifically activated.	–		**+IZM-DTU-ARMS** 122791		1 off	–
NC-reduced: The Type U electronics are supplied without communications interface.	–		**+IZM-DTU-NC** 122790		1 off	Cannot be combined with: • IZM-DTU-NPC • IZM-DTU-ARMS
NPC-reduced: The Type U electronics are supplied without communications interface and without interface to the external supply.	–		**+IZM-DTU-NPC** 122788		1 off	Only in combination with IZM-DTU-EP. Can not be combined with other options.

	Rated control voltage U_s V	For use with	**Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack
Options and accessories for electronic releases					
Trip unit for Type P circuit-breakers					
Power measurement		IZM…-P… (Digitrip 1150)	**IZM-DTP** 122894		1 off
Type P contains the following as standard: • Power measurement • Communication interface • Overload alarm with signalling contact • Prepared for external 24/48 V DC supply (e.g. for display) • (A14 = +24 VDC/A15 = -24 VDC). Ground-fault protection and alarm are combined in a single option (IZM-DTP-EPA), which can be combined with overload alarm. For field bus communications a corresponding interface module IZM-PMINT/IZM-MMINT is required in addition.					
Add-on function for Type P circuit-breaker					
With overload alarm, prepared for external 240 V AC supply instead of 24/48 V DC.	240 AC	IZM…-P… (Digitrip 1150)	**+IZM-DTP2** 122906		1 off
With additional ground-fault protection and alarm, prepared for 24/48 V DC.	24/48 DC		**+IZM-DTP-EPA** 122915		
With additional ground-fault protection and alarm, prepared for 240 V AC.	240 AC		**+IZM-DTP-EPA2** 122938		
Through a simple, reliable means, the ARMS (Arcflash Reduction Maintenance System™) function can reduce the Off time for enhanced safety. Must be specifically activated.	–		**+IZM-DTP-ARMS** 122939		
Voltage tap on power supply at bottom: Internally, voltage is tapped at the lower (instead of the upper) contacts. Voltage tapping is relevant for power monitoring.	–		**+IZM-DTP-PFBT** 122990		
TripLink transmits all protection parameters from one switch to the other, for example when replacing a device for maintenance.	–		**IZM-DTP-TL** 122989		
Digital relay module for circuit-breakers (Type P) power measurement			**IZM-DTP-RM** 101534		

		Rated control voltage U_s V	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Communication modules						
Fieldbus interfaces for Digitrip IZM-...-U... and IZM...-P...						
	The PROFIBUS communication interface is mounted on top-hat rails.	–	IZM…-U… (Digitrip 520MC) IZM…-P… (Digitrip 1150)	**IZM-PMINT** 124235		1 off
	The Modbus communication interface is mounted on top-hat rails.			**IZM-MMINT** 124236		1 off
Hand held test unit for Digitrip						
	IZM…-A… (Digitrip 520LI) IZM…-V… (Digitrip 520LSI) IZM…-U… (Digitrip 520M)		Testing device for IZM26	**IZM-SIM-KIT** 101535		1 off

Rating plug sensor and current transformer

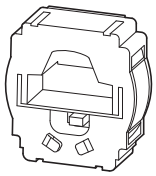
This combination is required when a circuit-breaker's rated operational current is to be reduced.



Rated operational current I_n A	For use with	3 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	4 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack
200	IZM20… 800 A ≦ I_u ≦ 2000 A	**IZM-RP203-200** 122995		**IZM-RP204-200** 123026		1 off
200	IZM20… 800 A ≦ I_u ≦ 2000 A	**+IZM-RP203-200** 122793		**+IZM-RP204-200** 122824		
250	IZM20… 800 A ≦ I_u ≦ 2000 A	**IZM-RP203-250** 122996		**IZM-RP204-250** 123027		
250	IZM20… 800 A ≦ I_u ≦ 2000 A	**+IZM-RP203-250** 122794		**+IZM-RP204-250** 122825		
300	IZM20… 800 A ≦ I_u ≦ 2000 A	**IZM-RP203-300** 122997		**IZM-RP204-300** 123028		
300	IZM20… 800 A ≦ I_u ≦ 2000 A	**+IZM-RP203-300** 122795		**+IZM-RP204-300** 122826		
400	IZM20… 800 A ≦ I_u ≦ 2000 A	**IZM-RP203-400** 122998		**IZM-RP204-400** 123029		
400	IZM20… 800 A ≦ I_u ≦ 2000 A	**+IZM-RP203-400** 122796		**+IZM-RP204-400** 122827		
630	IZM20… 800 A ≦ I_u ≦ 2000 A	**IZM-RP203-630** 122999		**IZM-RP204-630** 123030		
630	IZM20… 800 A ≦ I_u ≦ 2000 A	**+IZM-RP203-630** 122797		**+IZM-RP204-630** 122828		
800	IZM20… 800 A ≦ I_u ≦ 2000 A	**IZM-RP203-800** 123000		**IZM-RP204-800** 123031		
800	IZM20… 800 A ≦ I_u ≦ 2000 A	**+IZM-RP203-800** 122798		**+IZM-RP204-800** 122829		
1000	IZM20… 1000 A ≦ I_u ≦ 2000 A	**IZM-RP203-1000** 123001		**IZM-RP204-1000** 123032		
1000	IZM20… 1000 A ≦ I_u ≦ 2000 A	**+IZM-RP203-1000** 122799		**+IZM-RP204-1000** 122830		
1250	IZM20… 1250 A ≦ I_u ≦ 2000 A	**IZM-RP203-1250** 123002		**IZM-RP204-1250** 123033		
1250	IZM20… 1250 A ≦ I_u ≦ 2000 A	**+IZM-RP203-1250** 122800		**+IZM-RP204-1250** 122831		
1600	IZM20… 1600 A ≦ I_u ≦ 2000 A	**IZM-RP203-1600** 123003		**IZM-RP204-1600** 123034		
1600	IZM20… 1600 A ≦ I_u ≦ 2000 A	**+IZM-RP203-1600** 122801		**+IZM-RP204-1600** 122832		
2000	IZM20… 2000 A	**IZM-RP203-2000** 123004		**IZM-RP204-2000** 123035		
200	IZM32… 800 A ≦ I_u ≦ 3200 A	**IZM-RP323-200** 123005		**IZM-RP324-200** 123036		
200	IZM32… 800 A ≦ I_u ≦ 3200 A	**+IZM-RP323-200** 122803		**+IZM-RP324-200** 122834		
250	IZM32… 800 A ≦ I_u ≦ 3200 A	**IZM-RP323-250** 123006		**IZM-RP324-250** 123037		
250	IZM32… 800 A ≦ I_u ≦ 3200 A	**+IZM-RP323-250** 122804		**+IZM-RP324-250** 122835		
300	IZM32… 800 A ≦ I_u ≦ 3200 A	**IZM-RP323-300** 123007		**IZM-RP324-300** 123038		
300	IZM32… 800 A ≦ I_u ≦ 3200 A	**+IZM-RP323-300** 122805		**+IZM-RP324-300** 122836		
400	IZM32… 800 A ≦ I_u ≦ 3200 A	**IZM-RP323-400** 123008		**IZM-RP324-400** 123039		
400	IZM32… 800 A ≦ I_u ≦ 3200 A	**+IZM-RP323-400** 122806		**+IZM-RP324-400** 122837		
630	IZM32… 800 A ≦ I_u ≦ 3200 A	**IZM-RP323-630** 123009		**IZM-RP324-630** 123040		
630	IZM32… 800 A ≦ I_u ≦ 3200 A	**+IZM-RP323-630** 122807		**+IZM-RP324-630** 122838		
800	IZM32… 800 A ≦ I_u ≦ 3200 A	**IZM-RP323-800** 123010		**IZM-RP324-800** 123041		
800	IZM32… 800 A ≦ I_u ≦ 3200 A	**+IZM-RP323-800** 122808		**+IZM-RP324-800** 122839		

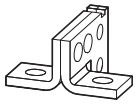
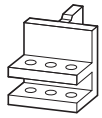
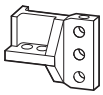
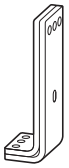
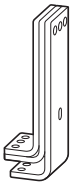
Rating plug sensor and current transformer

This combination is required when a circuit-breaker's rated operational current is to be reduced.



Rated operational current I_n A	For use with	3 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	4 pole **Part no.** Article no. **Part no. suffix "+IZM..."** Article no. for ordering with basic device	**Price** See price list	Std. pack
1000	IZM32… 1000 A ≦ I_u ≦ 3200 A	**IZM-RP323-1000** 123011		**IZM-RP324-1000** 123042		1 off
1000	IZM32… 1000 A ≦ I_u ≦ 3200 A	**+IZM-RP323-1000** 122809		**+IZM-RP324-1000** 122840		
1250	IZM32… 1250 A ≦ I_u ≦ 3200 A	**IZM-RP323-1250** 123012		**IZM-RP324-1250** 123043		
1250	IZM32… 1250 A ≦ I_u ≦ 3200 A	**+IZM-RP323-1250** 122810		**+IZM-RP324-1250** 122841		
1600	IZM32… 1600 A ≦ I_u ≦ 3200 A	**IZM-RP323-1600** 123013		**IZM-RP324-1600** 123044		
1600	IZM32… 1600 A ≦ I_u ≦ 3200 A	**+IZM-RP323-1600** 122811		**+IZM-RP324-1600** 122842		
2000	IZM32… 2000 A ≦ I_u ≦ 3200 A	**IZM-RP323-2000** 123014		**IZM-RP324-2000** 123045		
2000	IZM32… 2000 A ≦ I_u ≦ 3200 A	**+IZM-RP323-2000** 122812		**+IZM-RP324-2000** 122843		
2500	IZM32… 2500 A ≦ I_u ≦ 3200 A	**IZM-RP323-2500** 123015		**IZM-RP324-2500** 123046		
2500	IZM32… 2500 A ≦ I_u ≦ 3200 A	**+IZM-RP323-2500** 122813		**+IZM-RP324-2500** 122844		
3200	IZM32... 3200 A	**IZM-RP323-3200** 123016		**IZM-RP324-3200** 123047		
2000	IZM40… 2000 A ≦ I_u ≦ 4000 A	**IZM-RP403-2000** 123017		**IZM-RP404-2000** 123048		
2000	IZM40… 2000 A ≦ I_u ≦ 4000 A	**+IZM-RP403-2000** 122815		**+IZM-RP404-2000** 122846		
2500	IZM40… 2500 A ≦ I_u ≦ 4000 A	**IZM-RP403-2500** 123018		**IZM-RP404-2500** 123049		
2500	IZM40… 2500 A ≦ I_u ≦ 4000 A	**+IZM-RP403-2500** 122816		**+IZM-RP404-2500** 122847		
3200	IZM40… 3200 A ≦ I_u ≦ 4000 A	**IZM-RP403-3200** 123019		**IZM-RP404-3200** 123050		
3200	IZM40… 3200 A ≦ I_u ≦ 4000 A	**+IZM-RP403-3200** 122817		**+IZM-RP404-3200** 122848		
4000	IZM40… 4000 A	**IZM-RP403-4000** 122802		**IZM-RP404-4000** 122814		
2000	IZM63… 4000 A	**IZM-RP633-2000** 124244		**IZM-RP634-2000** 124321		
2000	IZM63… 4000 A	**+IZM-RP633-2000** 124319		**+IZM-RP634-2000** 124264		
2500	IZM63… 4000 A ≦ I_u ≦ 5000 A	**IZM-RP633-2500** 124320		**IZM-RP634-2500** 124211		
2500	IZM63… 4000 A ≦ I_u ≦ 5000 A	**+IZM-RP633-2500** 124209		**+IZM-RP634-2500** 124299		
3200	IZM63… 4000 A ≦ I_u ≦ 6300 A	**IZM-RP633-3200** 124210		**IZM-RP634-3200** 124322		
3200	IZM63… 4000 A ≦ I_u ≦ 6300 A	**+IZM-RP633-3200** 124374		**+IZM-RP634-3200** 124354		
4000	IZM63… 4000 A ≦ I_u ≦ 6300 A	**IZM-RP633-4000** 123023		**IZM-RP634-4000** 123054		
4000	IZM63… 4000 A ≦ I_u ≦ 6300 A	**+IZM-RP633-4000** 122821		**+IZM-RP634-4000** 122852		
5000	IZM63… 5000 A ≦ I_u ≦ 6300 A	**IZM-RP633-5000** 123024		**IZM-RP634-5000** 123055		
5000	IZM63… 5000 A ≦ I_u ≦ 6300 A	**+IZM-RP633-5000** 122822		**+IZM-RP634-5000** 122853		
6300	IZM63… 6300 A	**IZM-RP633-6300** 123025		**IZM-RP634-6300** 123056		

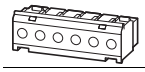
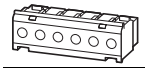
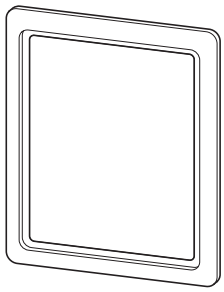
Rated operational current I_n A	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Current sensors for Neutral conductor				
For neutral conductor protection or comprehensive ground-fault protection of 3 pole circuit-breakers an external converter is required for current monitoring in the neutral conductor.				
200	IZM20... IZM32…	**IZM-CTN-200** 123057		1 off
250	IZM20... IZM32…	**IZM-CTN-250** 123058		
300	IZM20... IZM32…	**IZM-CTN-300** 123059		
400	IZM20... IZM32…	**IZM-CTN-400** 123060		
630	IZM20... IZM32…	**IZM-CTN-630** 123061		
800	IZM20... IZM32…	**IZM-CTN-800** 123062		
1000	IZM20... IZM32…	**IZM-CTN-1000** 123063		
1250	IZM20... IZM32…	**IZM-CTN-1250** 123064		
1600	IZM20... IZM32…	**IZM-CTN-1600** 123065		
2000	IZM20... IZM32…	**IZM-CTN-2000** 123066		
2500	IZM32…	**IZM-CTN-2500** 123067		
3200	IZM32…	**IZM-CTN-3200** 123068		
4000	IZM40... IZM63...	**IZM-CTN-4000** 123069		
5000	IZM63…	**IZM-CTN-5000** 123070		
6300	IZM63…	**IZM-CTN-6300** 123071		

	Rated operational current I_n A	Rated ultimate short-circuit breaking capacity I_{cu} kA	Pole	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Main terminal kits							
Each basic device of the IZM26 series is supplied with horizontal connections as standard.[1]							
Vertical connections for fixed mounting or cassette							
	≦ 2000	≦ 65	3	IZM20… IN20…	**IZM-TV203N-2000** 123072		1 off
	4000	≦100	3	IZM40… IN40…	**IZM-TV403H-4000** 123081		
	≦ 2000	≦ 65	4	IZM20… IN20…	**IZM-TV204N-2000** 123086		
	4000	≦100	4	IZM40… IN40…	**IZM-TV404H-4000** 123095		
	≦ 1600	≦ 65	3	IZM32… IN32…	**IZM-TV323B-1600** 123074		
	≦ 2000	≦ 100	3	IZM32B…20 IN32B…20 IZM32H…, IN32H…	**IZM-TV323H-2000** 123075		
	2500 - 3200	100	3	IZM32… IN32…	**IZM-TV323H-3200** 123077		
	≦ 1600	≦ 65	4	IZM32… IN32…	**IZM-TV324B-1600** 123088		
	≦ 2000	≦ 100	4	IZM32B…20 IN32B…20 IZM32H…, IN32H…	**IZM-TV324H-2000** 123089		
	2500 - 3200	100	4	IZM32… IN32…	**IZM-TV324H-3200** 123091		
	4000	100	3	IZM63… IN63…	**IZM-TV633H-4000** 123082		
	5000 - 6300	100	3	IZM63… IN63…	**IZM-TV633H-6300** 123084		
	4000	100	4	IZM63… IN63…	**IZM-TV634H-4000** 123096		
	5000 - 6300	100	4	IZM63… IN63…	**IZM-TV634H-6300** 123098		
Front connections for fixed mounting or cassette							
	≦ 1250	≦ 65	3	IZM20… IN20…	**IZM-TF203N-1250** 123100		1 off
	≦ 1250	≦ 65	4	IZM20… IN20…	**IZM-TF204N-1250** 123108		
	1600 - 2000	≦ 65	3	IZM20… IN20…	**IZM-TF203N-2000** 123102		
	4000	≦100	3	IZM40… IN40… IZM63N(H)3...40[2]	**IZM-TF403H-4000** 123107		
	≦ 2000	≦ 65	4	IZM20… IN20…	**IZM-TF204N-2000** 123110		
	4000	≦100	4	IZM40… IN40… IZM63N(H)4...40[2]	**IZM-TF404H-4000** 123115		
	≦ 1250	≦ 65	3	IZM32B… IN32B…	**IZM-TF323B-1250** 124225		
	1600 - 2500	≦ 65	3	IZM32B… IN32B…	**IZM-TF323B-2500** 123104		
	≦ 3200	≦ 100	3	IZM32B…32... IN32B…32… IZM32N…, IN32N… IZM32H…, IN32H… IZM63N(H)3...50 (63)[2]	**IZM-TF323H-3200** 123105		
	≦ 1250	≦ 65	4	IZM32B… IN32B…	**IZM-TF324B-1250** 124280		
	≦ 2500	≦ 65	4	IZM32B… IN32B…	**IZM-TF324B-2500** 123112		
	≦ 3200	≦ 100	4	IZM32B…32... IN32B…32… IZM32N…, IN32N… IZM32H…, IN32H… IZM63N(H)4...50 (63)[2]	**IZM-TF324H-3200** 123113		

Notes

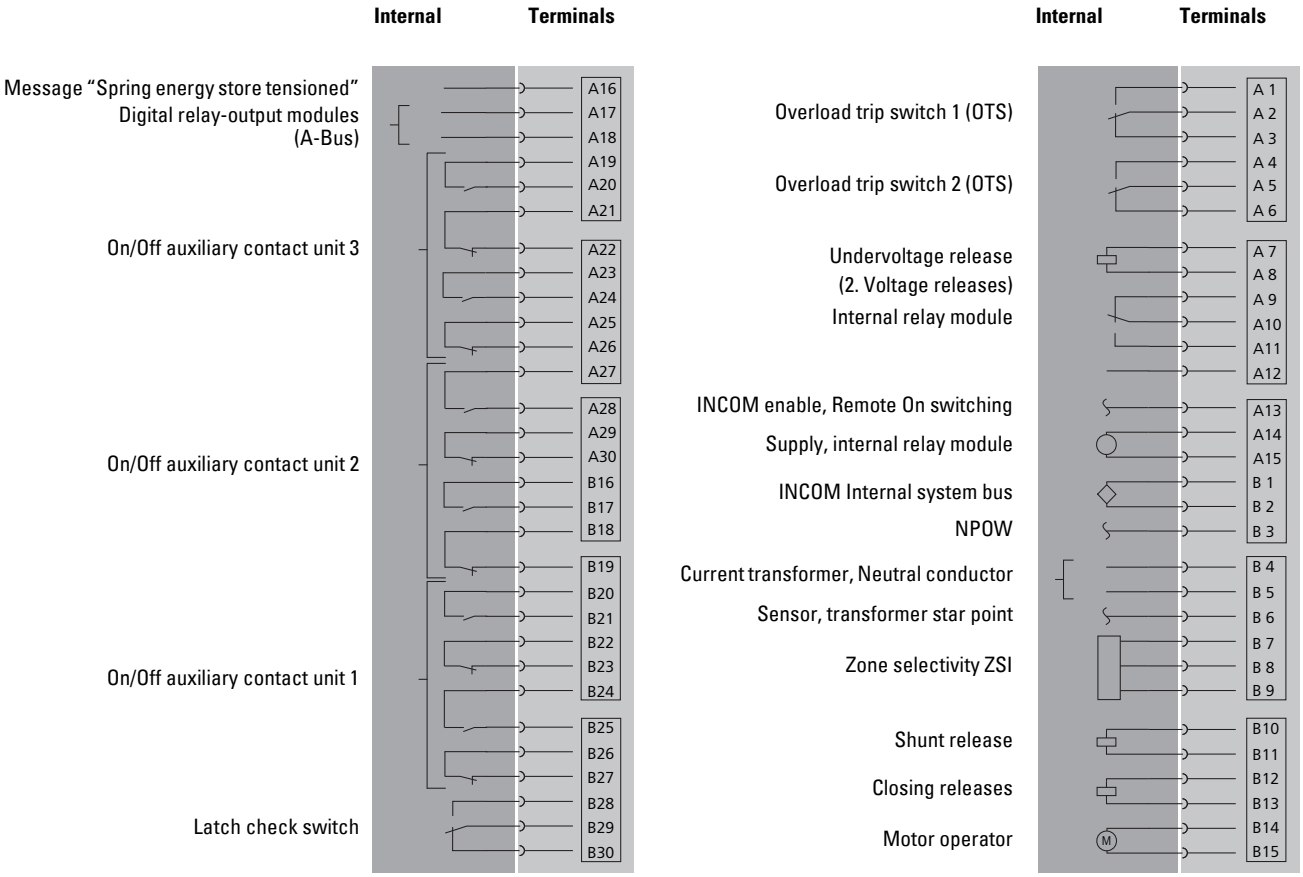
[1] For 3 pole switches: 6 off; for 4 pole switches: 8 off.
IZM40: For 3 pole switches: 12 off, for 4 pole switches: 16 off

[2] For use with this type, you must order the corresponding article twice.

	Rated control voltage U_s V	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
General accessories					
Control circuit terminal, 2 blocks Two terminal blocks, each for six control circuit terminals, complete with labels; AMP tool (AMP No. 305183) and internal wiring.					
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-SEC-TB2** 123116		1 off
Control circuit terminal, 15 blocks 15 terminal blocks, each for six control circuit terminals, with labels. Order wiring set separately.					
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-SEC-TB15** 123117		1 off
Wiring set for control circuit terminals Wiring material (built into switch), 90 wires for 15 terminal blocks.					
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-SEC-WR90** 122789		1 off
Spare door escutcheon, IP41 Spare part; the door escutcheon is supplied as standard with the basic unit or cassette.					
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-DEG** 122925		1 off
Protective cover, IP55					
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-DC** 122926		1 off
Lifting yoke for lifting Consists of two specially shaped steel hooks that engage in the molded lifting handles in the basic unit of the switch closure.					
	3	IZM20… IN20…	**IZM203-8651C91G09** 124237		1 off
	3	IZM32… IN32…	**IZM323-8651C91G02** 124239		
	3	IZM40… IN40…	**IZM403-2A10886G03** 124241		
	3	IZM63… IN63…	**IZM633-8651C91G05** 124243		
	4	IZM20… IN20…	**IZM204-8651C91G10** 124238		
	4	IZM32… IN32…	**IZM324-8651C91G07** 124240		
	4	IZM40… IN40…	**IZM404-2A10886G07** 124242		
	4	IZM63… IN63…	**IZM634-8651C91G08** 124245		
Trolley Allows lifting of the switch basic unit in combination with the lifting yoke.					
	–	IZM20, 32, 40, 63... IN20, 32, 40, 63...	**IZM-6727D63H20** 124246		1 off

Terminal assignment of control circuit terminals, Switch states.

IZM26

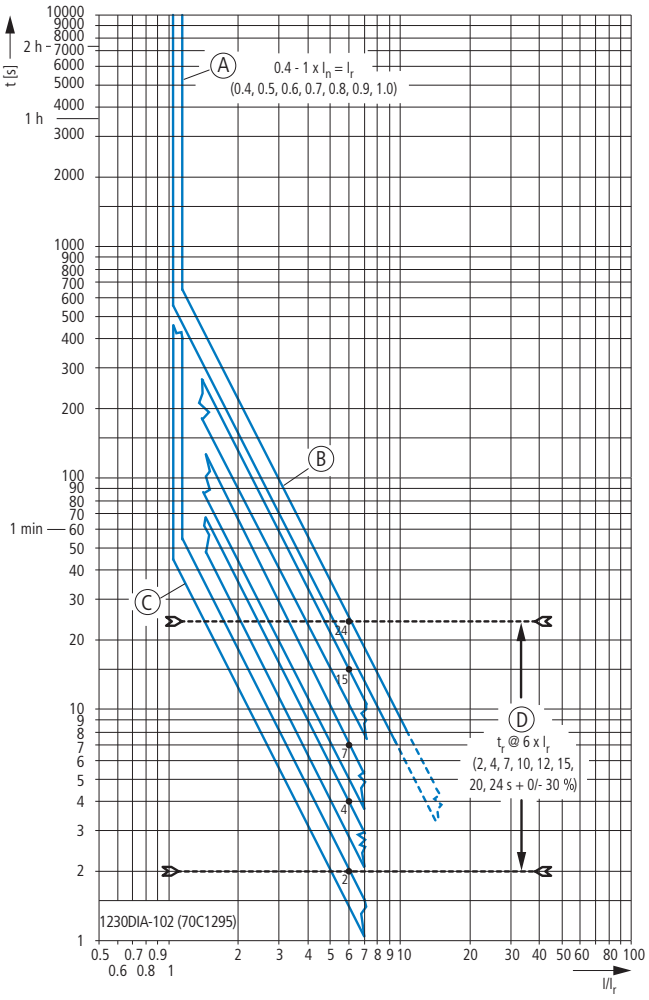


Switching states at mechanical interlock

Mechanical interlock	Possible switching states		
	Switch A	Switch B	
Part no. 2	0	0	
	1	0	
	0	1	
Part no. 31	Switch A	Switch B	Switch C
	0	0	0
	1	0	0
	0	1	0
	0	0	1
	1	0	1
Part no. 32	Switch A	Switch B	Switch C
	0	0	0
	1	0	0
	0	1	0
	0	0	1
	1	1	0
	0	1	1
	1	0	1
Part no. 33	Switch A	Switch B	Switch C
	0	0	0
	1	0	0
	0	1	0
	0	0	1

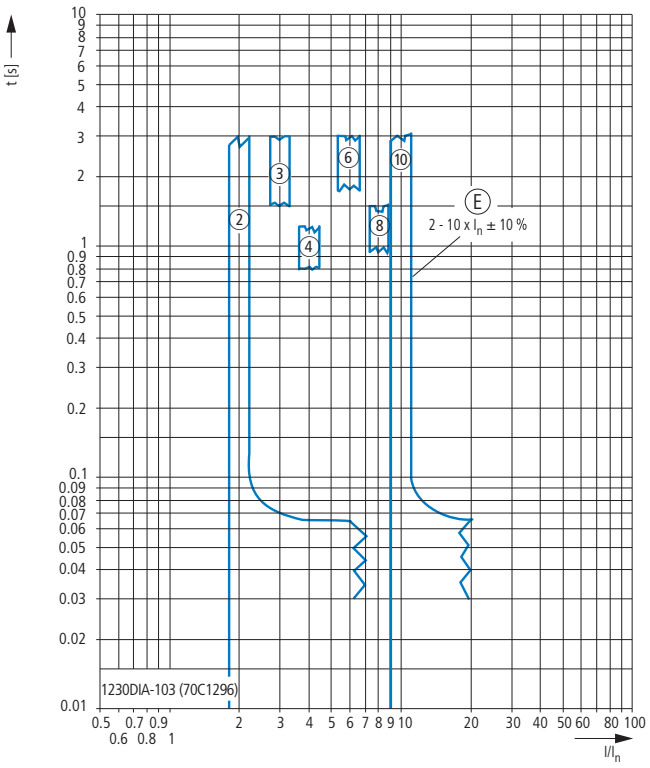
IZM26…A...Tripping characteristics for selective protection
Overload protection (L) and non-delayed short-circuit protection (I)

L-Protection: Adjustable
See Notes 1, 2, 3.



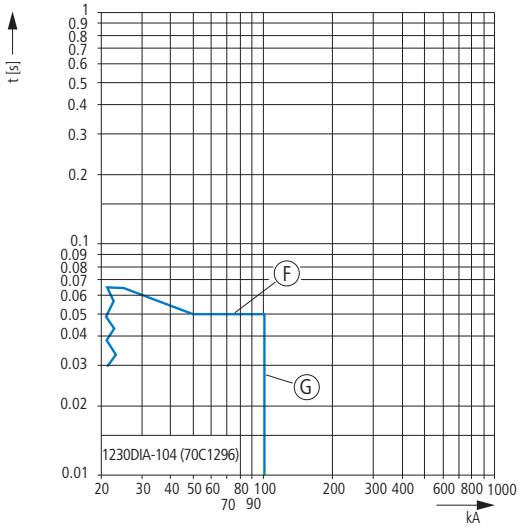
A Set values for overload protection
B Maximum total opening delay
C Minimum total opening delay
D Set values for long delay

I-protection: Adjustable
See Notes 3, 4, 5, 6, 7.



E Set values for short-time delayed short-circuit protection

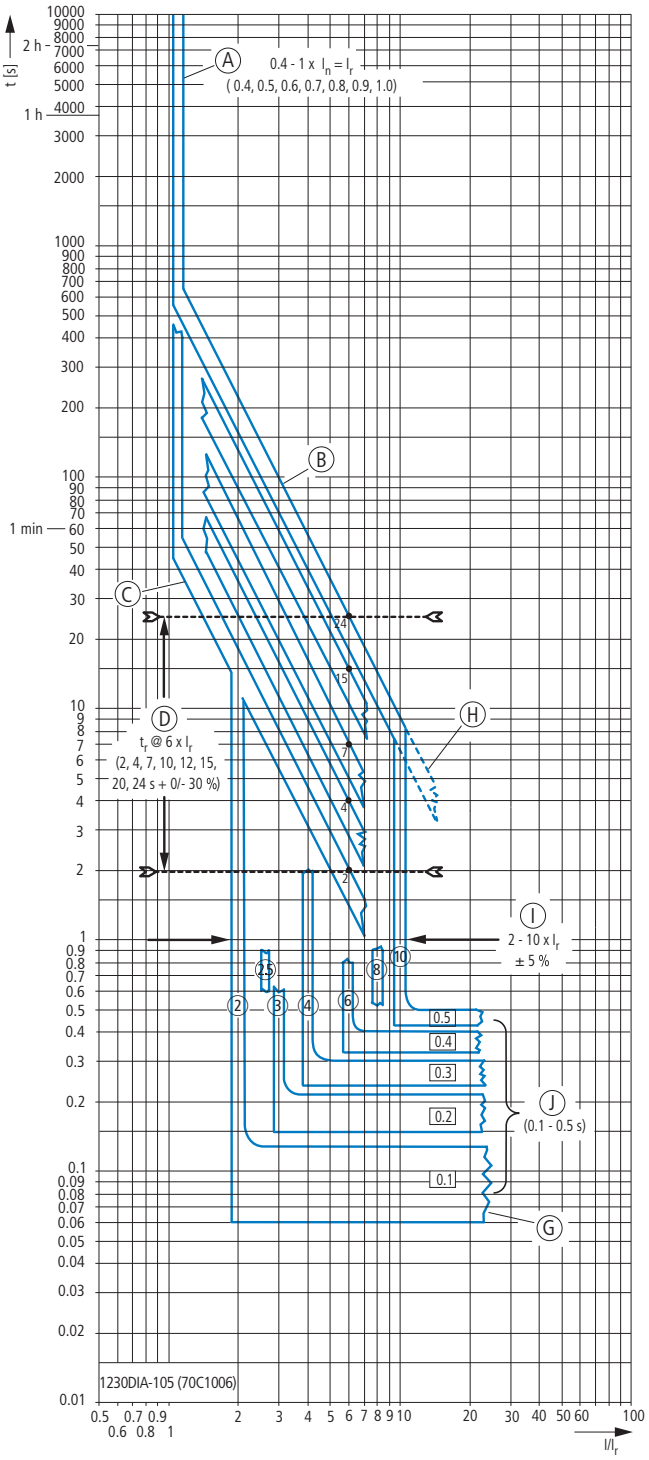
I-protection: For high short-circuit currents
See Notes 3, 4, 5, 6, 7.



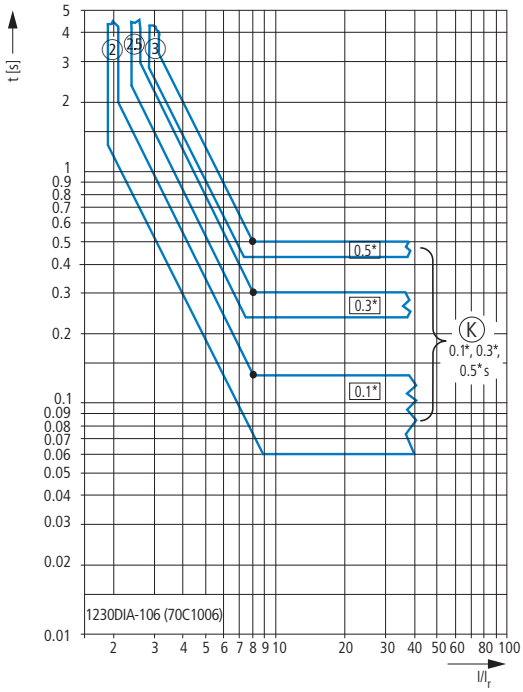
F Set values for short-time delayed short-circuit protection with flat characteristic curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

IZM26…V(U)... Tripping characteristics for selectivity protection and universal protection
Overload protection (L) and short-time delayed short-circuit protection (S)

L-Protection: I^2t characteristic curve and S protection: flat characteristic curve
See Notes 1, 3, 4, 6, 7, 8, 9, 10.



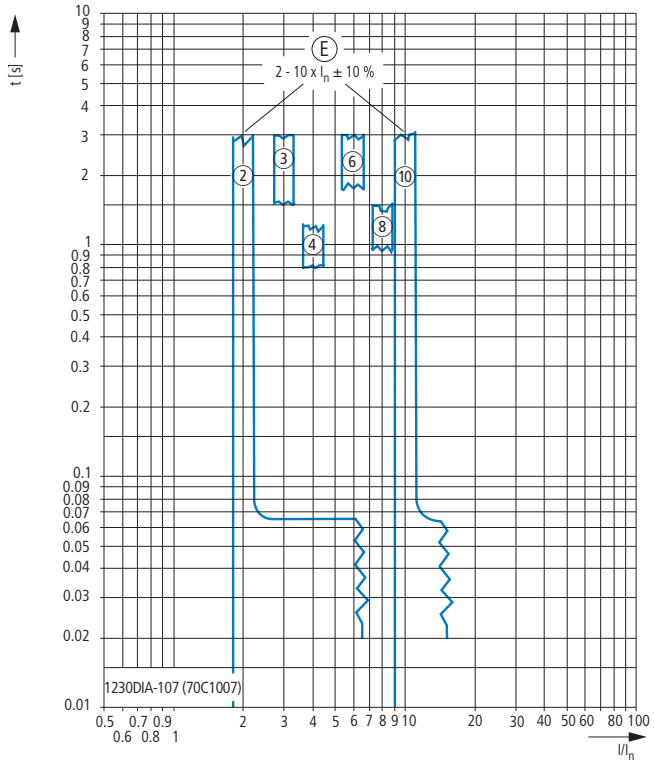
S protection: I^2t characteristic curve
See Notes 1, 3, 4, 6, 7, 8, 9, 10.



A Set values for overload protection
B Maximum total opening delay
C Minimum total opening delay
D Set values for long delay
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.
H The characteristic curve for the overload release can extend up to the M1 set value.
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
K Set values for ground fault protection

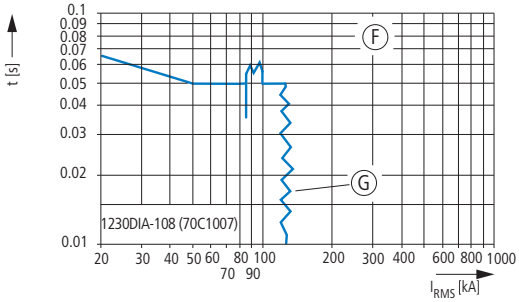
IZM26…V(U)... Tripping characteristics for selectivity protection and universal protection
Non-delayed short-circuit protection (I)

I-protection: Adjustable
See Notes 4, 5, 6, 7, 11, 12.



E Set values for short-time delayed short-circuit protection

I-protection: For high short-circuit currents
See Notes 4, 5, 6, 7, 11, 12.

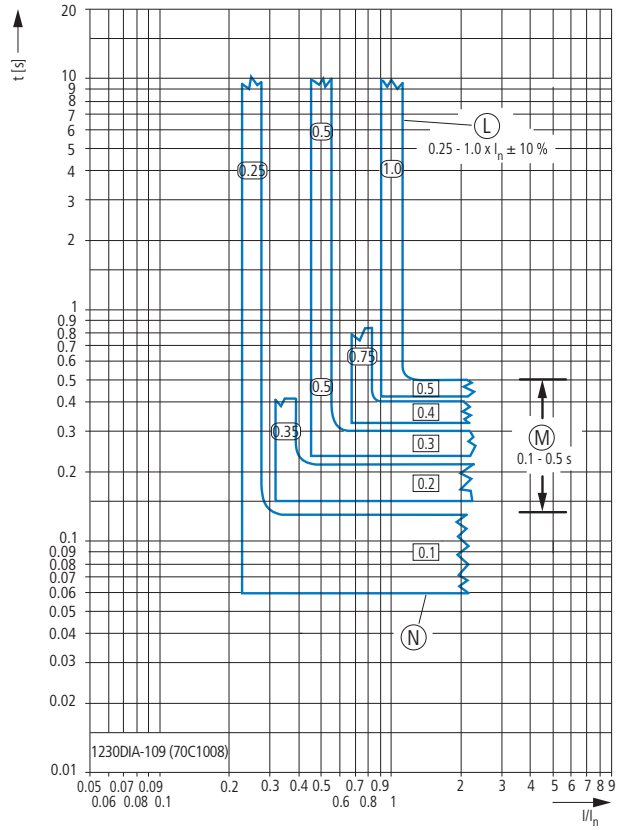


F Set values for short-time delayed short-circuit protection with flat characteristic curve

G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

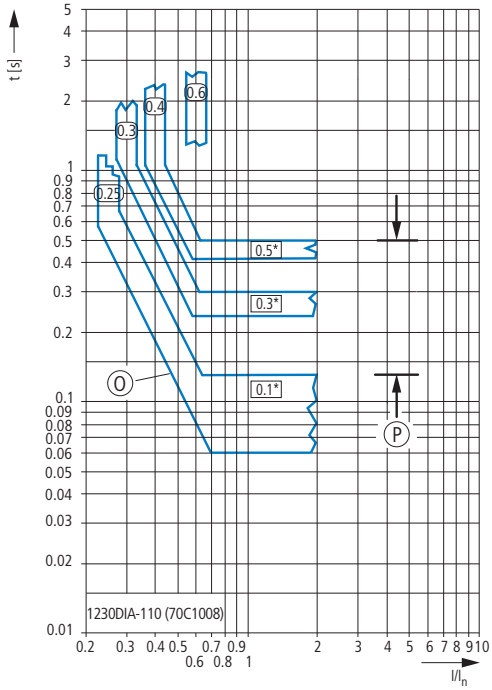
IZM26…V(U)... Option ground-fault protection +IZM-DTV(U)-E…

G: Ground fault protection, flat characteristic curve
See Notes 4, 6, 13, 14, 15, 16, 17.



L Set values for ground-fault protection
M Set values for ground-fault protection delay at flat characteristic curve
N Flat characteristic curve for the delay time fault protection

G: Ground fault protection, I^2t-Characteristic curve
See Notes 4, 6, 13, 14, 15, 16, 17.

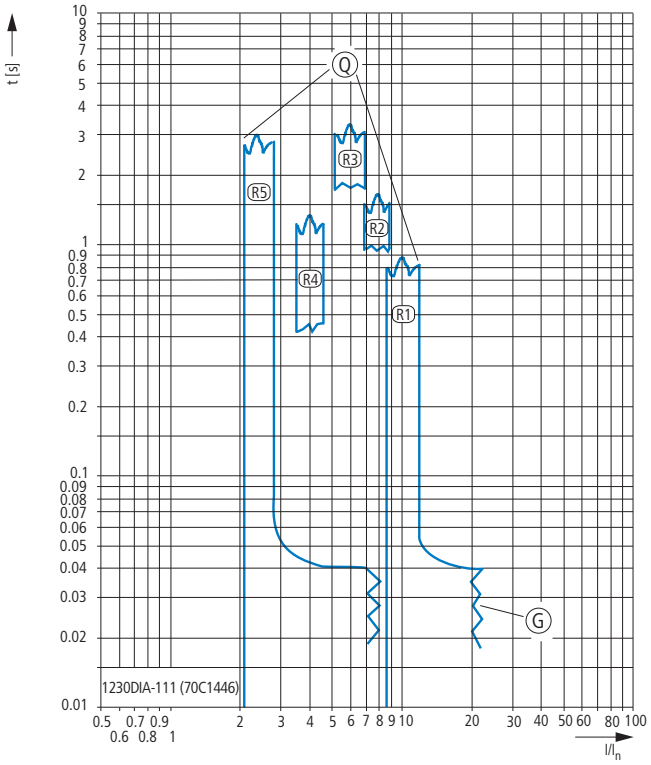


O I^2t characteristic for ground-fault protection delay time

P Set values for ground-fault protection delay with I^2t characteristic

IZM26…U... Option Maintenance mode option +IZM-DTU-ARMS

ARMS-maintenance mode
See Notes 4, 6, 12, 18, 19, 20, 21.



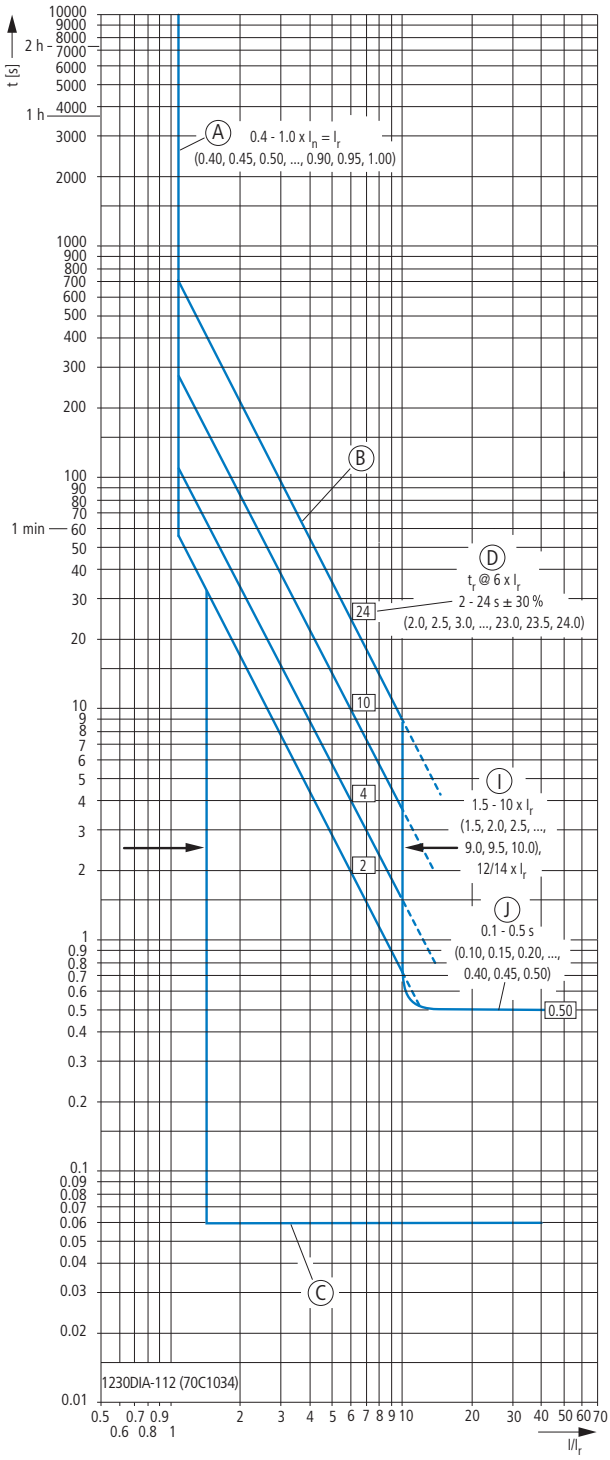
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

Q Set values for maintenance mode (ARMS):
R5 = max. reduction,
R1 = min. reduction

IZM26...P...

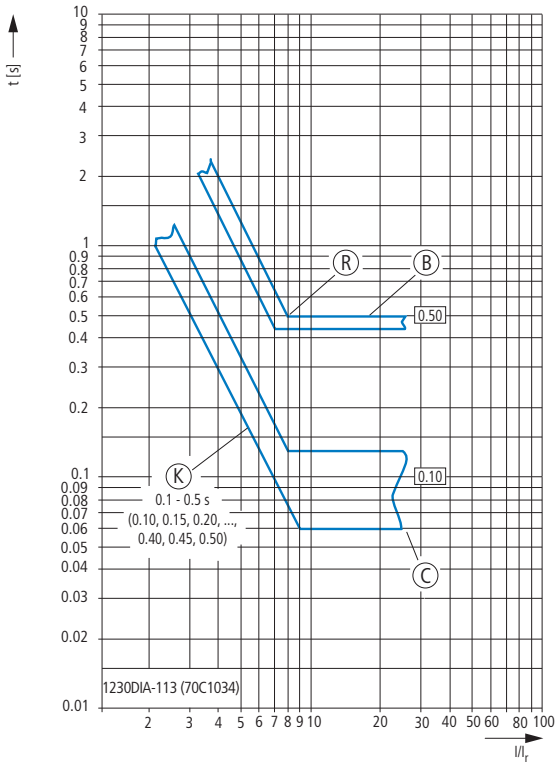
IZM26…P... Tripping characteristics for universal protection with power measurement
Overload protection (L) and short-time delayed short-circuit protection (S)

L-Protection: I^2t characteristic curve and S protection: flat characteristic curve
See Notes 1, 3, 7, 9, 22, 23, 24, 25, 26.



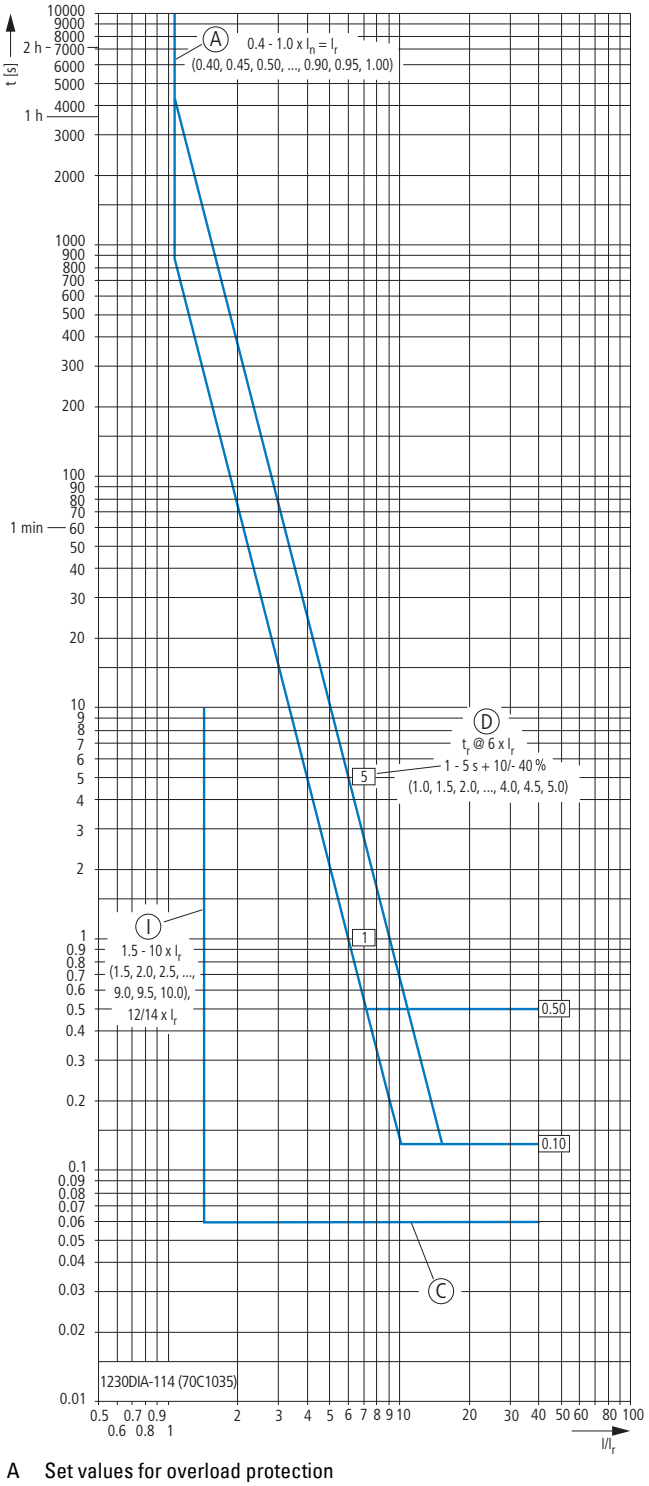
A Set values for overload protection
B Maximum total opening delay
C Minimum total opening delay
D Set values for long delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents

S protection: I^2t characteristic curve
See Notes 1, 3, 7, 9, 22, 23, 24, 25, 26.



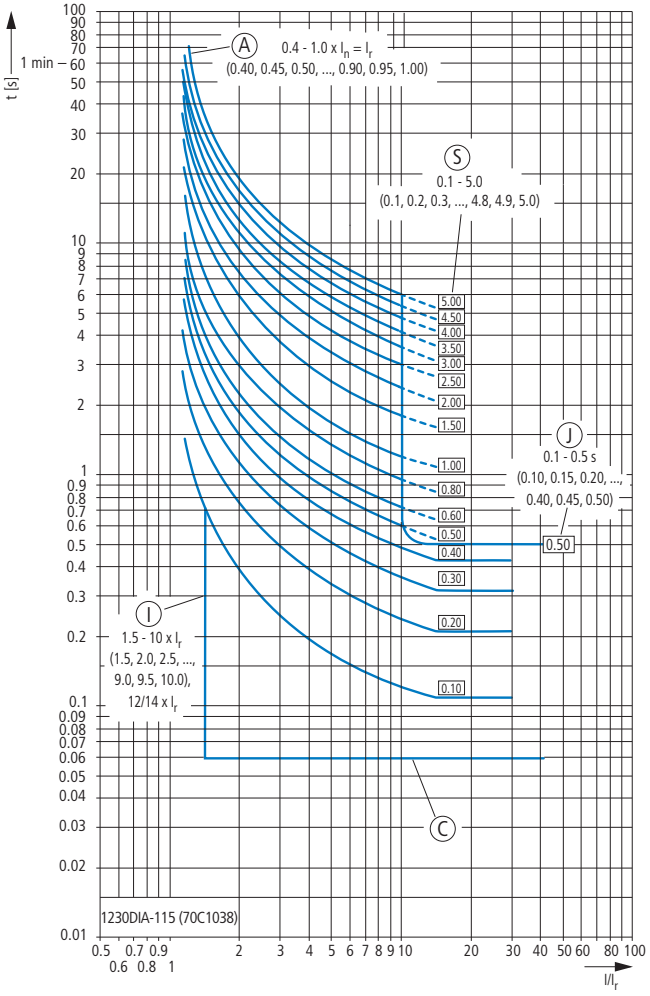
B Maximum total opening delay
C Minimum total opening delay
K Set values for ground fault protection
R Characteristic curve turning point

L protection: I^4t characteristic curve and S protection: flat characteristic curve
See Notes 1, 3, 7, 9, 22, 23, 24, 25, 27.



A Set values for overload protection
C Minimum total opening delay
D Set values for long delay
I Available set values for short-time delayed short-circuit protection I_{sd}

L protection: IEEE standard inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29.

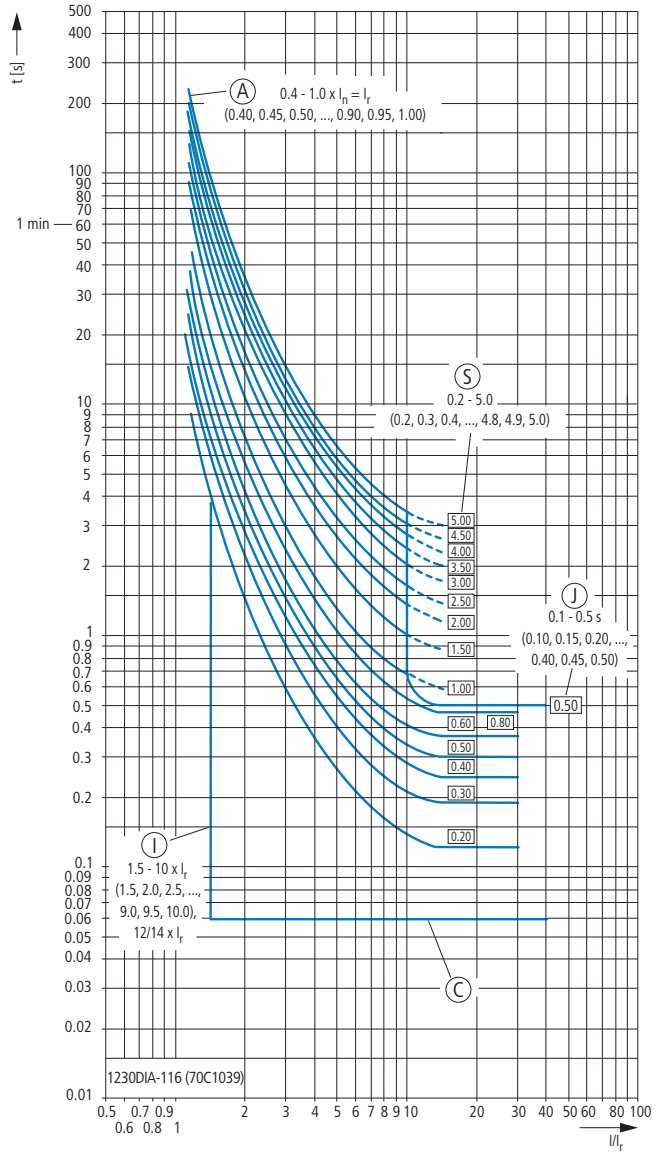


A Set values for overload protection
C Minimum total opening delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
S Long delay time at 14 × I_r

IZM26 tripping characteristics

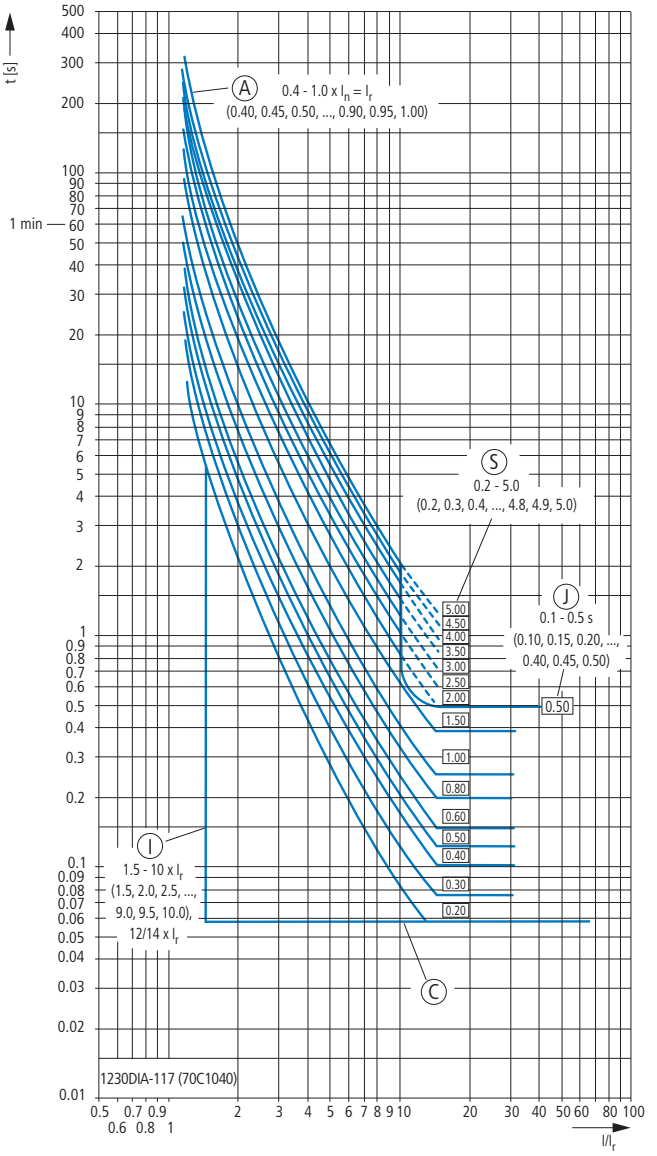
IZM26…(P)…

L protection: IEEE high inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29.



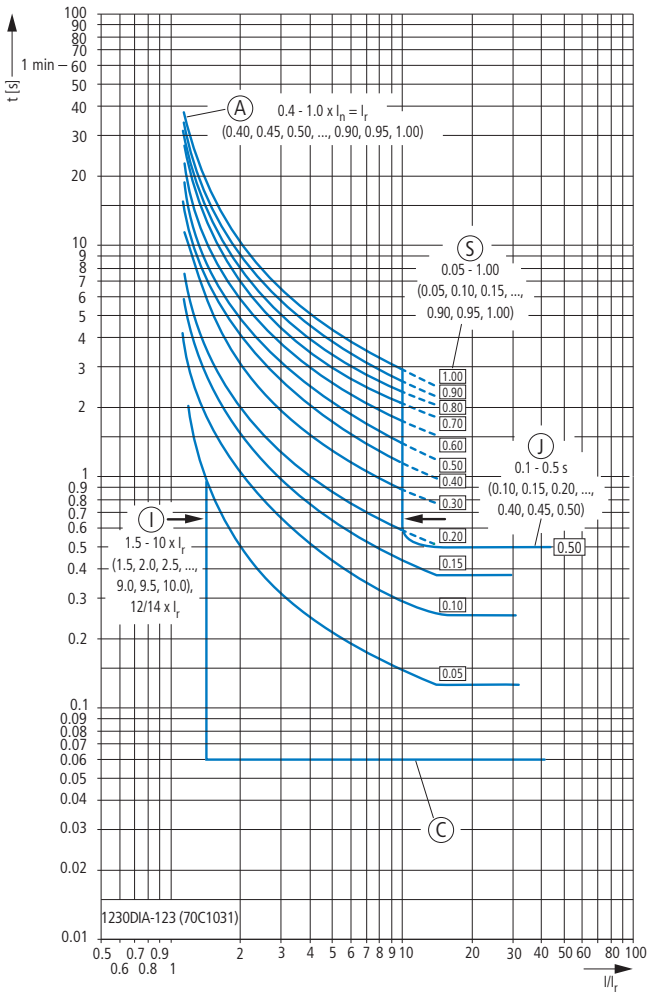
A Set values for overload protection
C Minimum total opening delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
S Long delay time at 14 × I_r

L protection: IEEE extreme inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29.



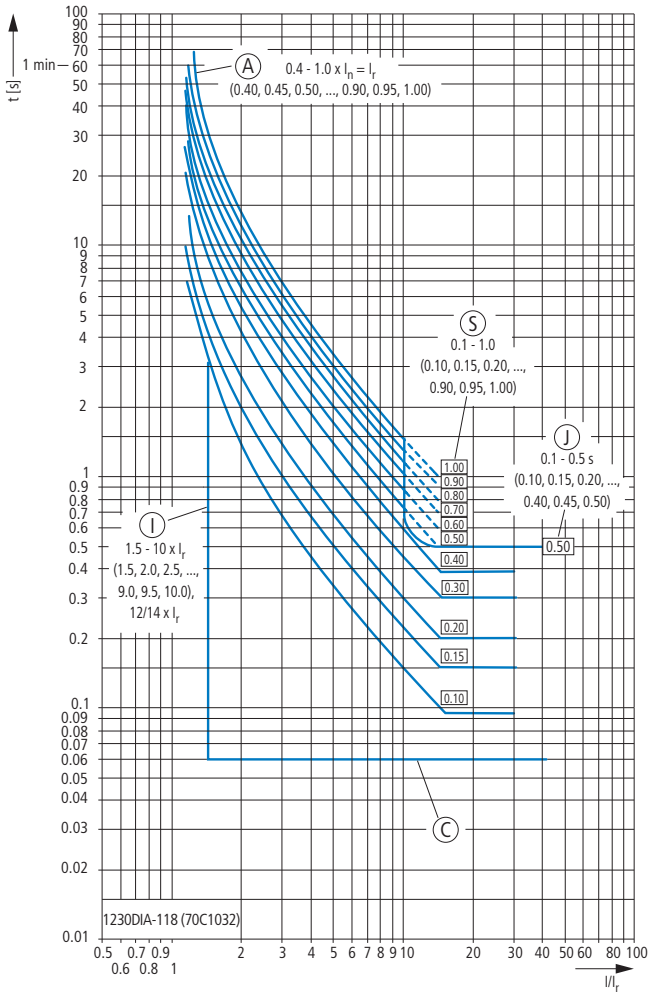
A Set values for overload protection
C Minimum total opening delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
S Long delay time at 14 × I_r

L protection: IEC-A standard inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29.



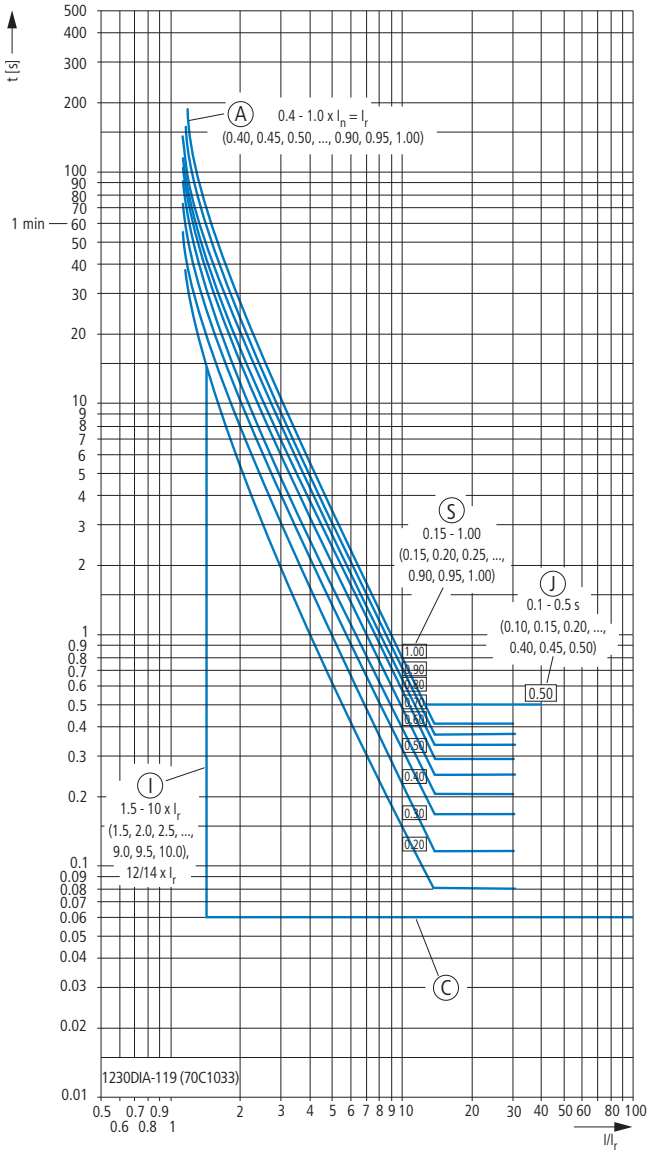
A Set values for overload protection
C Minimum total opening delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
S Long delay time at 14 × I_r

L protection: IEC-B high inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29.



A Set values for overload protection
C Minimum total opening delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
S Long delay time at 14 × I_r

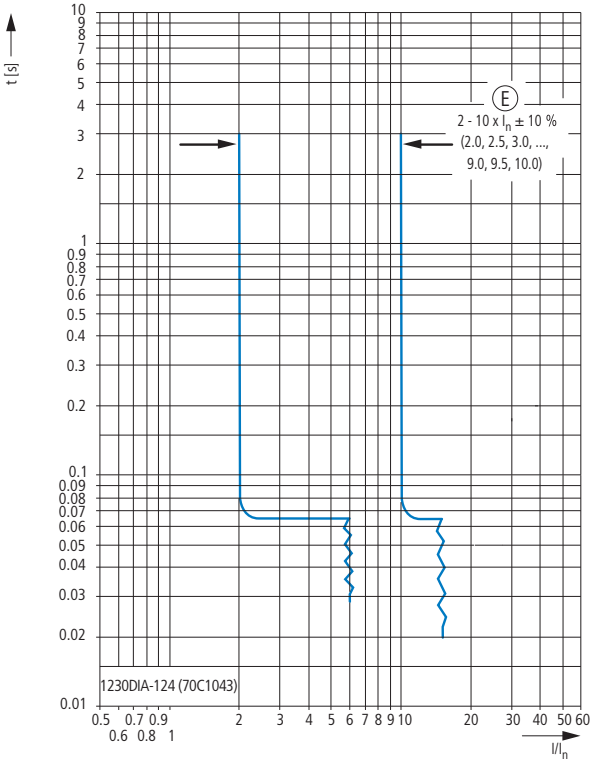
L protection: IEC-C extreme inverse tripping, and S protection: flat characteristic curve
See Notes 3, 7, 8, 9, 23, 25, 28, 29.



A Set values for overload protection
C Minimum total opening delay
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
S Long delay time at 14 × I_r

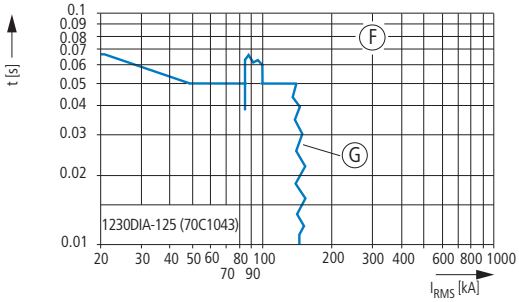
IZM26…P... Tripping characteristics for trip units with power measurement
Non-delayed short-circuit protection (I)

I-protection: Adjustable
See Notes 1, 4, 5, 6, 7, 11, 12.



E Set values for short-time delayed short-circuit protection

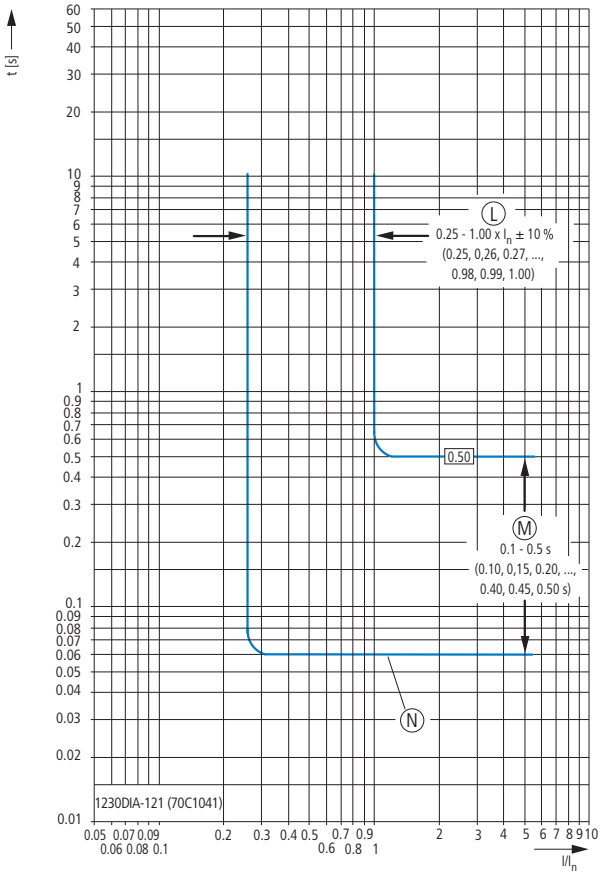
I-protection: For high short-circuit currents



F Set values for short-time delayed short-circuit protection with flat characteristic curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.

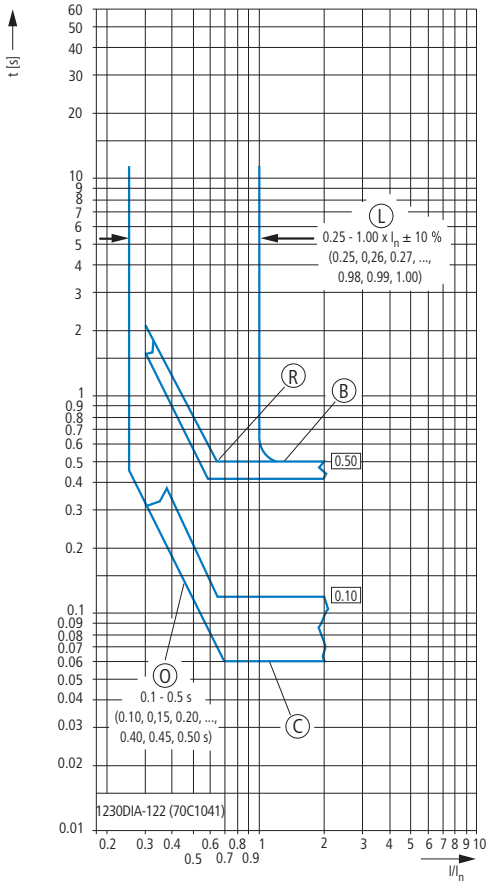
IZM26…P... Option Ground fault protection +IZM-DTP-E…

G: Ground fault protection, flat characteristic curve
See Notes 4, 6, 13, 14, 15, 16, 25, 26, 30.



L Set values for ground-fault protection
M Set values for ground-fault protection delay at flat characteristic curve
N Flat characteristic curve for the delay time fault protection

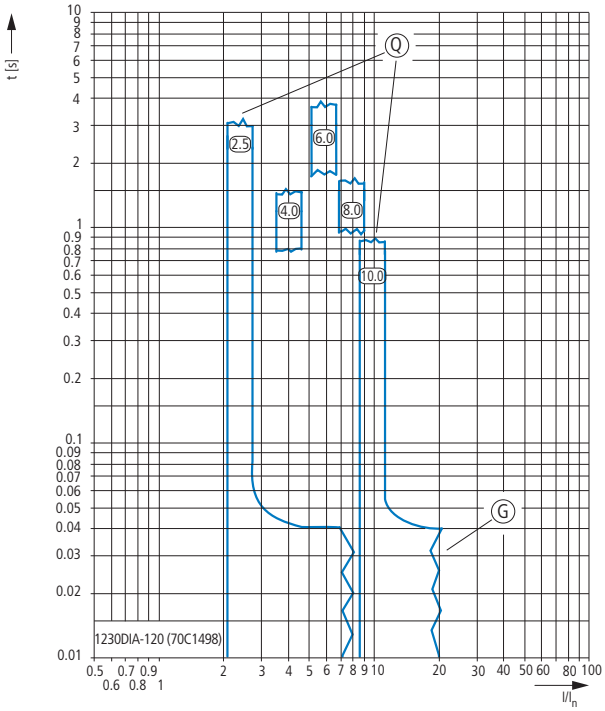
G: Ground fault protection, I²t-characteristic curve
See Notes 4, 6, 13, 14, 15, 16, 25, 26, 30.



B Maximum total opening delay
C Minimum total opening delay
L Set values for ground-fault protection
O I²t characteristic for ground-fault protection delay time
R Characteristic curve turning point

IZM26…P... Option Maintenance mode option +IZM-DTP-ARMS

ARMS-maintenance mode
See Notes 4, 6, 12, 18, 19, 20, 21.



G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.
Q Set values for maintenance mode (ARMS):
R5 = max. reduction, R1 = min. reduction

IZM26 tripping characteristics

IZM26...A(V)(U)(P)...

1 The trip unit has a thermal memory, which can shorten the tripping time in the overload range.

This function plays a role whenever a current is higher than the overload release's tripping time and which is then isolated by a downstream circuit-breaker or the circuit-breaker itself. On a subsequent overload current the circuit-breaker will trip more quickly than normal.

The reduced tripping time is inversely proportional to the time expired since the last overload. After about five minutes the thermal memory is reset.

2 The overload release is activated at a pick-up time of 110 % I_r with a tolerance of ±5 % (indicated by the lit "Unit Status" LED).

3 The characteristic curves apply to applications in a temperature range from -20 °C to +55 °C. Temperatures over +85 °C cause automatic tripping. The circuit-breaker must be selected according to the temperature-dependent derating values from the table in the technical data.

4 The end of the characteristic curve is determined by the type of application and the switching capacity of the selected circuit-breaker.

5 The non-delayed short-circuit release is activated at a response value of conventionally 100 % with a tolerance of ±10 %.

6 The listed overall switch-off times include the response times of the trip unit, the opening times of the switch and the time required to switch off the current.

7 Additional setting "max M1":

IZM20
M1 = 14 × I_n for nominal currents of 200 A to 1250 A
M1 = 12 × I_n for nominal currents of 1600 A to 2000 A

IZM32
M1 = 14 × I_n for nominal currents of 200 A to 1250 A
M1 = 12 × I_n for nominal currents of 1600 A to 2500 A
M1 = 10 × I_n for nominal currents of 3200 A

IZM40
M1 = 12 × I_n for nominal currents of 4000 A

IZM63
M1 = 14 × I_n for nominal currents of 2000 A to 2500 A
M1 = 12 × I_n for nominal currents of 3200 A to 5000 A
M1 = 10 × I_n for nominal currents of 6300 A

8 The overload release trips at 110 % I_r with a tolerance of ±5 % (indicated by the "Unit Status" LED).

The short-time delayed short-circuit release I_{sd} is activated at a pick-up time of conventionally 100 % with a tolerance of ±5 %.

9 When zone selectivity (ZSI) is activated in the short-time delayed short-circuit release and no blocking signal is applied, the minimum time value (0.10 s) applies irrespective of the short-time delay settings.

10 The upper lines of the I^2t characteristic curves are horizontal from a value of 8 × I_r (indicated by the points).

11 IZM circuit-breakers32 feature an additional, permanently set non-delayed short-circuit release, which is set to a peak value of 170 kA with a tolerance of ±10 %.

This protective function remains active when the non-delayed short-circuit release is switched off.

12 The listed overall switch-off times are conservative and take into account the trip unit's maximum response times, the circuit-breaker's maximum opening delays and the longest current interruption times with regard to factors that contribute to worst-case conditions, such as maximum rated operational voltage, single-phase interruptions and minimum power factor.

Fast disconnecting times are possible but depend on the system conditions and the circuit-breaker model.

13 The ground-fault release is activated at a response value of conventionally 100 % with a tolerance of ±10 %.

14 Unless otherwise specified, the current value tolerances are ±10 % of the values shown in the diagram.

15 In combination with ARMS function, ground-fault protection is limited to 1200 A.

16 When zone selectivity (ZSI) is activated in ground-fault protection and no blocking signal is applied, the minimum time value (flat characteristic curve) applies irrespective of the settings.

17 The upper lines of the I^2t characteristic curves are horizontal from a value of 0.625 × I_n (indicated by the points).

18 The maintenance mode function must be activated with a switch or through the communications terminals for these characteristic curves to apply. A blue LED indicates that the maintenance mode settings are active.

19 The shown switch-off times apply for connection to an additional auxiliary power supply.

20 Tripping by the Maintenance Mode Trip is indicated by the non-delayed short-circuit protection LED.

21 The nominal reduction values (response values), with a tolerance of ±15 % are:
2.5 x I_n (= R5), 4 x I_n (= R4), 6 x I_n (= R3), 8 x I_n (= R2), 10 x I_n (= R1)

22 This characteristic curve is shown as a multiple of the overload release setting I_r. The overload release trips at 110 % Ir with a tolerance of ±5 % (indicated by the "Unit Status" LED).

23 The delayed short-circuit release I_{sd} also has an "M1" setting, which may increase the response threshold when I_{sd} is active (at the curves' point of overlap).

24 The delayed short-circuit release I_{sd} trips at 100 %, with a tolerance of ±5 %.

25 Delay tolerances in the area of the flat characteristic curve:
The tolerance is +0/-80 ms of the set values, with the following exceptions:
At 100 ms the tolerance is 6 to 13 ms
At 150 ms the tolerance is 10 to 17 ms
At 200 ms the tolerance is 15 to 22 ms

26 I^2t-function
The upper lines of the I^2t characteristic curves are horizontal from a value of 8 × I_r (for ground-fault protection 0.625 × I_n), the lower limit value of the band following the line.

The characteristic curve has a tolerance of +0/-30 % for all settings except the following ones:
For 0.10 s +30 %/-25 %
For 0.15 s +20 %/-25 %
For 0.20 s +10 %/-25 %

For all characteristic curves the lower, minimum time value, which merges with the I^2t line, determines the break point and the shape of the upper characteristic curve.

27 In the time range ≦ 0.5 s the I^4t characteristic curve becomes horizontal. Tripping does not take place faster than the set short-time delay t_{sd}. (In the drawing a displacement of the characteristic curve is avoided.)

28 This characteristic curve is shown as a multiple of the overload release setting I_r.

This so-called "E-/IEC-... inverse" characteristic curve results from the time setting "TimeDial" in combination with the delayed short-circuit release I_{sd} and the delay t_{sd} (shown as thick lines). The non-delayed short-circuit release I_i, shown as a separate characteristic curve, can be disabled (Off position).

29 For each current > 1.2 × I_r the tolerance is [±15 %] or [-15 %, +90 ms], whichever is greater.

This characteristic curve flattens out for smaller time settings ("TimeDial": 0.1 to 0.4) at 14 × I_r and, if the curves overlap, merges with the characteristic curve for short-term delay I_{sd} for larger time settings ("TimeDial": 0.5 to 1.0).

The delay of the short-circuit release and the "TimeDial" time setting are applied independently of each other. The IEC-B (very inverse) characteristic curve always remains active, even when the lines cross over.

30 With Digitrip 1150 trip unit without ARMS function the ground-fault protection settings already begin at 0.1 × I_n.

A Set values for overload protection I_r
B Maximum total opening delay
C Minimum total opening delay
D Set value for long delay t_r
E Set value non-delayed short-circuit protection I_i
F Set values for short-time delayed short-circuit protection with flat characteristic curve
G The end of the characteristic curve is determined by the type of application and the switching capacity of the selected switch.
H Setting values for short time delay with i2t characteristic.
I Available set values for short-time delayed short-circuit protection I_{sd}
J Short-circuit release for very high currents
KP Set values for short-time delay at I^2t characteristic
L Set values for ground fault protection
M Set values for ground-fault protection delay at flat characteristic curve
N Flat characteristic curve for the deceleration time Ground fault protection
O I^2t characteristic for ground-fault protection delay time
P Set values for ground-fault protection delay with I^2t characteristic
q Set values for maintenance mode (ARMS):
R5 = max. reduction,
R1 = min. reduction
R Characteristic curve turning point
S Long delay time with 14 x I_r

Rating-Plug-Combinations for IZM20…

Rating plugs (plus types, 3 pole)

I_u [A]	800	1000	1250	1600	2000
I_n [A]					
200	+IZM-RP203-200				
250	+IZM-RP203-250				
300	+IZM-RP203-300				
400	+IZM-RP203-400				
630	+IZM-RP203-630				
800	Standard	+IZM-RP203-800			
1000		Standard	+IZM-RP203-1000		
1250			Standard	+IZM-RP203-1250	
1600				Standard	+IZM-RP203-1600
2000					Standard

Rating plugs (plus types, 4 pole)

I_u [A]	800	1000	1250	1600	2000
I_n [A]					
200	+IZM-RP204-200				
250	+IZM-RP204-250				
300	+IZM-RP204-300				
400	+IZM-RP204-400				
630	+IZM-RP204-630				
800	Standard	+IZM-RP204-800			
1000		Standard	+IZM-RP204-1000		
1250			Standard	+IZM-RP204-1250	
1600				Standard	+IZM-RP204-1600
2000					Standard

Rating-Plug-Combinations for IZM32…

Rating plugs (plus types, 3 pole)

I_u [A]	800	1000	1250	1600	2000	2500	3200
I_n [A]							
200	+IZM-RP323-200						
250	+IZM-RP323-250						
300	+IZM-RP323-300						
400	+IZM-RP323-400						
630	+IZM-RP323-630						
800	Standard	+IZM-RP323-800					
1000		Standard	+IZM-RP323-1000				
1250			Standard	+IZM-RP323-1250			
1600				Standard	+IZM-RP323-1600		
2000					Standard	+IZM-RP323-2000	
2500						Standard	+IZM-RP323-2500
3200							Standard

Rating plugs (plus types, 4 pole)

I_u [A]	800	1000	1250	1600	2000	2500	3200
I_n [A]							
200	+IZM-RP324-200						
250	+IZM-RP324-250						
300	+IZM-RP324-300						
400	+IZM-RP324-400						
630	+IZM-RP324-630						
800	Standard	+IZM-RP324-800					
1000		Standard	+IZM-RP324-1000				
1250			Standard	+IZM-RP324-1250			
1600				Standard	+IZM-RP324-1600		
2000					Standard	+IZM-RP324-2000	
2500						Standard	+IZM-RP324-2500
3200							Standard

Rating-Plug-Combinations for IZM40…

Rating plugs (plus types, 3- and 4 pole)

	3 pole	4 pole
I_u [A]	4000	4000
I_n [A]		
2000	+IZM-RP403-2000	+IZM-RP404-2000
2500	+IZM-RP403-2500	+IZM-RP404-2500
3200	+IZM-RP403-3200	+IZM-RP404-3200
4000	Standard	Standard

Rating-Plug-Combinations for IZM63…

Rating plugs (plus types, 3 pole)

I_u [A]	4000	5000	6300
I_n [A]			
2000		+IZM-RP633-2000	
2500		+IZM-RP633-2500	
3200		+IZM-RP633-3200	
4000	Standard	+IZM-RP633-4000	
5000		Standard	+IZM-RP633-5000
6300			Standard

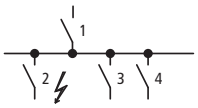
Rating plugs (plus types, 4 pole)

I_u [A]	4000	5000	6300
I_n [A]			
2000		+IZM-RP634-2000	
2500		+IZM-RP634-2500	
3200		+IZM-RP634-3200	
4000	Standard	+IZM-RP634-4000	
5000		Standard	+IZM-RP634-5000
6300			Standard

IZM circuit-breakers, IN switch-disconnectors

Selectivity: incoming circuit-breaker, outgoing circuit-breaker

IZM20...



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short-circuit breaking capacity
I_i: Set value non-delayed short-circuit releases

Selectivity 415 V AC
between circuit-breakers enables the separate isolation of faulty system sections.
Selectivity exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, only outgoing circuit-breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 remain operational.

Selection:
Provided that the short-circuit current does not exceed those values specified ($I_{cc\ rms}$).
These details represent the limits of selectivity.
Both circuit-breakers will switch off with higher short-circuit currents.
On IZM circuit-breakers with V, U, P releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

	Incoming circuit-breaker (1)	**IZM...20-A**										**IZM...20-V**						
	I_n [A]	800	800	1000	1000	1250	1250	1600	1600	2000	2000	800	800	1000	1000	1250	1250	1600
	I_{cu} [kA]	50	65	50	65	50	65	50	65	50	65	50	65	50	65	50	65	50
	I_i [A]	8000	8000	10000	10000	12500	12500	16000	16000	20000	20000	11200	11200	14000	14000	17500	17500	19200
Outgoing circuit-breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	B	N	B	N	B	N	B	N	B	N	B	N	B	N	B	N	B
			Prospective short-circuit current ($I_{cc\ rms}$ in kA)										Prospective short-circuit current ($I_{cc\ rms}$ in kA)						
NZMB(C)(N)(H)1-A(M)…	20	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	25	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	32	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	40	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	50	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	63	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	80	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	100	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	125	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
	160	25 - 100	9	9	15	15	T(25)	T(25)	T	T(50)	T	T	T	T	T	T	T	T	T
NZMB(C)(N)(H) 2-A(M)(V)…	20	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	25	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	32	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	40	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	50	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	63	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	80	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	90	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	100	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	125	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	140	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	160	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	200	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	220	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	250	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
	300	25 - 150	10	10	18	18	T(30)	T(30)	T	T	T	T	T	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)…	220	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	250	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	320	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	350	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	400	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	450	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	500	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
	630	36 - 150	7	7	9	9	12	12	18	18	25	25	T	T	T	T	T	T	T
NZMN(H)4-A(M)(V)…	550	50 - 100	7	7	9	9	12	12	15	15	18	18	T	T	T	T	T	T	T
	630	50 - 100	7	7	9	9	12	12	15	15	18	18	T	T	T	T	T	T	T
	800	50 - 100	-	-	9	9	12	12	15	15	18	18	-	-	T	T	T	T	T
	875	50 - 100	-	-	9	9	12	12	15	15	18	18	-	-	T	T	T	T	T
	1000	50 - 100	-	-	-	-	12	12	15	15	18	18	-	-	-	-	T	T	T
	1250	50 - 100	-	-	-	-	-	-	15	15	18	18	-	-	-	-	-	-	T
	1400	50 - 100	-	-	-	-	-	-	15	15	18	18	-	-	-	-	-	-	T
	1600	50 - 100	-	-	-	-	-	-	-	-	18	18	-	-	-	-	-	-	-

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

			IZM...20-U										**IZM20...-P**									
1600	2000	2000	800	800	1000	1000	1250	1250	1600	1600	2000	2000	800	800	1000	1000	1250	1250	1600	1600	2000	2000
65	50	65	50	65	50	65	50	65	50	65	50	65	50	65	50	65	50	65	50	65	50	65
19200	24000	24000	11200	11200	14000	14000	17500	17500	19200	19200	24000	24000	11200	11200	14000	14000	17500	17500	19200	19200	24000	24000
N	B	N	B	N	B	N	B	N	B	N	B	N	B	N	B	N	B	N	B	N	B	N
			Prospective short-circuit current ($I_{cc\ rms}$ in kA)										Prospective short-circuit current ($I_{cc\ rms}$ in kA)									
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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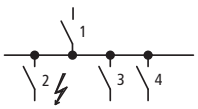
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	-	-	T	T	T	T	T	T	T	T	-	-	T	T	T	T	T	T	T	T
T	T	T	-	-	T	T	T	T	T	T	T	T	-	-	T	T	T	T	T	T	T	T
T	T	T	-	-	-	-	T	T	T	T	T	T	-	-	-	-	T	T	T	T	T	T
T	T	T	-	-	-	-	-	-	T	T	T	T	-	-	-	-	-	-	T	T	T	T
T	T	T	-	-	-	-	-	-	T	T	T	T	-	-	-	-	-	-	T	T	T	T
-	T	T	-	-	-	-	-	-	-	-	T	T	-	-	-	-	-	-	-	-	T	T

IZM circuit-breakers, IN switch-disconnectors

Selectivity: incoming circuit-breaker, outgoing circuit-breaker

IZM32...



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short-circuit breaking capacity
I_i: Set value non-delayed short-circuit releases

Selectivity 415 V AC
between circuit-breakers enables the separate isolation of faulty system sections.
Selectivity exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 continue to operate.

Selection:
Provided that the short-circuit current does not exceed those values specified ($I_{cc\ rms}$).
These details represent the limits of selectivity.
Both circuit-breakers will switch off with higher short-circuit currents.
On IZM circuit-breakers with V, U, P releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

	Incoming circuit-breaker (1)		**IZM...32-A**																			
		I_n [A]	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200
		I_{cu} [kA]	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65
		I_i [A]	8000	8000	8000	10000	10000	10000	12500	12500	12500	16000	16000	16000	20000	20000	20000	25000	25000	25000	32000
Outgoing circuit-breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B

			Prospective short-circuit current ($I_{cc\ rms}$ in kA)																		
NZMB(C)(N)(H)1-A(M)…	20	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	25	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	32	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	40	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	50	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	63	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	80	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	100	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	125	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
	160	25 - 100	9	9	9	15	15	15	T(25)	T(25)	T(25)	T(50)	T(50)	T(50)	T	T	T(85)	T	T	T	T
NZMB(C)(N)(H)2-A(M)(V)…	20	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	25	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	32	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	40	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	50	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	63	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	80	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	90	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	100	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	125	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	140	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	160	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	200	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	220	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	250	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
	300	25 - 150	10	10	10	18	18	18	T(30)	T(30)	T(30)	T	T	T(85)	T	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)…	220	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	250	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	320	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	350	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	400	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	450	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	500	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
	630	36 - 150	7	7	7	9	9	9	12	12	12	18	18	18	20	20	20	T(40)	T(40)	T(40)	T(60)
NZMN(H)4-A(M)(V)…	550	50 - 100	7	7	7	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	630	50 - 100	7	7	7	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	800	50 - 100	–	–	–	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	875	50 - 100	–	–	–	9	9	9	12	12	12	15	15	15	18	18	18	22	22	22	29
	1000	50 - 100	–	–	–	–	–	–	12	12	12	15	15	15	18	18	18	22	22	22	29
	1250	50 - 100	–	–	–	–	–	–	–	–	–	15	15	15	18	18	18	22	22	22	29
	1400	50 - 100	–	–	–	–	–	–	–	–	–	15	15	15	18	18	18	22	22	22	29
	1600	50 - 100	–	–	–	–	–	–	–	–	–	–	–	–	18	18	18	22	22	22	29

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

		IZM...32-V																				
3200	3200	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200	3200	3200
85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100
32000	32000	11200	11200	11200	14000	14000	14000	17500	17500	17500	19200	19200	19200	24000	24000	24000	30000	30000	30000	32000	32000	32000
N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
		Prospective short-circuit current ($I_{cc\ rms}$ in kA)																				
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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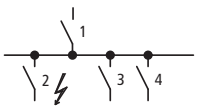
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T(60)	T(60)	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
29	29	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T

IZM circuit-breakers, IN switch-disconnectors

Selectivity: incoming circuit-breaker, outgoing circuit-breaker

IZM32...



I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short-circuit breaking capacity
I_i: Set value non-delayed short-circuit releases

Selectivity 415 V AC
between circuit-breakers enables the separate isolation of faulty system sections.
Selectivity exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 continue to operate.

Selection:
Provided that the short-circuit current does not exceed those values specified ($I_{cc\ rms}$).
These details represent the limits of selectivity.
Both circuit-breakers will switch off with higher short-circuit currents.
On IZM circuit-breakers with V, U, P releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

	Incoming circuit-breaker (1)		**IZM...32-U**																			
		I_n [A]	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200
		I_{cu} [kA]	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65
		I_i [A]	11200	11200	11200	14000	14000	14000	17500	17500	17500	19200	19200	19200	24000	24000	24000	30000	30000	30000	32000
Outgoing circuit-breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B
			Prospective short-circuit current ($I_{cc\ rms}$ in kA)																		
NZMB(C)(N)(H)1-A(M)…	20	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMB(C)(N)(H)2-A(M)(V)…	20	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	90	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	140	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	220	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	300	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)…	220	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	350	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	450	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMN(H)4-A(M)(V)…	550	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	50 - 100	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	875	50 - 100	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1000	50 - 100	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T
	1250	50 - 100	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T
	1400	50 - 100	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T
	1600	50 - 100	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

		IZM32...-P																				
3200	3200	800	800	800	1000	1000	1000	1250	1250	1250	1600	1600	1600	2000	2000	2000	2500	2500	2500	3200	3200	3200
85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100	65	85	100
32000	32000	11200	11200	11200	14000	14000	14000	17500	17500	17500	19200	19200	19200	24000	24000	24000	30000	30000	30000	32000	32000	32000
N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H	B	N	H
		Prospective short-circuit current ($I_{cc\ rms}$ in kA)																				
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
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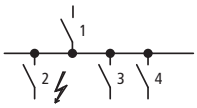
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
T	T	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
T	T	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T	T	T	T
T	T	–	–	–	–	–	–	–	–	–	–	–	–	T	T	T	T	T	T	T	T	T

Selectivity: incoming circuit-breaker, outgoing circuit-breaker

IZM40...



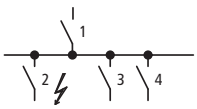
I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short-circuit breaking capacity
I_i: Set value non-delayed short-circuit release

Selectivity 415 V AC
between circuit-breakers enables the separate isolation of faulty system sections.
Selectivity exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 remain operational.

Selection:
Provided that the short-circuit current does not exceed those values specified ($I_{cc\ rms}$).
These details represent the limits of selectivity.
Both circuit-breakers will switch off with higher short-circuit currents.
On IZM circuit-breakers with V, U, P releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

	Incoming circuit-breaker		**IZM...40-V**		**IZM...40-U**		**IZM40...-P**	
	I_n [A]		4000	4000	4000	4000	4000	4000
	I_{cu} [kA]		85	100	85	100	85	100
	I_i [A]		48000	48000	48000	48000	48000	48000
Outgoing circuit-breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	N	H	N	H	N	H
			Prospective short-circuit current ($I_{cc\ rms}$ in kA)					
NZMB(C)(N)(H)1-A(M)…	20	25 - 100	T	T	T	T	T	T
	25	25 - 100	T	T	T	T	T	T
	32	25 - 100	T	T	T	T	T	T
	40	25 - 100	T	T	T	T	T	T
	50	25 - 100	T	T	T	T	T	T
	63	25 - 100	T	T	T	T	T	T
	80	25 - 100	T	T	T	T	T	T
	100	25 - 100	T	T	T	T	T	T
	125	25 - 100	T	T	T	T	T	T
	160	25 - 100	T	T	T	T	T	T
NZMB(C)(N)(H)2-A(M)(V)…	20	25 - 150	T	T	T	T	T	T
	25	25 - 150	T	T	T	T	T	T
	32	25 - 150	T	T	T	T	T	T
	40	25 - 150	T	T	T	T	T	T
	50	25 - 150	T	T	T	T	T	T
	63	25 - 150	T	T	T	T	T	T
	80	25 - 150	T	T	T	T	T	T
	90	25 - 150	T	T	T	T	T	T
	100	25 - 150	T	T	T	T	T	T
	125	25 - 150	T	T	T	T	T	T
	140	25 - 150	T	T	T	T	T	T
	160	25 - 150	T	T	T	T	T	T
	200	25 - 150	T	T	T	T	T	T
	220	25 - 150	T	T	T	T	T	T
	250	25 - 150	T	T	T	T	T	T
	300	25 - 150	T	T	T	T	T	T
NZMC(N)(H)3-A(M)(V)…	220	36 - 150	T	T	T	T	T	T
	250	36 - 150	T	T	T	T	T	T
	320	36 - 150	T	T	T	T	T	T
	350	36 - 150	T	T	T	T	T	T
	400	36 - 150	T	T	T	T	T	T
	450	36 - 150	T	T	T	T	T	T
	500	36 - 150	T	T	T	T	T	T
	630	36 - 150	T	T	T	T	T	T
NZMN(H)4-A(M)(V)…	550	50 - 100	T	T	T	T	T	T
	630	50 - 100	T	T	T	T	T	T
	800	50 - 100	T	T	T	T	T	T
	875	50 - 100	T	T	T	T	T	T
	1000	50 - 100	T	T	T	T	T	T
	1250	50 - 100	T	T	T	T	T	T
	1400	50 - 100	T	T	T	T	T	T
	1600	50 - 100	T	T	T	T	T	T

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity



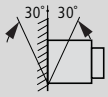
I_n: Rated operational current
I_u: Rated uninterrupted current
I_{cu}: Rated short-circuit breaking capacity
I_i: Set value non-delayed short-circuit releases

Selectivity 415 V AC
between circuit-breakers enables the separate isolation of faulty system sections.
Selectivity exists between incoming circuit-breaker 1 and outgoing circuit-breaker 2 if, only outgoing breaker 2 trips at position 2 during a short-circuit.
System sections 3 and 4 continue to operate.

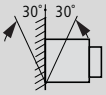
Selection:
Provided that the short-circuit current does not exceed those values specified ($I_{cc\ rms}$).
These details represent the limits of selectivity.
Both circuit-breakers will switch off with higher short-circuit currents.
On IZM circuit-breakers with V, U, P releases, the delay time t_{sd} must be at least 100 ms longer than the delay time of the next downstream levels (2, 3, 4).

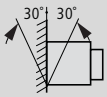
	Incoming circuit-breaker (1)		**IZM...63-V**						**IZM...63-U**						**IZM63...-P**					
	I_n [A]		4000	4000	5000	5000	6300	6300	4000	4000	5000	5000	6300	6300	4000	4000	5000	5000	6300	6300
	I_{cu} [kA]		85	100	85	100	85	100	85	100	85	100	85	100	85	100	85	100	85	100
	I_i [A]		48000	48000	60000	60000	63000	63000	48000	48000	60000	60000	63000	63000	48000	48000	60000	60000	63000	63000
Outgoing circuit-breaker (2)	I_u [A]	$I_{cu2(415V)}$ [kA]	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H	N	H
			Prospective short-circuit current ($I_{cc\ rms}$ in kA)																	
NZMB(C)(N)(H) 1-A(M)…	20	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMB(C)(N)(H) 2-A(M)(V)…	20	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	25	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	32	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	40	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	50	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	63	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	80	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	90	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	100	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	125	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	140	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	160	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	200	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	220	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	300	25 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMC(N)(H) 3-A(M)(V)…	220	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	250	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	320	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	350	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	400	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	450	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	500	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	36 - 150	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
NZMN(H) 4-A(M)(V)…	550	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	630	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	800	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	875	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1000	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1250	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1400	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
	1600	50 - 100	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T

Notes B = Basic switching capacity, N = Normal switching capacity, H = High switching capacity, T = Total selectivity

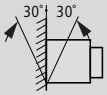
				IZM20B…08…	IZM20B…10…	IZM20B…12…
General						
Standards				IEC/EN 60947		
Ambient temperature	Storage		°C	-40 - +70 (Devices with LCD display -20 - +70)		
	Operation (open)		°C	-25 - +70 (Devices with LCD display -20 - +70)		
Built-in position						
Utility category				B	B	B
Protection type				IP20, IP54 with protective cover		
Direction of incoming supply				Any		
Main contacts						
Rated operational current = Rated uninterrupted current		$I_n = I_u$	A	800	1000	1250
Rated uninterrupted current at 50 °C[1)]		I_u	A	800	1000	1250
Rated uninterrupted current at 60 °C[1)]		I_u	A	800	1000	1100
Rated uninterrupted current at 70 °C[1)]		I_u	A	800	1000	1000
Rated impulse withstand voltage		U_{imp}	V AC	8000	8000	8000
Rated operational voltage		U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V		I_{IT}	kA	21	21	21
Use in IT electrical power networks up to U = 690 V		I_{IT}	kA	–	–	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity	Up to 440 V 50/60 Hz	I_{cm}	kA	105	105	105
	Up to 690 V 50/60 Hz	I_{cm}	kA	105	105	105
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	50	50	50
	t = 3 s	I_{cw}	kA	–	–	–
Rated short-circuit breaking capacity I_{cn}						
IEC/EN 60947 Operating sequence I_{cu} O-t-CO						
Up to 240 V 50/60 Hz		I_{cu}	kA	50	50	50
Up to 440 V 50/60 Hz		I_{cu}	kA	50	50	50
Up to 690 V 50/60 Hz		I_{cu}	kA	50	50	50
Up to 1100 V 50/60 Hz		I_{cu}	kA	–	–	–
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO						
Up to 240 V 50/60 Hz		I_{cs}	kA	50	50	50
Up to 440 V 50/60 Hz		I_{cs}	kA	50	50	50
Up to 690 V 50/60 Hz		I_{cs}	kA	50	50	50
Up to 1100 V 50/60 Hz		I_{cs}	kA	–	–	–
Switching times						
Total opening delay			ms	30	30	30
Closing delay			ms	35	35	35
Closing delay electrical (via closing release)			ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)			ms	35/70	35/70	35/70
Opening delay via trip electronics (non-delayed short-circuit release)			ms	35	35	35
Durability						
Mechanical, without maintenance		Operations		12500	12500	12500
Mechanical, with maintenance		Operations		20000	20000	20000
Electrical, without maintenance		Operations		10000	10000	10000
Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading	Fixed		W	60	95	150
	Withdrawable		W	110	170	260
Weight						
Fixed	3 pole		kg	43	43	43
	4 pole		kg	54	54	54
Withdrawable	3 pole		kg	48	48	48
	4 pole		kg	62	62	62
Empty cassette	3 pole		kg	34	34	34
	4 pole		kg	38	38	38

Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IZM20B…16…	**IZM20B…20…**	**IZM20N…08…**	**IZM20N…10…**	**IZM20N…12…**	**IZM20N…16…**	**IZM20N…20…**
IEC/EN 60947						
-40 - +70 (Devices with LCD display -20 - +70)						
-25 - +70 (Devices with LCD display -20 - +70)						
						
B	B	B	B	B	B	B
IP20, IP54 with protective cover						
Any						
1600	2000	800	1000	1250	1600	2000
1600	2000	800	1000	1250	1600	2000
1500	1800	800	1000	1100	1500	1800
1350	1650	800	1000	1000	1350	1650
8000	8000	8000	8000	8000	8000	8000
690	690	690	690	690	690	690
23	32	21	21	21	23	32
–	–	–	–	–	–	–
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
105	105	137	137	137	137	137
105	105	137	137	137	137	137
50	50	65	65	65	65	65
–	30	40	40	40	40	40
50	50	65	65	65	65	65
50	50	65	65	65	65	65
50	50	65	65	65	65	65
–	–	–	–	–	–	–
50	50	65	65	65	65	65
50	50	65	65	65	65	65
50	50	65	65	65	65	65
–	–	–	–	–	–	–
30	30	30	30	30	30	30
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
12500	10000	12500	12500	12500	12500	10000
20000	16000	20000	20000	20000	20000	16000
10000	8000	10000	10000	10000	10000	8000
10000	8000	10000	10000	10000	10000	8000
60	60	60	60	60	60	60
240	280	45	70	110	180	280
420	560	90	140	220	360	560
43	43	43	43	43	43	43
54	54	54	54	54	54	54
48	48	48	48	48	48	48
62	62	62	62	62	62	62
34	34	34	34	34	34	34
38	38	38	38	38	38	38

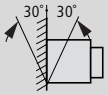
				IZM32B…08…	IZM32B…10…	IZM32B…12…
General						
Standards				IEC/EN 60947		
Ambient temperature	Storage		°C	-40 - +70 (Devices with LCD display -20 - +70)		
	Operation (open)		°C	-25 - +70 (Devices with LCD display -20 - +70)		
Built-in position						
Utility category				B	B	B
Protection type				IP20, IP54 with protective cover		
Direction of incoming supply				Any		
Main contacts						
Rated operational current = Rated uninterrupted current		$I_n = I_u$	A	800	1000	1250
Rated uninterrupted current at 50 °C[1)]		I_u	A	800	1000	1250
Rated uninterrupted current at 60 °C[1)]		I_u	A	800	1000	1250
Rated uninterrupted current at 70 °C[1)]		I_u	A	800	1000	1250
Rated impulse withstand voltage		U_{imp}	V AC	8000	8000	8000
Rated operational voltage		U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V		I_{IT}	kA	13	13	13
Use in IT electrical power networks up to U = 690 V		I_{IT}	kA	13	13	13
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity	Up to 440 V 50/60 Hz	I_{cm}	kA	137	137	137
	Up to 690 V 50/60 Hz	I_{cm}	kA	137	137	137
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	65	65	65
	t = 3 s	I_{cw}	kA	–	–	–
Rated short-circuit breaking capacity I_{cn}						
IEC/EN 60947 Operating sequence I_{cu} O-t-CO						
Up to 240 V 50/60 Hz		I_{cu}	kA	65	65	65
Up to 440 V 50/60 Hz		I_{cu}	kA	65	65	65
Up to 690 V 50/60 Hz		I_{cu}	kA	65	65	65
Up to 1100 V 50/60 Hz		I_{cu}	kA	–	–	–
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO						
Up to 240 V 50/60 Hz		I_{cs}	kA	65	65	65
Up to 440 V 50/60 Hz		I_{cs}	kA	65	65	65
Up to 690 V 50/60 Hz		I_{cs}	kA	65	65	65
Up to 1100 V 50/60 Hz		I_{cs}	kA	–	–	–
Switching times						
Total opening delay			ms	30	30	30
Closing delay			ms	35	35	35
Closing delay electrical (via closing release)			ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)			ms	35/70	35/70	35/70
Opening delay via trip electronics (non-delayed short-circuit release)			ms	35	35	35
Durability						
Mechanical, without maintenance		Operations		12500	12500	12500
Mechanical, with maintenance		Operations		20000	20000	20000
Electrical, without maintenance		Operations		10000	10000	10000
Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading	Fixed		W	40	60	90
	Withdrawable		W	85	130	200
Weight						
Fixed	3 pole		kg	58	58	58
	4 pole		kg	72	72	72
Withdrawable	3 pole		kg	70	70	70
	4 pole		kg	88	88	88
Empty cassette	3 pole		kg	34	34	34
	4 pole		kg	38	38	38

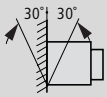
Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IZM32B…16…	**IZM32B…20…**	**IZM32B…25…**	**IZM32B…32…**	**IZM32N…08…**	**IZM32N…10…**	**IZM32N…12…**
IEC/EN 60947						
-40 - +70 (Devices with LCD display -20 - +70)						
-25 - +70 (Devices with LCD display -20 - +70)						
						
B	B	B	B	B	B	B
IP20, IP54 with protective cover						
Any						
1600	2000	2500	3200	800	1000	1250
1600	2000	2500	3100	800	1000	1250
1600	2000	2500	2800	800	1000	1250
1600	2000	2500	2550	800	1000	1250
8000	8000	8000	8000	8000	8000	8000
690	690	690	690	690	690	690
23	28	39	39	13	13	13
23	28	39	39	13	13	13
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
137	137	137	137	179	179	179
137	137	137	137	179	179	179
65	65	65	65	85	85	85
–	50	50	50	65	65	65
65	65	65	65	85	85	85
65	65	65	65	85	85	85
65	65	65	65	85	85	85
–	–	–	–	–	–	–
65	65	65	65	85	85	85
65	65	65	65	85	85	85
65	65	65	65	85	85	85
–	–	–	–	–	–	–
30	30	30	30	30	30	30
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
12500	10000	8000	8000	10000	10000	10000
20000	16000	12800	12800	16000	16000	16000
10000	10000	8000	8000	10000	10000	10000
10000	10000	8000	8000	10000	10000	10000
60	60	60	60	60	60	60
150	190	200	320	35	50	70
330	330	500	800	70	95	140
58	63	68	68	68	68	68
72	78	86	86	86	86	86
70	75	86	86	80	80	80
88	94	112	112	102	102	102
34	58	58	60	34	34	34
38	60	60	73	38	38	38

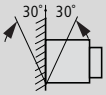
				IZM32N…16…	IZM32N…20…	IZM32N…25…
General						
Standards				IEC/EN 60947		
Ambient temperature	Storage		°C	-40 - +70 (Devices with LCD display -20 - +70)		
	Operation (open)		°C	-25 - +70 (Devices with LCD display -20 - +70)		
Built-in position						
Utility category				B	B	B
Protection type				IP20, IP54 with protective cover		
Direction of incoming supply				Any		
Main contacts						
Rated operational current = Rated uninterrupted current		$I_n = I_u$	A	1600	2000	2500
Rated uninterrupted current at 50 °C[1)]		I_u	A	1600	2000	2500
Rated uninterrupted current at 60 °C[1)]		I_u	A	1600	2000	2500
Rated uninterrupted current at 70 °C[1)]		I_u	A	1600	2000	2500
Rated impulse withstand voltage		U_{imp}	V AC	8000	8000	8000
Rated operational voltage		U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V		I_{IT}	kA	23	28	39
Use in IT electrical power networks up to U = 690 V		I_{IT}	kA	23	28	39
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity	Up to 440 V 50/60 Hz	I_{cm}	kA	179	179	179
	Up to 690 V 50/60 Hz	I_{cm}	kA	179	179	179
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	85	85	85
	t = 3 s	I_{cw}	kA	65	65	65
Rated short-circuit breaking capacity I_{cn}						
IEC/EN 60947 Operating sequence I_{cu} O-t-CO						
Up to 240 V 50/60 Hz		I_{cu}	kA	85	85	85
Up to 440 V 50/60 Hz		I_{cu}	kA	85	85	85
Up to 690 V 50/60 Hz		I_{cu}	kA	85	85	85
Up to 1100 V 50/60 Hz		I_{cu}	kA	–	–	–
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO						
Up to 240 V 50/60 Hz		I_{cs}	kA	85	85	85
Up to 440 V 50/60 Hz		I_{cs}	kA	85	85	85
Up to 690 V 50/60 Hz		I_{cs}	kA	85	85	85
Up to 1100 V 50/60 Hz		I_{cs}	kA	–	–	–
Switching times						
Total opening delay			ms	30	30	30
Closing delay			ms	35	35	35
Closing delay electrical (via closing release)			ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)			ms	35/70	35/70	35/70
Opening delay via trip electronics (non-delayed short-circuit release)			ms	35	35	35
Durability						
Mechanical, without maintenance		Operations		10000	10000	8000
Mechanical, with maintenance		Operations		16000	16000	12800
Electrical, without maintenance		Operations		10000	10000	8000
Electrical, with maintenance		Operations		10000	10000	8000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading	Fixed		W	120	190	200
	Withdrawable		W	240	380	500
Weight						
Fixed	3 pole		kg	68	68	70
	4 pole		kg	86	86	89
Withdrawable	3 pole		kg	80	80	88
	4 pole		kg	102	102	115
Empty cassette	3 pole		kg	34	34	58
	4 pole		kg	38	38	60

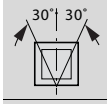
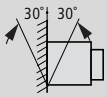
Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IZM32N…32…	**IZM32H…08…**	**IZM32H…10…**	**IZM32H…12…**	**IZM32H…16…**	**IZM32H…20…**	**IZM32H…25…**
IEC/EN 60947						
-40 - +70 (Devices with LCD display -20 - +70)						
-25 - +70 (Devices with LCD display -20 - +70)						
						
B	B	B	B	B	B	B
IP20, IP54 with protective cover						
Any						
3200	800	1000	1250	1600	2000	2500
3100	800	1000	1250	1600	2000	2500
2800	800	1000	1250	1600	2000	2500
2550	800	1000	1250	1600	2000	2500
8000	8000	8000	8000	8000	8000	8000
690	690	690	690	690	690	690
39	13	13	13	23	28	39
39	13	13	13	23	28	39
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
179	210	210	210	210	210	210
179	179	179	179	179	179	179
85	85	85	85	85	85	85
65	65	65	65	65	65	65
85	100	100	100	100	100	100
85	100	100	100	100	100	100
85	85	85	85	85	85	85
–	–	–	–	–	–	–
85	100	100	100	100	100	100
85	100	100	100	100	100	100
85	85	85	85	85	85	85
–	–	–	–	–	–	–
30	30	30	30	30	30	30
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
8000	10000	10000	10000	10000	10000	8000
12800	16000	16000	16000	16000	16000	12800
8000	10000	10000	10000	10000	10000	8000
8000	10000	10000	10000	10000	10000	8000
60	60	60	60	60	60	60
320	30	50	70	120	190	200
800	60	95	140	240	380	500
70	68	68	68	68	68	70,
89	86	86	86	86	86	89
88	80	80	80	80	80	88
115	102	102	102	102	102	115
60	34	34	34	34	58	58
73	38	38	38	38	60	60

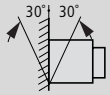
				IZM32H…32…	IZM32S…	IZM40N…40…
General						
Standards				IEC/EN 60947		
Ambient temperature	Storage		°C	-40 - +70 (Devices with LCD display -20 - +70)		
	Operation (open)		°C	-25 - +70 (Devices with LCD display -20 - +70)		
Built-in position						
Utility category				B	B	B
Protection type				IP20, IP54 with protective cover		
Direction of incoming supply				Any		
Main contacts						
Rated operational current = Rated uninterrupted current		$I_n = I_u$	A	3200	3200	4000
Rated uninterrupted current at 50 °C[1)]		I_u	A	3100	3100	4000
Rated uninterrupted current at 60 °C[1)]		I_u	A	2800	2800	4000
Rated uninterrupted current at 70 °C[1)]		I_u	A	2550	2550	3776
Rated impulse withstand voltage		U_{imp}	V AC	8000	8000	12000
Rated operational voltage		U_e	V AC	690	1100	690
Use in IT electrical power networks up to U = 440 V		I_{IT}	kA	39	–	48
Use in IT electrical power networks up to U = 690 V		I_{IT}	kA	39	39	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage		U_i	V	1000	1100	1000
Switching capacity						
Rated short-circuit making capacity	Up to 440 V 50/60 Hz	I_{cm}	kA	210	210	179
	Up to 690 V 50/60 Hz	I_{cm}	kA	179	210	137
Rated short-time withstand current 50/60 Hz	t = 1 s	I_{cw}	kA	85	–	85
	t = 3 s	I_{cw}	kA	65	–	65
Rated short-circuit breaking capacity I_{cn}						
IEC/EN 60947 Operating sequence I_{cu} O-t-CO						
Up to 240 V 50/60 Hz		I_{cu}	kA	100	–	85
Up to 440 V 50/60 Hz		I_{cu}	kA	100	–	85
Up to 690 V 50/60 Hz		I_{cu}	kA	85	–	65
Up to 1100 V 50/60 Hz		I_{cu}	kA	–	25	–
IEC/EN 60947 Operating sequence I_{cs} O-t-CO-t-CO						
Up to 240 V 50/60 Hz		I_{cs}	kA	100	–	85
Up to 440 V 50/60 Hz		I_{cs}	kA	100	–	85
Up to 690 V 50/60 Hz		I_{cs}	kA	85	–	65
Up to 1100 V 50/60 Hz		I_{cs}	kA	–	25	–
Switching times						
Total opening delay			ms	30	30	30
Closing delay			ms	35	35	35
Closing delay electrical (via closing release)			ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)			ms	35/70	35/70	35/70
Opening delay via trip electronics (non-delayed short-circuit release)			ms	35	35	35
Durability						
Mechanical, without maintenance		Operations		8000	8000	5000
Mechanical, with maintenance		Operations		12800	12800	8000
Electrical, without maintenance		Operations		8000	8000	3000
Electrical, with maintenance		Operations		8000	8000	3000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading	Fixed		W	320	320	560
	Withdrawable		W	800	800	1100
Weight						
Fixed	3 pole		kg	70	70	83
	4 pole		kg	89	89	105
Withdrawable	3 pole		kg	88,	88	98
	4 pole		kg	115	115	121
Empty cassette	3 pole		kg	60	60	60
	4 pole		kg	73	73	73

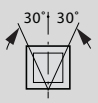
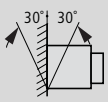
Notes [1)] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IZM40H…40…	**IZM63N…40…**	**IZM63N…50…**	**IZM63N…63…**	**IZM63H…40…**	**IZM63H…50…**	**IZM63H…63…**
IEC/EN 60947						
-40 - +70 (Devices with LCD display -20 - +70)						
-25 - +70 (Devices with LCD display -20 - +70)						
						
B	B	B	B	B	B	B
IP20, IP54 with protective cover						
Any						
4000	4000	5000	6300	4000	5000	6300
4000	4000	5000	6200	4000	5000	6200
4000	4000	5000	5600	4000	5000	5600
3776	4000	5000	5100	4000	5000	5100
12000	8000	8000	8000	8000	8000	8000
690	690	690	690	690	690	690
48	–	–	–	–	–	–
–	–	–	–	–	–	–
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
210	179	179	179	210	210	210
137	179	179	179	210	210	210
100	85	85	85	100	100	100
65	65	65	65	65	65	65
100	85	85	85	100	100	100
100	85	85	85	100	100	100
65	85	85	85	100	100	100
–	–	–	–	–	–	–
100	85	85	85	100	100	100
100	85	85	85	100	100	100
65	85	85	85	100	100	100
–	–	–	–	–	–	–
30	40	40	40	40	40	40
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
35	35	35	35	35	35	35
5000	5000	5000	5000	5000	5000	5000
8000	8000	8000	8000	8000	8000	8000
3000	3000	3000	3000	3000	3000	3000
3000	3000	3000	3000	3000	3000	3000
60	60	60	60	60	60	60
560	380	400	620	380	400	620
1100	750	1000	1550	750	1000	1550
83	108	125	125	108	125	125
105	145	163	163	145	163	163
98	139	157	157	139	157	157
121	166	200	200	166	200	200
60	60	60	60	60	60	60
73	73	73	73	73	73	73

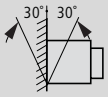
				IN20B…08…	IN20B…10…	IN20B…12…
General						
Standards				IEC/EN 60947		
Ambient temperature						
Storage			°C	-40 - +70		
Operation (open)			°C	-25 - +70		
Built-in position						
Utility category				B	B	B
Protection type				IP20, IP54 with protective cover		
Direction of incoming supply				Any		
Main contacts						
Rated operational current = Rated uninterrupted current	$I_n = I_u$		A	800	1000	1250
Rated uninterrupted current at 50 °C [1]	I_u		A	800	1000	1250
Rated uninterrupted current at 60 °C [1]	I_u		A	800	1000	1100
Rated uninterrupted current at 70 °C [1]	I_u		A	800	1000	1000
Rated impulse withstand voltage	U_{imp}		V AC	8000	8000	8000
Rated operational voltage	U_e		V AC	690	690	690
Use in IT electrical power networks up to U = 440 V	I_{IT}		kA	21	21	21
Use in IT electrical power networks up to U = 690 V	I_{IT}		kA	–	–	–
Overvoltage category/pollution degree				III/3	III/3	III/3
Rated insulation voltage	U_i		V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity						
Up to 440 V 50/60 Hz	I_{cm}		kA	105	105	105
Up to 690 V 50/60 Hz	I_{cm}		kA	105	105	105
Rated short-time withstand current 50/60 Hz						
t = 1 s	I_{cw}		kA	50	50	50
t = 3 s	I_{cw}		kA	–	–	–
Switching times						
Total opening delay			ms	30	30	30
Closing delay			ms	35	35	35
Closing delay electrical (via closing release)			ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)			ms	35/70	35/70	35/70
Durability						
Mechanical, without maintenance		Operations		12500	12500	12500
Mechanical, with maintenance		Operations		20000	20000	20000
Electrical, without maintenance		Operations		10000	10000	10000
Electrical, with maintenance		Operations		10000	10000	10000
Maximum operating frequency		Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading						
Fixed			W	60	95	150
Withdrawable			W	110	170	260
Weight						
Fixed						
3 pole			kg	43	43	43
4 pole			kg	54	54	54
Withdrawable						
3 pole			kg	48	48	48
4 pole			kg	62	62	62
Empty cassette						
3 pole			kg	34	34	34
4 pole			kg	38	38	38

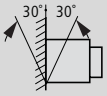
Notes [1] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IN20B…16…	**IN20B…20…**	**IN20N…08…**	**IN20N…10…**	**IN20N…12…**	**IN20N…16…**	**IN20N…20…**
IEC/EN 60947						
-40 - +70						
-25 - +70						
						
B	B	B	B	B	B	B
IP20, IP54 with protective cover						
Any						
1600	2000	800	1000	1250	1600	2000
1600	2000	800	1000	1250	1600	2000
1500	1800	800	1000	1100	1500	1800
1350	1650	800	1000	1000	1350	1650
8000	8000	8000	8000	8000	8000	8000
690	690	690	690	690	690	690
23	32	21	21	21	23	32
–	–	–	–	–	–	–
III/3	III/3	III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000	1000	1000
105	105	143	143	143	143	143
105	105	143	143	143	143	143
50	50	65	65	65	65	65
–	30	40	40	40	40	40
30	30	30	30	30	30	30
35	35	35	35	35	35	35
40	40	40	40	40	40	40
35/70	35/70	35/70	35/70	35/70	35/70	35/70
12500	10000	12500	12500	12500	12500	10000
20000	16000	20000	20000	20000	20000	16000
10000	8000	10000	10000	10000	10000	8000
10000	8000	10000	10000	10000	10000	8000
60	60	60	60	60	60	60
240	280	45	70	110	180	280
420	560	90	140	220	360	560
43	43	43	43	43	43	43
54	54	54	54	54	54	54
48	48	48	48	48	48	48
62	62	62	62	62	62	62
34	34	34	34	34	34	34
38	38	38	38	38	38	38

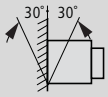
			IN32B…08…	IN32B…10…	IN32B…12…
General					
Standards			IEC/EN 60947		
Ambient temperature					
Storage		°C	-40 - +70	-40 - +70	-40 - +70
Operation (open)		°C	-25 - +70	-25 - +70	-25 - +70
Built-in position					
Utility category			B	B	B
Protection type			IP20, IP54 with protective cover		
Direction of incoming supply			Any		
Main contacts					
Rated operational current = Rated uninterrupted current	$I_n = I_u$	A	800	1000	1250
Rated uninterrupted current at 50 °C [1]	I_u	A	800	1000	1250
Rated uninterrupted current at 60 °C [1]	I_u	A	800	1000	1250
Rated uninterrupted current at 70 °C [1]	I_u	A	800	1000	1250
Rated impulse withstand voltage	U_{imp}	V AC	8000	8000	8000
Rated operational voltage	U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V	I_{IT}	kA	13	13	13
Use in IT electrical power networks up to U = 690 V	I_{IT}	kA	13	13	13
Overvoltage category/pollution degree			III/3	III/3	III/3
Rated insulation voltage	U_i	V	1000	1000	1000
Switching capacity					
Rated short-circuit making capacity					
Up to 440 V 50/60 Hz	I_{cm}	kA	143	143	143
Up to 690 V 50/60 Hz	I_{cm}	kA	143	143	143
Rated short-time withstand current 50/60 Hz					
t = 1 s	I_{cw}	kA	65	65	65
t = 3 s	I_{cw}	kA	–	–	–
Switching times					
Total opening delay		ms	30	30	30
Closing delay		ms	35	35	35
Closing delay electrical (via closing release)		ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)		ms	35/70	35/70	35/70
Durability					
Mechanical, without maintenance	Operations		12500	12500	12500
Mechanical, with maintenance	Operations		20000	20000	20000
Electrical, without maintenance	Operations		10000	10000	10000
Electrical, with maintenance	Operations		10000	10000	10000
Maximum operating frequency	Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading					
Fixed		W	40	60	90
Withdrawable		W	85	130	200
Weight					
Fixed					
3 pole		kg	58	58	58
4 pole		kg	72	72	72
Withdrawable					
3 pole		kg	70	70	70
4 pole		kg	88	88	88
Empty cassette					
3 pole		kg	34	34	34
4 pole		kg	38	38	38

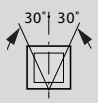
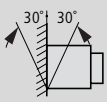
Notes [1] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IN32B…16…	**IN32B…20…**	**IN32B…25…**	**IN32B…32…**
IEC/EN 60947			
-40 - +70	-40 - +70	-40 - +70	-40 - +70
-25 - +70	-25 - +70	-25 - +70	-25 - +70
			
B	B	B	B
IP20, IP54 with protective cover			
Any			
1600	2000	2500	3200
1600	2000	2500	3100
1600	2000	2500	2800
1600	2000	2500	2550
8000	8000	8000	8000
690	690	690	690
23	28	39	39
23	28	39	39
III/3	III/3	III/3	III/3
1000	1000	1000	1000
143	143	143	143
143	143	143	143
65	65	65	65
–	50	50	50
30	30	30	30
35	35	35	35
40	40	40	40
35/70	35/70	35/70	35/70
12500	10000	8000	8000
20000	16000	12800	12800
10000	10000	8000	8000
10000	10000	8000	8000
60	60	60	60
150	190	200	320
330	330	500	800
58	63	68	68
72	78	86	86
70	75	86	86
88	94	112	112
34	58	58	60
38	60	60	73

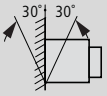
				IN32N…08…	IN32N…10…	IN32N…12…
General						
Standards				IEC/EN 60947		
Ambient temperature						
Storage			°C	-40 - +70		
Operation (open)			°C	-25 - +70		
Built-in position						
Utility category				B		
Protection type				IP20, IP54 with protective cover		
Direction of incoming supply				Any		
Main contacts						
Rated operational current = Rated uninterrupted current	$I_n = I_u$		A	800	1000	1250
Rated uninterrupted current at 50 °C [1]	I_u		A	800	1000	1250
Rated uninterrupted current at 60 °C [1]	I_u		A	800	1000	1250
Rated uninterrupted current at 70 °C [1]	I_u		A	800	1000	1250
Rated impulse withstand voltage	U_{imp}		V AC	8000	8000	8000
Rated operational voltage	U_e		V AC	690	690	690
Use in IT electrical power networks up to U = 440 V	I_{IT}		kA	13	13	13
Use in IT electrical power networks up to U = 690 V	I_{IT}		kA	13	13	13
Overvoltage category/degree of pollution				III/3	III/3	III/3
Rated insulation voltage	U_i		V	1000	1000	1000
Switching capacity						
Rated short-circuit making capacity						
Up to 440 V 50/60 Hz	I_{cm}		kA	187	187	187
Up to 690 V 50/60 Hz	I_{cm}		kA	187	187	187
Rated short-time withstand current 50/60 Hz						
t = 1 s	I_{cw}		kA	85	85	85
t = 3 s	I_{cw}		kA	65	65	65
Switching times						
Total opening delay			ms	30	30	30
Closing delay			ms	35	35	35
Closing delay electrical (via closing release)			ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)			ms	35/70	35/70	35/70
Durability						
Mechanical, without maintenance	Operations			10000	10000	10000
Mechanical, with maintenance	Operations			16000	16000	16000
Electrical, without maintenance	Operations			10000	10000	10000
Electrical, with maintenance	Operations			10000	10000	10000
Maximum operating frequency	Operations/h			60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading						
Fixed			W	35	50	70
Withdrawable			W	70	95	140
Weight						
Fixed						
3 pole			kg	68	68	68
4 pole			kg	86	86	86
Withdrawable						
3 pole			kg	80	80	80
4 pole			kg	102	102	102
Empty cassette						
3 pole			kg	34	34	34
4 pole			kg	38	38	38

Notes [1] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IN32N…16…	**IN32N…20…**	**IN32N…25…**	**IN32N…32…**	**IN32S…**
IEC/EN 60947				
-40 - +70				
-25 - +70				
				
B				
IP20, IP54 with protective cover				
Any				
1600	2000	2500	3200	3200
1600	2000	2500	3100	3100
1600	2000	2500	2800	2800
1600	2000	2500	2550	2550
8000	8000	8000	8000	8000
690	690	690	690	690
23	28	39	39	39
23	28	39	39	39
III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1100
187	187	187	187	53
187	187	187	187	53
85	85	85	85	–
65	65	65	65	–
30	30	30	30	30
35	35	35	35	35
40	40	40	40	40
35/70	35/70	35/70	35/70	35/70
10000	10000	8000	8000	8000
16000	16000	12800	12800	12800
10000	10000	8000	8000	8000
10000	10000	8000	8000	8000
60	60	60	60	60
120	190	200	320	320
240	380	500	800	800
68	68	70	70	70
86	86	89	89	89
80	80	88	88	88
102	102	115	115	115
34	58	58	60	60
38	60	60	73	73

			IN40N…40…	IN40H…40…	IN63N…40…
General					
Standards			IEC/EN 60947		
Ambient temperature					
Storage		°C	-40 - +70	-40 - +70	-40 - +70
Operation (open)		°C	-25 - +70	-25 - +70	-25 - +70
Built-in position					
Utility category			B		
Protection type			IP20, IP54 with protective cover		
Direction of incoming supply			Any		
Main contacts					
Rated operational current = Rated uninterrupted current	$I_n = I_u$	A	4000	4000	4000
Rated uninterrupted current at 50 °C [1]	I_u	A	4000	4000	4000
Rated uninterrupted current at 60 °C [1]	I_u	A	4000	4000	4000
Rated uninterrupted current at 70 °C [1]	I_u	A	3776	3776	4000
Rated impulse withstand voltage	U_{imp}	V AC	12000	12000	8000
Rated operational voltage	U_e	V AC	690	690	690
Use in IT electrical power networks up to U = 440 V	I_{IT}	kA	48	48	–
Use in IT electrical power networks up to U = 690 V	I_{IT}	kA	–	–	–
Overvoltage category/pollution degree			III/3	III/3	III/3
Rated insulation voltage	U_i	V	1000	1000	1000
Switching capacity					
Rated short-circuit making capacity					
Up to 440 V 50/60 Hz	I_{cm}	kA	187	220	187
Up to 690 V 50/60 Hz	I_{cm}	kA	187	220	187
Rated short-time withstand current 50/60 Hz					
t = 1 s	I_{cw}	kA	85	100	85
t = 3 s	I_{cw}	kA	65	65	65
Switching times					
Total opening delay		ms	30	30	40
Closing delay		ms	35	35	35
Closing delay electrical (via closing release)		ms	40	40	40
Opening delay electrical (via shunt release / undervoltage release)		ms	35/70	35/70	35/70
Durability					
Mechanical, without maintenance	Operations		5000	5000	5000
Mechanical, with maintenance	Operations		8000	8000	8000
Electrical, without maintenance	Operations		3000	3000	3000
Electrical, with maintenance	Operations		3000	3000	3000
Maximum operating frequency	Operations/h		60	60	60
Heat dissipation at rated operational current I_n 3-phase symmetric loading					
Fixed		W	560	560	380
Withdrawable		W	1100	1100	750
Weight					
Fixed					
3 pole		kg	83	83	108
4 pole		kg	105	105	145
Withdrawable					
3 pole		kg	98	98	139
4 pole		kg	121	121	166
Empty cassette					
3 pole		kg	55	55	103
4 pole		kg	64	64	103

Notes [1] Permissible continuous current for circuit-breakers used at different temperatures within switchgear. The expected internal temperatures can be estimated according to the applicable IEC regulations.

IN63N…50…	**IN63N…63…**	**IN63H…40…**	**IN63H…50…**	**IN63H…63…**
IEC/EN 60947				
-40 - +70	-40 - +70	-40 - +70	-40 - +70	-40 - +70
-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70
				
B				
IP20, IP54 with protective cover				
Any				
5000	6300	4000	5000	6300
5000	6200	4000	5000	6200
5000	5600	4000	5000	5600
5000	5100	4000	5000	5100
8000	8000	8000	8000	8000
690	690	690	690	690
–	–	–	–	–
–	–	–	–	–
III/3	III/3	III/3	III/3	III/3
1000	1000	1000	1000	1000
187	187	220	220	220
187	187	220	220	220
85	85	100	100	100
65	65	65	65	65
40	40	40	40	40
35	35	35	35	35
40	40	40	40	40
35/70	35/70	35/70	35/70	35/70
5000	5000	5000	5000	5000
8000	8000	8000	8000	8000
3000	3000	3000	3000	3000
3000	3000	3000	3000	3000
60	60	60	60	60
400	620	380	400	620
1000	1550	750	1000	1550
125	125	108	125	125
163	163	145	163	163
157	157	139	157	157
200	200	166	200	200
103	103	103	103	103
103	103	103	103	103

IZM-AS, IZM-OTS, IZM-CS, IZM-S...

			Auxiliary contact, overload trip switch and cell signalling switch		
			IZM-AS…	IZM-OTS	IZM-CS…
Rated breaking capacity					
Inductive load					
250 V AC		A	10	10	10
125 V DC		A	0.5	0.5	0.5
250 V DC		A	0.25	0.25	0.25

			Voltage releases				
			IZM-ST24DC IZM-STS24DC	IZM-ST48DC IZM-STS48DC	IZM-ST60DC	IZM-ST110AD IZM-STS110AD	IZM-ST230AD IZM-STS230AD
Rated control voltage							
AC 50/60 Hz	U_s	V	–	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	60	110 - 125	220 - 250
Power consumption							
AC		VA	–	–	–	(pick-up 450)	(pick-up 450)
DC		W	(pick-up 250)	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 450)
Response time of the circuit-breaker with U_s		ms	35	35	35	35	35
Operating range							
Drop-out voltage							
AC operated 50/60 Hz	Drop-out	x U_c	–	–	–	–	–
pick-up voltage							
	pick-up	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard

			Closing releases				
			IZM-SR24DC	IZM-SR48DC	IZM-SR60DC	IZM-SR110AD	IZM-SR230AD
Rated control voltage							
AC 50/60 Hz	U_s	V	–	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	60	110 - 125	220 - 250
Power consumption							
AC		VA	–	–	–	(pick-up 450)	(pick-up 450)
DC		W	(pick-up 250)	(pick-up 250)	(pick-up 250)	(pick-up 450)	(pick-up 450)
Response time of the circuit-breaker with U_s		ms	40	40	40	40	40
Operating range							
Drop-out voltage							
AC operated 50/60 Hz	Drop-out	x U_c	–	–	–	–	–
pick-up voltage							
	pick-up	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard

			Under-voltage releases			
			IZM-UVR24DC	**IZM-UVR32DC**	**IZM-UVR48DC**	**IZM-UVR60DC**
Rated control voltage						
AC 50/60 Hz	U_s	V	–	–	–	–
DC	U_s	V	24	32	48	60
Power consumption						
AC		VA	–	–	–	–
DC		W	18 (pick-up 250)	15 (pick-up 275)	18 (pick-up 275)	18 (pick-up 275)
Response time of the circuit-breaker with U_s		ms	70	70	70	70
Operating range						
Drop-out voltage						
AC operated 50/60 Hz	Drop-out	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard
pick-up voltage						
	pick-up	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard

			Under-voltage releases				
			IZM-UVR110AC	**IZM-UVR110DC**	**IZM-UVR220DC**	**IZM-UVR230AC**	**IZM-UVR400AC**
Rated control voltage							
AC 50/60 Hz	U_s	V	110 - 127	–	–	208 - 240	380 - 415
DC	U_s	V	–	110 - 125	220 - 250	–	–
Power consumption							
AC		VA	10 (pick-up 450)	–	–	10 (pick-up 400)	10 (pick-up 480)
DC		W	–	10 (pick-up 450)	10 (pick-up 450)	–	–
Response time of the circuit-breaker with U_s		ms	70	70	70	70	70
Operating range							
Drop-out voltage							
AC operated 50/60 Hz	Drop-out	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard
pick-up voltage							
	pick-up	x U_c	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard	Acc. to IEC standard

			Motor operator						
			IZM-M24DC	**IZM-M48DC**	**IZM-M60DC**	**IZM-M110DC**	**IZM-M220DC**	**IZM-M110AC**	**IZM-M230AC**
Rated control voltage									
AC 50/60 Hz	U_s	V	–	–	–	–	–	110 - 127	208 - 240
DC	U_s	V	24	48	60	110 - 125	220 - 250	–	–
Necessary time required for charging of the spring-operated stored energy mechanism at 1 x U_s		s	5	5	5	5	5	5	5
Rated operational current	I_n	A	12	5	5	2	1	2	1
Starting current		A	36	25	25	12	6	12	6
Power consumption									
AC 50/60 Hz		VA	300	250	250	250	250	250	250
DC		W	300	250	250	250	250	250	250

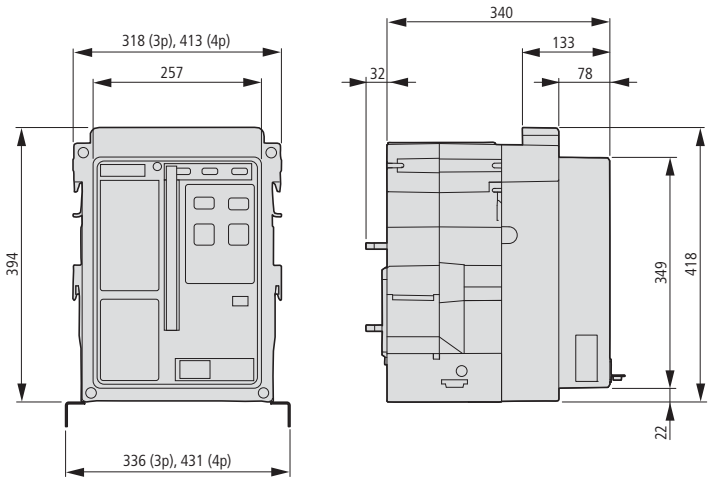
IZMX-PCAM, IZMX-MCAM, IZM-PMINT, IZM-MMINT

	IZMX-PCAM	IZMX-MCAM	IZM-PMINT	IZM-MMINT
General				
Dimensions (W x H x D)	24 x 105 x 80 mm	24 x 105 x 80 mm	91 x 111 x 88 mm	92 x 111 x 88 mm
Mounting	Auxiliary contact strip or 35 mm top-hat rail	Auxiliary contact strip or 35 mm top-hat rail	DIN rail (top hat rail) 35 mm	DIN rail (top hat rail) 35 mm
Protection type	IP20	IP20	IP20	IP20
Mounting position	–	–	horizontal	horizontal
Power supply	24 V DC	24 V DC	24 - 150 V DC or 100 - 240 V AC (50/60 Hz)	24 - 125 V DC or 120 V AC (50/60 Hz)
LED indicators	DP Tx Rx Status	Modbus Tx Rx Status	DP Status INCOM Rx Tx Status	Modbus Tx Rx INCOM Rx Tx Status
Network				
INCOM	–	–	Plug-in screw terminals	Plug-in screw terminals
PROFIBUS	SUB-D 9-pole, socket	–	SUB-D 9-pole, socket	–
Modbus	–	Plug-in screw terminals	–	Plug-in screw terminals
Function	Slave	Slave	Slave	Slave
Interface	RS484	RS485	RS484	RS485
Protocol	PROFIBUS-DP	Modbus-RTU	PROFIBUS-DP	Modbus-RTU
Baud rate	Automatic search up to 12 MBit/s	1200/4800/9600/19200 Bit/s, adjustable via Digitrip	Automatic search up to 12 MBit/s	1200/9600/19200 bits/s, adjustable through coding switch
Bus terminating resistors	In plug as required	121 Ω, externally switch-able	In plug as required	121 Ω, activated through coding switch
INCOM[1)]	–	–	100 Ω, activated through coding switch	100 Ω, activated through coding switch
Bus addresses	1 - 127, can be set through Digitrip	1 - 247, can be set through Digitrip	1 - 127	1 - 127
Number of IZM26 devices on INCOM	–	–	1	32
Maximum distance	2.4 km	1.2 km	2.4 km	1.2 km
INCOM	–	–	3	3
Supported functions	Cyclical data transfer	Function code: 03 = read register 04 = read word variables 08 = connection test, 16 = write register	Cyclical data transfer	Function code: 03 = read register 04 = read word variables 08 = connection test, 16 = write register

Notes [1)] INCOM = system bus (communication connection between Digitrip and fieldbus module)

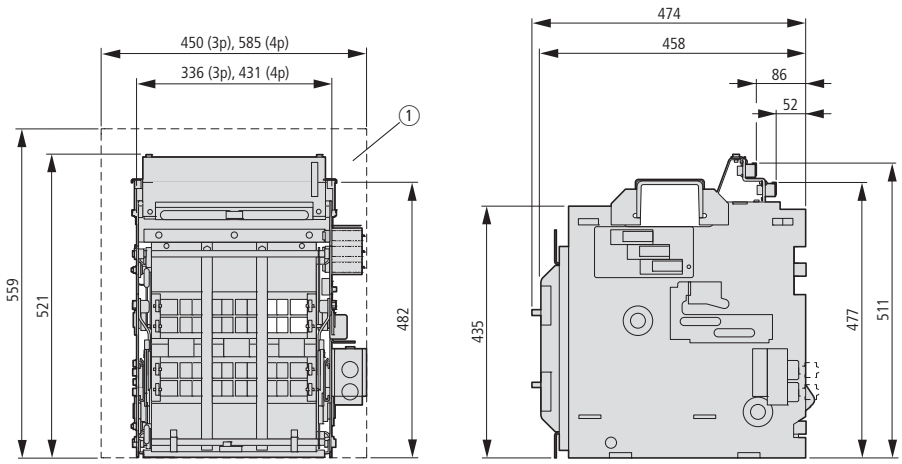
IN20, IZM20 Fixed mounted

IN20…F, IZM20…F



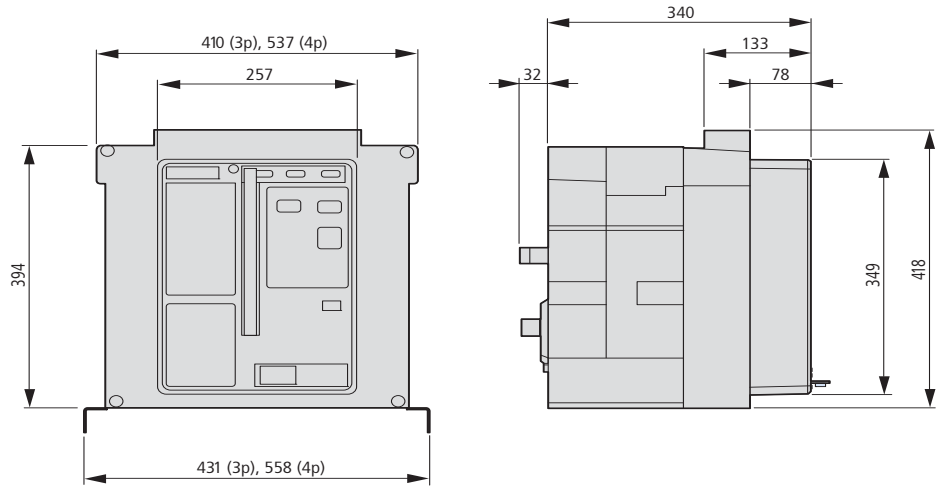
IN20, IZM20 Withdrawable units

IN20…W, IZM20…W



IN32, IZM32 Fixed mounted

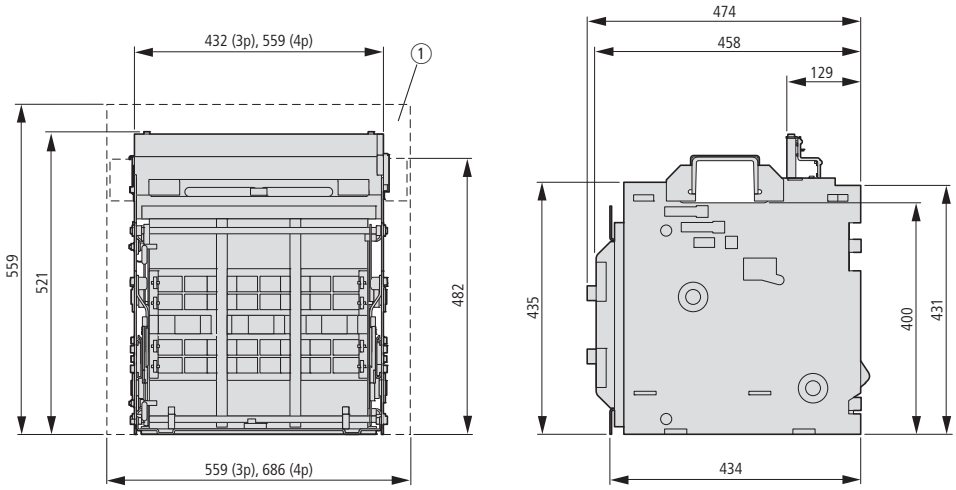
IN32…F, IZM32…F…



① Recommended minimum enclosure size (not shown to scale)

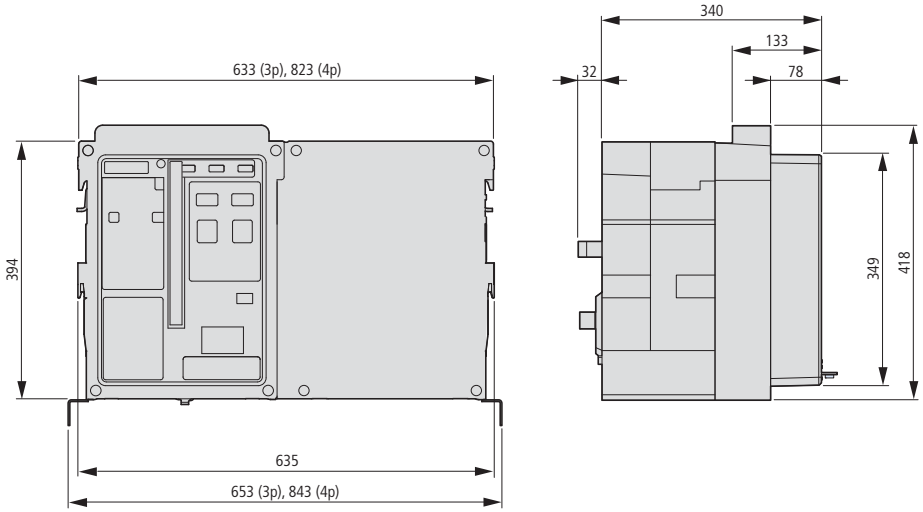
IN32, IZM32 Withdrawable units

IN32…W, IZM32…W…



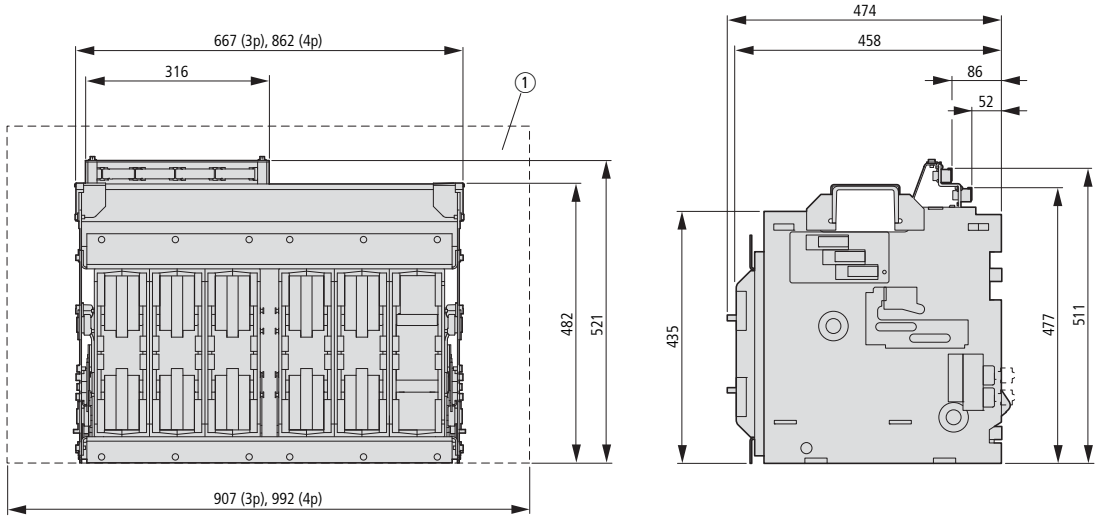
IN40, IZM40 Fixed mounted

IN40…F, IZM40…F



IN40, IZM40 Withdrawable units

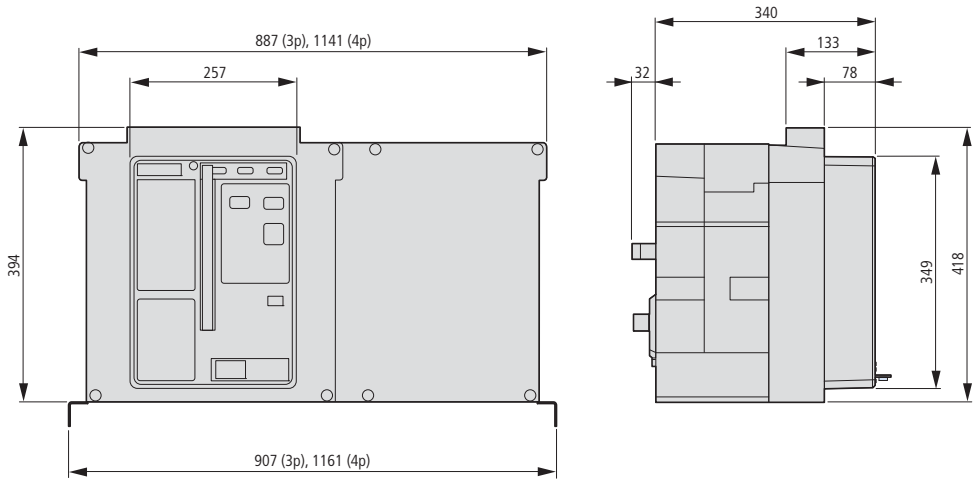
IN40…W, IZM40…W



① Recommended minimum enclosure size (not shown to scale)

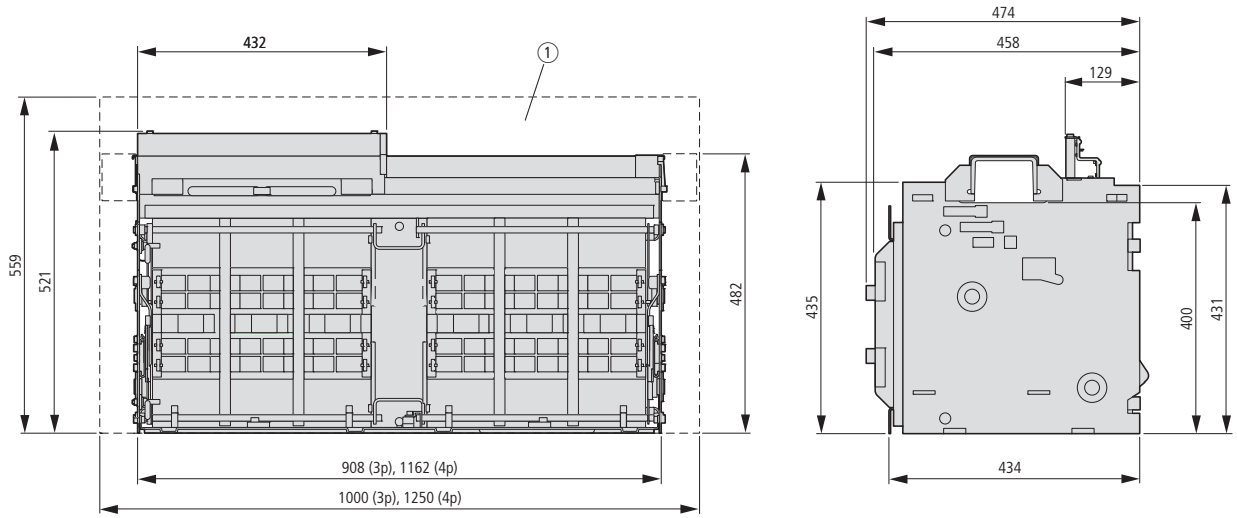
IN63, IZM63 Fixed mounted

IN63…F, IZM63…F



IN63, IZM63 Withdrawable units

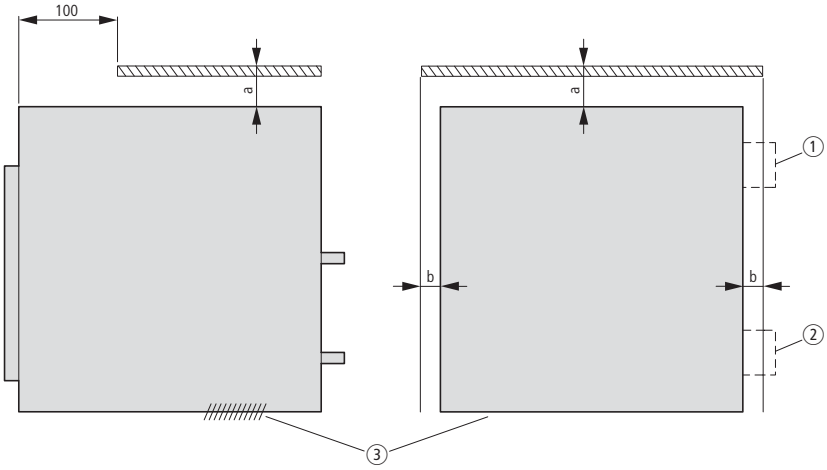
IN63…W, IZM63…W



① Recommended minimum enclosure size (not shown to scale)

Recommended safety clearances

The following information about safety distances is intended to provide a guideline for the installation of circuit-breakers in an enclosure.

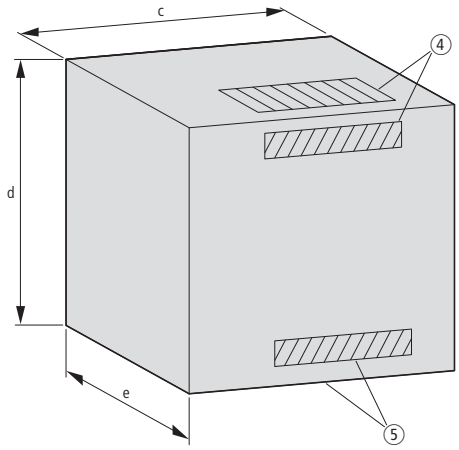


① Cell switch (optional)
② Locking facilities (optional)
③ Ventilation openings (do not cover!)

	Enclosure clearance	To insulated surface	To grounded metal surface	With cell switch or locking facilities
		mm	mm	mm
Withdrawable units	a	0	0	0
	b	25	25	25/75
Fixed mounted	a	150	250	–
	b	30	70	–

Recommended enclosure clearance and ventilation

The illustration shows a typical enclosure.
The table below lists the associated minimum distances between enclosures and ventilation openings.
This information is intended as a guideline for constructing a suitable circuit-breaker enclosure.



Width	Width of cassette + 75 mm
Height	550 mm
Depth	450 mm (front control panel bay)
Ventilation holes	160 cm² (800 - 3200 A) 320 cm² (4000 - 6300 A)

④ Top or rear vent
⑤ Rear or lower vent

Circuit-breakers, fuses

Tested quality, approvals and shipping classifications represent the functionality and safety suitable for world markets with industrial miniature circuit-breakers. Besides a comprehensive range of residual current devices, LV h.b.c. fuse bases and fuse switch-disconnectors is provided.

FAZ miniature circuit-breakers
Height 80 mm only +++ Installation and removal without disassembly of the rails +++ Double comfort terminal lift/claw +++ Terminal with rear plug protection → Page 19/4

Digital residual current device
Preventive information +++ Warning before tripping +++ Integrated auxiliary contact +++ Display for earth-fault release → Page 19/21

Fuse base
Integrated terminal covers +++ Double terminals → Page 19/42

Cylindrical fuse switch-disconnectors
With flash function on tripped fuse +++ can be sealed → Page 19/45

Fuse switch-disconnectors (empty) C10-FD
Cord protection for photovoltaic generator +++ Trip indicator signals tripped fuse link: 50 – 400 V: blinking, 400 – 1000 V: continuous light +++ Nominal current voltage 1000 V DC +++ For cylindrical fuse inserts in photovoltaic applications +++ Sealable → Page 19/48

Circuit-breaker

System overview

Ordering

Engineering

Technical data

Dimensions

Fuses

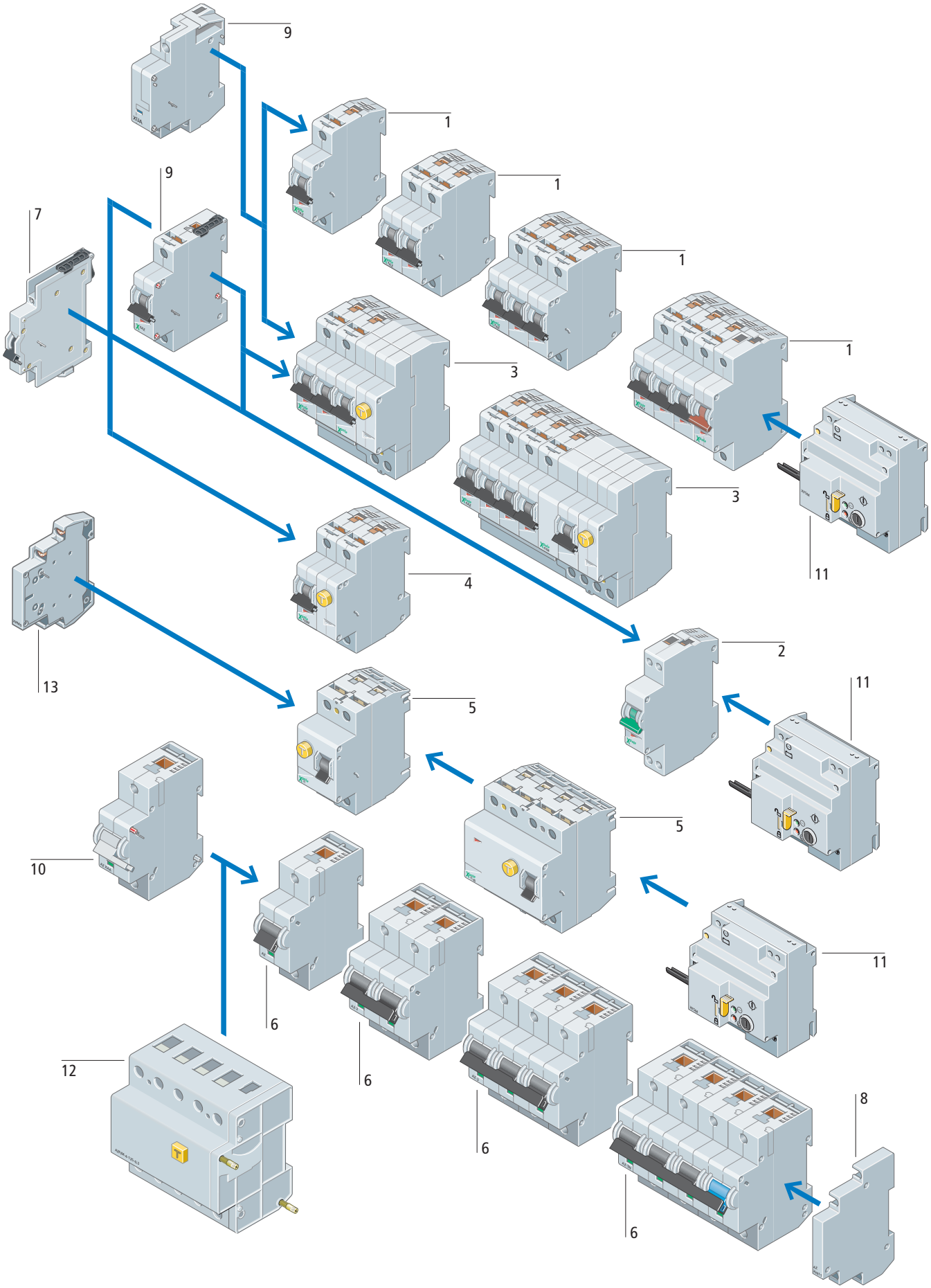
Ordering

Engineering

Technical data

Dimensions

System overview



Basic devices

FAZ miniature circuit-breakers 1
Characteristic/rated operational current ranges
B/4 – 63 A; C/0.5 – 63 A; D/6 – 40 A; K/0.5 - 63 A; S/1 - 40 A; Z/0.5 - 63 A
Switching capacity:
15 kA to IEC/EN 60947-2
B, C, D, K, S, Z characteristic
1-, 1N-, 2-, 3-, 3N-, 4 pole
Special miniature circuit-breaker for control circuits (1, 2 pole)
Special miniature circuit-breaker for DC applications up to 500 V DC
→ Page 19/4

FAZT miniature circuit-breakers 1
Characteristic/rated operational current ranges
B/1 - 25 A; C/1 - 25 A; D/1 - 16 A
Switching capacity:
25 kA to IEC/EN 60947-2
→ Page 19/10

FAZ-PN miniature circuit-breaker 2
Characteristic/rated operational current ranges
B/6 – 40 A; C/2 – 40 A
Switching capacity:
6 kA to IEC/EN 60898
B, C characteristic
1 N pole
→ Page 19/12

Residual-current protective modules for fitting to FAZ 3
Protection in the event of fault current
Rated current ranges 40 – 63 A
Rated fault current 30 mA, 300 mA
→ Page 19/16

Residual-current protective modules for fitting to AZ 12
Protection in the event of fault current
Rated current ranges 80 – 125 A
Rated fault current 30 mA, 300 mA
→ Page 19/16

PKNM combined device 4
Overload and short-circuit protection, and protection in the event of fault currents
Characteristic/rated operational current ranges
B/6-40 A; C/6-40 A; 1N pole
Switching capacity:
10 kA to IEC/EN 60898
Rated fault current 30 mA, 300 mA
→ Page 19/17

Residual-current circuit-breaker (RCCB) 5
AC current sensitive
2 pole, 16 – 80 A
4 pole, 25 – 80 A
Pulsed current sensitive
2 pole, 16 – 40 A
4 pole, 25 – 125 A
AC/DC sensitive
4 pole, 40 – 125 A
Rated fault current
30 mA, 100 mA, 300 mA, 500 mA
4 pole, selective, 63 – 80 A
Rated fault current
100 mA, 300 mA
4 pole suitable for frequency inverters 40, 63 A, 100 mA, 300 mA
→ Page 19/13

AZ miniature circuit-breakers 6
Characteristic/rated operational current ranges C/20-125 A; D/50-100 A
Switching capacity: 15 – 25 kA to IEC/EN 60947-2, 1-, 2-, 3-, 3N-, 4 pole
→ Page 19/14

Add-on functions

FAZ auxiliary contact 7
Standard auxiliary contact
Trip-indicating auxiliary contacts
Auxiliary contacts
→ Page 19/24

AZ auxiliary contact 8
Standard auxiliary contacts
→ Page 19/24

FAZ shunt releases 9
Undervoltage release
Shunt releases
Can be fitted to FAZ or FAZ-FIM
→ Page 19/24

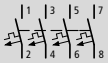
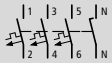
AZ shunt releases 10
Shunt releases
→ Page 19/24

FI auxiliary contact 13
Auxiliary contacts
→ Page 19/24

Remote switching module 11
Suitable for remote switching and automatic restart of a miniature circuit-breaker or RCCB, for remote trip testing of an RCCB in conjunction with a remote test module
→ Page 19/22

Ordering

	Rated operational current I_n A	**1 pole** **Part no.** Article no.	**Price** See price list	Std. pack	**2 pole** With 2 protected poles **Part no.** Article no.	**Price** See price list	Std. pack	**3 pole** With 3 protected poles **Part no.** Article no.	**Price** See price list	Std. pack
FAZ miniature circuit-breakers										
Characteristic B Instantaneous release response current 3 - 5 x I_n Switching capacity 15 kA (IEC/EN 60947-2)	4	**FAZ-B4/1-HS** 279274		12 off	**FAZ-B4/2-HS** 279275		1 off			
	5	**FAZ-B5/1** 278528		12 off						
	6	**FAZ-B6/1** 278529			**FAZ-B6/2** 278728		1 off	**FAZ-B6/3** 278841		1 off
	8	**FAZ-B8/1** 278530			**FAZ-B8/2** 278729			**FAZ-B8/3** 278842		
	10	**FAZ-B10/1** 278531			**FAZ-B10/2** 278730			**FAZ-B10/3** 278843		
	12	**FAZ-B12/1** 278532			**FAZ-B12/2** 278731			**FAZ-B12/3** 278844		
	13	**FAZ-B13/1** 278533			**FAZ-B13/2** 278732			**FAZ-B13/3** 278845		
	15	**FAZ-B15/1** 278534			**FAZ-B15/2** 278733			**FAZ-B15/3** 278846		
	16	**FAZ-B16/1** 278535			**FAZ-B16/2** 278734			**FAZ-B16/3** 278847		
	20	**FAZ-B20/1** 278536			**FAZ-B20/2** 278735			**FAZ-B20/3** 278848		
	25	**FAZ-B25/1** 278537			**FAZ-B25/2** 278736			**FAZ-B25/3** 278849		
	32	**FAZ-B32/1** 278538			**FAZ-B32/2** 278737			**FAZ-B32/3** 278850		
	40	**FAZ-B40/1** 278539			**FAZ-B40/2** 278738			**FAZ-B40/3** 278851		
	50	**FAZ-B50/1** 278540			**FAZ-B50/2** 278739			**FAZ-B50/3** 278852		
	63	**FAZ-B63/1** 278541			**FAZ-B63/2** 278740			**FAZ-B63/3** 278853		
Characteristic C Instantaneous release response current 5 - 10 x I_n Switching capacity 15 kA (IEC/EN 60947-2)	0.5	**FAZ-C0,5/1** 278544		12 off	**FAZ-C0.5/2** 278743		1 off	**FAZ-C0.5/3** 278856		1 off
	1	**FAZ-C1/1** 278546			**FAZ-C1/2** 278745			**FAZ-C1/3** 278858		
	1.6	**FAZ-C0,5/1** 278548			**FAZ-C1.6/2** 278747			**FAZ-C1.6/3** 278860		
	2	**FAZ-C2/1** 278549			**FAZ-C2/2** 278748			**FAZ-C2/3** 278861		
	3	**FAZ-C3/1** 278551			**FAZ-C3/2** 278750			**FAZ-C3/3** 278863		
	4	**FAZ-C4/1** 278553			**FAZ-C4/2** 278752			**FAZ-C4/3** 278865		
	6	**FAZ-C6/1** 278555			**FAZ-C6/2** 278754			**FAZ-C6/3** 278867		
	8	**FAZ-C8/1** 278556			**FAZ-C8/2** 278755			**FAZ-C8/3** 278868		
	10	**FAZ-C10/1** 278557			**FAZ-C10/2** 278756			**FAZ-C10/3** 278869		
	13	**FAZ-C13/1** 278559			**FAZ-C13/2** 278758			**FAZ-C13/3** 278871		
	16	**FAZ-C16/1** 278561			**FAZ-C16/2** 278760			**FAZ-C16/3** 278873		
	20	**FAZ-C20/1** 278562			**FAZ-C20/2** 278761			**FAZ-C20/3** 278874		
	25	**FAZ-C25/1** 278563			**FAZ-C25/2** 278762			**FAZ-C25/3** 278875		
	32	**FAZ-C32/1** 278564			**FAZ-C32/2** 278763			**FAZ-C32/3** 278876		
	40	**FAZ-C40/1** 278565			**FAZ-C40/2** 278764			**FAZ-C40/3** 278877		
	50	**FAZ-C50/1** 278566			**FAZ-C50/2** 278765			**FAZ-C50/3** 278878		
	63	**FAZ-C63/1** 278567			**FAZ-C63/2** 278766			**FAZ-C63/3** 278879		

4 pole With 4 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack	**2 pole** With 1 protected pole, N switching with pole  **Part no.** Article no.	**Price** See price list	Std. pack	**4 pole** With 3 protected poles, N switching with poles  **Part no.** Article no.	**Price** See price list	Std. pack
FAZ-B6/4 279029		1 off	**FAZ-B6/1N** 278642		1 off	**FAZ-B6/3N** 278943		1 off
FAZ-B8/4 279030			**FAZ-B8/1N** 278643			**FAZ-B8/3N** 278944		
FAZ-B10/4 279031			**FAZ-B10/1N** 278644			**FAZ-B10/3N** 278945		
FAZ-B12/4 279032			**FAZ-B12/1N** 278645			**FAZ-B12/3N** 278946		
FAZ-B13/4 279033			**FAZ-B13/1N** 278646			**FAZ-B13/3N** 278947		
FAZ-B15/4 279034			**FAZ-B15/1N** 278647			**FAZ-B15/3N** 278948		
FAZ-B16/4 279035			**FAZ-B16/1N** 278648			**FAZ-B16/3N** 278949		
FAZ-B20/4 279036			**FAZ-B20/1N** 278649			**FAZ-B20/3N** 278950		
FAZ-B25/4 279037			**FAZ-B25/1N** 278650			**FAZ-B25/3N** 278951		
FAZ-B32/4 279038			**FAZ-B32/1N** 278651			**FAZ-B32/3N** 278952		
FAZ-B40/4 279039			**FAZ-B40/1N** 278652			**FAZ-B40/3N** 278953		
FAZ-B50/4 279040			**FAZ-B50/1N** 278653			**FAZ-B50/3N** 278954		
FAZ-B63/4 279041			**FAZ-B63/1N** 278654			**FAZ-B63/3N** 278955		
FAZ-C0.5/4 279044		1 off	**FAZ-C0.5/1N** 278657		1 off	**FAZ-C0.5/3N** 278958		1 off
FAZ-C1/4 279046			**FAZ-C1/1N** 278659			**FAZ-C1/3N** 278960		
FAZ-C1.6/4 279048			**FAZ-C1.6/1N** 278661			**FAZ-C1.6/3N** 278962		
FAZ-C2/4 279049			**FAZ-C2/1N** 278662			**FAZ-C2/3N** 278963		
FAZ-C3/4 279051			**FAZ-C3/1N** 278664			**FAZ-C3/3N** 278965		
FAZ-C4/4 279053			**FAZ-C4/1N** 278666			**FAZ-C4/3N** 278967		
FAZ-C6/4 279055			**FAZ-C6/1N** 278668			**FAZ-C6/3N** 278969		
FAZ-C8/4 279056			**FAZ-C8/1N** 278669			**FAZ-C8/3N** 278970		
FAZ-C10/4 279057			**FAZ-C10/1N** 278670			**FAZ-C10/3N** 278971		
FAZ-C13/4 279059			**FAZ-C13/1N** 278672			**FAZ-C13/3N** 278973		
FAZ-C16/4 279061			**FAZ-C16/1N** 278674			**FAZ-C16/3N** 278975		
FAZ-C20/4 279062			**FAZ-C20/1N** 278675			**FAZ-C20/3N** 278976		
FAZ-C25/4 279063			**FAZ-C25/1N** 278676			**FAZ-C25/3N** 278977		
FAZ-C32/4 279064			**FAZ-C32/1N** 278677			**FAZ-C32/3N** 278978		
FAZ-C40/4 279065			**FAZ-C40/1N** 278678			**FAZ-C40/3N** 278979		
FAZ-C50/4 279066			**FAZ-C50/1N** 278679			**FAZ-C50/3N** 278980		
FAZ-C63/4 279067			**FAZ-C63/1N** 278680			**FAZ-C63/3N** 278981		

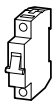
Notes

Switching capacity (IEC/EN 60898)	10 kA
Switching capacity (IEC/EN 60947-2)	15 kA

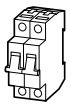
Accessories	**Page**
Auxiliary contacts	→ 19/24
Shunt releases	
Mounting accessories	→ 19/25

FAZ-B4/1-HS, FAZ-B4/2-HS
Special miniature circuit-breakers with much reduced let-through energy to prevent contact weld of **auxiliary contacts**

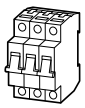
1 pole
Depth 71 mm
Width 17.5 mm



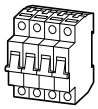
2 pole; 1 pole + N
Depth 71 mm
Width 35 mm



3 pole
Depth 71 mm
Width 52.5 mm



4 pole; 3 pole + N
Depth 71 mm
Width 70 mm



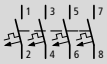
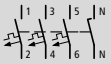
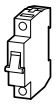
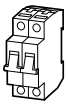
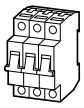
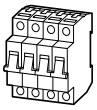
Information relevant for export to North America

Product Standards	IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking
UL File No.	E177451
UL CCN	QVNU2, QVNU8
CSA File No.	204453
CSA Class No.	3215-30
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Supplementary Protector only
Suitable for	Branch Circuits; not as BCPD
Max. Voltage Rating	1 pole: 277 V AC; 48 V DC 2 pole: 480 Y/277 V AC; 96 V DC 3 pole: 480 Y/277 V AC
Degree of Protection	IEC: IP20; UL/CSA Type: -

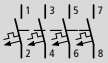
Short Circuit Current Rating

≦ 40 A	10 kA
≧ 50 A	5 kA

	Rated operational current I_n A	1 pole  **Part no.** Article no.	**Price** See price list	Std. pack	2 pole With 2 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack	3 pole With 3 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack
FAZ miniature circuit-breakers										
Characteristic D Instantaneous release response current 10 - 20 x I_n Switching capacity 15 kA (IEC/EN 60947-2)	6	**FAZ-D6/1** 278578		12 off	**FAZ-D6/2** 278777		1 off	**FAZ-D6/3** 278890		1 off
	8	**FAZ-D8/1** 278579			**FAZ-D8/2** 278778			**FAZ-D8/3** 278891		
	10	**FAZ-D10/1** 278580			**FAZ-D10/2** 278779			**FAZ-D10/3** 278892		
	13	**FAZ-D13/1** 278582			**FAZ-D13/2** 278781			**FAZ-D13/3** 278894		
	16	**FAZ-D16/1** 278584			**FAZ-D16/2** 278783			**FAZ-D16/3** 278896		
	20	**FAZ-D20/1** 278585			**FAZ-D20/2** 278784			**FAZ-D20/3** 278897		
	25	**FAZ-D25/1** 278586			**FAZ-D25/2** 278785			**FAZ-D25/3** 278898		
	32	**FAZ-D32/1** 278587			**FAZ-D32/2** 278786			**FAZ-D32/3** 278899		
	40	**FAZ-D40/1** 278588			**FAZ-D40/2** 278787			**FAZ-D40/3** 278900		
Characteristic K Instantaneous release response current 8 - 12 x I_n Switching capacity 15 kA (IEC/EN 60947-2)	0.5	**FAZ-K0,5/1** 278589		12 off	**FAZ-K0.5/2** 278788		1 off	**FAZ-K0.5/3** 278901		1 off
	1	**FAZ-K1/1** 278590			**FAZ-K1/2** 278789			**FAZ-K1/3** 278902		
	1.6	**FAZ-K0,5/1** 278591			**FAZ-K1.6/2** 278790			**FAZ-K1.6/3** 278903		
	2	**FAZ-K2/1** 278592			**FAZ-K2/2** 278791			**FAZ-K2/3** 278904		
	3	**FAZ-K3/1** 278593			**FAZ-K3/2** 278792			**FAZ-K3/3** 278905		
	4	**FAZ-K4/1** 278594			**FAZ-K4/2** 278793			**FAZ-K4/3** 278906		
	6	**FAZ-K6/1** 278595			**FAZ-K6/2** 278794			**FAZ-K6/3** 278907		
	8	**FAZ-K8/1** 278596			**FAZ-K8/2** 278795			**FAZ-K8/3** 278908		
	10	**FAZ-K10/1** 278597			**FAZ-K10/2** 278796			**FAZ-K10/3** 278909		
	13	**FAZ-K13/1** 278598			**FAZ-K13/2** 278797			**FAZ-K13/3** 278910		
	16	**FAZ-K16/1** 278599			**FAZ-K16/2** 278798			**FAZ-K16/3** 278911		
	20	**FAZ-K20/1** 278600			**FAZ-K20/2** 278799			**FAZ-K20/3** 278912		
	25	**FAZ-K25/1** 278601			**FAZ-K25/2** 278800			**FAZ-K25/3** 278913		
	32	**FAZ-K32/1** 278602			**FAZ-K32/2** 278801			**FAZ-K32/3** 278914		
	40	**FAZ-K40/1** 278603			**FAZ-K40/2** 278802			**FAZ-K40/3** 278915		
	50	**FAZ-K50/1** 278604			**FAZ-K50/2** 278803			**FAZ-K50/3** 278916		
	63	**FAZ-K63/1** 278605			**FAZ-K63/2** 278804			**FAZ-K63/3** 278917		

4 pole With 4 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack	**4 pole** With 3 protected poles, N switching with poles  **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
FAZ-D6/4 279078		1 off	**FAZ-D6/3N** 278992		1 off	Switching capacity (IEC/EN 60898) 10 kA Switching capacity (IEC/EN 60947-2) 15 kA
FAZ-D8/4 279079			**FAZ-D8/3N** 278993			
FAZ-D10/4 279080			**FAZ-D10/3N** 278994			**Accessories** **Page** Auxiliary contacts → 19/24 Shunt releases Mounting accessories → 19/25
FAZ-D13/4 279082			**FAZ-D13/3N** 278996			
FAZ-D16/4 279084			**FAZ-D16/3N** 278998			1 pole Depth 71 mm Width 17.5 mm 
FAZ-D20/4 279085			**FAZ-D20/3N** 278999			2 pole; 1 pole + N Depth 71 mm Width 35 mm 
FAZ-D25/4 279086			**FAZ-D25/3N** 279000			
FAZ-D32/4 279087			**FAZ-D32/3N** 279001			
FAZ-D40/4 279088			**FAZ-D40/3N** 279002			
FAZ-K0.5/4 279089		1 off	**FAZ-K0.5/3N** 279003		1 off	3 pole Depth 71 mm Width 52.5 mm 
FAZ-K1/4 279090			**FAZ-K1/3N** 279004			
FAZ-K1.6/4 279091			**FAZ-K1.6/3N** 279005			4 pole; 3 pole + N Depth 71 mm Width 70 mm 
FAZ-K2/4 279092			**FAZ-K2/3N** 279006			
FAZ-K3/4 279093			**FAZ-K3/3N** 279007			
FAZ-K4/4 279094			**FAZ-K4/3N** 279008			
FAZ-K6/4 279095			**FAZ-K6/3N** 279009			**Information relevant for export to North America**  Product Standards IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking UL File No. E177451 UL CCN QVNU2, QVNU8 CSA File No. 204453 CSA Class No. 3215-30 NA Certification UL Recognized, CSA certified Conditions of Acceptability Supplementary Protector only Suitable for Branch Circuits; not as BCPD Max. Voltage Rating 1 pole: 277 V AC; 48 V DC 2 pole: 480 Y/277 V AC; 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection IEC: IP20; UL/CSA Type: - Short Circuit Current Rating ≦ 40 A 10 kA ≧ 50 A 5 kA
FAZ-K8/4 279096			**FAZ-K8/3N** 279010			
FAZ-K10/4 279097			**FAZ-K10/3N** 279011			
FAZ-K13/4 279098			**FAZ-K13/3N** 279012			
FAZ-K16/4 279099			**FAZ-K16/3N** 279013			
FAZ-K20/4 279100			**FAZ-K20/3N** 279014			
FAZ-K25/4 279101			**FAZ-K25/3N** 279015			
FAZ-K32/4 279102			**FAZ-K32/3N** 279016			
FAZ-K40/4 279103			**FAZ-K40/3N** 279017			
FAZ-K50/4 279104			**FAZ-K50/3N** 279018			
FAZ-K63/4 279105			**FAZ-K63/3N** 279019			

	Rated current I_n A	**1 pole**  **Part no.** Article no.	**Price** See price list	Std. pack	**2 pole** With 2 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack
FAZ miniature circuit-breakers							
Characteristic S Instantaneous release response current 13 - 17 x I_n Switching capacity 10 kA (IEC/EN 60947-2)	1	**FAZ-S1/1** 278606		12 off	**FAZ-S1/2** 278805		1 off
	2	**FAZ-S2/1** 278607			**FAZ-S2/2** 278806		
	3	**FAZ-S3/1** 278608			**FAZ-S3/2** 278807		
	4	**FAZ-S4/1** 278609			**FAZ-S4/2** 278808		
	6	**FAZ-S6/1** 278610			**FAZ-S6/2** 278809		
	10	**FAZ-S10/1** 278611			**FAZ-S10/2** 278810		
	16	**FAZ-S16/1** 278612			**FAZ-S16/2** 278811		
	20	**FAZ-S20/1** 278613			**FAZ-S20/2** 278812		
	25	**FAZ-S25/1** 278614			**FAZ-S25/2** 278813		
	32	**FAZ-S32/1** 278615			**FAZ-S32/2** 278814		
	40	**FAZ-S40/1** 278616			**FAZ-S40/2** 278815		
Characteristic Z Instantaneous release response current 2 - 3 x I_n Switching capacity 10 kA (IEC/EN 60947-2)	0.5	**FAZ-Z0,5/1** 278617		12 off	**FAZ-Z0.5/2** 278816		1 off
	1	**FAZ-Z1/1** 278618			**FAZ-Z1/2** 278817		
	1.6	**FAZ-Z1,6/1** 278619			**FAZ-Z1.6/2** 278818		
	2	**FAZ-Z2/1** 278620			**FAZ-Z2/2** 278819		
	3	**FAZ-Z3/1** 278621			**FAZ-Z3/2** 278820		
	4	**FAZ-Z4/1** 278622			**FAZ-Z4/2** 278821		
	6	**FAZ-Z6/1** 278623			**FAZ-Z6/2** 278822		
	8	**FAZ-Z8/1** 278624			**FAZ-Z8/2** 278823		
	10	**FAZ-Z10/1** 278625			**FAZ-Z10/2** 278824		
	16	**FAZ-Z16/1** 278626			**FAZ-Z16/2** 278825		
	20	**FAZ-Z20/1** 278627			**FAZ-Z20/2** 278826		
	25	**FAZ-Z25/1** 278628			**FAZ-Z25/2** 278827		
	32	**FAZ-Z32/1** 278629			**FAZ-Z32/2** 278828		
	40	**FAZ-Z40/1** 278630			**FAZ-Z40/2** 278829		
	50	**FAZ-Z50/1** 278631			**FAZ-Z50/2** 278830		
	63	**FAZ-Z63/1** 278632			**FAZ-Z63/2** 278831		

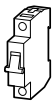
3 pole With 3 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack	**4 pole** With 4 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack
FAZ-Z0.5/3 278918		1 off	**FAZ-Z0.5/4** 279106		1 off
FAZ-Z1/3 278919			**FAZ-Z1/4** 279107		
FAZ-Z1.6/3 278920			**FAZ-Z1.6/4** 279108		
FAZ-Z2/3 278921			**FAZ-Z2/4** 279109		
FAZ-Z3/3 278922			**FAZ-Z3/4** 279110		
FAZ-Z4/3 278923			**FAZ-Z4/4** 279111		
FAZ-Z6/3 278924			**FAZ-Z6/4** 279112		
FAZ-Z8/3 278925			**FAZ-Z8/4** 279113		
FAZ-Z10/3 278926			**FAZ-Z10/4** 279114		
FAZ-Z16/3 278927			**FAZ-Z16/4** 279115		
FAZ-Z20/3 278928			**FAZ-Z20/4** 279116		
FAZ-Z25/3 278929			**FAZ-Z25/4** 279117		
FAZ-Z32/3 278930			**FAZ-Z32/4** 279118		
FAZ-Z40/3 278931			**FAZ-Z40/4** 279119		
FAZ-Z50/3 278932			**FAZ-Z50/4** 279120		
FAZ-Z63/3 278933			**FAZ-Z63/4** 279121		

Notes

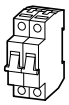
Switching capacity (IEC/EN 60898)	10 kA
Switching capacity (IEC/EN 60947-2)	15 kA

Accessories	**Page**
Auxiliary contacts	→ 19/24
Shunt releases	
Mounting accessories	→ 19/25

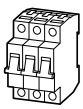
1 pole
Depth 71 mm
Width 17.5 mm



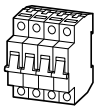
2 pole; 1 pole + N
Depth 71 mm
Width 35 mm



3 pole
Depth 71 mm
Width 52.5 mm



4 pole; 3 pole + N
Depth 71 mm
Width 70 mm



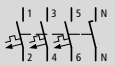
Information relevant for export to North America

Product Standards	IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking
UL File No.	E177451
UL CCN	QVNU2, QVNU8
CSA File No.	204453
CSA Class No.	3215-30
NA Certification	UL Recognized, CSA certified
Conditions of Acceptability	Supplementary Protector only
Suitable for	Branch Circuits; not as BCPD
Max. Voltage Rating	1 pole: 277 V AC; 48 V DC 2 pole: 480 Y/277 V AC; 96 V DC 3 pole: 480 Y/277 V AC
Degree of Protection	IEC: IP20; UL/CSA Type: -

Short Circuit Current Rating

≦ 40 A	10 kA
≧ 50 A	5 kA

	Rated operational current I_n A	1 pole **Part no.** Article no.	**Price** See price list	Std. pack	1 pole+N **Part no.** Article no.	**Price** See price list	Std. pack	2 pole **Part no.** Article no.	**Price** See price list	Std. pack
FAZT miniature circuit-breakers										
Characteristic B Switching capacity 25 kA (IEC/EN 60947-2)	1	**FAZT-B1/1** 240770		12 off	**FAZT-B1/1N** 240994		1 off	**FAZT-B1/2** 240820		1 off
	2	**FAZT-B2/1** 240771			**FAZT-B2/1N** 240995			**FAZT-B2/2** 240821		
	3	**FAZT-B3/1** 240772			**FAZT-B3/1N** 240996			**FAZT-B3/2** 240822		
	4	**FAZT-B4/1** 240777			**FAZT-B4/1N** 240997			**FAZT-B4/2** 240823		
	6	**FAZT-B6/1** 240782			**FAZT-B6/1N** 240998			**FAZT-B6/2** 240824		
	10	**FAZT-B10/1** 240787			**FAZT-B10/1N** 240999			**FAZT-B10/2** 240825		
	12	**FAZT-B12/1** 240792			**FAZT-B12/1N** 241000			**FAZT-B12/2** 240826		
	13	**FAZT-B13/1** 240793			**FAZT-B13/1N** 241001			**FAZT-B13/2** 240827		
	15	**FAZT-B15/1** 240794			**FAZT-B15/1N** 241005			**FAZT-B15/2** 240828		
	16	**FAZT-B16/1** 240795			**FAZT-B16/1N** 241009			**FAZT-B16/2** 240829		
	20	**FAZT-B20/1** 240796			**FAZT-B20/1N** 241015			**FAZT-B20/2** 240830		
	25	**FAZT-B25/1** 240797			**FAZT-B25/1N** 241019			**FAZT-B25/2** 240831		
	32[1)]	**FAZT-B32/1** 141907			**FAZT-B32/1N** 142509			**FAZT-B32/2** 142485		
	40[1)]	**FAZT-B40/1** 141908			**FAZT-B40/1N** 142510			**FAZT-B40/2** 142486		
Characteristic C Switching capacity 25 kA (IEC/EN 60947-2)	1	**FAZT-C1/1** 240798		12 off	**FAZT-C1/1N** 241022		1 off	**FAZT-C1/2** 240832		1 off
	2	**FAZT-C2/1** 240799			**FAZT-C2/1N** 241023			**FAZT-C2/2** 240833		
	3	**FAZT-C3/1** 240800			**FAZT-C3/1N** 241024			**FAZT-C3/2** 240838		
	4	**FAZT-C4/1** 240801			**FAZT-C4/1N** 241025			**FAZT-C4/2** 240843		
	6	**FAZT-C6/1** 240802			**FAZT-C6/1N** 241026			**FAZT-C6/2** 240850		
	10	**FAZT-C10/1** 240803			**FAZT-C10/1N** 241027			**FAZT-C10/2** 240855		
	12	**FAZT-C12/1** 240804			**FAZT-C12/1N** 241028			**FAZT-C12/2** 240858		
	13	**FAZT-C13/1** 240805			**FAZT-C13/1N** 241029			**FAZT-C13/2** 240859		
	15	**FAZT-C15/1** 240806			**FAZT-C15/1N** 241030			**FAZT-C15/2** 240860		
	16	**FAZT-C16/1** 240807			**FAZT-C16/1N** 241034			**FAZT-C16/2** 240861		
	20	**FAZT-C20/1** 240808			**FAZT-C20/1N** 241038			**FAZT-C20/2** 240862		
	25	**FAZT-C25/1** 240809			**FAZT-C25/1N** 241044			**FAZT-C25/2** 240863		
	32[1)]	**FAZT-C32/1** 141909			**FAZT-C32/1N** 142511			**FAZT-C32/2** 142487		
	40[1)]	**FAZT-C40/1** 142480			**FAZT-C40/1N** 142512			**FAZT-C40/2** 142488		
Characteristic D Switching capacity 25 kA (IEC/EN 60947-2)	1	**FAZT-D1/1** 240810		12 off	**FAZT-D1/1N** 241048		1 off	**FAZT-D1/2** 240864		1 off
	2	**FAZT-D2/1** 240811			**FAZT-D2/1N** 241051			**FAZT-D2/2** 240865		
	3	**FAZT-D3/1** 240812			**FAZT-D3/1N** 241052			**FAZT-D3/2** 240866		
	4	**FAZT-D4/1** 240813			**FAZT-D4/1N** 241053			**FAZT-D4/2** 240867		
	6	**FAZT-D6/1** 240814			**FAZT-D6/1N** 241054			**FAZT-D6/2** 240868		

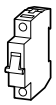
3 pole  **Part no.** Article no.	**Price** See price list	Std. pack	3 pole+N  **Part no.** Article no.	**Price** See price list	Std. pack	4 pole  **Part no.** Article no.	**Price** See price list	Std. pack
FAZT-B1/3 240874		1 off	**FAZT-B1/3N** 241060		1 off	**FAZT-B1/4** 240922		1 off
FAZT-B2/3 240875			**FAZT-B2/3N** 241065			**FAZT-B2/4** 240927		
FAZT-B3/3 240876			**FAZT-B3/3N** 241070			**FAZT-B3/4** 240930		
FAZT-B4/3 240877			**FAZT-B4/3N** 241075			**FAZT-B4/4** 240931		
FAZT-B6/3 240878			**FAZT-B6/3N** 241080			**FAZT-B6/4** 240932		
FAZT-B10/3 240879			**FAZT-B10/3N** 241085			**FAZT-B10/4** 240933		
FAZT-B12/3 240880			**FAZT-B12/3N** 241090			**FAZT-B12/4** 240934		
FAZT-B13/3 240881			**FAZT-B13/3N** 241095			**FAZT-B13/4** 240935		
FAZT-B15/3 240882			**FAZT-B15/3N** 241100			**FAZT-B15/4** 240936		
FAZT-B16/3 240883			**FAZT-B16/3N** 241105			**FAZT-B16/4** 240937		
FAZT-B20/3 240884			**FAZT-B20/3N** 241110			**FAZT-B20/4** 240938		
FAZT-B25/3 240885			**FAZT-B25/3N** 241115			**FAZT-B25/4** 240939		
FAZT-B32/3 142493			**FAZT-B32/3N** 142517			**FAZT-B32/4** 142501		
FAZT-B40/3 142494			**FAZT-B40/3N** 142518			**FAZT-B40/4** 142502		
FAZT-C1/3 240886		1 off	**FAZT-C1/3N** 241120		1 off	**FAZT-C1/4** 240940		1 off
FAZT-C2/3 240887			**FAZT-C2/3N** 241125			**FAZT-C2/4** 240941		
FAZT-C3/3 240888			**FAZT-C3/3N** 241130			**FAZT-C3/4** 240945		
FAZT-C4/3 240889			**FAZT-C4/3N** 241135			**FAZT-C4/4** 240949		
FAZT-C6/3 240890			**FAZT-C6/3N** 241140			**FAZT-C6/4** 240955		
FAZT-C10/3 240891			**FAZT-C10/3N** 241145			**FAZT-C10/4** 240959		
FAZT-C12/3 240892			**FAZT-C12/3N** 241150			**FAZT-C12/4** 240962		
FAZT-C13/3 240893			**FAZT-C13/3N** 241155			**FAZT-C13/4** 240963		
FAZT-C15/3 240894			**FAZT-C15/3N** 241160			**FAZT-C15/4** 240964		
FAZT-C16/3 240895			**FAZT-C16/3N** 241165			**FAZT-C16/4** 240965		
FAZT-C20/3 240896			**FAZT-C20/3N** 241170			**FAZT-C20/4** 240966		
FAZT-C25/3 240897			**FAZT-C25/3N** 241175			**FAZT-C25/4** 240967		
FAZT-C32/3 142495			**FAZT-B32/3N** 142519			**FAZT-C32/4** 142503		
FAZT-C40/3 142496			**FAZT-B40/3N** 142520			**FAZT-C40/4** 142504		
FAZT-D1/3 240898		1 off	**FAZT-D1/3N** 241180		1 off	**FAZT-D1/4** 240968		1 off
FAZT-D2/3 240899			**FAZT-D2/3N** 241181			**FAZT-D2/4** 240969		
FAZT-D3/3 240900			**FAZT-D3/3N** 241182			**FAZT-D3/4** 240970		
FAZT-D4/3 240901			**FAZT-D4/3N** 241183			**FAZT-D4/4** 240971		
FAZT-D6/3 240902			**FAZT-D6/3N** 241184			**FAZT-D6/4** 240975		

Notes

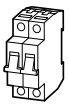
Switching capacity (IEC/EN 60947-2)	25 kA

Accessories	**Page**
Auxiliary contacts	→ 19/24
Shunt releases	
Mounting accessories	→ 19/25

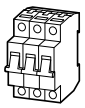
1 pole
Depth 71 mm
Width 17.5 mm



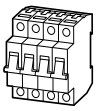
2 pole; 1 pole + N
Depth 71 mm
Width 35 mm



3 pole
Depth 71 mm
Width 52.5 mm

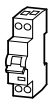


4 pole; 3 pole + N
Depth 71 mm
Width 70 mm



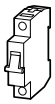
[1] For additional Technical Data and Characteristic Curves see "Installation Products for Industrial Application FAZ-T": www.moeller.net/cn/support/pdf_Katalog.jsp

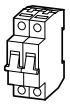
	Rated operational current I_n A	1 pole **Part no.** Article no.	**Price** See price list	Std. pack	1 pole+N **Part no.** Article no.	**Price** See price list	Std. pack	2 pole **Part no.** Article no.	**Price** See price list	Std. pack
FAZT miniature circuit-breakers										
Characteristic D Switching capacity 25 kA (IEC/EN 60947-2)	10	**FAZT-D10/1** 240815		12 off	**FAZT-D10/1N** 241055		1 off	**FAZT-D10/2** 240869		1 off
	12	**FAZT-D12/1** 240816			**FAZT-D12/1N** 241056			**FAZT-D12/2** 240870		
	13	**FAZT-D13/1** 240817			**FAZT-D13/1N** 241057			**FAZT-D13/2** 240871		
	15	**FAZT-D15/1** 240818			**FAZT-D15/1N** 241058			**FAZT-D15/2** 240872		
	16	**FAZT-D16/1** 240819			**FAZT-D16/1N** 241059			**FAZT-D16/2** 240873		
	20[1)]	**FAZT-D20/1** 142481			**FAZT-D20/1N** 142513			**FAZT-D20/2** 142489		
	25[1)]	**FAZT-D25/1** 142482			**FAZT-D25/1N** 142514			**FAZT-D25/2** 142490		
	32[1)]	**FAZT-D32/1** 142483			**FAZT-D32/1N** 142515			**FAZT-D32/2** 142491		
	40[1)]	**FAZT-D40/1** 142484			**FAZT-D40/1N** 142516			**FAZT-D40/2** 142492		

	Rated operational current I_n A	2 pole With 1 protected pole, N switching with pole **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
FAZ-PN miniature circuit-breaker					
Characteristic B Instantaneous release response current 3 - 5 x I_n Switching capacity 6 kA (IEC/EN 60898)	6	**FAZ-PN-B6/1N** 279146		12 off	**Accessories** **Page** Auxiliary contacts → 19/24 Shunt releases 1 N pole Depth 71 mm Width 17.5 mm 
	10	**FAZ-PN-B10/1N** 279147			
	13	**FAZ-PN-B13/1N** 279148			
	16	**FAZ-PN-B16/1N** 279149			
	20	**FAZ-PN-B20/1N** 279150			
	25	**FAZ-PN-B25/1N** 279151			
	32	**FAZ-PN-B32/1N** 279152			
	40	**FAZ-PN-B40/1N** 279153			
Characteristic C Instantaneous release response current 5 - 10 x I_n Switching capacity 6 kA (IEC/EN 60898)	2	**FAZ-PN-C2/1N** 279154		12 off	
	4	**FAZ-PN-C4/1N** 279155			
	6	**FAZ-PN-C6/1N** 279156			
	10	**FAZ-PN-C10/1N** 279157			
	13	**FAZ-PN-C13/1N** 279158			
	16	**FAZ-PN-C16/1N** 279159			
	20	**FAZ-PN-C20/1N** 279160			
	25	**FAZ-PN-C25/1N** 279161			
	32	**FAZ-PN-C32/1N** 279162			
	40	**FAZ-PN-C40/1N** 279163			

3 pole **Part no.** Article no.	**Price** See price list	Std. pack	3 pole+N **Part no.** Article no.	**Price** See price list	Std. pack	4 pole **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
FAZT-D10/3 240903		1 off	**FAZT-D10/3N** 241185		1 off	**FAZT-D10/4** 240979		1 off	Switching capacity (IEC/EN 60947-2) 25 kA
FAZT-D12/3 240904			**FAZT-D12/3N** 241186			**FAZT-D12/4** 240985			**Accessories** **Page**
FAZT-D13/3 240905			**FAZT-D13/3N** 241187			**FAZT-D13/4** 240989			Auxiliary contacts → 19/24 Shunt releases Mounting accessories → 19/25
FAZT-D15/3 240910			**FAZT-D15/3N** 241188			**FAZT-D15/4** 240992			1 pole Depth 71 mm Width 17.5 mm
FAZT-D16/3 240915			**FAZT-D16/3N** 241189			**FAZT-D16/4** 240993			2 pole; 1 pole + N Depth 71 mm Width 35 mm
FAZT-D20/3 142497			**FAZT-D20/3N** 142521			**FAZT-D20/4** 142505			3 pole Depth 71 mm Width 52.5 mm
FAZT-D25/3 142498			**FAZT-D25/3N** 142522			**FAZT-D25/4** 142506			4 pole; 3 pole + N Depth 71 mm Width 70 mm
FAZT-D32/3 142499			**FAZT-D32/3N** 142523			**FAZT-D32/4** 142507			→ Graphics, Page 19/11
FAZT-D40/3 142500			**FAZT-D40/3N** 142524			**FAZT-D40/4** 142508			[1] For additional Technical Data and Characteristic Curves see "Installation Products for Industrial Application FAZ-T": www.moeller.net/cn/support/pdf_Katalog.jsp

	Rated operational current I_n A	1 pole **Part no.** Article no.	**Price** See price list	Std. pack	2 pole With 2 protected poles **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
FAZ miniature circuit-breakers for DC applications								
Characteristic C Instantaneous release response current 5 - 10 x I_n Switching capacity 10 kA (IEC/EN 60947-2) (L/R = 4 ms) Rated operating voltage 250 V DC per pole	2	**FAZ-C2/1-DC** 279122		12 off	**FAZ-C2/2-DC** 279134		1 off	**Accessories** **Page** Auxiliary contacts → 19/24 Shunt releases Mounting accessories → 19/25 1 pole Depth 71 mm Width 17.5 mm 2 pole; 1N pole Depth 71 mm Width 35 mm
	3	**FAZ-C3/1-DC** 279123			**FAZ-C3/2-DC** 279135			
	4	**FAZ-C4/1-DC** 279124			**FAZ-C4/2-DC** 279136			
	6	**FAZ-C6/1-DC** 279125			**FAZ-C6/2-DC** 279137			
	10	**FAZ-C10/1-DC** 279126			**FAZ-C10/2-DC** 279138			
	13	**FAZ-C13/1-DC** 279127			**FAZ-C13/2-DC** 279139			
	16	**FAZ-C16/1-DC** 279128			**FAZ-C16/2-DC** 279140			
	20	**FAZ-C20/1-DC** 279129			**FAZ-C20/2-DC** 279141			
	25	**FAZ-C25/1-DC** 279130			**FAZ-C25/2-DC** 279142			
	32	**FAZ-C32/1-DC** 279131			**FAZ-C32/2-DC** 279143			
	40	**FAZ-C40/1-DC** 279132			**FAZ-C40/2-DC** 279144			
	50	**FAZ-C50/1-DC** 279133			**FAZ-C50/2-DC** 279145			



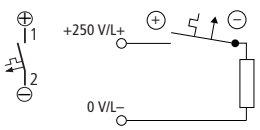


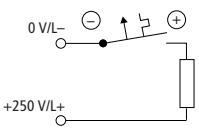
Notes

Circuit design notes

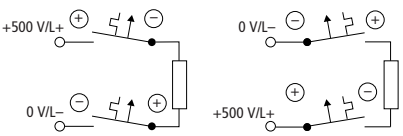
Note polarity!

1 pole

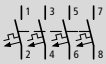
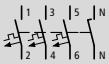
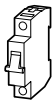
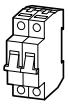
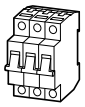
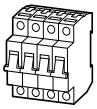


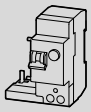
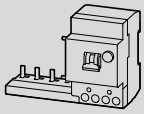


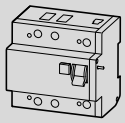
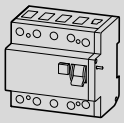
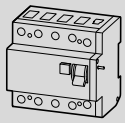
2 pole



	Rated operational current I_n A	**1 pole**  **Part no.** Article no.	**Price** See price list	Std. pack	**2 pole** With 2 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack	**3 pole** With 3 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack
AZ miniature circuit-breakers										
Characteristic C Response current of short-circuit release 5 - 10 x I_n Switching capacity 15 - 25 kA (IEC/EN 60947-2)	20	**AZ-C20** 211769		12 off	**AZ-2-C20** 211770		2 off	**AZ-3-C20** 211771		1 off
	25	**AZ-C25** 211774		12 off	**AZ-2-C25** 211775		2 off	**AZ-3-C25** 211776		1 off
	32	**AZ-C32** 211779		12 off	**AZ-2-C32** 211780		2 off	**AZ-3-C32** 211781		1 off
	40	**AZ-C40** 211784		12 off	**AZ-2-C40** 211785		2 off	**AZ-3-C40** 211786		1 off
	50	**AZ-C50** 211789		12 off	**AZ-2-C50** 211790		2 off	**AZ-3-C50** 211791		1 off
	63	**AZ-C63** 211794		12 off	**AZ-2-C63** 211795		2 off	**AZ-3-C63** 211796		1 off
	80	**AZ-C80** 211799		12 off	**AZ-2-C80** 211800		2 off	**AZ-3-C80** 211801		1 off
	100	**AZ-C100** 211804		12 off	**AZ-2-C100** 211805		2 off	**AZ-3-C100** 211806		1 off
	125	**AZ-C125** 211809		12 off	**AZ-2-C125** 211810		2 off	**AZ-3-C125** 211811		1 off
Characteristic D Instantaneous release response current 10 - 20 x I_n Switching capacity 15 - 25 kA (IEC/EN 60947-2)	50	**AZ-D50** 211814		12 off	**AZ-2-D50** 211815		2 off	**AZ-3-D50** 211816		1 off
	63	**AZ-D63** 211818		12 off	**AZ-2-D63** 211819		2 off	**AZ-3-D63** 211820		1 off
	80	**AZ-D80** 211822		12 off	**AZ-2-D80** 211823		2 off	**AZ-3-D80** 211824		1 off
	100	**AZ-D100** 211826		12 off	**AZ-2-D100** 211827		2 off	**AZ-3-D100** 211828		1 off

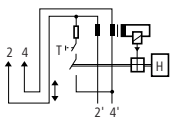
4 pole With 4 protected poles  **Part no.** Article no.	**Price** See price list	Std. pack	**4 pole** With 3 protected poles, N switching with poles  **Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
AZ-4-C20 211772		1 off	**AZ-3N-C20** 211773		1 off	For switching capacity refer to Technical Data
AZ-4-C25 211777		1 off	**AZ-3N-C25** 211778		1 off	**Accessories** **Page** Auxiliary contacts, shunt releases → 19/24 Mounting accessories → 19/25
AZ-4-C32 211782		1 off	**AZ-3N-C32** 211783		1 off	1 pole Depth 75 mm Width 27 mm
AZ-4-C40 211787		1 off	**AZ-3N-C40** 211788		1 off	2 pole Depth 75 mm Width 54 mm
AZ-4-C50 211792		1 off	**AZ-3N-C50** 211793		1 off	 
AZ-4-C63 211797		1 off	**AZ-3N-C63** 211798		1 off	
AZ-4-C80 211802		1 off	**AZ-3N-C80** 211803		1 off	
AZ-4-C100 211807		1 off	**AZ-3N-C100** 211808		1 off	3 pole Depth 75 mm Width 81 mm
AZ-4-C125 211812		1 off	**AZ-3N-C125** 211813		1 off	4 pole; 3 pole + N Depth 75 mm Width 108 mm
			AZ-3N-D50 211817		1 off	 
			AZ-3N-D63 211821		1 off	
			AZ-3N-D80 211825		1 off	
			AZ-3N-D100 211829		1 off	

	Rated uninterrupted current I_u A	2 pole  **Part no.** Article no.	**Price** See price list	4 pole  **Part no.** Article no.	**Price** See price list			Std. pack
Residual-current protective modules for FAZ								
Rated fault current $I_{\Delta N}$ = 30 mA	40	**FIM-40/2/0.03-A** 278510		**FIM-40/4/0.03-A** 278514				1 off
Rated fault current $I_{\Delta N}$ = 30 mA	63	**FIM-63/2/0.03-A** 278512		**FIM-63/4/0.03-A** 278516				
Rated fault current $I_{\Delta N}$ = 300 mA	40	**FIM-40/2/0.3-A** 278511		**FIM-40/4/0.3-A** 278515				
Rated fault current $I_{\Delta N}$ = 300 mA	63	**FIM-63/2/0.3-A** 278513		**FIM-63/4/0.3-A** 278517				

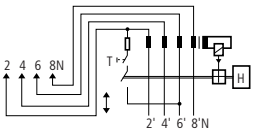
	Rated uninterrupted current I_u A	2 pole  **Part no.** Article no.	**Price** See price list	4 pole  **Part no.** Article no.	**Price** See price list	4 pole Selective  **Part no.** Article no.	**Price** See price list	Std. pack
Residual-current protective modules for AZ								
Rated fault current $I_{\Delta N}$ = 30 mA	80			**AZFIMP-4-80-0,03** 255484				1 off
Rated fault current $I_{\Delta N}$ = 30 mA	125			**AZFIMP-4-125-0,03** 255488				
Rated fault current $I_{\Delta N}$ = 300 mA	80	**AZFIMP-2-80-0,3** 255477		**AZFIMP-4-80-0,3** 255485		**AZFIMS-4-80-0,3** 255492		
Rated fault current $I_{\Delta N}$ = 300 mA	125	**AZFIMP-2-125-0,3** 255481		**AZFIMP-4-125-0,3** 255489		**AZFIMS-4-125-0,3** 255495		

Notes

FIM-…/2/…



FIM-…/4/…



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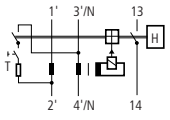
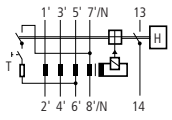
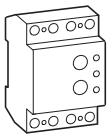
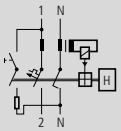
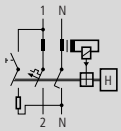
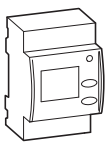


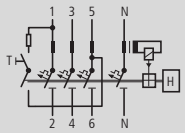
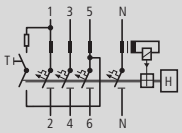
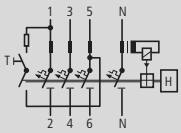
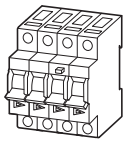
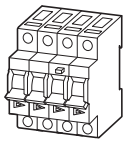
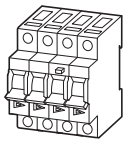
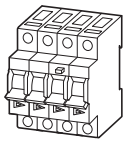
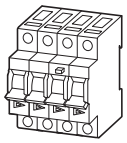
AZFIMP-4-…
AZFIMS-4-…

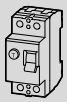
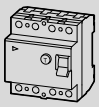


	Pole	Rated operational current I_n A	Response value Earth-fault release $I_{\Delta n}$ A	**Part no.** Article no.	**Price** See price list	Std. pack
Leakage current meter						
• 4 pole, can also be used as 2 and 3 pole • Electronic operation (independent of mains voltage) •  , non-delayed • Type G or part no. S can be set • → 19/55						
	4 pole	40	0.03 0.1 0.3 0.5 1.0	**PDIM-40/4** 111760		1 off
	4 pole	100	0.03 0.1 0.3 0.5 1.0	**PDIM-100/4** 111761		1 off

	Rated operational current I_n A	**2 pole**  **Part no.** Article no. Rated fault current $I_{\Delta N}$ = 30 mA	**Price** See price list	**2 pole**  **Part no.** Article no. Rated fault current $I_{\Delta N}$ = 300 mA	**Price** See price list	Std. pack
PKNM combination switches, type A						
Characteristic B Switching capacity 10 kA	6	**PKNM-6/1N/B/003-A-DW** 238580		**PKNM-6/1N/B/03-A-DW** 238582		1 off
	10	**PKNM-10/1N/B/003-A-DW** 238640		**PKNM-10/1N/B/03-A-DW** 238642		
	13	**PKNM-13/1N/B/003-A-DW** 238701		**PKNM-13/1N/B/03-A-DW** 238703		
	16	**PKNM-16/1N/B/003-A-DW** 238773		**PKNM-16/1N/B/03-A-DW** 238775		
	20	**PKNM-20/1N/B/003-A-DW** 238807		**PKNM-20/1N/B/03-A-DW** 238809		
	25	**PKNM-25/1N/B/003-A-DW** 238837		**PKNM-25/1N/B/03-A-DW** 238839		
	32	**PKNM-32/1N/B/003-A-DW** 238867		**PKNM-32/1N/B/03-A-DW** 238869		
	40	**PKNM-40/1N/B/003-A-DW** 238896		**PKNM-40/1N/B/03-A-DW** 238898		
Characteristic C Switching capacity 10 kA	6	**PKNM-6/1N/C/003-A-DW** 238590		**PKNM-6/1N/C/03-A-DW** 238592		
	10	**PKNM-10/1N/C/003-A-DW** 238650		**PKNM-10/1N/C/03-A-DW** 238652		
	13	**PKNM-13/1N/C/003-A-DW** 238713		**PKNM-13/1N/C/03-A-DW** 238715		
	16	**PKNM-16/1N/C/003-A-DW** 238785		**PKNM-16/1N/C/03-A-DW** 238787		
	20	**PKNM-20/1N/C/003-A-DW** 238817		**PKNM-20/1N/C/03-A-DW** 238819		
	25	**PKNM-25/1N/C/003-A-DW** 238847		**PKNM-25/1N/C/03-A-DW** 238849		
	32	**PKNM-32/1N/C/003-A-DW** 238877		**PKNM-32/1N/C/03-A-DW** 238879		
	40	**PKNM-40/1N/C/003-A-DW** 238906		**PKNM-40/1N/C/03-A-DW** 238908		

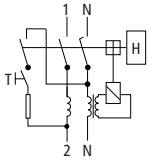
	Pole	Description	Rated operational current I_n A	**Part no.** Article no.	**Price** See price list	Std. pack
Power meter						
Power meter to IEC/EN 62053 for sub measurements • For active/reactive energy • Three-phase models also suitable for unbalanced load • Programmable through 2 keys on device front • Front plate and terminal area can be sealed						
	3 + N	Connection through current transformer	5	**KWZ-3PH** 110825		1 off
	3 + N	Connection through current transformer	63	**KWZ-3PH-63** 110826		

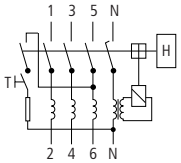
	Rated operational current I_n A	3 pole + N  **Part no.** Article no. Rated fault current $I_{\Delta N}$ = 30 mA	3 pole + N  **Part no.** Article no. Rated fault current $I_{\Delta N}$ = 100 mA	3 pole + N  **Part no.** Article no. Rated fault current $I_{\Delta N}$ = 300 mA	**Price** See price list	Std. pack
FI/LS combination switches mRB6						
• Conditionally surge-proof 250 A • Pulse-current sensitive, Type A • Depth 75 mm • Width 70 mm						
Characteristic B Switching capacity 6 kA 	13	**mRB6-13/3N/B/003-A** 120651	**mRB6-13/3N/B/01-A** 120653	**mRB6-13/3N/B/03-A** 120655		1 off
	16	**mRB6-16/3N/B/003-A** 120652	**mRB6-16/3N/B/01-A** 120654	**mRB6-16/3N/B/03-A** 120656		1 off
Characteristic C Switching capacity 6 kA 	6	**mRB6-6/3N/C/003-A** 120657	**mRB6-6/3N/C/01-A** 120661	**mRB6-6/3N/C/03-A** 120665		1 off
	10	**mRB6-10/3N/C/003-A** 120658	**mRB6-10/3N/C/01-A** 120662	**mRB6-10/3N/C/03-A** 120666		1 off
	13	**mRB6-13/3N/C/003-A** 120659	**mRB6-13/3N/C/01-A** 120663	**mRB6-13/3N/C/03-A** 120667		1 off
	16	**mRB6-16/3N/C/003-A** 120660	**mRB6-16/3N/C/01-A** 120664	**mRB6-16/3N/C/03-A** 120668		1 off
Characteristic D Switching capacity 6 kA 	6	**mRB6-6/3N/D/003-A** 120669	**mRB6-6/3N/D/01-A** 120673			1 off
	10	**mRB6-10/3N/D/003-A** 120670	**mRB6-10/3N/D/01-A** 120674			1 off
	13	**mRB6-13/3N/D/003-A** 120671	**mRB6-13/3N/D/01-A** 120675			1 off
	16	**mRB6-16/3N/D/003-A** 120672	**mRB6-16/3N/D/01-A** 120676			1 off
FI-LS combination switches mRB4						
• Conditionally surge-proof 250 A • Pulse-current sensitive, Type A • Depth 75 mm • Width 70 mm						
Characteristic C Switching capacity 4.5 kA 	20	**mRB4-20/3N/C/003-A** 120677	**mRB4-20/3N/C/01-A** 120679	**mRB4-20/3N/C/03-A** 120681		1 off
	25	**mRB4-25/3N/C/003-A** 120678	**mRB4-25/3N/C/01-A** 120680	**mRB4-25/3N/C/03-A** 120682		1 off
Characteristic D Switching capacity 4.5 kA 	20	**mRB4-20/3N/D/003-A** 120683	**mRB4-20/3N/D/01-A** 120684			1 off

	Rated uninterrupted current I_u A	2 pole  Part no. Article no.	Price See price list	Std. pack	4 pole  Part no. Article no.	Price See price list	Std. pack
Residual-current devices FI, type A							
Rated fault current $I_{\Delta N}$ = 30 mA	16	**FI-16/2/003-A** 279183		1 off			1 off
	25	**FI-25/2/003-A** 279184		1 off	**FI-25/4/003-A** 279213		
	40	**FI-40/2/003-A** 279187		1 off	**FI-40/4/003-A** 279217		
	63				**FI-63/4/003-A** 279221		
	80				**FI-80/4/003-A** 279225		
	100				**FI-100/4/003-A/-** 102936		
	125				**FI-125/4/003-A** 279165		
Rated fault current $I_{\Delta N}$ = 100 mA	25	**FI-25/2/01-A** 279185		1 off	**FI-25/4/01-A** 279214		
	40	**FI-40/2/01-A** 279188		1 off	**FI-40/4/01-A** 279218		
	63				**FI-63/4/01-A** 279222		
Rated fault current $I_{\Delta N}$ = 300 mA	25	**FI-25/2/03-A** 279186		1 off	**FI-25/4/03-A** 279215		
	40	**FI-40/2/03-A** 279189		1 off	**FI-40/4/03-A** 279219		
	63				**FI-63/4/03-A** 279223		
	80				**FI-80/4/03-A** 279226		
	100				**FI-100/4/03-A/-** 102937		
	125				**FI-125/4/03-A** 279167		
Rated fault current $I_{\Delta N}$ = 500 mA	25				**FI-25/4/05-A** 279216		
	40				**FI-40/4/05-A** 279220		
	63				**FI-63/4/05-A** 279224		
	80				**FI-80/4/05-A** 279227		
	100				**FI-100/4/05-A/-** 102938		
	125				**FI-125/4/05-A** 279169		

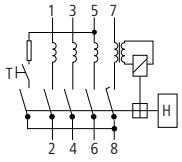
Notes

≦ 100 A

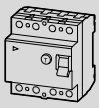


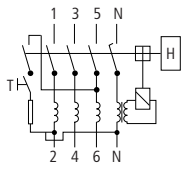
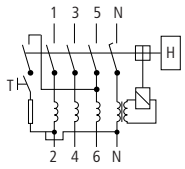
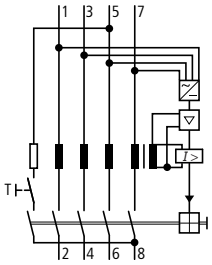


125 A



4 pole

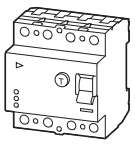


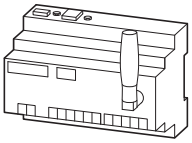
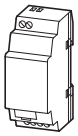
	Rated uninterrupted current I_u A	Part no. Article no.	Price See price list	Std. pack	Notes
Suitable for frequency inverters, type U					
Rated fault current $I_{\Delta N}$ = 100 mA	40	**FI-40/4/01-U** 279234		1 off	
	63	**FI-63/4/01-U** 279236		1 off	
Rated fault current $I_{\Delta N}$ = 300 mA	40	**FI-40/4/03-U** 279235		1 off	
	63	**FI-63/4/03-U** 279237		1 off	
Selective and surge-proof 5 kA, type S/A					
Rated fault current $I_{\Delta N}$ = 100 mA	63	**FI-63/4/01-S/A** 279228		1 off	
Rated fault current $I_{\Delta N}$ = 300 mA	63	**FI-63/4/03-S/A** 279229		1 off	
	80	**FI-80/4/03-S/A** 279230		1 off	
AC/DC sensitive, Type B					
Rated fault current $I_{\Delta N}$ = 30 mA	40	**FI-40/4/003-B** 240710		1 off	
	63	**FI-63/4/003-B** 240711		1 off	
	80	**FI-80/4/003-B** 240712		1 off	
	125[1]	**FI-125/4/003-B** 240717		1 off	
Rated fault current $I_{\Delta N}$ = 100 mA	40	**FI-40/4/01-B** 279170		1 off	
	63	**FI-63/4/01-B** 279171		1 off	
	80	**FI-80/4/01-B** 279172		1 off	
	125[1]	**FI-125/4/01-B** 240722		1 off	
Rated fault current $I_{\Delta N}$ = 300 mA	40	**FI-40/4/03-B** 279173		1 off	
	63	**FI-63/4/03-B** 279174		1 off	
	80	**FI-80/4/03-B** 279175		1 off	
	125[1]	**FI-125/4/03-B** 240727		1 off	
AC/DC sensitive, selective, S/B type					
Rated fault current $I_{\Delta N}$ = 300 mA	40	**FI-40/4/03-S/B** 281022		1 off	
	63	**FI-63/4/03-S/B** 281023		1 off	
	80	**FI-80/4/03-S/B** 281024		1 off	

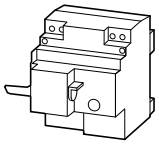
For use in 50 Hz AC current systems with electrical equipment such as frequency inverters, UPS systems or switched-mode power supply units. During a malfunction electrical equipment can cause AC fault currents and pulsed DC fault currents as well as smoothed d.c. fault currents, where residual-current devices of type C will not trip. The residual-current devices FI-B detect all fault current types in accordance with the trip characteristic of IEC 60755, i.e. even pulsating d.c. fault current.

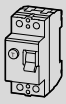
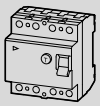
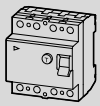
- Caution: In some countries the insurance companies place special demands on residual-current devices.
- Contact position display red-green
- Position independent function
- Trip occurs independent of the mains voltage (currents type AC and A)
- 30 V AC necessary for detection of type B current
- Mains connection side at top
- Type S/B 40 ms delay and selective switch off
- Auxiliary contacts on request

Notes [1] Neutral conductor right, with 125 A neutral conductor on left

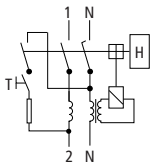
		Rated operational current I_n A	**Part no.** Article no.	**Price** See price list	Std. pack
Residual-current devices dRCM, digital					
• 4 pole • Contact position display red-green • Trip indication white/blue					
	Surge-proof 3 kA, pulse-current sensitive, Type G/A				
	Rated fault current $I_{\Delta N}$ = 30 mA	25	**dRCM-25/4/003-G/A+** 120834		1 off
		40	**dRCM-40/4/003-G/A+** 120836		1 off
		63	**dRCM-63/4/003-G/A+** 120838		1 off
		80	**dRCM-80/4/003-G/A+** 120840		1 off
	Rated fault current $I_{\Delta N}$ = 300 mA	25	**dRCM-25/4/03-G/A+** 120835		1 off
		40	**dRCM-40/4/03-G/A+** 120837		1 off
		63	**dRCM-63/4/03-G/A+** 120839		1 off
		80	**dRCM-80/4/03-G/A+** 120841		1 off
	Surge-proof 3 kA, X-ray applications, Type R				
	Rated fault current $I_{\Delta N}$ = 30 mA	63	**dRCM-63/4/003-R+** 120842		1 off
	Selective and surge-proof typ. 5 kA, pulse-current sensitive, Type S/A				
	Rated fault current $I_{\Delta N}$ = 300 mA	40	**dRCM-40/4/03-S/A+** 120843		1 off
		63	**dRCM-63/4/03-S/A+** 120844		1 off
		80	**dRCM-80/4/03-S/A+** 120845		1 off
	Selective and surge-proof typ. 5 kA, suitable for frequency inverters, Type U				
	Rated fault current $I_{\Delta N}$ = 300 mA	40	**dRCM-40/4/03-U+** 120851		1 off
		63	**dRCM-63/4/03-U+** 120847		1 off
		80	**dRCM-80/4/03-U+** 120848		1 off
	Short-time delayed and surge-proof 3 kA, suitable for frequency inverters, Type U				
	Rated fault current $I_{\Delta N}$ = 30 mA	40	**dRCM-40/4/003-U+** 120850		1 off
		63	**dRCM-63/4/003-U+** 120846		1 off

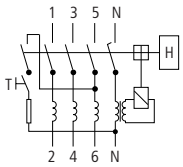
		Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Remote monitoring unit					
• GSM-based universal remote monitoring and control through SMS • Configuration and status monitoring through SMS • Built-in modem monitoring and associated status indication through front-mounted LEDs • 2 changeover contacts • 4 digital inputs, 2 relay outputs					
	–	**Z-CC/2CO** 119383		1 off	
Accessories for remote monitoring unit					
Power adaptor 	24 V, 0.2 A	**EASY200-POW** 229424		1 off	Product Standards: IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking UL File No.: E135462 UL CCN: NRAQ CSA File No.: 012528 CSA Class No.: 2252-01 + 2258-02 NA Certification: UL Listed, CSA certified Degree of Protection: IEC: IP20, UL/CSA Type: -
Temperature sensor		**Z-CC/2CO-SE** 119430		1 off	

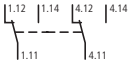
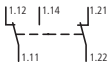
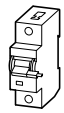
		Part no. Article no.	Price See price list	Std. pack
Remote switching modules				
• IEC/EN 60669-2-2 • For remote switching and automatic restart of FAZ miniature circuit-breakers and FI residual-current devices up to 80 A, except Type B • Mechanically lockable and sealable • LED indication of operational status and alarm status • Mechanical switching capacity up to FAZ-...63 and up to FI-80..., except Type B (-XFSM) • -25 °C/+40 °C • Rated operating voltage 24 - 240 V AC, 24 - 48 V DC • Terminal capacity 2 x 1.5 mm², 1 x 2.5 mm²; 0.4 Nm • Mechanical/electrical lifespan 10 000 switching operations • Power consumption 5 W				
	220 - 240 V AC	**FAZ/FIP-XAWM** 262514		1 off
	48 V DC	**FAZ/FIP-XDWM** 274404		1 off
Remote test module				
• External test module with test resistor for RCCB devices • Version adapted for rated fault currents with stipulated “external” test button function				
–	0.01 A	**Z-FW/001** 248297		4 off
	0.03 A	**Z-FW/003** 248298		4 off
	0.1 A	**Z-FW/010** 248299		4 off
	0.3 A	**Z-FW/030** 248300		4 off
	0.5 A	**Z-FW/050** 248301		4 off

	Rated uninterrupted current I_u A	2 pole  **Part no.** Article no.	**Price** See price list	Std. pack	4 pole  **Part no.** Article no.	**Price** See price list	Std. pack	4 pole Selective and surge-proof 5 kA  **Part no.** Article no.	**Price** See price list	Std. pack
FI residual-current devices, only for export (AC type)										
Rated fault current $I_{\Delta N}$ = 30 mA	16	**FI-16/2/003** 279176		1 off						
	25	**FI-25/2/003** 279177			**FI-25/4/003** 279196		1 off			
	40	**FI-40/2/003** 279180			**FI-40/4/003** 279200					
	63	**FI-63/2/003** 279190			**FI-63/4/003** 279204					
	80	**FI-80/2/003** 279192			**FI-80/4/003** 279208					
Rated fault current $I_{\Delta N}$ = 100 mA	25	**FI-25/2/01** 279178			**FI-25/4/01** 279197					
	40	**FI-40/2/01** 279181			**FI-40/4/01** 279201					
	63	**FI-63/2/01** 279191			**FI-63/4/01** 279205			**FI-63/4/01-S** 279210		1 off
	80	**FI-80/2/01** 279193			**FI-80/4/01** 279231					
Rated fault current $I_{\Delta N}$ = 300 mA	25	**FI-25/2/03** 279179			**FI-25/4/03** 279198					
	40	**FI-40/2/03** 279182			**FI-40/4/03** 279202					
	80				**FI-63/4/03** 279206			**FI-63/4/03-S** 279211		1 off
	25				**FI-80/4/03** 279209			**FI-80/4/03-S** 279212		1 off
Rated fault current $I_{\Delta N}$ = 500 mA	40				**FI-25/4/05** 279199					
	63				**FI-40/4/05** 279203					
	16				**FI-63/4/05** 279207					

Notes





	For use with		Contacts Number	Contact sequences	Space units, 1 space unit = 18 mm Space unit	**Part no.** Article no.	**Price** See price list	Std. pack
Auxiliary contacts and shunt releases								
Auxiliary contacts for FAZ, AZ, PKNM								
	FAZ... PKNM...	to 63 A	1 N/O/ 1 NC		0.5	**FAZ-XHIN11**[3] 286054		10 off
	FAZ... PKNM...	to 63 A	1 C		0.5	**FAZ-XHINW1**[4] 286055		10 off
	AZ...	to 125 A	1 N/O/ 1 NC		0.5	**AZ-XHI11** 212067		8 off
Trip-indicating auxiliary contact/auxiliary contact for FAZ, PKNM[1]								
	FAZ... PKNM...	to 63 A	2 C		0.5	**FAZ-XAM002**[5] 262414		10 off
Auxiliary contacts for FI								
	FI...	16 - 100 A, except type B	1 N/O/ 1 NC		0.5	**FIP-XHI11** 225121		10 off
	FI...[2]	125 A and all type B	1 NC / 1 N/O		0.5	**FIPA-XAM011** 262578		1 off
Shunt releases for FAZ, PKNM, AZ								
	FAZ... PKNM...	to 63 A	–		1	**FAZ-XAA-C-12-110VAC** 278518		1 off
	FAZ... PKNM...	to 63 A	–		1	**FAZ-XAA-C-110-415VAC** 278519		1 off
	AZ...	to 125 A	–		1.5	**AZ-XAA(110-415VAC)** 212059		8 off
	AZ...	to 125 A	–		1.5	**AZ-XAA(12-60VAC)** 212061		8 off
Undervoltage releases for FAZ								
	FAZ...	–	–		1	**FAZ-XUA(115VAC)** 212049		7 off
	FAZ...	–	–		1	**FAZ-XUA(230VAC)** 212051		7 off
	FAZ...	–	–		1	**FAZ-XUA(400VAC)** 212053		7 off
MCB lock for FAZ/FIP								
	FAZ... FIP...	–	–	–	–	**IS/SPE-1TE** 101911		5 off

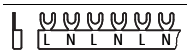
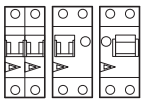
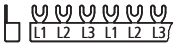
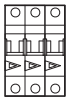
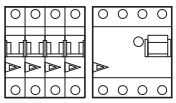
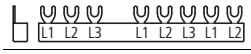
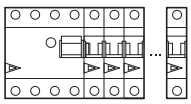
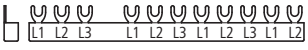
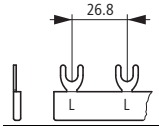
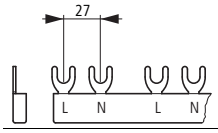
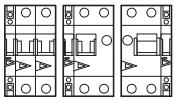
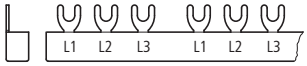
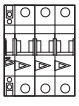
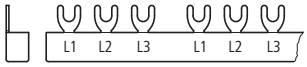
Notes

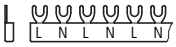
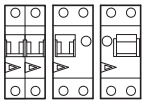
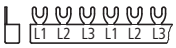
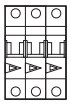
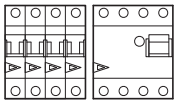
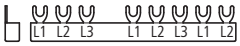
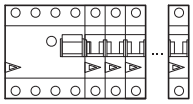
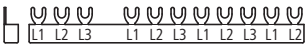
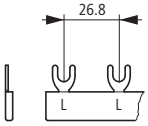
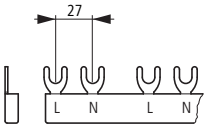
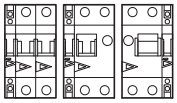
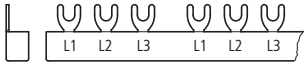
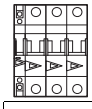
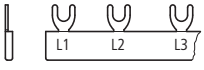
[1] The device is supplied with the groove in the yellow selector button in the horizontal: Changeover contact 4.11 – 4.12/4.14 switches when tripped manually or electrically. Turning the yellow selector button by 90° results in contact 4.11 – 4.12/4.14 responding only to electrical tripping: the contact 4.11 – 4.12/4.14 remains closed when tripped by hand.

[2] The device is supplied with the "Auxiliary contacts" function set such that both contacts switch on manual **and** electrical tripping. A change of function to "Signalling switch" means that both contacts switch **only** under fault conditions.

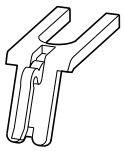
Information relevant for export to North America

[3] Product Standards	IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking
UL File No.	E177451
UL CCN	QVNU2, QVNU9
CSA File No.	–
CSA Class No.	3215-30
NA Certification	UL Recognized, certified by UL for use in Canada
Degree of Protection	IEC: IP20; UL/CSA Type: -
[4] Product Standards	IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking
UL File No.	E177451
UL CCN	QVNU2
NA Certification	UL Recognized, request filed for CSA
Degree of Protection	IEC: IP20; UL/CSA Type: -
[5] Product Standards	IEC/EN 60947-2; IEC/EN 60898; UL 1077; CSA-C22.2 No. 235; CE marking
UL File No.	E177451
UL CCN	QVNU2, QVNU8
CSA File No.	–
CSA Class No.	3215-30
NA Certification	UL Recognized, certified by UL for use in Canada
Degree of Protection	IEC: IP20; UL/CSA Type: -

	Phases Number	Devices Number	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Euro-Vario busbars (fork connector)						
• No end caps required • Do not shorten						
10 mm²						
• Rated operational current 63 A						
For PXL, PXF, PXK, PFIM-U, PFNM						
	1	2	**EVG-1PHAS/2MODUL** 215646		40 off	
	1	6	**EVG-1PHAS/6MODUL** 215638		40 off	
	1	12	**EVG-1PHAS/12MODUL** 215637		40 off	
	2	4	**EVG-2PHAS/4MODUL** 268220		20 off	
	2	6	**EVG-2PHAS/6MODUL** 215642		20 off	
	2	12	**EVG-2PHAS/12MODUL** 215641		20 off	
	3	6	**EVG-3PHAS/6MODUL** 215640		20 off	
	3	9	**EVG-3PHAS/9MODUL** 215645		20 off	
	3	12	**EVG-3PHAS/12MODUL** 215639		20 off	
	3	16	**EVG-3PHAS/16MODUL** 285381		20 off	
	3	20	**EVG-3PHAS/20MODUL** 285383		10 off	
	4	8	**EVG-4PHAS/8MODUL** 215644		10 off	
	4	12	**EVG-4PHAS/12MODUL** 215643		10 off	
	4	16	**EVG-3P+3N/16MODUL** 105215		20 off	
	4	18	**EVG-3P+3N/18MODUL** 274161		20 off	
For 2 pole combination RCCB/circuit-breaker with a width of 3 space units						
	1	2 - 5	**EVG-1PHAS/2-5MODUL/FILS** 285384		40 off	
For combined use of 4 pole residual-current devices with miniature circuit-breakers						
	3	4 + 5	**EVG-3PHAS/N/5MODUL/LS** 215659		20 off	
	3	4 + 8	**EVG-3PHAS/N/8MODUL/LS** 215660		20 off	
For use with auxiliary contacts						
	1	2.5	**EVG-1PHAS/2MODUL/HI** 215655		40 off	
	1	13	**EVG-1PHAS/9MODUL/HI** 215656		40 off	
	2	4.5	**EVG-2PHAS/4MODUL/HI** 219573		20 off	
	2	12	**EVG-2PHAS/10MODUL/HI** 215657		20 off	
	3	6.5	**EVG-3PHAS/6MODUL/HI** 216411		20 off	
	3	13.5	**EVG-3PHAS/12MODUL/HI** 215658		20 off	

	Phases Number	Devices Number	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Euro-Vario busbars (fork connector)						
• No end caps required • Do not shorten						
16 mm²						
• Rated operational current 100 A						
For FAZ…, FI…						
	1	2	**EVG-16/1PHAS/2MODUL** 291464		40 off	
	1	6	**EVG-16/1PHAS/6MODUL** 291465		40 off	
	1	12	**EVG-16/1PHAS/12MODUL** 291466		40 off	
	2	4	**EVG-16/2PHAS/4MODUL** 291467		20 off	
	2	6	**EVG-16/2PHAS/6MODUL** 291468		20 off	
	2	12	**EVG-16/2PHAS/12MODUL** 291469		20 off	
	3	6	**EVG-16/3PHAS/6MODUL** 291470		20 off	
	3	9	**EVG-16/3PHAS/9MODUL** 291471		20 off	
	3	12	**EVG-16/3PHAS/12MODUL** 291472		20 off	
	3	16	**EVG-16/3PHAS/16MODUL** 291473		20 off	
	3	20	**EVG-16/3PHAS/20MODUL** 291474		10 off	
	4	8	**EVG-16/4PHAS/8MODUL** 291475		10 off	
	4	12	**EVG-16/4PHAS/12MODUL** 291476		10 off	
For combined use of 4 pole residual-current devices with miniature circuit-breakers						
	3	4 + 5	**EVG-16/3PHAS/N/5MODUL/LS** 291477		20 off	
	3	4 + 8	**EVG-16/3PHAS/N/8MODUL/LS** 291478		20 off	
For use with auxiliary contacts						
	1	2	**EVG-16/1PHAS/2MODUL/HI** 291479		20 off	
	1	6	**EVG-16/1PHAS/6MODUL/HI** 291480		40 off	
	1	9	**EVG-16/1PHAS/9MODUL/HI** 291481		40 off	
	2	2	**EVG-16/2PHAS/4MODUL/HI** 291482		20 off	
	2	3	**EVG-16/2PHAS/6MODUL/HI** 291483		20 off	
	2	5	**EVG-16/2PHAS/10MODUL/HI** 291484		20 off	
	3	2	**EVG-16/3PHAS/6MODUL/HI** 291485		20 off	
	3	4	**EVG-16/3PHAS/12MODUL/HI** 291486		20 off	
	3 x 1	6	**EVG-16/3X1PHAS/6MODUL/HI** 291487		20 off	
	3 x 1	8	**EVG-16/3X1PHAS/8MODUL/HI** 291488		20 off	
	3 x 1	9	**EVG-16/3X1PHAS/9MODUL/HI** 291489		20 off	

HPL19027EN

	Pole	Rated operational current I_e A	Cross section mm²	Length m	**Part no.** Article no.	**Price** See price list	Std. pack
Comb-shaped phase busbar							
1-phase, 80 A	1	80	16	1	**Z-GV-16/1P-1TE** 271061		50 off
3-phase, 63 A	3	63	10	1	**Z-GV-10/3P-3TE** 271060		20 off
3-phase, 80 A	3	80	16	1	**Z-GV-16/3P-3TE** 271064		20 off
4-phase, 80 A	4	80	16	1	**Z-GV-16/3P+N-4TE** 271066		15 off
End caps	3	–	10	–	**Z-AK-10/2+3P** 271069		10 off
	3	–	16	–	**Z-AK-16/2+3P** 271070		10 off
	4	–	16	–	**Z-AK-16/4P** 271071		10 off
Incoming terminals							
4.3 Nm, touch-proof busbar connection to miniature circuit-breaker	–	–	25	–	**FAZ-XK25** 212116		50 off
M5: 3.0 Nm, M8: 4.3 Nm touch-proof connection to FAZ-XIS... busbar	–	–	35	–	**FAZ-XK35** 212119		10 off
Busbar tag shroud							
For masking of unused connections on the busbar	–	–	–	–	**ZV-BS-G** 104903		10 off
Bracket for securing of covers 2 required per row of MCBs	–	–	–	–	**REG-BB** 212106		20 off
Terminal bracket, 80 A							
Same extension terminal, turned by 180°							
	L1, N	80	–	–	**ZV-L1/N-80A-10** 263950		10 off
	L1, N	80	–	–	**ZV-L1/N-80A-36** 263951		36 off
	L1, N	80	–	–	**ZV-L1/N-80A-100** 263952		100 off
	L2, L3	80	–	–	**ZV-L2/L3-80A-10** 263953		10 off
	L2, L3	80	–	–	**ZV-L2/L3-80A-36** 263954		36 off
	L2, L3	80	–	–	**ZV-L2/L3-80A-100** 263955		100 off
Busbars							
1 m long.							
	–	50	–	1	**ZV-SS** 263956		10 off
	–	80	–	1	**ZV-SS-80A** 263957		10 off
Shroud section							
1 m long, for 50 and 80 A.							
	–	–	–	–	**ZV-ADP** 263958		1 off
End cap for shroud section							
	–	–	–	–	**ZV-AEK** 263959		10 off

Rated operational current	Interrupting capacity (SCCR)	Special approval for protection of AWG 18 or AWG 16 to NFPA70 (NEC) and NFPA 79	1 pole **Part no.** Article no.	**Price** See price list	Std. pack	2 pole **Part no.** Article no.	**Price** See price list	Std. pack
I_n A	kA							
Miniature circuit-breakers FAZ-NA								
• Characteristic B • Switching capacity 15 kA IEC								
1	10	AWG 18	**FAZ-B1/1-NA**[1] 132414		2 off	**FAZ-B1/2-NA**[1] 132693		1 off
1.5	10	AWG 18	**FAZ-B1,5/1-NA**[1] 132415			**FAZ-B1,5/2-NA**[1] 132694		
2	10	AWG 18	**FAZ-B2/1-NA**[1] 132416			**FAZ-B2/2-NA**[1] 132695		
3	10	AWG 18	**FAZ-B3/1-NA**[1] 132417			**FAZ-B3/2-NA**[1] 132696		
4	10	AWG 18	**FAZ-B4/1-NA**[1] 132418			**FAZ-B4/2-NA**[1] 132697		
5	10	AWG 18	**FAZ-B5/1-NA**[1] 132419			**FAZ-B5/2-NA**[1] 132698		
6	10	AWG 18	**FAZ-B6/1-NA**[1] 132680			**FAZ-B6/2-NA**[1] 132699		
7	10	AWG 18	**FAZ-B7/1-NA**[1] 132681			**FAZ-B7/2-NA**[1] 132700		
8	10	AWG 16	**FAZ-B8/1-NA**[1] 132682			**FAZ-B8/2-NA**[1] 132701		
10	10	AWG 16	**FAZ-B10/1-NA**[1] 132683			**FAZ-B10/2-NA**[1] 132702		
13	10	–	**FAZ-B13/1-NA**[1] 132684			**FAZ-B13/2-NA**[1] 132703		
15	14	–	**FAZ-B15/1-NA**[1] 132685			**FAZ-B15/2-NA**[1] 132704		
16	14	–	**FAZ-B16/1-NA**[1] 132686			**FAZ-B16/2-NA**[1] 132705		
20	14	–	**FAZ-B20/1-NA**[1] 132687			**FAZ-B20/2-NA**[1] 132706		
25	14	–	**FAZ-B25/1-NA**[1] 132688			**FAZ-B25/2-NA**[1] 132707		
30	10	–	**FAZ-B30/1-NA**[1] 132689			**FAZ-B30/2-NA**[1] 132708		
32	10	–	**FAZ-B32/1-NA**[1] 132690			**FAZ-B32/2-NA**[1] 132709		
35	10	–	**FAZ-B35/1-NA**[2] 132691			**FAZ-B35/2-NA**[2] 132710		
40	10	–	**FAZ-B40/1-NA**[2] 132692			**FAZ-B40/2-NA**[2] 132711		

3 pole

Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
FAZ-B1/3-NA[1] 132712		1 off	[1]	Accessories → 19/40
FAZ-B1.5/3-NA[1] 132713			Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: ≦ 32 A 1 pole: 277 V AC, 48 V DC 2 pole: 480 Y/277 V AC, 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	1 pole Depth 75 mm Width 17.7 mm
FAZ-B2/3-NA[1] 132714				
FAZ-B3/3-NA[1] 132715				
FAZ-B4/3-NA[1] 132716				
FAZ-B5/3-NA[1] 132717				
FAZ-B6/3-NA[1] 132718				
FAZ-B7/3-NA[1] 132719				
FAZ-B8/3-NA[1] 132720				
FAZ-B10/3-NA[1] 132721				
FAZ-B13/3-NA[1] 132722				
FAZ-B15/3-NA[1] 132723				
FAZ-B16/3-NA[1] 132724				
FAZ-B20/3-NA[1] 132725				
FAZ-B25/3-NA[1] 132726				
FAZ-B30/3-NA[1] 132727				
FAZ-B32/3-NA[1] 132728				
FAZ-B35/3-NA[2] 132729			[2]	2 pole Depth 75 mm Width 35.4 mm
FAZ-B40/3-NA[2] 132730			Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: > 32 A 1 pole: 240 V AC, 48 V DC 2 pole: 240 V AC, 96 V DC 3 pole: 240 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	3 pole Depth 75 mm Width 53.1 mm

FAZ-NA can also be used where FAZ Supplementary Protectors to UL 1077 are sufficient.

Rated operational current I_n A	Interrupting capacity (SCCR) kA	Special approval for protection of AWG 18 or AWG 16 to NFPA70 (NEC) and NFPA 79	1 pole  **Part no.** Article no.	**Price** See price list	Std. pack	2 pole  **Part no.** Article no.	**Price** See price list	Std. pack
Miniature circuit-breakers FAZ-NA								
• Characteristic C • Switching capacity 15 kA IEC								
0.5	10	AWG 18	**FAZ-C0,5/1-NA**[1] 102077		2 off	**FAZ-C0.5/2-NA**[1] 102157		1 off
1	10	AWG 18	**FAZ-C1/1-NA**[1] 102078			**FAZ-C1/2-NA**[1] 102158		
1.5	10	AWG 18	**FAZ-C0,5/1-NA**[1] 102079			**FAZ-C1.5/2-NA**[1] 102159		
2	10	AWG 18	**FAZ-C2/1-NA**[1] 102080			**FAZ-C2/2-NA**[1] 102160		
3	10	AWG 18	**FAZ-C3/1-NA**[1] 102081			**FAZ-C3/2-NA**[1] 102161		
4	10	AWG 18	**FAZ-C4/1-NA**[1] 102082			**FAZ-C4/2-NA**[1] 102162		
5	10	AWG 18	**FAZ-C5/1-NA**[1] 102083			**FAZ-C5/2-NA**[1] 102163		
6	10	AWG 18	**FAZ-C6/1-NA**[1] 102084			**FAZ-C6/2-NA**[1] 102164		
7	10	AWG 18	**FAZ-C7/1-NA**[1] 102085			**FAZ-C7/2-NA**[1] 102165		
8	10	AWG 16	**FAZ-C8/1-NA**[1] 102086			**FAZ-C8/2-NA**[1] 102166		
10	10	AWG 16	**FAZ-C10/1-NA**[1] 102087			**FAZ-C10/2-NA**[1] 102167		
13	10	–	**FAZ-C13/1-NA**[1] 102088			**FAZ-C13/2-NA**[1] 102168		
15	14	–	**FAZ-C15/1-NA**[1] 102089			**FAZ-C15/2-NA**[1] 102169		
16	14	–	**FAZ-C16/1-NA**[1] 102090			**FAZ-C16/2-NA**[1] 102170		
20	14	–	**FAZ-C20/1-NA**[1] 102091			**FAZ-C20/2-NA**[1] 102171		
25	14	–	**FAZ-C25/1-NA**[1] 102092			**FAZ-C25/2-NA**[1] 102172		
30	10	–	**FAZ-C30/1-NA**[1] 102093			**FAZ-C30/2-NA**[1] 102173		
32	10	–	**FAZ-C32/1-NA**[1] 102094			**FAZ-C32/2-NA**[1] 102174		
35	10	–	**FAZ-C35/1-NA**[2] 102095			**FAZ-C35/2-NA**[2] 102175		
40	10	–	**FAZ-C40/1-NA**[2] 102096			**FAZ-C40/2-NA**[2] 102176		

3 pole

Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
FAZ-C0.5/3-NA[1] 102237		1 off	[1] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: ≦ 32 A 1 pole: 277 V AC, 48 V DC 2 pole: 480 Y/277 V AC, 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	Accessories → 19/40 1 pole Depth 75 mm Width 17.7 mm
FAZ-C1/3-NA[1] 102238				
FAZ-C1.5/3-NA[1] 102239				
FAZ-C2/3-NA[1] 102240				
FAZ-C3/3-NA[1] 102241				
FAZ-C4/3-NA[1] 102242				
FAZ-C5/3-NA[1] 102243				
FAZ-C6/3-NA[1] 102244				
FAZ-C7/3-NA[1] 102245				
FAZ-C8/3-NA[1] 102246				
FAZ-C10/3-NA[1] 102247				
FAZ-C13/3-NA[1] 102248				
FAZ-C15/3-NA[1] 102249				
FAZ-C16/3-NA[1] 102250				
FAZ-C20/3-NA[1] 102251				
FAZ-C25/3-NA[1] 102252				
FAZ-C30/3-NA[1] 102253				
FAZ-C32/3-NA[1] 102254				
FAZ-C35/3-NA[2] 102255			[2] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: > 32 A 1 pole: 240 V AC, 48 V DC 2 pole: 240 V AC, 96 V DC 3 pole: 240 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	2 pole Depth 75 mm Width 35.4 mm
FAZ-C40/3-NA[2] 102256			FAZ-NA can also be used where FAZ Supplementary Protectors to UL 1077 are sufficient.	3 pole Depth 75 mm Width 53.1 mm

Rated operational current I_n A	Interrupting capacity (SCCR) kA	Special approval for protection of AWG 18 or AWG 16 to NFPA70 (NEC) and NFPA 79	1 pole  **Part no.** Article no.	**Price** See price list	Std. pack	2 pole  **Part no.** Article no.	**Price** See price list	Std. pack
Miniature circuit-breakers FAZ-NA								
• Characteristic D • Switching capacity 15 kA IEC								
0.5	10	AWG 18	**FAZ-D0,5/1-NA**[1] 102097		2 off	**FAZ-D0.5/2-NA**[1] 102177		1 off
1	10	AWG 18	**FAZ-D1/1-NA**[1] 102098			**FAZ-D1/2-NA**[1] 102178		
1.5	10	AWG 18	**FAZ-D0,5/1-NA**[1] 102099			**FAZ-D1.5/2-NA**[1] 102179		
2	10	AWG 18	**FAZ-D2/1-NA**[1] 102100			**FAZ-D2/2-NA**[1] 102180		
3	10	AWG 18	**FAZ-D3/1-NA**[1] 102101			**FAZ-D3/2-NA**[1] 102181		
4	10	AWG 18	**FAZ-D4/1-NA**[1] 102102			**FAZ-D4/2-NA**[1] 102182		
5	10	AWG 18	**FAZ-D5/1-NA**[1] 102103			**FAZ-D5/2-NA**[1] 102183		
6	10	AWG 18	**FAZ-D6/1-NA**[1] 102104			**FAZ-D6/2-NA**[1] 102184		
7	10	AWG 18	**FAZ-D7/1-NA**[1] 102105			**FAZ-D7/2-NA**[1] 102185		
8	10	AWG 16	**FAZ-D8/1-NA**[1] 102106			**FAZ-D8/2-NA**[1] 102186		
10	10	AWG 16	**FAZ-D10/1-NA**[1] 102107			**FAZ-D10/2-NA**[1] 102187		
13	10	–	**FAZ-D13/1-NA**[1] 102108			**FAZ-D13/2-NA**[1] 102188		
15	14	–	**FAZ-D15/1-NA**[1] 102109			**FAZ-D15/2-NA**[1] 102189		
16	14	–	**FAZ-D16/1-NA**[1] 102110			**FAZ-D16/2-NA**[1] 102190		
20	14	–	**FAZ-D20/1-NA**[1] 102111			**FAZ-D20/2-NA**[1] 102191		
25	14	–	**FAZ-D25/1-NA**[1] 102112			**FAZ-D25/2-NA**[1] 102192		
30	10	–	**FAZ-D30/1-NA**[1] 102113			**FAZ-D30/2-NA**[1] 102193		
32	10	–	**FAZ-D32/1-NA**[1] 102114			**FAZ-D32/2-NA**[1] 102194		
35	10	–	**FAZ-D35/1-NA**[2] 102115			**FAZ-D35/2-NA**[2] 102195		
40	10	–	**FAZ-D40/1-NA**[2] 102116			**FAZ-D40/2-NA**[2] 102196		

3 pole

Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
FAZ-D0.5/3-NA[1] 102257		1 off	[1] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: ≦ 32 A 1 pole: 277 V AC, 48 V DC 2 pole: 480 Y/277 V AC, 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	Accessories → 19/40 1 pole Depth 75 mm Width 17.7 mm
FAZ-D1/3-NA[1] 102258				
FAZ-D1.5/3-NA[1] 102259				
FAZ-D2/3-NA[1] 102260				
FAZ-D3/3-NA[1] 102261				
FAZ-D4/3-NA[1] 102262				
FAZ-D5/3-NA[1] 102263				
FAZ-D6/3-NA[1] 102264				
FAZ-D7/3-NA[1] 102265				
FAZ-D8/3-NA[1] 102266				
FAZ-D10/3-NA[1] 102267				
FAZ-D13/3-NA[1] 102268				
FAZ-D15/3-NA[1] 102269				
FAZ-D16/3-NA[1] 102270				
FAZ-D20/3-NA[1] 102271				
FAZ-D25/3-NA[1] 102272				
FAZ-D30/3-NA[1] 102273				
FAZ-D32/3-NA[1] 102274				
FAZ-D35/3-NA[2] 102275			[2] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: > 32 A 1 pole: 240 V AC, 48 V DC 2 pole: 240 V AC, 96 V DC 3 pole: 240 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	2 pole Depth 75 mm Width 35.4 mm
FAZ-D40/3-NA[2] 102276			FAZ-NA can also be used where FAZ Supplementary Protectors to UL 1077 are sufficient.	3 pole Depth 75 mm Width 53.1 mm

Rated operational current I_n A	Interrupting capacity (SCCR) kA	Special approval for protection of AWG 18 or AWG 16 to NFPA70 (NEC) and NFPA 79	1 pole  **Part no.** Article no.	**Price** See price list	Std. pack	2 pole  **Part no.** Article no.	**Price** See price list	Std. pack
Miniature circuit-breakers FAZ-RT								
• With ring cable lug connection • Characteristic B • Switching capacity 15 kA IEC								
1	10	AWG 18	**FAZ-B1/1-RT**[1] 132731		2 off	**FAZ-B1/2-RT**[1] 132750		1 off
1.5	10	AWG 18	**FAZ-B1,5/1-RT**[1] 132732			**FAZ-B1,5/2-RT**[1] 132751		
2	10	AWG 18	**FAZ-B2/1-RT**[1] 132733			**FAZ-B2/2-RT**[1] 132752		
3	10	AWG 18	**FAZ-B3/1-RT**[1] 132734			**FAZ-B3/2-RT**[1] 132753		
4	10	AWG 18	**FAZ-B4/1-RT**[1] 132735			**FAZ-B4/2-RT**[1] 132754		
5	10	AWG 18	**FAZ-B5/1-RT**[1] 132736			**FAZ-B5/2-RT**[1] 132755		
6	10	AWG 18	**FAZ-B6/1-RT**[1] 132737			**FAZ-B6/2-RT**[1] 132756		
7	10	AWG 18	**FAZ-B7/1-RT**[1] 132738			**FAZ-B7/2-RT**[1] 132757		
8	10	AWG 16	**FAZ-B8/1-RT**[1] 132739			**FAZ-B8/2-RT**[1] 132758		
10	10	AWG 16	**FAZ-B10/1-RT**[1] 132740			**FAZ-B10/2-RT**[1] 132759		
13	10	–	**FAZ-B13/1-RT**[1] 132741			**FAZ-B13/2-RT**[1] 132760		
15	14	–	**FAZ-B15/1-RT**[1] 132742			**FAZ-B15/2-RT**[1] 132761		
16	14	–	**FAZ-B16/1-RT**[1] 132743			**FAZ-B16/2-RT**[1] 132762		
20	14	–	**FAZ-B20/1-RT**[1] 132744			**FAZ-B20/2-RT**[1] 132763		
25	14	–	**FAZ-B25/1-RT**[1] 132745			**FAZ-B25/2-RT**[1] 132764		
30	10	–	**FAZ-B30/1-RT**[1] 132746			**FAZ-B30/2-RT**[1] 132765		
32	10	–	**FAZ-B32/1-RT**[1] 132747			**FAZ-B32/2-RT**[1] 132766		
35	10	–	**FAZ-B35/1-RT**[2] 132748			**FAZ-B35/2-RT**[2] 132767		
40	10	–	**FAZ-B40/1-RT**[2] 132749			**FAZ-B40/2-RT**[2] 132768		

3 pole

Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
FAZ-B1/3-RT[1] 132769		1 off	[1] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: ≦ 32 A 1 pole: 277 V AC, 48 V DC 2 pole: 480 Y/277 V AC, 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	Accessories → 19/40 1 pole Depth 75 mm Width 17.7 mm
FAZ-B1.5/3-RT[1] 132770				
FAZ-B2/3-RT[1] 132771				
FAZ-B3/3-RT[1] 132772				
FAZ-B4/3-RT[1] 132773				
FAZ-B5/3-RT[1] 132774				
FAZ-B6/3-RT[1] 132775				
FAZ-B7/3-RT[1] 132776				
FAZ-B8/3-RT[1] 132777				
FAZ-B10/3-RT[1] 132778				
FAZ-B13/3-RT[1] 132779				
FAZ-B15/3-RT[1] 132780				
FAZ-B16/3-RT[1] 132781				
FAZ-B20/3-RT[1] 132782				
FAZ-B25/3-RT[1] 132783				
FAZ-B30/3-RT[1] 132784				
FAZ-B32/3-RT[1] 132785				
FAZ-B35/3-RT[2] 132786			[2] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: > 32 A 1 pole: 240 V AC, 48 V DC 2 pole: 240 V AC, 96 V DC 3 pole: 240 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	2 pole Depth 75 mm Width 35.4 mm
FAZ-B40/3-RT[2] 132787			FAZ-RT can also be used where FAZ Supplementary Protectors to UL 1077 are sufficient.	3 pole Depth 75 mm Width 53.1 mm

Rated operational current I_n A	Interrupting capacity (SCCR) kA	Special approval for protection of AWG 18 or AWG 16 to NFPA70 (NEC) and NFPA 79	1 pole  **Part no.** Article no.	**Price** See price list	Std. pack	2 pole  **Part no.** Article no.	**Price** See price list	Std. pack
Miniature circuit-breakers FAZ-RT								
• With ring cable lug connection • Characteristic C • Switching capacity 15 kA IEC								
0.5	10	AWG 18	**FAZ-C0,5/1-RT**[1] 102117		2 off	**FAZ-C0.5/2-RT**[1] 102197		1 off
1	10	AWG 18	**FAZ-C1/1-RT**[1] 102118			**FAZ-C1/2-RT**[1] 102198		
1.5	10	AWG 18	**FAZ-C0,5/1-RT**[1] 102119			**FAZ-C1.5/2-RT**[1] 102199		
2	10	AWG 18	**FAZ-C2/1-RT**[1] 102120			**FAZ-C2/2-RT**[1] 102200		
3	10	AWG 18	**FAZ-C3/1-RT**[1] 102121			**FAZ-C3/2-RT**[1] 102201		
4	10	AWG 18	**FAZ-C4/1-RT**[1] 102122			**FAZ-C4/2-RT**[1] 102202		
5	10	AWG 18	**FAZ-C5/1-RT**[1] 102123			**FAZ-C5/2-RT**[1] 102203		
6	10	AWG 18	**FAZ-C6/1-RT**[1] 102124			**FAZ-C6/2-RT**[1] 102204		
7	10	AWG 18	**FAZ-C7/1-RT**[1] 102125			**FAZ-C7/2-RT**[1] 102205		
8	10	AWG 16	**FAZ-C8/1-RT**[1] 102126			**FAZ-C8/2-RT**[1] 102206		
10	10	AWG 16	**FAZ-C10/1-RT**[1] 102127			**FAZ-C10/2-RT**[1] 102207		
13	10	–	**FAZ-C13/1-RT**[1] 102128			**FAZ-C13/2-RT**[1] 102208		
15	14	–	**FAZ-C15/1-RT**[1] 102129			**FAZ-C15/2-RT**[1] 102209		
16	14	–	**FAZ-C16/1-RT**[1] 102130			**FAZ-C16/2-RT**[1] 102210		
20	14	–	**FAZ-C20/1-RT**[1] 102131			**FAZ-C20/2-RT**[1] 102211		
25	14	–	**FAZ-C25/1-RT**[1] 102132			**FAZ-C25/2-RT**[1] 102212		
30	10	–	**FAZ-C30/1-RT**[1] 102133			**FAZ-C30/2-RT**[1] 102213		
32	10	–	**FAZ-C32/1-RT**[1] 102134			**FAZ-C32/2-RT**[1] 102214		
35	10	–	**FAZ-C35/1-RT**[2] 102135			**FAZ-C35/2-RT**[2] 102215		
40	10	–	**FAZ-C40/1-RT**[2] 102136			**FAZ-C40/2-RT**[2] 102216		

3 pole

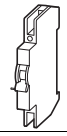
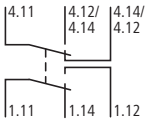
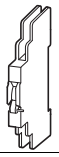
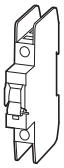
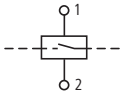
Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
FAZ-C0.5/3-RT[1] 102277		1 off	[1]	Accessories → 19/40
FAZ-C1/3-RT[1] 102278			Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: ≦ 32 A 1 pole: 277 V AC, 48 V DC 2 pole: 480 Y/277 V AC, 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	1 pole Depth 75 mm Width 17.7 mm
FAZ-C1.5/3-RT[1] 102279				
FAZ-C2/3-RT[1] 102280				
FAZ-C3/3-RT[1] 102281				
FAZ-C4/3-RT[1] 102282				
FAZ-C5/3-RT[1] 102283				
FAZ-C6/3-RT[1] 102284				
FAZ-C7/3-RT[1] 102285				
FAZ-C8/3-RT[1] 102286				
FAZ-C10/3-RT[1] 102287				
FAZ-C13/3-RT[1] 102288				
FAZ-C15/3-RT[1] 102289				
FAZ-C16/3-RT[1] 102290				
FAZ-C20/3-RT[1] 102291				
FAZ-C25/3-RT[1] 102292				
FAZ-C30/3-RT[1] 102293				
FAZ-C32/3-RT[1] 102294				
FAZ-C35/3-RT[2] 102295			[2]	2 pole Depth 75 mm Width 35.4 mm
FAZ-C40/3-RT[2] 102296			Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: > 32 A 1 pole: 240 V AC, 48 V DC 2 pole: 240 V AC, 96 V DC 3 pole: 240 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	3 pole Depth 75 mm Width 53.1 mm

FAZ-RT can also be used where FAZ Supplementary Protectors to UL 1077 are sufficient.

Rated operational current I_n A	Interrupting capacity (SCCR) kA	Special approval for protection of AWG 18 or AWG 16 to NFPA70 (NEC) and NFPA 79	1 pole  **Part no.** Article no.	**Price** See price list	Std. pack	2 pole  **Part no.** Article no.	**Price** See price list	Std. pack
Miniature circuit-breakers FAZ-RT								
• With ring cable lug connection • Characteristic D • Switching capacity 15 kA IEC								
0.5	10	AWG 18	**FAZ-D0,5/1-RT**[1] 102137		2 off	**FAZ-D0.5/2-RT**[1] 102217		1 off
1	10	AWG 18	**FAZ-D1/1-RT**[1] 102138			**FAZ-D1/2-RT**[1] 102218		
1.5	10	AWG 18	**FAZ-D0,5/1-RT**[1] 102139			**FAZ-D1.5/2-RT**[1] 102219		
2	10	AWG 18	**FAZ-D2/1-RT**[1] 102140			**FAZ-D2/2-RT**[1] 102220		
3	10	AWG 18	**FAZ-D3/1-RT**[1] 102141			**FAZ-D3/2-RT**[1] 102221		
4	10	AWG 18	**FAZ-D4/1-RT**[1] 102142			**FAZ-D4/2-RT**[1] 102222		
5	10	AWG 18	**FAZ-D5/1-RT**[1] 102143			**FAZ-D5/2-RT**[1] 102223		
6	10	AWG 18	**FAZ-D6/1-RT**[1] 102144			**FAZ-D6/2-RT**[1] 102224		
7	10	AWG 18	**FAZ-D7/1-RT**[1] 102145			**FAZ-D7/2-RT**[1] 102225		
8	10	AWG 16	**FAZ-D8/1-RT**[1] 102146			**FAZ-D8/2-RT**[1] 102226		
10	10	AWG 16	**FAZ-D10/1-RT**[1] 102147			**FAZ-D10/2-RT**[1] 102227		
13	10	–	**FAZ-D13/1-RT**[1] 102148			**FAZ-D13/2-RT**[1] 102228		
15	14	–	**FAZ-D15/1-RT**[1] 102149			**FAZ-D15/2-RT**[1] 102229		
16	14	–	**FAZ-D16/1-RT**[1] 102150			**FAZ-D16/2-RT**[1] 102230		
20	14	–	**FAZ-D20/1-RT**[1] 102151			**FAZ-D20/2-RT**[1] 102231		
25	14	–	**FAZ-D25/1-RT**[1] 102152			**FAZ-D25/2-RT**[1] 102232		
30	10	–	**FAZ-D30/1-RT**[1] 102153			**FAZ-D30/2-RT**[1] 102233		
32	10	–	**FAZ-D32/1-RT**[1] 102154			**FAZ-D32/2-RT**[1] 102234		
35	10	–	**FAZ-D35/1-RT**[2] 102155			**FAZ-D35/2-RT**[2] 102235		
40	10	–	**FAZ-D40/1-RT**[2] 102156			**FAZ-D40/2-RT**[2] 102236		

3 pole

Part no. Article no.	**Price** See price list	Std. pack	**Information relevant for export to North America**	**Notes**
FAZ-D0.5/3-RT[1] 102297		1 off	[1] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: ≦ 32 A 1 pole: 277 V AC, 48 V DC 2 pole: 480 Y/277 V AC, 96 V DC 3 pole: 480 Y/277 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	Accessories → 19/40 1 pole Depth 75 mm Width 17.7 mm
FAZ-D1/3-RT[1] 102298				
FAZ-D1.5/3-RT[1] 102299				
FAZ-D2/3-RT[1] 102300				
FAZ-D3/3-RT[1] 102301				
FAZ-D4/3-RT[1] 102302				
FAZ-D5/3-RT[1] 102303				
FAZ-D6/3-RT[1] 102304				
FAZ-D7/3-RT[1] 102305				
FAZ-D8/3-RT[1] 102306				
FAZ-D10/3-RT[1] 102307				
FAZ-D13/3-RT[1] 102308				
FAZ-D15/3-RT[1] 102309				
FAZ-D16/3-RT[1] 102310				
FAZ-D20/3-RT[1] 102311				
FAZ-D25/3-RT[1] 102312				
FAZ-D30/3-RT[1] 102313				
FAZ-D32/3-RT[1] 102314				
FAZ-D35/3-RT[2] 102315			[2] Product Standards: IEC/EN 60947-2; UL 489; CSA-C22.2 No. 5-09; CE marking UL File No.: E235139 UL CCN: DIVQ CSA File No.: 204453 CSA Class No.: 1432-01 NA Certification: UL Listed, CSA certified Suitable for: Feeder circuits, branch circuits Current Limiting CB: ✓ Max. Voltage Rating: > 32 A 1 pole: 240 V AC, 48 V DC 2 pole: 240 V AC, 96 V DC 3 pole: 240 V AC Degree of Protection: IEC: IP20, UL/CSA Type: -	2 pole Depth 75 mm Width 35.4 mm
FAZ-D40/3-RT[2] 102316			FAZ-RT can also be used where FAZ Supplementary Protectors to UL 1077 are sufficient.	3 pole Depth 75 mm Width 53.1 mm

	Contacts C = Changeover contact N/O = normally open contact NC = normally closed contact	Contact sequences	Space units 1 PLE = 18 mm	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Accessories for FAZ-NA, FAZ-RT							
Tripping signal contact • The function of one of the two changeover contacts can be changed from “auxiliary contact” to “tripping signal contact”.							
	2 C		0.5	FAZ-NA FAZ-RT	**Z-NHK** 248434		4 off
Auxiliary contacts • Suitable for FAZ-NA > 480Y/277 V AC							
	1 N/O 1 NC		0.5	FAZ-NA FAZ-RT	**Z-IHK-NA** 113895		1 off
Shunt releases • Standard auxiliary contacts can be fitted in addition • Position indicator red/green							
	–		1	FAZ-NA FAZ-RT	**FAZ-XAA-NA110-415VAC** 102036		1 off
	–		1	FAZ-NA FAZ-RT	**FAZ-XAA-NA12-110VAC** 102037		1 off

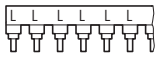
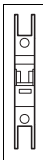
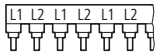
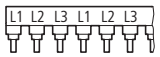
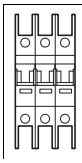
Information relevant for export to North America

Product Standards	IEC/EN 60898; UL 489; CSA-C22.2 No. 5-09; CE marking
UL File No.	E257181
UL CCN	DIHS, DIHS7
CSA File No.	204453
CSA Class No.	1437-01
NA Certification	UL Listed, CSA certified
Degree of Protection	IEC: IP20, UL/CSA Type: -

Accessories for FAZ-NA, FAZ-RT

Busbars (pin), UL 489

- 16 mm²
- Rated operational current 80 A
- For FAZ-NA, FAZ-RT
- Do not shorten

	Phases Number	Devices Number	Part no. Article no.	Price See price list	Std. pack	Notes
	1	6	**Z-SV/UL-16/1P-1TE/6** 104892		10 off	
	1	12	**Z-SV/UL-16/1P-1TE/12** 104893			
	1	18	**Z-SV/UL-16/1P-1TE/18** 104894			
	2	6	**Z-SV/UL-16/2P-2TE/6** 104895			
	2	12	**Z-SV/UL-16/2P-2TE/12** 104896			
	2	18	**Z-SV/UL-16/2P-2TE/18** 104897			
	3	6	**Z-SV/UL-16/3P-3TE/6** 104898			
	3	12	**Z-SV/UL-16/3P-3TE/12** 104899			
	3	18	**Z-SV/UL-16/3P-3TE/18** 104900			

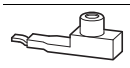
Information relevant for export to North America

Product Standards	IEC/EN 60898; UL 489; CE marking
UL File No.	E257181
UL CCN	NMTR2, DIHS2
CSA File No.	–
CSA Class No.	–
NA Certification	UL Recognized
Suitable for	Feeder Circuit, Branch Circuit
Max. Voltage Rating	Refer to main components FAZ, FAZ-NA, FAZ-RT
Degree of Protection	IEC: IP20, UL/CSA Type: -

Accessories for FAZ-NA, FAZ-RT

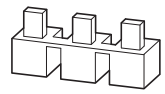
Connecting bracket

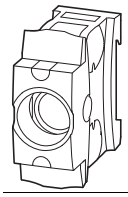
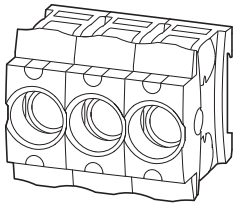
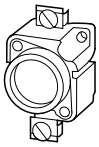
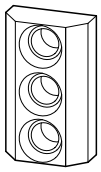
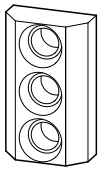
- 2.5 - 35 mm², AWG 14-2
- UL 489

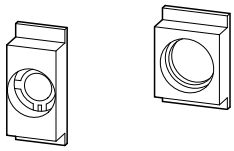
	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
	FAZ-NA FAZ-RT	**Z-EK/35/UL** 104901		3 off	Product Standards	IEC/EN 60898; UL 489; CE marking
					UL File No.	E257181
					UL CCN	NMTR2, DIHS2
					CSA File No.	–
					CSA Class No.	–
					NA Certification	UL Recognized
					Suitable for	Feeder circuits, branch circuits
					Max. Voltage Rating	Refer to main components FAZ, FAZ-NA, FAZ-RT
					Degree of Protection	IEC: IP20, UL/CSA Type: -

Busbar cover

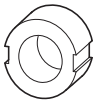
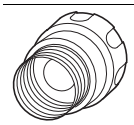
- for 3 pins
- UL 489

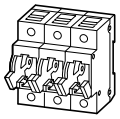
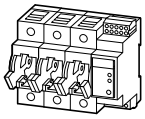
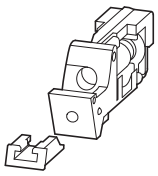
	FAZ-NA FAZ-RT	**ZV-BS-UL** 104904		10 off	Product Standards	IEC/EN 60898; UL 489; CE marking
					UL File No.	E257181
					UL CCN	NMTR2, DIHS2
					CSA File No.	–
					CSA Class No.	–
					NA Certification	UL Recognized
					Degree of Protection	IEC: IP20, UL/CSA Type: -

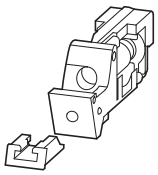
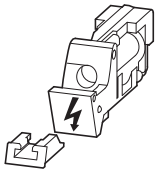
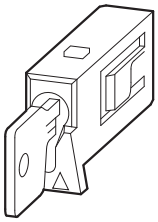
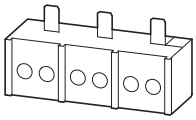
	Pole	Rated operational current I_e A	Rated operational voltage U_e V AC	Fuse-link Size	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
Fuse bases								
	1 pole	16	–	D01	**D01-SO/16/1** 102752		9 off	Equipment supplied: Empty, without screw on cover
	1 pole	63	–	D02	**D02-SO/63/1** 102675		9 off	
	3 pole	16	–	D01	**D01-SO/16/3** 102674		3 off	
	3 pole	63	–	D02	**D02-SO/63/3** 102676		3 off	
Fuse bases, 1 pole								
For gauge ring system (gauge screw: /FORMP)								
Screw fixing (holes for M4 screws)								
	1 pole	25	500	E27, DII	**S27-1** 045865		10 off	Gauge rings/gauge screws, fuse links and fuse caps are **not** included.
		25	500	E27, DII	**S27-1/FORMP** 020327		10 off	
		63	660 690	E33, DIII	**S33-1** 069595		2 off	
		63	660 690	E33, DIII	**S33-1/FORMP** 022700		2 off	
Can be snap fitted on top-hat rail to IEC/EN 60715 (35 mm)								
	1 pole	25	500	E27, DII	**S27-1/C** 048238		20 off	
		25	500	E27, DII	**S27-1/C/FORMP** 025073		20 off	
		63	660 690	E33, DIII	**S33-1/C** 071968		2 off	
		63	660 690	E33, DIII	**S33-1/C/FORMP** 027446		2 off	
Fuse bases, 3 pole								
For gauge ring system (gauge screw: /FORMP)								
Screw fixing (holes for M4 screws)								
	3 pole	25	500	E27, DII	**S27** 043492		4 off	Gauge rings/gauge screws, fuse links and fuse caps are **not** included.
		25	500	E27, DII	**S27/FORMP** 034565		4 off	
		63	660 690	E33, DIII	**S33** 067222		2 off	
		63	660 690	E33, DIII	**S33/FORMP** 036938		2 off	
Can be snap fitted on top-hat rail to IEC/EN 60715 (35 mm)								
	3 pole	25	500	E27, DII	**S27/C** 050611		4 off	
		25	500	E27, DII	**S27/C/FORMP** 032192		4 off	
		63	660 690	E33, DIII	**S33/C** 081460		2 off	
		63	660 690	E33, DIII	**S33/C/FORMP** 029819		2 off	

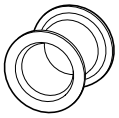
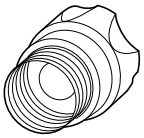
		For use with	Part no. Article no.	Price See price list	Std. pack
Covers for 1 pole fuse bases					
Standard front dimension 45 mm					
		S…-1/…	**P-E27** 090928		10 off
		S…-1/…	**P-E33** 093301		10 off
Transparent shroud					
	With cable entry knockouts top and bottom	–	**H-S27-1** 029118		10 off
Busbar connector 63 A					
	For fuse bases, 3 pole	D0…/3	**Z-SV-16/3P** 271072		20 off
End cap					
	For busbar block	Z-SV-16/3P	**Z-AK-16/2+3P** 271070		10 off
Notched phase busbars, can be cut to desired length					
For gauge ring system (gauge screw: /FORMP)					
	980 mm long, for max. 22 fuse bases, Rated operational current 100 A	S27-1/C	**KS27** 055248		5 off
	960 mm long, for max. 18 fuse bases, rated operational current 160 A	S33-1/C	**KS33** 059994		5 off
Terminal					
	For gauge ring system (gauge screw: /FORMP) For round conductor up to 35 mm² or flat cable conductor 6 x 9 x 0.8	KS14 - KS33	**K35-AB** 064339		20 off

	Rated operational current I_e A	Fuse-link Size	Part no. Article no. **Utilization category gG (gL)**	Price See price list	Part no. Article no. **Utilization category DZ**	Price See price list	Std. pack
Fuse links Z-D…/SE							
Rated operating voltage 500 V AC/400 V DC							
	2	DII E27	**Z-DII/SE-2A/GG** 112125		**Z-DII/SE-2A/DZ** 112028		5 off
	4	DII E27	**Z-DII/SE-4A/GG** 112126		**Z-DII/SE-4A/DZ** 112029		
	6	DII E27	**Z-DII/SE-6A/GG** 112127		**Z-DII/SE-6A/DZ** 112120		
	10	DII E27	**Z-DII/SE-10A/GG** 112128		**Z-DII/SE-10A/DZ** 112121		
	16	DII E27	**Z-DII/SE-16A/GG** 112129		**Z-DII/SE-16A/DZ** 112122		
	20	DII E27	**Z-DII/SE-20A/GG** 112130		**Z-DII/SE-20A/DZ** 112123		
	25	DII E27	**Z-DII/SE-25A/GG** 112131		**Z-DII/SE-25A/DZ** 112124		
	35	DIII E33	**Z-DIII/SE-35A/GG** 112135		**Z-DIII/SE-35A/DZ** 112132		
	50	DIII E33	**Z-DIII/SE-50A/GG** 112136		**Z-DIII/SE-50A/DZ** 112133		
	63	DIII E33	**Z-DIII/SE-63A/GG** 112137		**Z-DIII/SE-63A/DZ** 112134		

	Rated operational current I_e A	Rated operational voltage U_e V AC	Fuse link Size	**Part no.** Article no.	**Price** See price list	Std. pack
Gauge screws Z-DII.../PS						
	2	–	DII E27	**Z-DII/PS-2A** 112138		25 off
	4	–	DII E27	**Z-DII/PS-4A** 112139		
	6	–	DII E27	**Z-DII/PS-6A** 112140		
	10	–	DII E27	**Z-DII/PS-10A** 112141		
	16	–	DII E27	**Z-DII/PS-16A** 112142		
	20	–	DII E27	**Z-DII/PS-20A** 112143		
	25	–	DII E27	**Z-DII/PS-25A** 112144		
	35	–	DIII E33	**Z-DIII/PS-35A** 112145		
	50	–	DIII E33	**Z-DIII/PS-50A** 112146		
	63	–	DIII E33	**Z-DIII/PS-63A** 112147		
Z-DII.../PE push-in gauge rings						
	2	–	DII E27	**Z-DII/PE-2A** 110396		50 off
	4	–	DII E27	**Z-DII/PE-4A** 110397		
	6	–	DII E27	**Z-DII/PE-6A** 110398		
	10	–	DII E27	**Z-DII/PE-10A** 110399		
	16	–	DII E27	**Z-DII/PE-16A** 110790		
	20	–	DII E27	**Z-DII/PE-20A** 110791		
	2	–	DIII E33	**Z-DIII/PE-2A** 110792		
	4	–	DIII E33	**Z-DIII/PE-4A** 110793		
	6	–	DIII E33	**Z-DIII/PE-6A** 110794		
	10	–	DIII E33	**Z-DIII/PE-10A** 110795		
	16	–	DIII E33	**Z-DIII/PE-16A** 110796		
	20	–	DIII E33	**Z-DIII/PE-20A** 110797		
	25	–	DIII E33	**Z-DIII/PE-25A** 110798		
	35	–	DIII E33	**Z-DIII/PE-35A** 110799		
	50	–	DIII E33	**Z-DIII/PE-50A** 110800		
Z-DII.../SK screw caps						
	–	500	DII E27	**Z-DII/SK** 112148		50 off
	–	500	DIII E33	**Z-DIII/SK** 112149		30 off
	–	690	DIII E33	**Z-DIII/SK-690** 118904		3 off

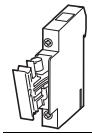
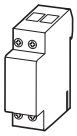
	Pole	Rated uninterrupted current I_u A	Fuse link Size	Part no. Article no.	Price See price list	Std. pack
Fuse switch-disconnectors						
Standard, empty 	1	63	D02, D01	**Z-SLS/NEOZ/1** 248235		12 off
	1 + N			**Z-SLS/NEOZ/1+N** 248237		6 off
	2			**Z-SLS/NEOZ/2** 248233		6 off
	3			**Z-SLS/NEOZ/3** 248234		4 off
	3 + N			**Z-SLS/NEOZ/3+N** 248236		3 off
With fuse monitoring, empty 	1 + HS			**Z-SLK/NEOZ/1** 248238		6 off
	1 + N + HS			**Z-SLK/NEOZ/1+N** 248242		4 off
	2 + HS			**Z-SLK/NEOZ/2** 248239		4 off
	3 + HS			**Z-SLK/NEOZ/3** 248240		3 off
	3 + N + HS			**Z-SLK/NEOZ/3+N** 248241		2 off
Fuse sets						
• For Z-SLS/NEOZ, Z-SLK/NEOZ, Z-SLS/CEK • With flashing function • Snap-fit on DIN rail • 1 set consists of: 3 fuse links, 3 current codings, 1 plastic box in the color of the indicator						
	Rated operational voltage 24 V AC/DC	1	–	**Z-SLS/B-24-1A** 268994		12 off
		2	–	**Z-SLS/B-24-2A** 268995		
		4	–	**Z-SLS/B-24-4A** 268996		
		6	–	**Z-SLS/B/24-6A** 268997		
		10	–	**Z-SLS/B/24-10A** 268998		
		13	–	**Z-SLS/B/24-13A** 289975		
		16	–	**Z-SLS/B/24-16A** 268999		
		20	–	**Z-SLS/B/24-20A** 269000		
		25	–	**Z-SLS/B/24-25A** 269001		
		32	–	**Z-SLS/B/24-32A** 289976		
		35	–	**Z-SLS/B/24-35A** 269002		
		40	–	**Z-SLS/B/24-40A** 289977		
		50	–	**Z-SLS/B/24-50A** 269003		
		63	–	**Z-SLS/B/24-63A** 269004		

		Rated uninterrupted current I_u A	**Part no.** Article no.	**Price** See price list	Std. pack
Fuse sets					
	Rated operational voltage 60 - 400 V AC	1	**Z-SLS/B-1A** 268983		12 off
		2	**Z-SLS/B-2A** 268984		
		4	**Z-SLS/B-4A** 268985		
		6	**Z-SLS/B-6A** 268986		
		10	**Z-SLS/B-10A** 268987		
		13	**Z-SLS/B-13A** 289972		
		16	**Z-SLS/B-16A** 268988		
		20	**Z-SLS/B-20A** 268989		
		25	**Z-SLS/B-25A** 268990		
		32	**Z-SLS/B-32A** 289973		
		35	**Z-SLS/B-35A** 268991		
		40	**Z-SLS/B-40A** 289974		
		60	**Z-SLS/B-50A** 268992		
		63	**Z-SLS/B-63A** 268993		
Disconnector kit					
• For Z-SLS/NEOZ, Z-SLK/NEOZ, Z-SLS/CEK • Snap-fit on DIN rail • 1 set consists of: 3 switch conversion sets, 3 current codings, 1 plastic box • The fuse switch-disconnector is thus converted to a switch-disconnector.					
	–	63	**Z-SLS/TR-SET** 100660		12 off
Switch-on inhibits					
• For Z-SLS/NEOZ, Z-SLK/NEOZ, Z-SLS/CEK, Z-SLK/D0 • Only 1 inhibit required per device					
	Stop with metal lock	–	**Z-SLZ/SC** 268980		12 off
	Stop with plastic lock	–	**Z-SLZ/SP** 268981		12 off
Incoming double terminal					
• For Z-SLS/NEOZ, Z-SLK/NEOZ, Z-SLS/CEK, Z-SLK/D0 • 2 x 3 x 35 mm²					
	–	–	**Z-SLZ/KL** 268982		15 off

		Rated uninterrupted current I_u A	Fuse link Size	**Part no.** Article no.	**Price** See price list	Std. pack
Fuse links utilization category gG (gL)						
	• Snap-fit on DIN rail • In a plastic box in the color of the indicator	2	D01	**Z-D01/SE-2** 288934		12 off
		4		**Z-D01/SE-4** 288935		
		6		**Z-D01/SE-6** 288936		
		10		**Z-D01/SE-10** 288937		
		13		**Z-D01/SE-13** 288938		
		16		**Z-D01/SE-16** 288939		
		20		**Z-D02/SE-20** 288940		
		25		**Z-D02/SE-25** 288941		
		32		**Z-D02/SE-32** 288942		
		35		**Z-D02/SE-35** 288943		
		40		**Z-D02/SE-40** 288944		
		50		**Z-D02/SE-50** 288945		
		63		**Z-D02/SE-63** 288946		
Adapter sleeves						
	• Snap-fit on DIN rail • In a plastic box in the color of the indicator	2	D01	**Z-D01/PE-2** 288909		12 off
		4		**Z-D01/PE-4** 288910		
		6		**Z-D01/PE-6** 288911		
		10, 13		**Z-D01/PE-10** 288912		
		20		**Z-D02/PE-20** 288913		
		25		**Z-D02/PE-25** 288914		
		35, 32		**Z-D02/PE-35** 288915		
		40		**Z-D02/PE-40** 288916		
		50		**Z-D02/PE-50** 288917		
	• D01 for fuse base D02 and fuse switch-disconnector D02	2	D02-D01	**Z-D02-D01/PE-2** 263112		
		4		**Z-D02-D01/PE-4** 263113		
		6		**Z-D02-D01/PE-6** 263150		
		10, 13		**Z-D02-D01/PE-10** 263151		
		16		**Z-D02-D01/PE-16** 263152		
Screw caps						
	–	Max. 16	D01	**Z-D01/SK** 100650		20 off
		Max. 63	D02	**Z-D02/SK** 100651		20 off
Retaining spring						
	• For inserting D01 fuses links in the screw cap Z-D02/SK		D02-D01	**Z-D02/SIKA-HF** 263149		50 off

Fuse switch-disconnectors (empty)

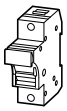
- Line protection of photovoltaic generator
- The trip indication signals that a fuse link has tripped:
  – 50 - 400 V flashing
  – 400 - 1000 V continuous light
- Rated operational voltage 1000 V DC
- Size 10 x 38, rated operational current 20 A DC
- For cylindrical fuse links for photovoltaic applications
- Sealable

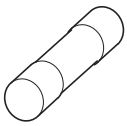
		Pole	Part no. Article no.	Price See price list	Std. pack
	Without flashing function	1	**C10-FD/20/1** 119024		12 off
	Without flashing function	2	**C10-FD/20/2** 119025		6 off
	With flashing function	1	**C10-FD/20/1-L** 119026		12 off
	With flashing function	2	**C10-FD/20/2-L** 119027		6 off

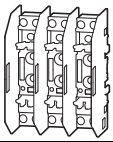
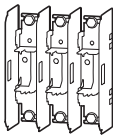
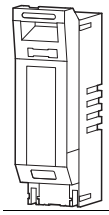
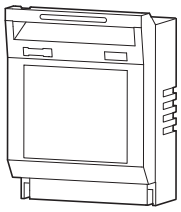
Cylindrical fuse links Z-C…/SE for photovoltaic applications

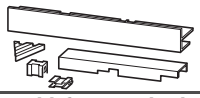
- Maximum DC rated operating voltage of fuse link 1.2 × V_{cc} of line (V_{cc} … open circuit voltage of line)
- Rated operational current I_n of Fuse link must be greater than or equal to 1.5 × I_{sc} (I_{sc} … short circuit current of PV module)

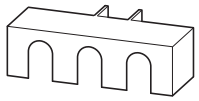
	Size	Rated operational current I_e A	Rated operating voltage U_e V DC	Part no. Article no.	Price See price list	Std. pack
	10 x 38	2	1000	**Z-C10/SE-2A/PV** 131700		10 off
	10 x 38	4	1000	**Z-C10/SE-4A/PV** 131701		
	10 x 38	6	1000	**Z-C10/SE-6A/PV** 122009		
	10 x 38	8	1000	**Z-C10/SE-8A/PV** 122070		
	10 x 38	10	1000	**Z-C10/SE-10A/PV** 122071		
	10 x 38	12	1000	**Z-C10/SE-12A/PV** 131702		
	10 x 38	16	1000	**Z-C10/SE-16A/PV** 122072		
	10 x 38	20	1000	**Z-C10/SE-20A/PV** 122073		
	10 x 38	25	900	**Z-C10/SE-25A/PV** 131703		

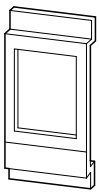
		Pole	**Part no.** Article no.	**Price** See price list	Std. pack
Fuse switch-disconnectors, empty					
• For cylindrical fuses					
	Size 14 x 51, to 50 A				
	Without flashing function	1	**VLC14-1P** 285361		12 off
		1 + N	**VLC14-1P+N** 285362		6 off
		2	**VLC14-2P** 285363		6 off
		3	**VLC14-3P** 285364		4 off
		3 + N	**VLC14-3P+N** 285365		3 off
	With flashing function	1	**VLC14-1P/L** 285371		12 off
		1 + N	**VLC14-1P+N/L** 285372		6 off
		2	**VLC14-2P/L** 285373		6 off
		3	**VLC14-3P/L** 285374		4 off
		3 + N	**VLC14-3P+N/L** 285375		3 off
	Size 22 x 58, to 100 A				
	Without flashing function	1	**VLC22-1P** 285366		3 off
		1 + N	**VLC22-1P+N** 285367		2 off
		2	**VLC22-2P** 285368		2 off
		3	**VLC22-3P** 285369		1 off
		3 + N	**VLC22-3P+N** 285370		1 off
	With flashing function	1	**VLC22-1P/L** 285376		3 off
		1 + N	**VLC22-1P+N/L** 285377		2 off
		2	**VLC22-2P/L** 285378		2 off
		3	**VLC22-3P/L** 285379		1 off
		3 + N	**VLC22-3P+N/L** 285380		1 off

	Size	Rated operational current I_e A	Rated operational voltage U_e V AC	**Part no.** Article no. **Utilization category gG (gL)**	**Price** See price list	Rated operational voltage U_e V AC	**Part no.** Article no. **Utilization category aM**	**Price** See price list	Std. pack
Cylindrical fuse inserts Z-C…/SE									
	10 x 38	1	500	**Z-C10/SE-1A/GG** 112156		500	**Z-C10/SE-1A/AM** 112188		10 off
		2	500	**Z-C10/SE-2A/GG** 112157		500	**Z-C10/SE-2A/AM** 112189		
		4	500	**Z-C10/SE-4A/GG** 112158		500	**Z-C10/SE-4A/AM** 112190		
		6	500	**Z-C10/SE-6A/GG** 112159		500	**Z-C10/SE-6A/AM** 112191		
		8	500	**Z-C10/SE-8A/GG** 112160		500	**Z-C10/SE-8A/AM** 112192		
		10	500	**Z-C10/SE-10A/GG** 112161		500	**Z-C10/SE-10A/AM** 112193		
		12	500	**Z-C10/SE-12A/GG** 112162		500	**Z-C10/SE-12A/AM** 112194		
		16	500	**Z-C10/SE-16A/GG** 112163		500	**Z-C10/SE-16A/AM** 112195		
		20	500	**Z-C10/SE-20A/GG** 112164		400	**Z-C10/SE-20A/AM** 112196		
		25	500	**Z-C10/SE-25A/GG** 112165		400	**Z-C10/SE-25A/AM** 112197		
		32	400	**Z-C10/SE-32A/GG** 112166		400	**Z-C10/SE-32A/AM** 112198		
	14 x 51	2	690	**Z-C14/SE-2A/GG** 112167		690	**Z-C14/SE-2A/AM** 112199		
		4	690	**Z-C14/SE-4A/GG** 112168		690	**Z-C14/SE-4A/AM** 112200		
		6	690	**Z-C14/SE-6A/GG** 112169		690	**Z-C14/SE-6A/AM** 112201		
		8	690	**Z-C14/SE-8A/GG** 112170		690	**Z-C14/SE-8A/AM** 112202		
		10	690	**Z-C14/SE-10A/GG** 112171		690	**Z-C14/SE-10A/AM** 112203		
		12	690	**Z-C14/SE-12A/GG** 112172		690	**Z-C14/SE-12A/AM** 112204		
		16	690	**Z-C14/SE-16A/GG** 112173		690	**Z-C14/SE-16A/AM** 112205		
		20	690	**Z-C14/SE-20A/GG** 112174		690	**Z-C14/SE-20A/AM** 112206		
		25	690	**Z-C14/SE-25A/GG** 112175		690	**Z-C14/SE-25A/AM** 112207		
		32	690	**Z-C14/SE-32A/GG** 112176		500	**Z-C14/SE-32A/AM** 112208		
		40	500	**Z-C14/SE-40A/GG** 112177		500	**Z-C14/SE-40A/AM** 112209		
		50	500	**Z-C14/SE-50A/GG** 112178		500	**Z-C14/SE-50A/AM** 112210		
	22 x 58	16	690	**Z-C22/SE-16A/GG** 112179		690	**Z-C22/SE-16A/AM** 112211		
		20	690	**Z-C22/SE-20A/GG** 112180		690	**Z-C22/SE-20A/AM** 112212		
		25	690	**Z-C22/SE-25A/GG** 112181		690	**Z-C22/SE-25A/AM** 112213		
		32	690	**Z-C22/SE-32A/GG** 112182		690	**Z-C22/SE-32A/AM** 112214		
		40	690	**Z-C22/SE-40A/GG** 112183		690	**Z-C22/SE-40A/AM** 112215		
		50	500	**Z-C22/SE-50A/GG** 112184		690	**Z-C22/SE-50A/AM** 112216		
		63	500	**Z-C22/SE-63A/GG** 112185		500	**Z-C22/SE-63A/AM** 112217		
		80	500	**Z-C22/SE-80A/GG** 112186		500	**Z-C22/SE-80A/AM** 112218		
		100	500	**Z-C22/SE-100A/GG** 112187		500	**Z-C22/SE-100A/AM** 112219		

		Rated operating current I_e A	Max. fuse link 500 V A	Max. fuse link 690 V A	Size	**Part no.** Article no.	**Price** See price list	Std. pack	**Notes**
LV h.b.c. fuse bases									
3 pole									
		160	160	100	NH00	**GS00-160** 026741		1 off	–
		250	250	200	NH1	**GSU1** 289016		1 off	–
		400	400	315	NH2	**GSU2** 289017		1 off	–
		630	630	500	NH3	**GSU3** 289018		1 off	–
LV h.b.c. fuse switch-disconnectors									
For fitting on mounting plate									
	1 pole without hand guard	160	160	100	NH00	**GSTA00-160-1P** 225000		1 off	For fitting to GSTA00-160 for four pole LV h.b.c. fuse switch-disconnector, two devices can be combined to two pole LV h.b.c. fuse switch-disconnector
	3 pole without hand guard	160	160	100	NH00	**GSTA00-160** 095558		1 off	–
		250	250	200	NH1	**GSTA1** 017250		1 off	–
		400	400	315	NH2	**GSTA2** 021996		1 off	–
		630	630	500	NH3	**GSTA3** 026742		1 off	–

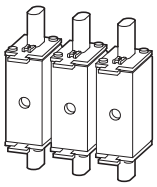
	Rated operational voltage U_e V	Fuse link Size	For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Set of connecting links						
	–	00	GSTA00-160-1P	**V-GSTA00-1P** 228173		1 off
Cover with fuse monitoring						
• One green operation indicator LED, three red error indication LEDs (F1, F2, F3) • Error message through relay contacts (floating) 1 N/O + 1 NC AC15: 24 V/4 A, 230 V/3 A AC13: 24 V/1 A, 220 V/0.5 A, terminal capacity 0.25 – 1.5 mm²						
	400 - 690 V AC / 50 - 60 Hz	00	GSTA00…	**GST00-DSI** 107956		1 off
	400 - 690 V AC / 50 - 60 Hz	1	GSTA1…	**GST1-DSI** 107957		1 off
	400 - 690 V AC / 50 - 60 Hz	2	GSTA2…	**GST2-DSI** 107958		1 off
	400 - 690 V AC / 50 - 60 Hz	3	GSTA3…	**GST3-DSI** 107959		1 off

	Fuse link Size	For use with	Connection	**Part no.** Article no.	**Price** See price list	Std. pack
Busbar tag shroud 1 pole						
	00	GSTA00-160-1P	Connection top or bottom	**ZBS-GSTA00-1P** 119006		2 off
	1	GSTA1-1P	Connection top or bottom	**ZBS-GSTA1-1P** 119007		2 off
	3	GSTA3-1P	Connection top or bottom	**ZBS-GSTA3-1P** 119008		2 off
Busbar tag shroud 3 pole						
	00	GSTA00-160	Connection top or bottom	**ZBS-GSTA00** 014411		10 off
	1	GSTA1	Connection at the top	**ZBS-GSTA1** 082800		10 off
	1	GSTA1	Connection at the bottom	**ZBSU-GSTA1** 082804		10 off
	2	GSTA2	Connection at the top	**ZBS-GSTA2** 082801		5 off
	2	GSTA2	Connection at the bottom	**ZBSU-GSTA2** 082805		10 off
	3	GSTA3	Connection at the top	**ZBS-GSTA3** 082802		1 off
	3	GSTA3	Connection at the bottom	**ZBSU-GSTA3** 082806		10 off

		For use with	**Part no.** Article no.	**Price** See price list	Std. pack
Clip set					
able to be fitted later, adjustable snap fitting to two top hat rails to IEC/EN 60715 (35 mm) For intervals between busbar centres of 100 - 125 mm					
	–	GSTA00-160	**C-GSTA00** 040922		5 off
One set comprises 3 clamp-type terminals.					
	Terminal range 1 x (70 - 150) mm² Cu/Al	GSU1, GST…1	**PSK1** 038734		1 off
	Terminal range 1 x (120 - 240) mm² Cu/Al	GSU2, GST…2	**PSK2** 043480		1 off
	Terminal range 1 x (120 - 300) mm² Cu/Al	GSU3, GST…3	**PSK3** 048226		1 off
Sets of double clamp-type terminals					
One set comprises 3 double clamp-type terminals					
	Terminal range 2 x (70 - 95) mm² Cu/Al	GSU1, GST…1	**PSK12** 041107		1 off
	Terminal range 2 x (120 - 150) mm² Cu/Al	GSU2, GST…2	**PSK22** 045853		1 off
	Terminal range 2 x (120-240) mm² Cu/Al	GSU3, GST…3	**PSK32** 050599		1 off
Insulating surround for fuse switch-disconnectors					
For compensation between the GA... protective cover and the device (for use in the CI insulated distribution board system)					
	–	GST00	**B-GST00-40-60/CI/1** 224553		5 off

LV h.b.c. fuse links

- Insulation body made from Steatite/Corderite
- Copper contact blade with silver coating, corrosion proof
- Pivoting and central indicator, live grip tabs
- Selectivity from 1:1.6



Size	Rated operational current I_e A	**Part no.** Article no.	**Price** See price list	Std. pack
00	10	**Z-NH-00/10** 289998		3 off
00	16	**Z-NH-00/16** 289999		3 off
00	20	**Z-NH-00/20** 290000		3 off
00	25	**Z-NH-00/25** 290001		3 off
00	35	**Z-NH-00/35** 290002		3 off
00	40	**Z-NH-00/40** 290003		3 off
00	50	**Z-NH-00/50** 290004		3 off
00	63	**Z-NH-00/63** 290005		3 off
00	80	**Z-NH-00/80** 290006		3 off
00	100	**Z-NH-00/100** 290007		3 off
00	125	**Z-NH-00/125** 290008		3 off
00	160	**Z-NH-00/160** 290009		3 off
1	50	**Z-NH-1/50** 290010		3 off
1	63	**Z-NH-1/63** 290011		3 off
1	80	**Z-NH-1/80** 290012		3 off
1	100	**Z-NH-1/100** 290013		3 off
1	125	**Z-NH-1/125** 290014		3 off
1	160	**Z-NH-1/160** 290015		3 off
1	200	**Z-NH-1/200** 290016		3 off
1	250	**Z-NH-1/250** 290017		3 off
2	100	**Z-NH-2/100** 290018		3 off
2	125	**Z-NH-2/125** 290019		3 off
2	160	**Z-NH-2/160** 290020		3 off
2	200	**Z-NH-2/200** 290021		3 off
2	250	**Z-NH-2/250** 290022		3 off
2	315	**Z-NH-2/315** 290023		3 off
2	400	**Z-NH-2/400** 290024		3 off
3	250	**Z-NH-3/250** 290025		3 off
3	315	**Z-NH-3/315** 290026		3 off
3	400	**Z-NH-3/400** 290027		3 off
3	500	**Z-NH-3/500** 290028		3 off
3	630	**Z-NH-3/630** 290029		3 off

Engineering

Influence of the ambient temperature on the thermal trip behavior

Corrected values of the rated operational current dependent on the ambient temperature

FAZ..., FAZT...

	Ambient temperature T [°C]																	
I_n [A]	**–40**	**–30**	**–20**	**–10**	**0**	**10**	**20**	**30**	**35**	**40**	**45**	**50**	**55**	**60**	**65**	**70**	**75**
0.16	0.20	0.20	0.19	0.19	0.18	0.17	0.17	0.16	0.16	0.15	0.15	0.15	0.14	0.14	0.14	0.14	0.13
0.25	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.25	0.24	0.24	0.23	0.23	0.22	0.22	0.21	0.21
0.5	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.48	0.47	0.46	0.45	0.44	0.43	0.42	0.41
0.75	0.96	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.74	0.73	0.71	0.69	0.68	0.66	0.65	0.64	0.62
1	1.3	1.2	1.2	1.2	1.1	1.1	1.0	1.0	0.99	0.97	0.95	0.93	0.90	0.89	0.87	0.85	0.83
1.5	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.3	1.3	1.3	1.2
1.6	2.0	2.0	1.9	1.9	1.8	1.7	1.7	1.6	1.6	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.3
2	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7
2.5	3.2	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2	2.1	2.1
3	3.8	3.7	3.6	3.5	3.4	3.3	3.1	3.0	3.0	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5
3.5	4.5	4.4	4.2	4.1	3.9	3.8	3.7	3.5	3.4	3.4	3.3	3.2	3.2	3.1	3.0	3.0	2.9
4	5.1	5.0	4.8	4.7	4.5	4.3	4.2	4.0	3.9	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3
5	6.4	6.0	6.0	5.8	5.6	5.4	5.2	5.0	4.9	4.8	4.7	4.6	4.5	4.4	4.3	4.2	4.1
6	7.7	7.5	7.2	7.0	6.7	6.5	6.3	6.0	5.9	5.8	5.7	5.6	5.4	5.3	5.2	5.1	5.0
8	10.2	9.9	9.6	9.3	9.0	8.7	8.4	8.0	7.9	7.7	7.6	7.4	7.2	7.1	6.9	6.8	6.6
10	13	12	12	12	11	11	10	10	9.9	9.7	9.5	9.3	9.0	8.9	8.7	8.5	8.3
12	15	15	14	14	13	13	13	12	12	12	11	11	11	11	10	10	10
13	17	16	16	15	15	14	14	13	13	13	12	12	12	12	11	11	11
15	19	19	18	17	17	16	16	15	15	15	14	14	14	13	13	13	12
16	20	20	19	19	18	17	17	16	16	15	15	15	14	14	14	14	13
20	26	25	24	23	22	22	21	20	20	19	19	19	18	18	17	17	17
25	32	31	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21
32	41	40	38	37	36	35	33	32	32	31	30	30	29	28	28	27	26
40	51	50	48	47	45	43	42	40	39	39	38	37	36	35	35	34	33
50	64	62	60	58	56	54	52	50	49	48	47	46	45	44	43	42	41
63	81	78	76	73	71	68	66	63	62	61	60	58	57	56	55	53	52

FAZ-...-NA, FAZ-...-RT

	Ambient temperature T [°C]							
I_n [A]	**15**	**20**	**25**	**30**	**40**	**50**	**55**	**60**
0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
1.0	1.1	1.1	1.1	1.0	1.0	1.0	0.9	0.9
1.5	1.7	1.6	1.6	1.6	1.5	1.4	1.4	1.4
2.0	2.2	2.2	2.1	2.1	2.0	1.9	1.9	1.8
3.0	3.3	3.2	3.2	3.1	3.0	2.9	2.9	2.8
4.0	4.4	4.3	4.2	4.2	4.0	3.8	3.8	3.7
5.0	5.5	5.4	5.3	5.2	5.0	4.8	4.7	4.6
6.0	6.6	6.5	6.4	6.2	6.0	5.8	5.6	5.5
7.0	7.7	7.6	7.4	7.3	7.0	6.7	6.6	6.4
8.0	8.8	8.6	8.5	8.3	8.0	7.7	7.5	7.4
10.0	11.0	10.8	10.6	10.4	10.0	9.6	9.4	9.2
13.0	14.3	14.0	13.8	13.5	13.0	12.5	12.5	12.0
15.0	16.5	16.2	15.9	15.6	15.0	14.4	14.1	13.8
16.0	17.6	17.3	17.0	16.6	16.0	15.4	15.0	14.7
20.0	22.0	21.6	21.2	20.8	20.0	19.2	18.8	18.4
25.0	27.5	27.0	26.5	26.0	25.0	24.0	23.3	23.0
30.0	33.0	32.4	31.8	31.2	30.0	28.8	28.2	27.6
32.0	35.2	34.6	33.9	33.3	32.0	30.7	30.1	29.4
40.0	44.0	43.2	42.4	41.6	40.0	38.4	37.6	36.8

Heat dissipation FAZT

Depending on rated operational current I_u

	Characteristic C			Characteristic D		
	Pole			Pole		
	1	2	3	1	2	3
I_n [A]	P [W]	P [W]	P [W]	P [W]	P [W]	P [W]
0.5	1.6	3.2	4.7	1.6	3.2	4.8
1	1.1	2.2	3.4	0.8	1.5	2.3
1.5	1.3	2.6	3.9	1.0	2.1	3.1
2	1.4	2.8	4.3	1.0	2.1	3.1
3	1.2	2.4	3.6	1.2	2.4	3.6
4	1.4	2.9	4.3	1.4	2.9	4.3
5	1.9	3.7	5.6	1.5	2.9	4.4
6	1.2	2.3	3.5	1.2	2.3	3.5
7	1.4	2.8	4.3	1.4	2.8	4.3
8	1.4	2.8	4.2	1.2	2.4	3.7
10	1.9	3.6	5.3	1.5	3.0	4.5
13	2.4	4.7	7.1	2.0	4.1	6.1
15	1.9	3.8	5.6	1.5	3.1	4.6
16	2.1	4.3	6.4	1.7	3.5	5.2
20	2.9	5.8	8.7	1.8	3.7	5.5
25	3.1	6.2	9.3	2.6	5.1	7.7
30	3.0	6.0	9.0	2.7	5.4	8.1
32	3.4	6.8	10.2	3.1	6.2	9.3
35	3.7	7.4	11.0	3.8	7.6	11.3
40	4.0	8.1	12.1	3.9	7.8	11.6

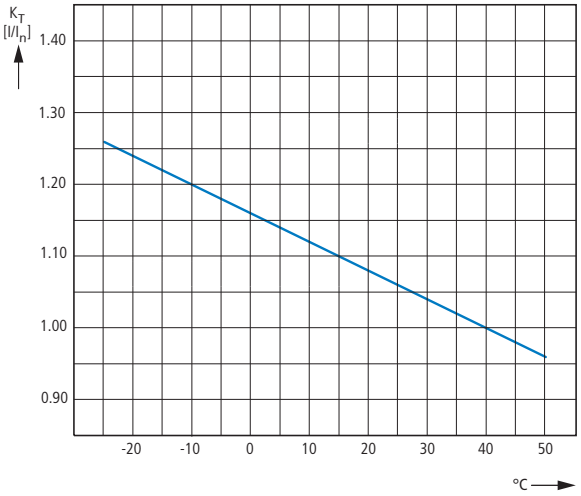
Heat dissipation FAZ-...-NA, FAZ-...-RT

Depending on rated operational current I_u

	Characteristic C			Characteristic D		
	Pole			Pole		
	1	2	3	1	2	3
I_n [A]	P [W]	P [W]	P [W]	P [W]	P [W]	P [W]
0.5	1.6	3.2	4.7	1.6	3.2	4.8
1	1.1	2.2	3.4	0.8	1.5	2.3
1.5	1.3	2.6	3.9	1.0	2.1	3.1
2	1.4	2.8	4.3	1.0	2.1	3.1
3	1.2	2.4	3.6	1.2	2.4	3.6
4	1.4	2.9	4.3	1.4	2.9	4.3
5	1.9	3.7	5.6	1.5	2.9	4.4
6	1.2	2.3	3.5	1.2	2.3	3.5
7	1.4	2.8	4.3	1.4	2.8	4.3
8	1.4	2.8	4.2	1.2	2.4	3.7
10	1.8	3.6	5.3	1.5	3.0	4.5
13	2.4	4.7	7.1	2.0	4.1	6.1
15	1.9	3.8	5.6	1.5	3.1	4.6
16	2.1	4.3	6.4	1.7	3.5	5.2
20	2.9	5.8	8.7	1.8	3.7	5.5
25	3.1	6.2	9.3	2.6	5.1	7.7
30	3.0	6.0	9.0	2.7	5.4	8.1
32	3.4	6.8	10.2	3.1	6.2	9.3
35	3.7	7.4	11.0	3.8	7.6	11.3
40	4.0	8.1	12.1	3.9	7.8	11.6

Influence of the ambient temperature on the tripping behavior

FAZ-...-NA, FAZ-...-RT,



K_T = rated diversity factor

PDIM leakage current meters

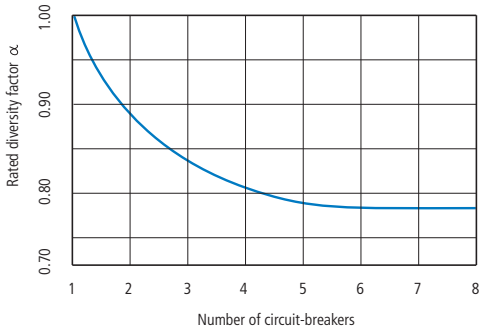
Contour and rail mounting compatible with other devices of the P series
Freely selectable rail arrangement top and bottom
Free terminal compartment despite fitted busbar
Power supply through ordering of the four conductors
Electronic operation (independent of mains voltage)

Mains connection on either side.
The 4 pole switch can also be used as 3 pole switch.
To do this, use terminals 1-2, 3-4 and 5-6.
The 4 pole switch can also be used as 2 pole switch.
To do this, use terminals 5-6 and N-N.
2 relays (N/O, parallel to yellow and red LED), floating
(up to 10 A/230 V~)

Function
Green LED lit on 0 – 30 % of set $I_{\Delta n}$.
Yellow LED lit on 30 – 50 % of set $I_{\Delta n}$.
Red LED lit on > 50 % of set $I_{\Delta n}$.
The yellow LED goes out when tripped if the measured fault current < 30 % of the set $I_{\Delta n}$.
The red LED goes remains lit when tripped, even if when the measured fault current < 50 % of the set $I_{\Delta n}$.
The red LED goes out only when the Reset button is pressed.
Only one LED lights up at any one time.
An output relay is always connected parallel to the yellow or red LED.
Depending on the set RCCB (non-delayed, G, or S) the fault current must flow for a specific time before an action takes place.

Test function
Rotary coding switch for RCCB function set to “TEST”.
A fault current of 30 % and 50 % $I_{\Delta n}$ is simulated in alternation.
The yellow and red LED flash alternately (1 Hz); both output relays are continually picked up.

Load carrying capacity with side-by-side miniature circuit-breakers FAZ...



Influence of the mains frequency

Influence of the mains frequency on the tripping behavior I_{MA} of the instantaneous release

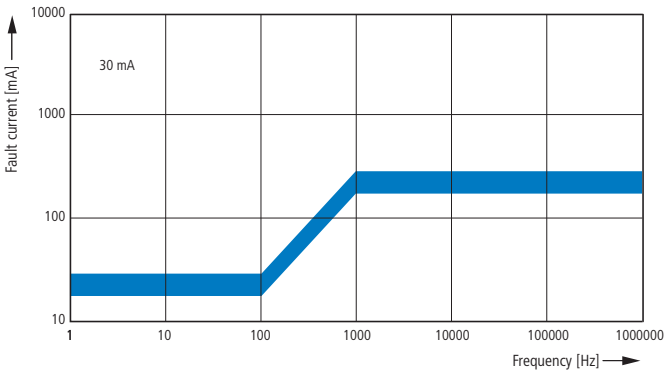
	Mains frequency f [Hz]						
	16 ⅔	50	60	100	200	300	400
$I_{MA}(f)/I_{MA}$ (50 Hz) [%]	91	100	101	106	115	134	141

Residual-current devices

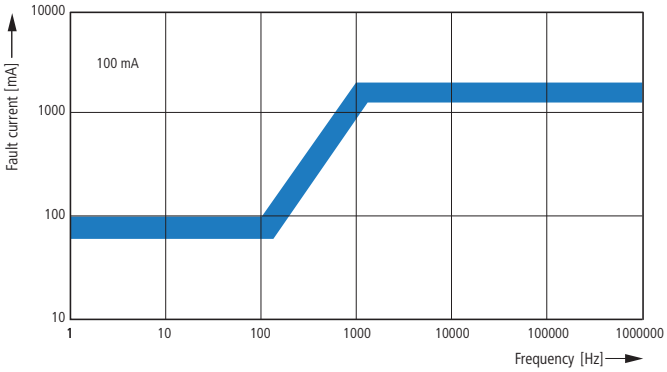
FI-...-B

Frequency response of the tripping current

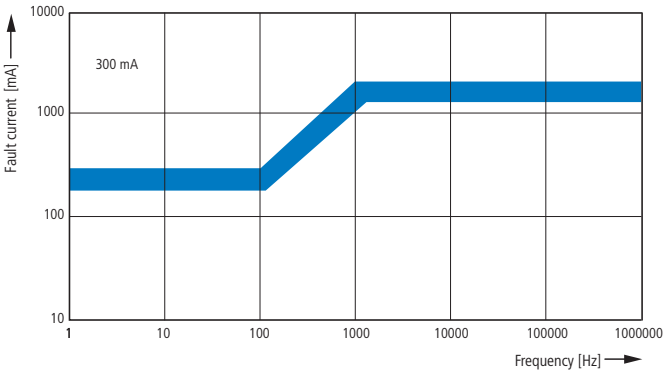
30 mA



100 mA



300 mA

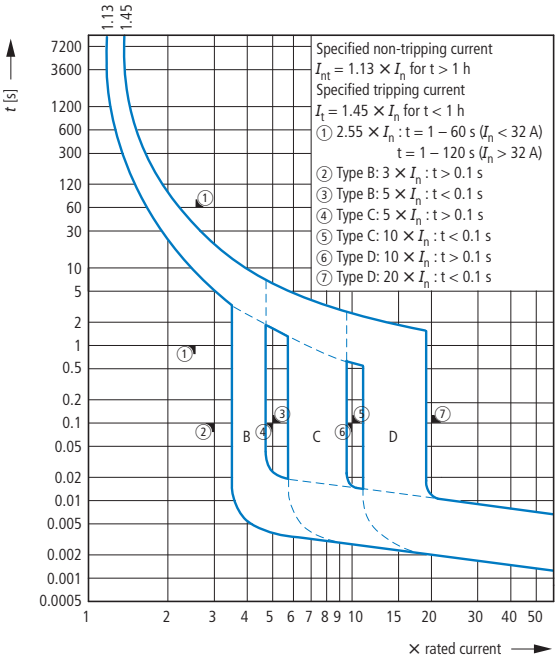


Miniature circuit-breakers (MCB)

FAZ...

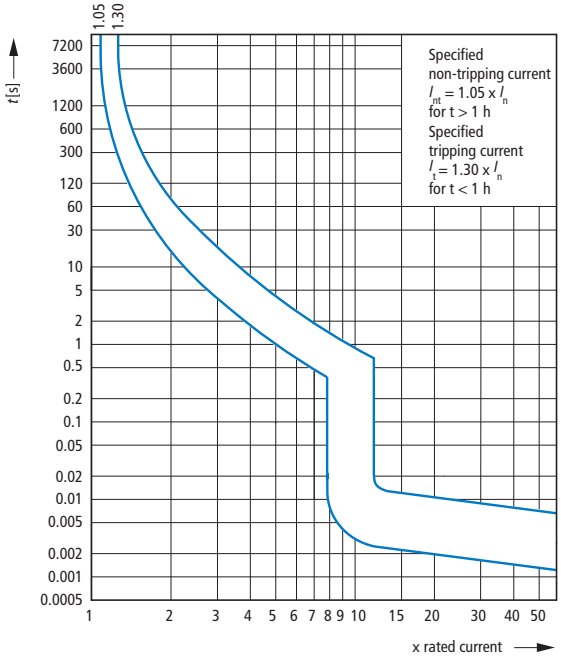
Tripping characteristics at 30 °C:

B, C, D to IEC/EN 60898



Tripping characteristics at 30 °C:

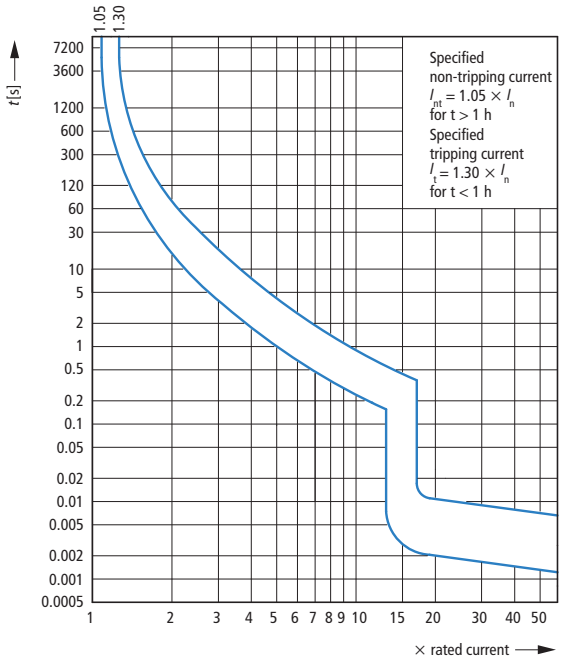
K according to IEC/EN 60947



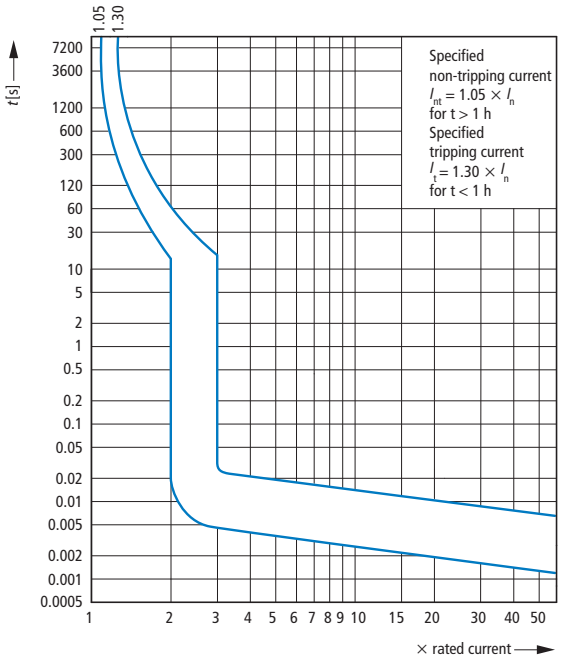
Miniature circuit-breakers (MCB)

FAZ...

Tripping characteristics at 30 °C:
S according to IEC/EN 60947

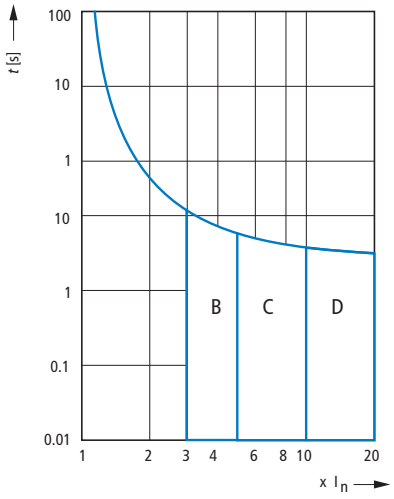


Tripping characteristics at 30 °C:
Z according to IEC/EN 60947



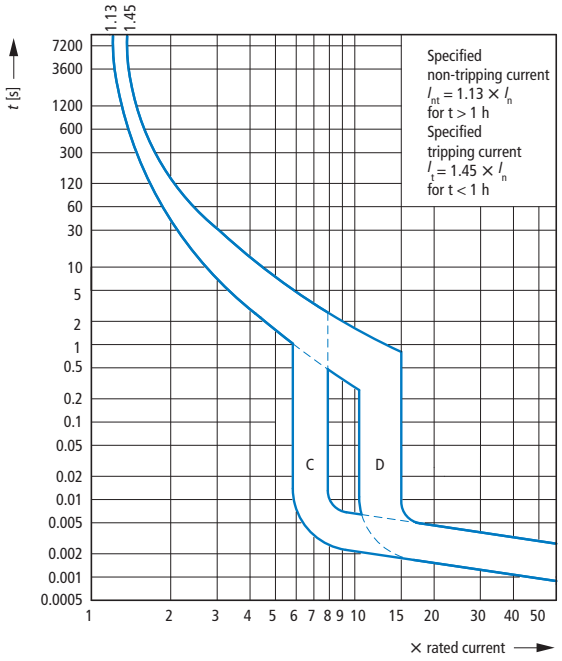
FAZT

Tripping characteristics FAZ at 30 °C
B, C, D to IEC/EN 60898



AZ...

Tripping characteristics at 30 °C:
C, D according to IEC/EN 60898



Tripping characteristics for miniature circuit-breakers

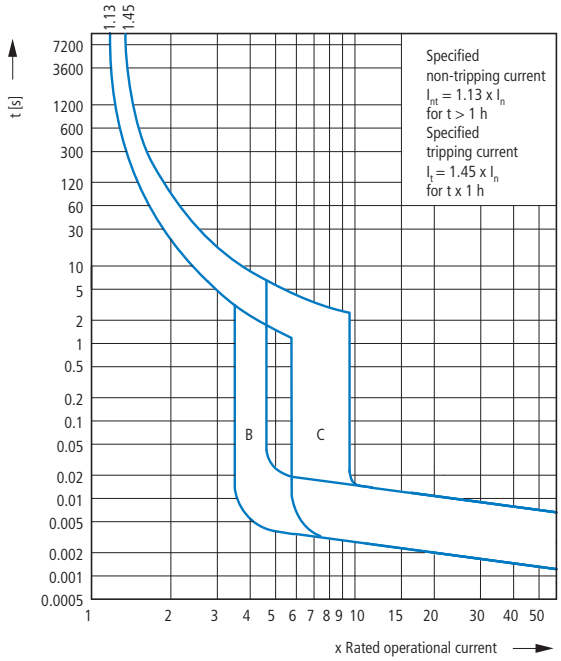
PKNM, mRB, FAZ-NA, FAZ-RT

Combination switches

PKNM...

Tripping characteristics at 30 °C:

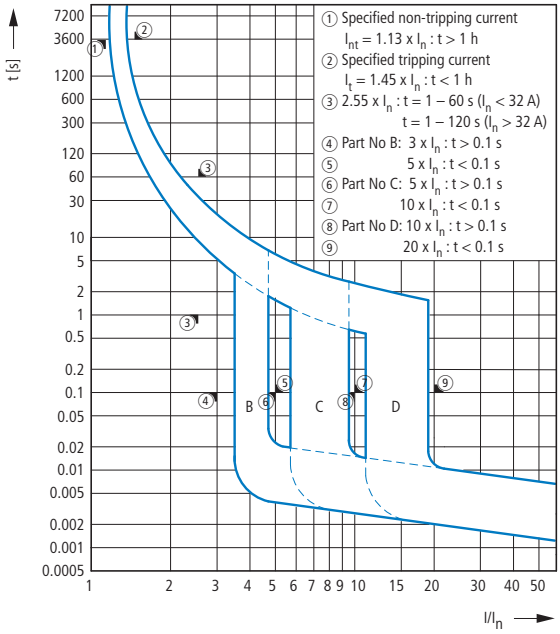
B, C according to IEC/EN 61009



mRB6..., mRB4...

Tripping characteristics

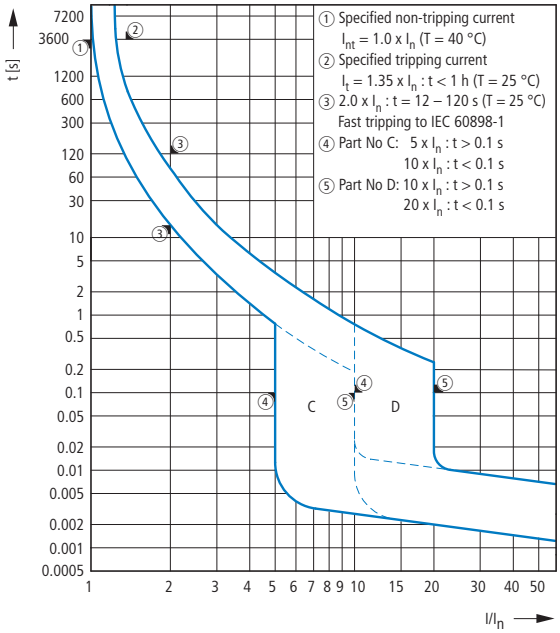
B, C, D according to IEC/EN 61009



Miniature circuit-breakers (MCB)

FAZ-...-NA, FAZ-...-RT

Tripping characteristics according to UL 489

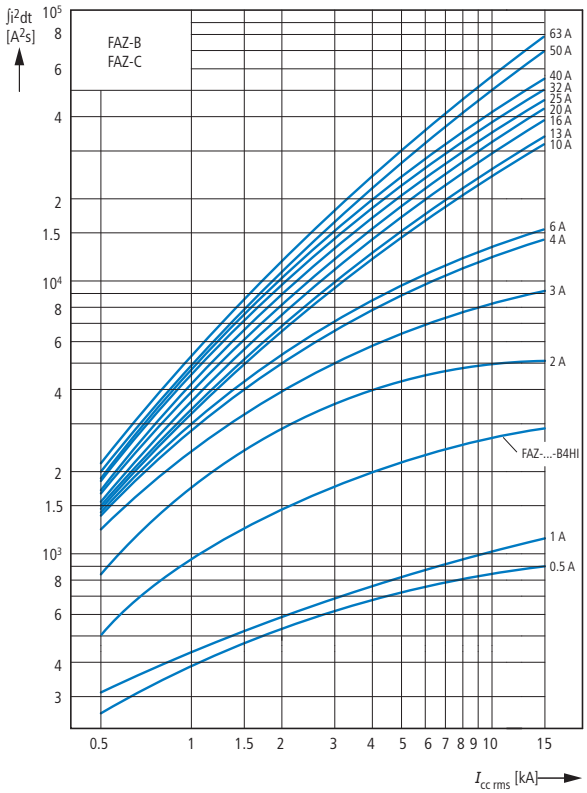


Miniature circuit-breakers (MCB)

FAZ...

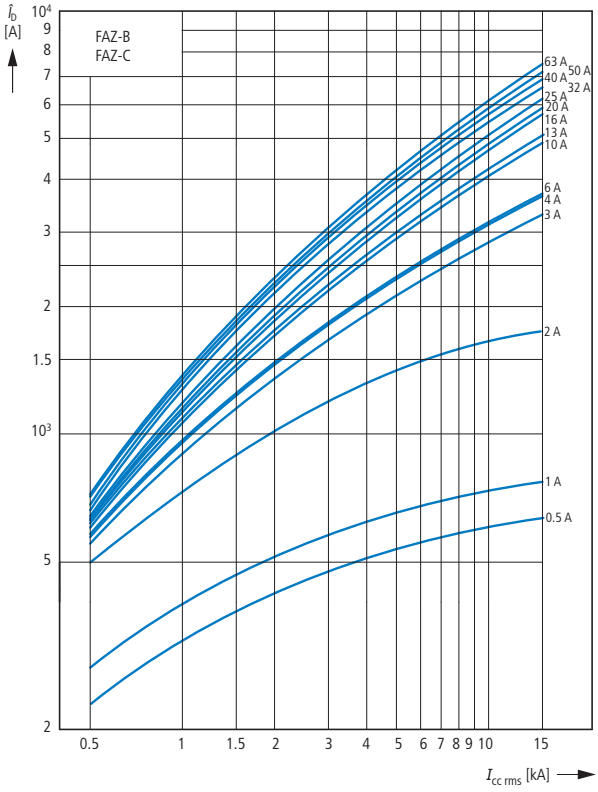
Let-through energy I^2t

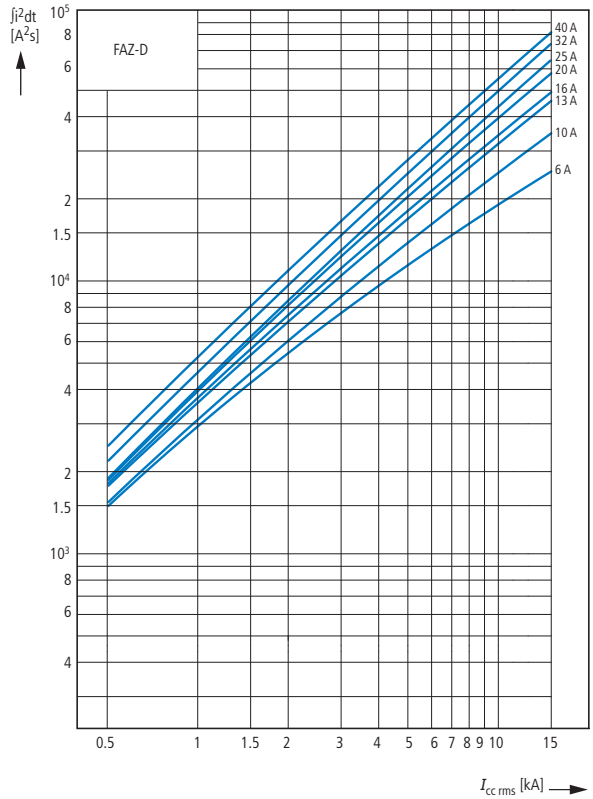
According to IEC/EN 60898

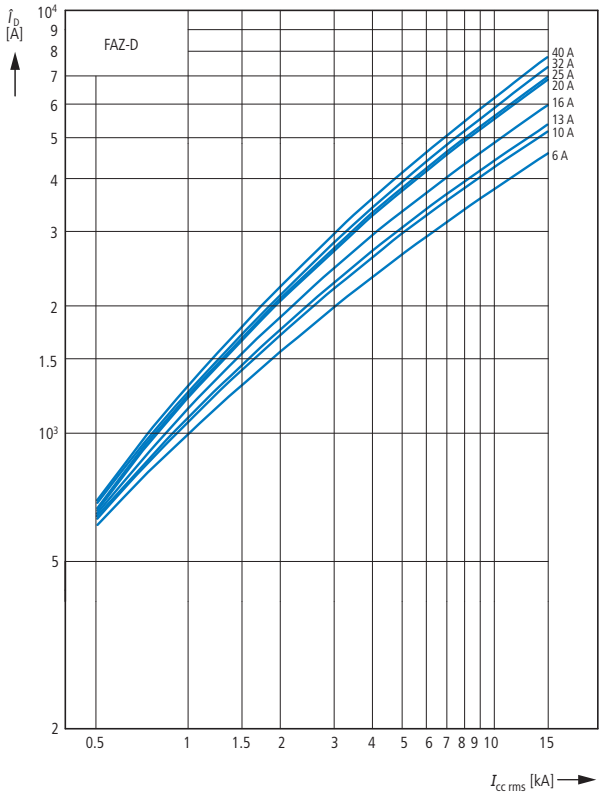


Let-through current I_D

According to IEC/EN 60898



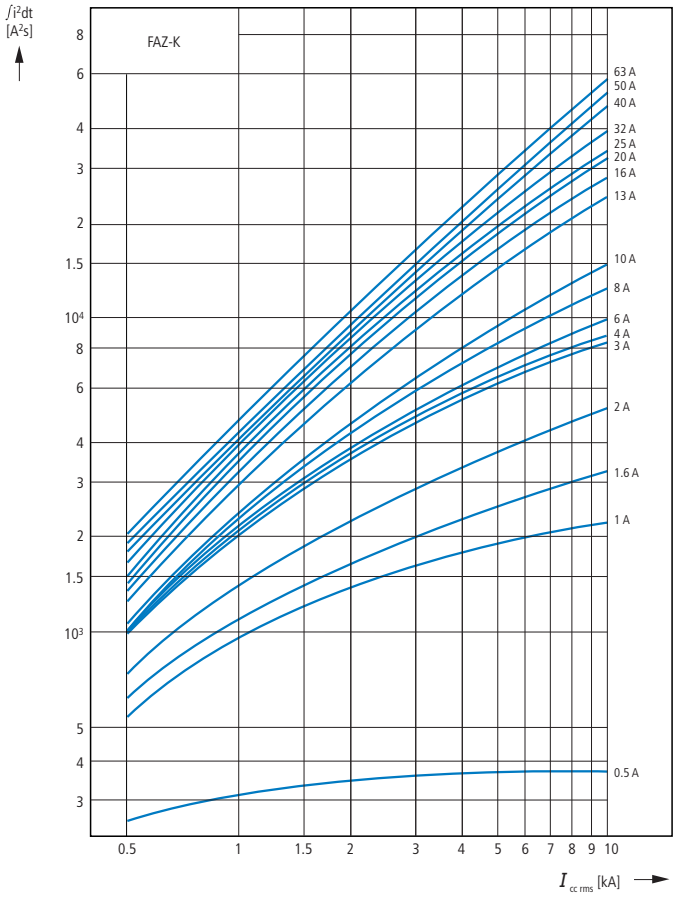




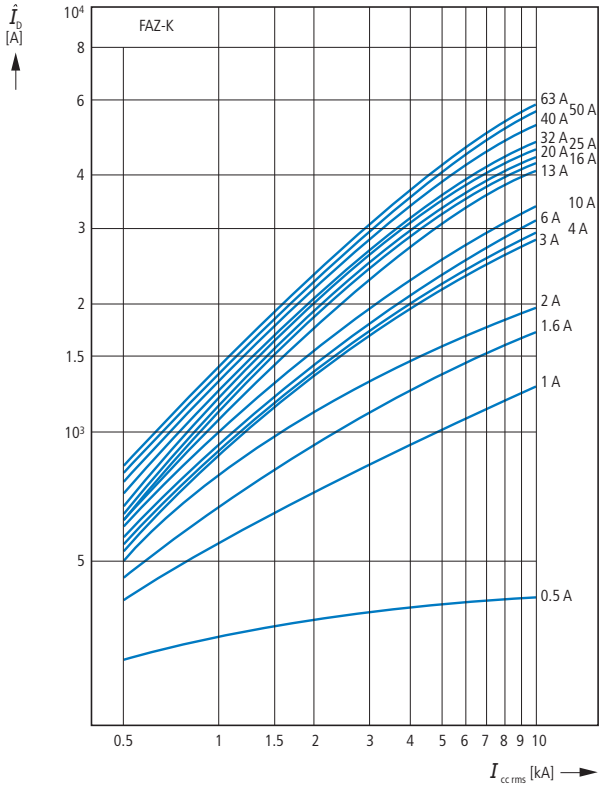
Miniature circuit-breakers (MCB)

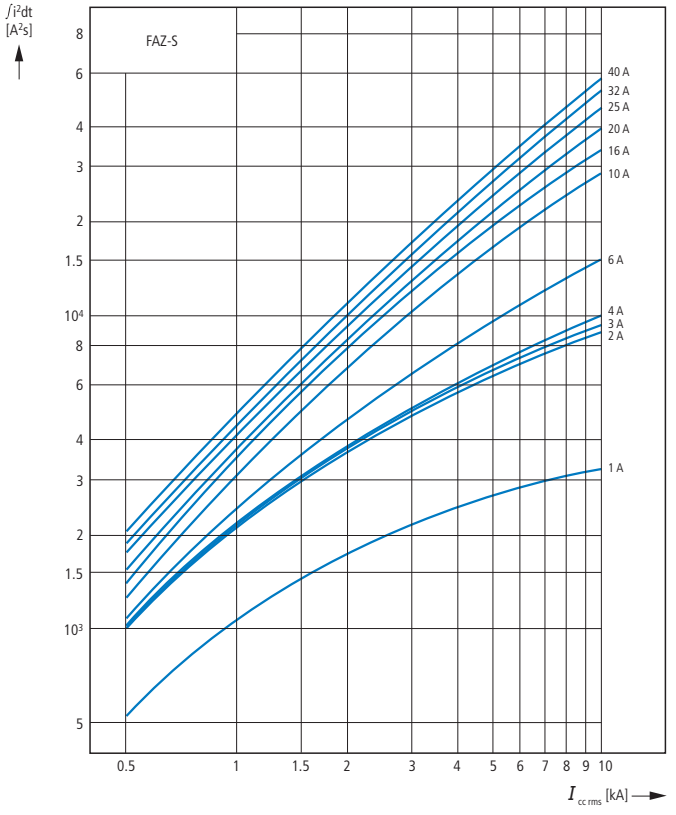
FAZ...

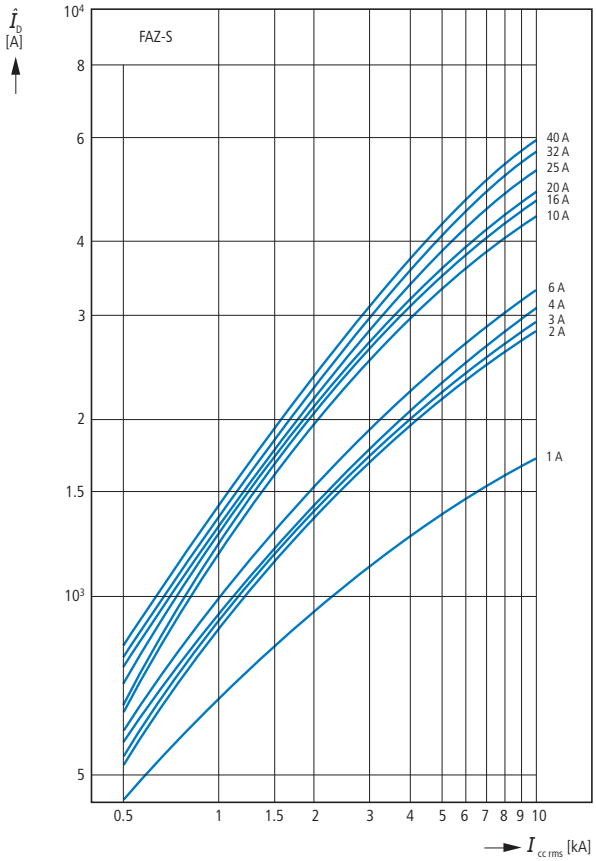
Let-through energy I^2t
According to IEC/EN 60898



Let-through current I_D
According to IEC/EN 60898



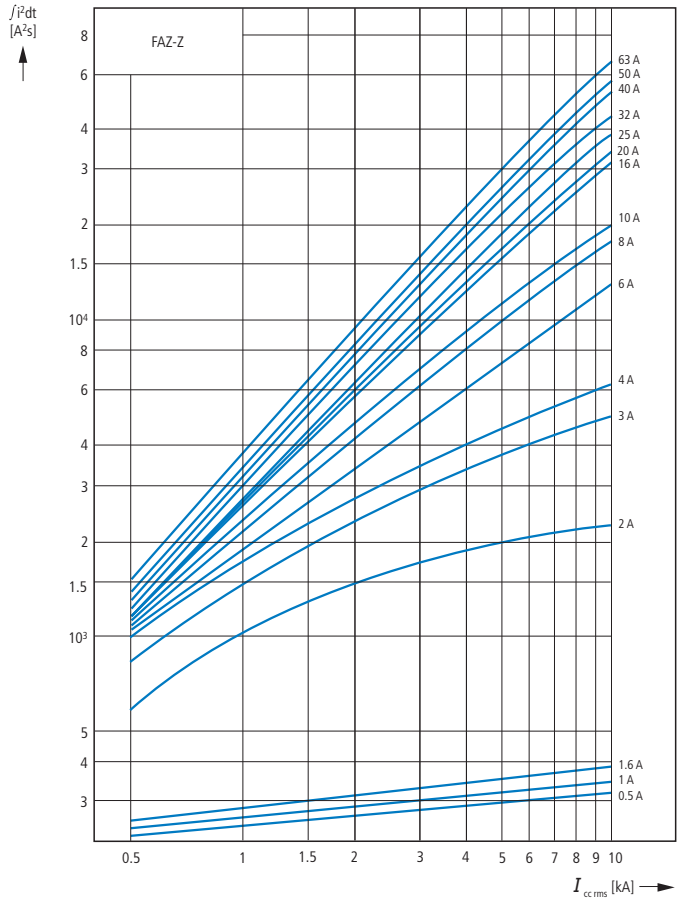




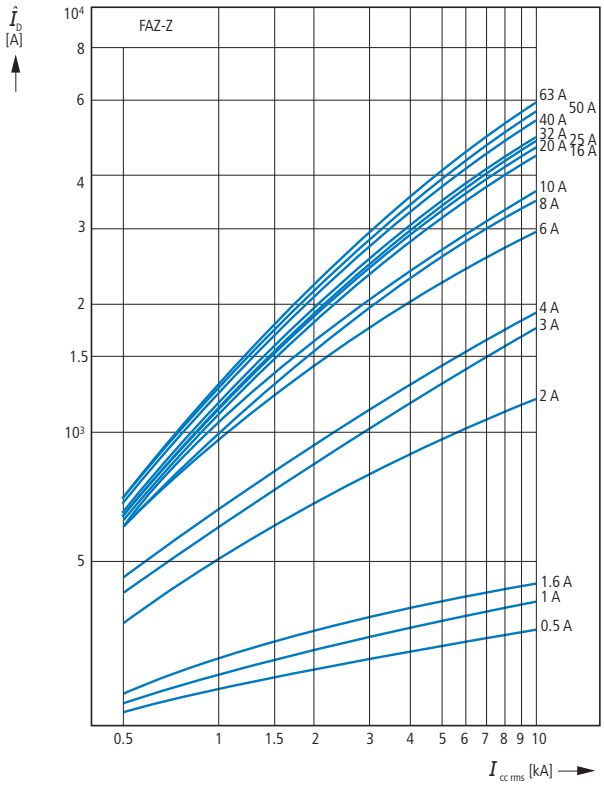
Miniature circuit-breakers (MCB)

FAZ...

Let-through energy I^2t
According to IEC/EN 60898

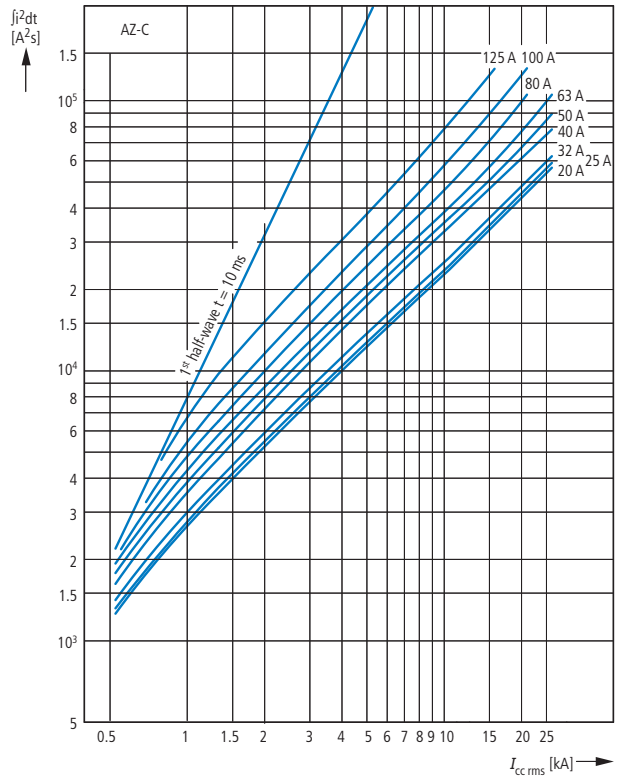


Let-through current I_D
According to IEC/EN 60898

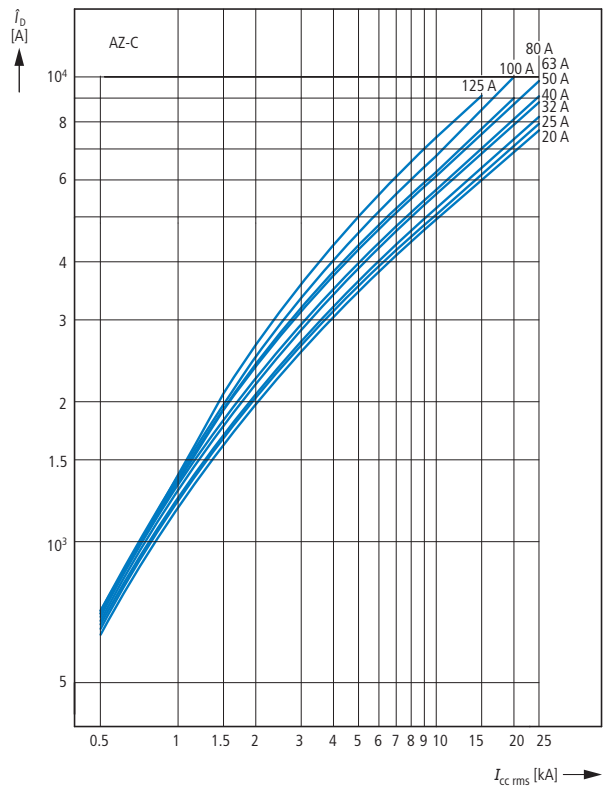


AZ...

Let-through energy I^2t



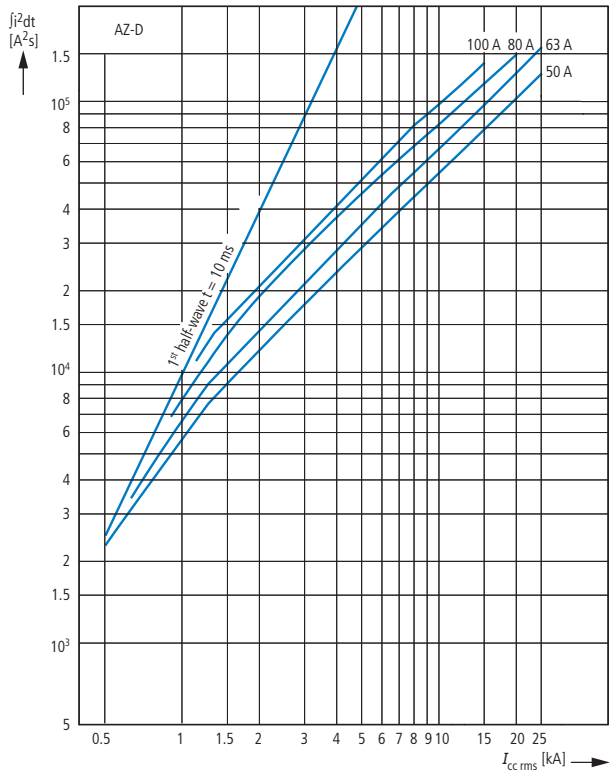
Let-through current I_D



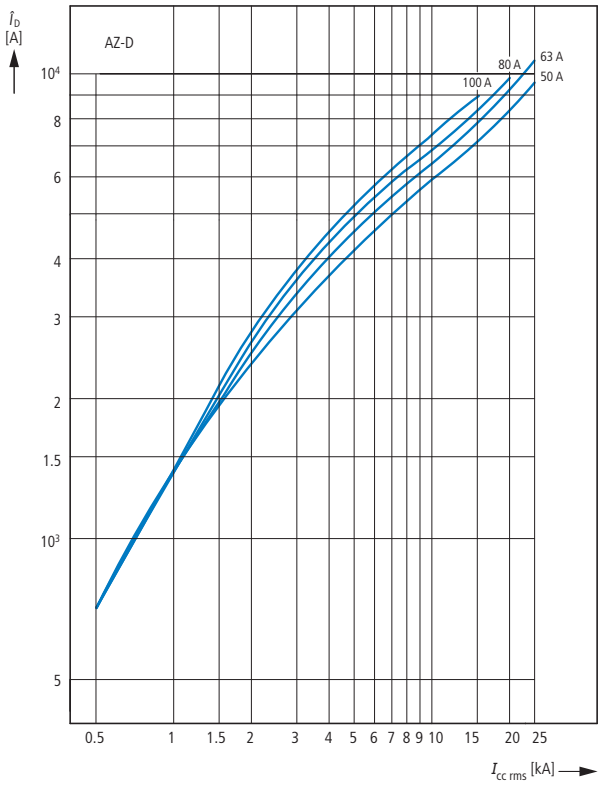
Miniature circuit-breakers

AZ...

Let-through energy I^2t



Let-through current I_D

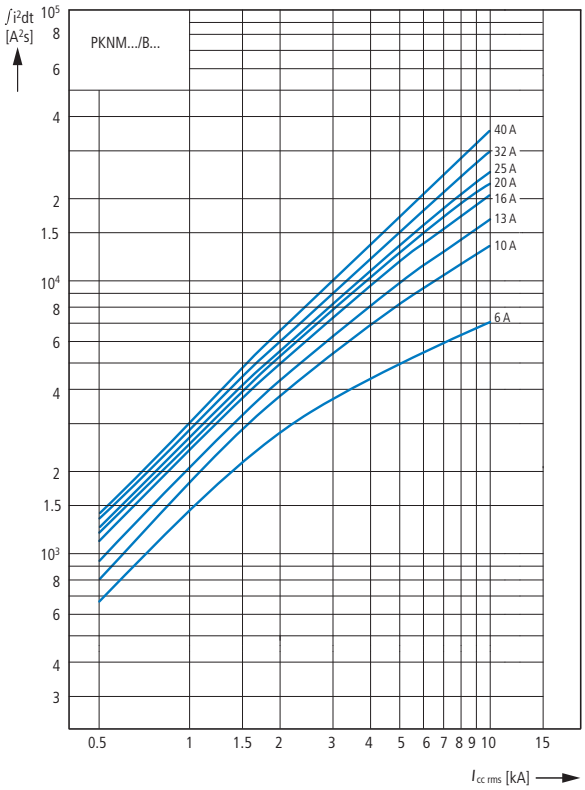


Combination switches

PKNM-...

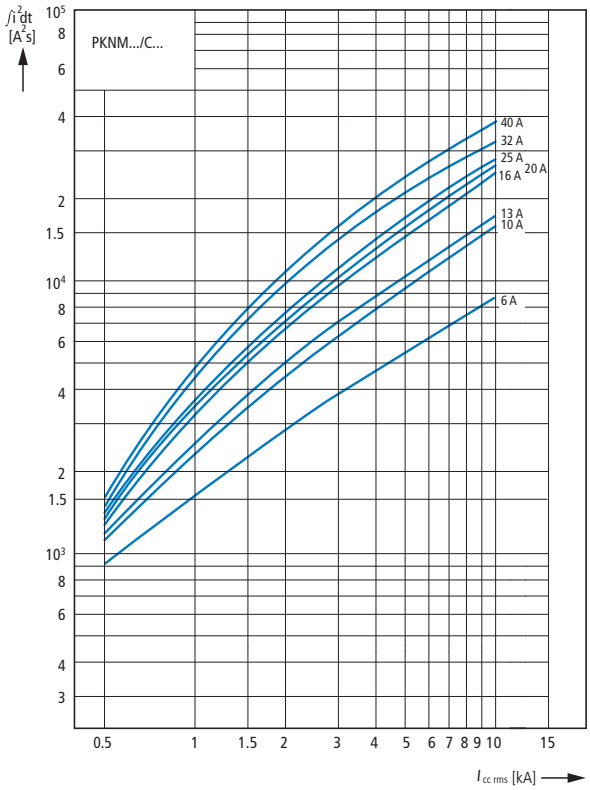
Let-through energy I^2t

According to IEC/EN 60898



Let-through current I_D

According to IEC/EN 60898

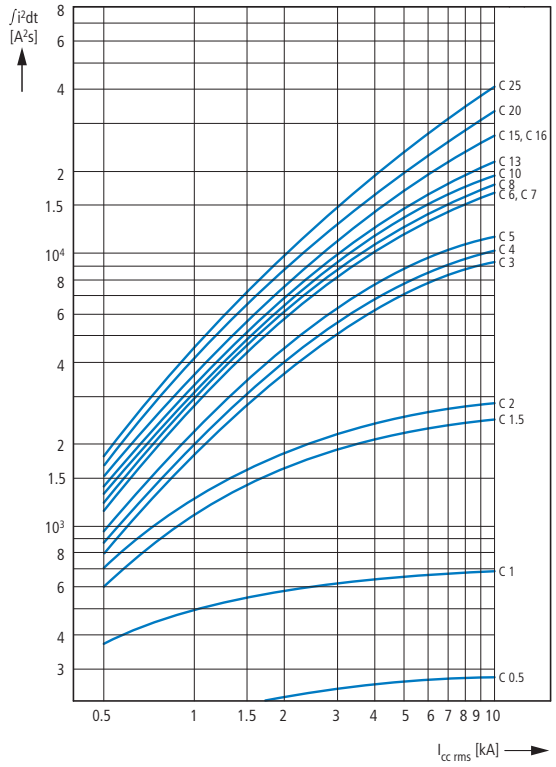


Miniature circuit-breakers (MCB)

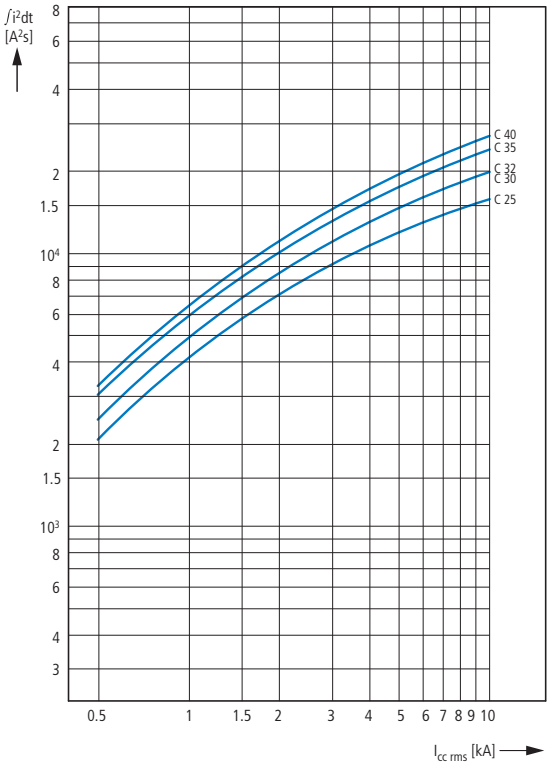
FAZ-...NA, FAZ-...RT

Let-through energy I^2t

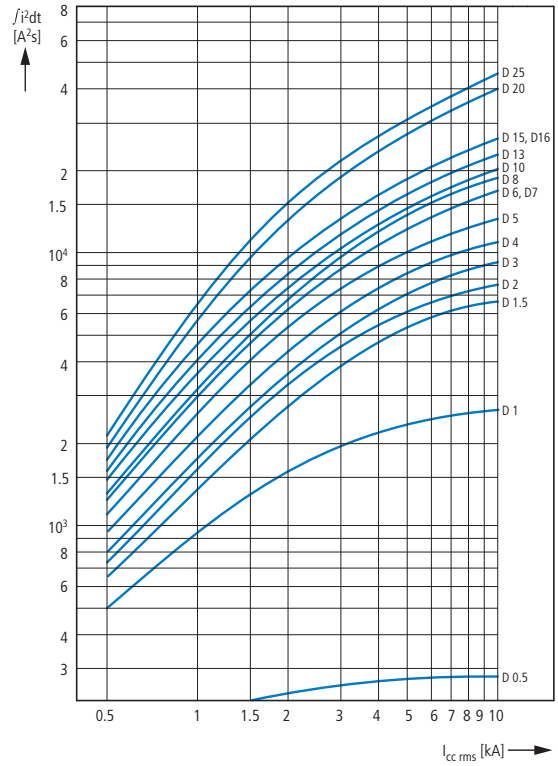
Characteristic C (0.5 - 20 A), 277 V



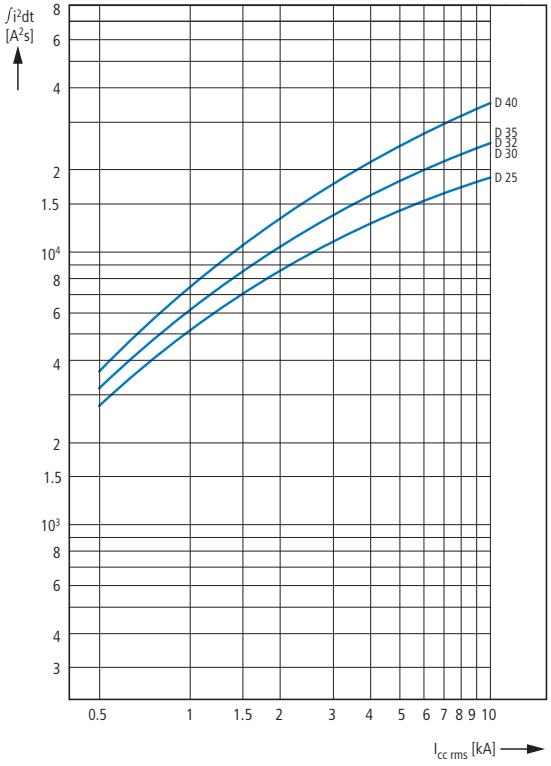
Characteristic C (25 - 40 A), 240 V



Characteristic D (0.5 - 20 A), 277 V



Characteristic D (25 - 40 A), 240 V



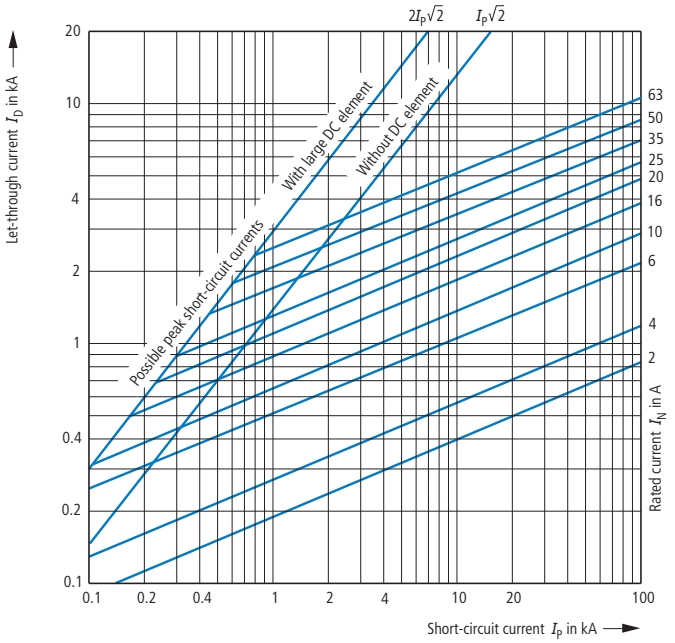
Let-through characteristics miniature circuit-breakers

Z-DO, Z-NH

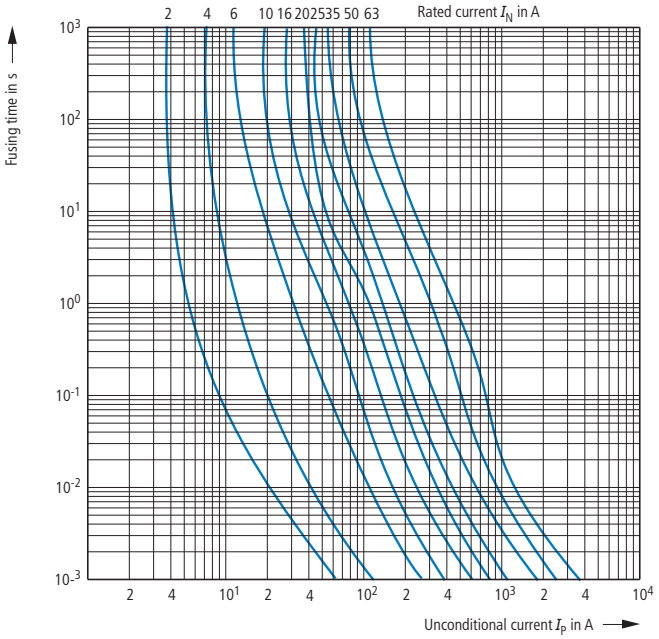
Fuse links

Z-DO.../S...

Let-through current



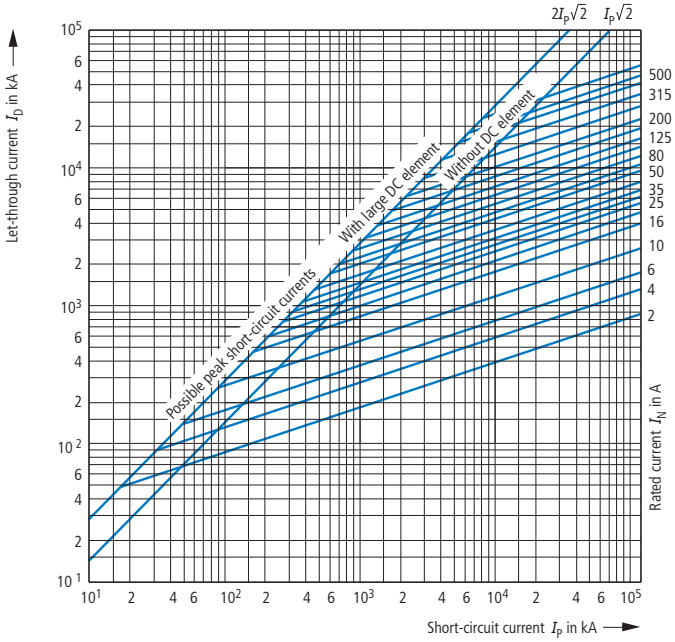
Time/current characteristics



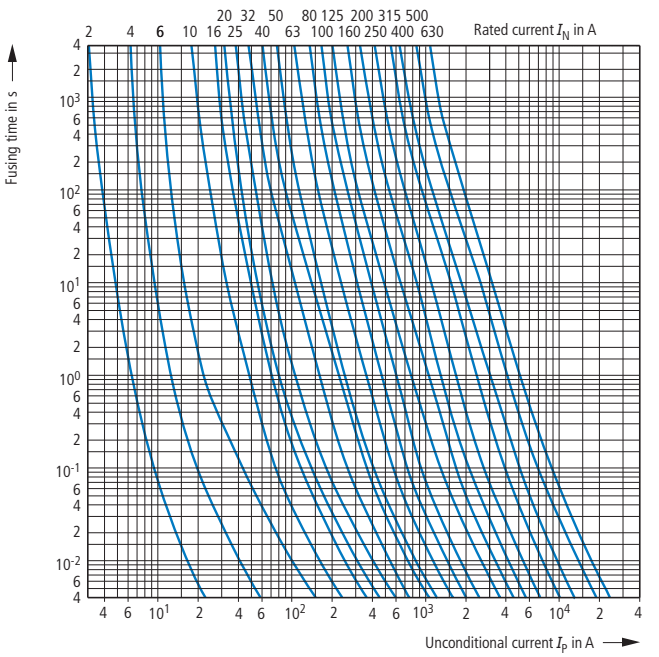
LV h.b.c. fuse links

Z-NH-...

Let-through current



Time/current characteristics



Technical data

			FAZ	FAZ-...-DC	FAZ-PN	AZ
Electrical						
Standards			IEC/EN 60947-2 IEC/EN 60898	IEC/EN 60947-2	IEC/EN 60898	IEC/EN 60947-2
Rated operating voltage						
		V AC	230/400	-	230	230/400
		V DC	48 (per pole)	250 (per pole)	48 (per pole)	60 (per pole)
Rated switching capacity		kA	15	10	6	25
Operational switching capacity		kA	7.5	-	-	20
Characteristic			B, C, D, K, S, Z	C	B, C	Similar: D, C
Max. back-up fuse		A gL/gG	125	100	100	200
Selectivity class			3	3	3	Compliant with Class 3
Lifespan		Operations	> 10000	> 10000	> 4000	> 10000
Direction of incoming supply			Any	Polarized	Any	Any
Mechanical						
Standard front dimension		mm	45			
Device height		mm	80	80	80	90
Terminal protection			Finger and back-of-hand proof to BGV A2			
Mounting width per pole		mm	17.5	17.5	17.5	27
Mounting			Top-hat rail to IEC/EN 60715			
Protection type			IP20, IP40 (enclosed)			
Terminals top and bottom			Twin-purpose terminals			Lift terminals
Terminal capacity						
Solid		mm^2	1 x 25	1 x 25	1 x 16	2.5 - 50
Flexible		mm^2	2 x 10	2 x 10	-	-
Thickness of busbar material		mm	0.8 - 2	0.8 - 2	-	-
Mounting position			Any		-	-

			FAZT
Electrical			
Standards			IEC/EN 60947-2
Rated voltage		V AC	240/415
		V DC	60 V per pole; up to two poles in series
Rated frequency	*f*	Hz	50/60
Rated switching capacity			
B, C (to 13 kA); D (to 10 kA)		kA	25
B, C (16-25 kA); D (12-16 kA)		kA	20
Characteristic			B, C, D
Lifespan	Operations		20000
Direction of incoming supply			Any
Mechanical			
Standard front dimension		mm	45
Device height		mm	80
Mounting width per pole		mm	17.5
Mounting			Quick attachment with three engagement positions for top-hat rail to IEC/EN 60715
Protection type			IP20
Terminals top and bottom			Twin-purpose terminals
Terminal protection			Finger and back-of-hand proof to BGV A3, ÖVE-EN 6
Terminal capacity		mm^2	1 - 25
Tightening torque		Nm	2 - 2.4
Thickness of busbar material		mm	0.8 - 2 (except N 0.5 space unit)
Mounting position			Any

			PKNM	FIM	AZFIMP	FI ≦ 100 A	FI 125 A and Type B
Electrical							
Standards and regulations			IEC/EN 61009	IEC/EN 61009	IEC/EN 60947-2	IEC/EN 61008	IEC/EN 61008
Tripping		A	250 (8/20 µ) non-delayed surge resistant			Non-delayed, S	
Rated operational voltage	U_e	V AC	230	230/400	230/400	230/400	230/400
Operating limit values		V AC	196 - 253	196 - 440	196 - 440	184 - 440	184 - 440
Rated frequency	f	Hz	50				
Rated fault currents	$I_{\triangle n}$	mA	30, 300	30, 300	30, 300	30, 100, 300, 500	30, 100, 300, 500
Rated non-tripping current			0.5 x $I_{\triangle n}$	0.5 x $I_{\triangle n}$	0.5 x $I_{\triangle n}$	0.5 x $I_{\triangle n}$	0.5 x $I_{\triangle n}$
Rated fault switching capacity	$I_{\triangle n}$	A	-	-	-	I_n = 16-40 A: 500 I_n = 63 A: 630 I_n = 80 A: 800 I_n = 100A: 1000	I_n = 125 A: 1250 for type B: 60, 80 A: 800 40 A: 500 125 A: 1250
230 V		kA	6	-	-	-	-
400 V		kA	3	-	-	-	-
Sensitivity			DC and pulsed current				Pulsed current and AC/DC
Rated switching capacity	I_{cn}	kA	10	As fitted FAZ	As fitted AZ	10	10
Operational switching capacity	I_{cs}	kA	-	As fitted FAZ	-	-	-
Rated ultimate breaking capacity	I_{cu}		-	As fitted AZ	As fitted AZ	-	-
Rated short-circuit switching capacity			-	-	= I_{cu}	-	-
Rated operational current	I_e	A	6 - 40	40, 63	80, 125	16 - 100	40 - 125
Rated impulse withstand voltage	U_{imp}	kV	6 (1.2/50 µs)	-	4 (1.2/50 µs)	6	6
Characteristic			B, C	-	-	-	-
Maximum back-up fuse as short-circuit protective device		A gL	100	-	-	I_n = 16 - 63 A: 63 I_n= 80 A: 80 I_n= 100 A: 100	I_n = 125 A: 125 for type B: I_n ≦ 80: 100 I_n = 125: 125
Selectivity class			3	-	-	-	-
Lifespan							
Electrical		Operations	> 4000	-	> 1500	> 4000	> 2000
Mechanical		Operations	-	-	> 10000	> 20000	> 5000
Mechanical							
Standard front dimension		mm	45	45	45	45	45
Device height		mm	80	90	90	80	85
Terminal protection			Busbar tag shroud to BGV A2				
Mounting width		mm	35 (2 SU)	70 (2 pole), 125 (4 pole)	95 (5.5 SU)	35 (2 space unit), 70 (4 space units)	70 (4 SU)
Mounting			-	Permanently screw-connected to FAZ	Screwed on to AZ (2 to 4 pole)	IEC/EN 60715 top-hat rail	IEC/EN 60715 top-hat rail
Protection type							
Circuit-breaker			IP20	-	-	-	-
Enclosed			IP40	IP40	IP40	IP40	IP40
Terminals top and bottom			Twin-purpose terminals	Lift terminals	Lift terminals	Twin-purpose terminals	Twin-purpose terminals
Terminal capacity							
Solid		mm^2	1 x 25	1 x (1 - 25)	2.5 - 50	1.5 - 35	1.5 - 50
Flexible		mm^2	-	1 x (0.75 - 16)	-	2 x 16	2 x (1.5 - 16)
Thickness of busbar material		mm	0.8 - 2	0.8 - 2	-	0.8 - 2	0.8 - 2
Admissible ambient temperature range		°C	-25 - +40	-25 - +40	-25 - +40	-25 - +40	-25 - +40
Climatic proofing			IEC/EN 61009	IEC/EN 61009	IEC/EN 60068-2	IEC/EN 61008	IEC/EN 61008

			mRB6...	**mRB4...**
Electrical				
Standards			IEC/EN 61009	IEC/EN 61009
Tripping		A	250 (8/20µ) non-delayed surge resistant	
Rated operating voltage	U_e	V AC	230/400	230/400
Rated frequency	f	Hz	50	50
Rated fault currents	$I_{\Delta n}$	mA	30, 100, 300	30, 100, 300
Rated fault non-tripping current			0.5 x $I_{\Delta n}$	0.5 x $I_{\Delta n}$
Sensitivity			DC and pulsed current	
Rated switching capacity	I_{cn}	kA	6	4.5
Rated operational current	I_e	A	6 - 25	6 - 25
Rated impulse withstand voltage	U_{imp}	kV	4 (1.2/50 µs)	4 (1.2/50 µs)
Characteristic			B, C, D	C, D
Maximum back-up fuse as short-circuit protective device		A gL	100	100
Selectivity class			3	3
Lifespan				
Electrical		Operations	> 4000	> 4000
Mechanical		Operations	> 20000	> 20000
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	80	80
Terminal protection			Busbar tag shroud to VBG4	
Mounting width		mm	70 (4 SU)	70 (4 SU)
Mounting			Tristable slide catch allows removal from an existing assembly.	
Protection type				
Circuit-breaker			IP20	IP20
Enclosed			IP40	IP40
Terminals top and bottom			Twin-purpose terminals	Twin-purpose terminals
Terminal capacity				
Solid		mm^2	1 - 25	1 - 25
Thickness of busbar material		mm	0.8 - 2	0.8 - 2
Admissible ambient temperature range		°C	-25 - +40	-25 - +40
Climatic proofing			According to IEC 68-2 (25 – 55 °C, 90 – 95 % rel. humidity)	

			Z-CC/2CO
Electrical			
Power supply		VDC	12 - 24 (≧ 10 - ≦ 30)
Power consumption		W	1.5 - 6
Temperature sensor			Incl. 9 pole Sub-D plug (for RS232 interface) Measurement range -10 °C – +50 °C, accuracy: ± 2 °C
Outputs			2 floating relay outputs AC: 5 A at 250 AC DC: 5 A at 30 V DC, 0.3 A at 110 V DC and 0.12 A at 220 V DC Max. switching duty AC15 at 230 V DC: 500 VA
Inputs			4; max. 12 – 24 V DC (2 – 4 mA) isolated (optocoupler)
Ethernet interface			Required for parameterization with a PC (web browser). For connecting PC and Z-CC/2CO a crossover network cable is required (DNW-PX/0200/RJ45/RJ45).
RS232 interface			9 pole Sub-D plug for connecting an external temperature sensor
Green LED ON			Modem status LED (on registration in the GSM network the LED flashes every 3 seconds)
Red LED ON			Modem activity LED (flashes when SMS is being sent or received)
Mechanical			
Standard front dimension		mm	45
Device height		mm	97
Mounting width		mm	105
Mounting			Quick attachment for top-hat rail EN 50022
Protection type			
Enclosed			IP40

			dRCM...
Electrical			
Standards and regulations			IEC/EN 61008, Type G and G/A to ÖVE E 8601 Current approvals as labeled
Tripping			Non-delayed
Type G, R			10 ms delayed
Type S			40 ms delay - selective switch off
Type U (only 30 mA)			10 ms delayed
Type U (except 30 mA)			40 ms delay - selective switch off
Rated voltage	U_n	V AC	230/400, 240/415
Rated frequency	f	Hz	50/60
Operational voltage electronic		V AC	50 - 254
Operational voltage test circuit		V AC	184 - 440
Rated fault currents	$I_{\Delta n}$	mA	30, 300
Sensitivity			DC and pulsed current
Rated insulation voltage	U_i	V	440
Rated impulse withstand voltage	U_{imp}	kV	4 (1.2/50 µs)
Rated short-circuit strength	I_{nc}	kA	10
Surge current capacity			
Type G, G/A, R, U (30 mA)		kA	3 (8/20 µs) surge-proof
Type S/A, U (except 30 mA)		kA	Part no. 5 (8/20 µs) selective and surge-proof
Electrical isolation			> 4 mm contact spacing
Max. admissible back-up fuse			Short-circuit and overload
I_n = 16 - 63 A		A gG/gL	63
I_n = 80 A		A gG/gL	80
I_n = 100 A		A gG/gL	100
Lifespan			
Electrical		Operations	≧ 4000
Mechanical		Operations	≧ 20000
Mechanical			
Standard front dimension		mm	45
Device height		mm	80
Mounting width		mm	70 (4 SU)
Mounting			Quick attachment with two engagement positions for top-hat rail to IEC/EN 60715
Protection type			
Enclosed			IP40
In moisture-proof enclosure			IP54
Terminals top and bottom			Twin-purpose terminals
Terminal protection			Busbar tag shroud to BGV A3
Terminal capacity			
Solid		mm^2	1 - 35
Stranded		mm^2	2 x 16
Terminal screws			M5 (Pozidriv PZ2)
Tightening torque terminal screws		Nm	2 - 2.4
Thickness of busbar material		mm	0.8 - 2
Admissible ambient temperature range		°C	-25 - +40
Climatic proofing			According to IEC/EN 61008

			PDIM
Electrical			
Standards			Conforming with DIN/EN 62020
Rated operational current	I_e	A	40, 100
Response behavior (adjustable)			Non-delayed
Type G			10 ms delayed
Type S			40 ms delayed - selective
Rated operating voltage	U_e	V AC	230/400 50/60 Hz 240/415 50/60 Hz
Rated fault currents	$I_{\triangle n}$	mA	30, 100, 300, 500, 1000
Sensitivity			Alternating and pulsed current
Rated insulation voltage	U_i	V	440
Rated short-circuit strength	I_{nc}	kA	10
Max. admissible back-up fuse			
I_n = 40 A		A gG/gL	Short-circuit: 63 overload: 40
I_n = 100 A		A gG/gL	Short-circuit: 100 A Overload: 63 A
Switching contacts			Potential-free 10 A / 230 ~
Response behavior of contacts			1: 30 - 50 % $I_{\triangle n}$ 2: > 50 % $I_{\triangle n}$
Lifespan			
Electrical		Operations	≧ 4000
Mechanical		Operations	≧ 20000
Mechanical			
Standard front dimension		mm	45
Device height		mm	80
Mounting width		mm	70 (4 SU)
Mounting position			Any
Mounting			Quick attachment with two engagement positions for top-hat rail to IEC/EN 60715
Protection type			
Enclosed			IP40
Protection type In moisture-proof enclosure			IP54
Terminals top and bottom			Twin-purpose terminals
Terminal protection			Busbar tag shroud to BGV A3, ÖVE-EN 6
Terminal capacity (1, 2, 3, 4, 5, 6, N, N)			
Solid		mm^2	1.5 - 35
Stranded		mm^2	2 x 16
Terminal cross-section of switching contacts		mm^2	0.25 - 1.5
Thickness of busbar material		mm	0.8 - 2
Admissible ambient temperature range		°C	-25 to +40
Climatic proofing			According to IEC/EN 61008

			FAZ-XHIN11	FAZ-XHINW1	FAZ-XAM002	FAZ-XAA-C	FAZ-XUA
Electrical							
Rated operating voltage	U_e	V AC	250	250	250	-	115, 230, 400
Contact function			1 N/O + 1 NC	1 C	2 C	-	-
Voltage range		V AC	-	-	-	12 - 110 110 - 415	-
Closing threshold	x U_n		-	-	-	-	0.8
Tripping threshold	x U_n		-	-	-	-	0.5
Rated frequency	f	Hz	50/60	50/60	50/60	50/60	50/60
Rated operational current	I_e	A	6	6	4	-	-
Thermal rated operational current	I_{th}	A	6	6	4	-	-
Rated operational current							
AC-12	I_e	A	3 (250 V AC)	3 (250 V AC)	3 (250 V AC)	-	-
AC-15	I_e	A	2 (250 V AC)	2 (250 V AC)	2 (250 V AC)	-	-
DC-13	I_e	A	0.5 (110 V DC)	0.5 (110 V DC)	0.5 (110 V DC)	-	-
Rated insulation voltage	U_i	V AC	250	250	250	-	-
Minimum operating voltage per contact	U_{min}	V DC	5	5	5	-	-
Rated impulse withstand voltage (1.2/ 50 µ)	U_{imp}	kV	2.5	2.5	2.5	-	-
Rated conditional short-circuit current with 6 A back-up fuse	I_k	kA	1	1	1	-	-
Max. admissible back-up fuse		A gL	6	6	4		
Mechanical							
Standard front dimension		mm	45	45	45	45	45
Device height		mm	80	80	80	80	80
Mounting width		mm	8.8 (0.5 SU)	8.8 (0.5 SU)	8.8 (0.5 SU)	17.5 (1 SU)	17.5 (1 SU)
Mounting			Max. 2 × on switching device	Max. 2 × on switching device	On switching device	IEC/EN 60715 top-hat rail	IEC/EN 60715 top-hat rail
Protection type							
Enclosed			IP40				
Terminal protection			Busbar tag shroud to BGV A2				
Terminals			Lift terminals	Lift terminals	Lift terminals	Twin-purpose terminals	Twin-purpose terminals
Terminal capacity							
Solid		mm^2	0.5 - 2.5	0.5 - 2.5	0.5 - 2.5	1 - 2.5	2 x (1 - 2.5)
Flexible		mm^2	0.5 - 2.5	0.5 - 2.5	0.5 - 2.5	1 - 2.5	2 x (1 - 2.5)
Tightening torque of terminal screws		Nm	≦ 1.2	≦ 1.2	0.8 - 1.0	2.4	0.8

				AZ-XHI11	AZ-XAA	FI-XHI11 ≦ 100 A	FIPA-XAM011 125 A FI and Type B
Electrical							
Contact function				1 N/O + 1 NC	-	1 N/O + 1 NC	1 C/O + 1 NC
Voltage range			V AC	-	12 - 110 110 - 415	-	-
Voltage range			V DC	-	12 - 60 110 - 220	-	-
Min. operating voltage		U_e	V/mA	24/50	-	24/50	12/100
Rated operational current							
AC-11							
	230 V	I_e	A	6	-	6	6
AC-13							
	250 V	I_e	A	6	-	6	-
	400 V	I_e	A	2	-	2	-
DC-11							
	230 V	I_e	A	4	-	-	1
DC-13							
	60 V	I_e	A	4	-	4	-
	110 V	I_e	A	2	-	2	-
	230 V	I_e	A	0.5	-	0.5	-
Rated insulation voltage		U_i	V AC	440	440	440	440
Minimum operating voltage per contact		U_{min}	V DC	-	-	-	-
Rated impulse withstand voltage		U_{imp}	kV	-	-	-	-
Rated conditional short-circuit current with 6 A back-up fuse		I_k	kA	-	-	-	-
Max. admissible back-up fuse			A gL	6	Inherently short-circuit-proof	6	6
Lifespan							
Mechanical			Operations	> 6000	> 4000	> 6000	-
Inrush current							
AC			A	-	38	-	-
Duty factor AC			ms	-	2.1	-	-
DC			A	-	34	-	-
Duty factor DC			ms	-	2	-	-
Mechanical							
Standard front dimension			mm	45	45	45	45
Device height			mm	90	90	90	90
Mounting width			mm	8.8 (0.5 SU)	17.5 (1 SU)	8.8 (0.5 SU)	8.8 (0.5 SU)
Mounting				Top-hat rail to IEC/EN 60715			
Protection type							
Enclosed				IP40			
Circuit-breaker				IP20			
Terminal capacity							
Solid			mm^2	1 x (1 - 25) 2 x (1 - 4)	1 x (1 - 25) 2 x (1 - 4)	2 x (0.5 - 2.5) 1 x (0.5 - 2.5)	1 x 2.5 2 x 1.5
Flexible			mm^2	1 x (1 - 25) 2 x (1 - 4)	1 x (1 - 25) 2 x (1 - 4)	2 x (0.5 - 2.5) 1 x (0.5 - 2.5)	1 x 2.5 2 x 1.5
Tightening torque of the terminal screws			Nm	0.8	3	0.8	0.8

Power meter

KWZ-3PH

			KWZ-3PH	KWZ-3PH-65
Electrical				
Rated operating voltage	U_e	V AC	230 - 240/400-415	
Voltage range		V AC	110 - 254/190-440	
Rated operational current	I_e	A	1, 5	10
Max. current	I_{max}	A	6	63
Rated frequency	*f*	Hz	50, 60	
Limiting frequency		Hz	47 - 63	
Own consumption per phase (current path)		VA	≦ 0.5 (each phase)	≦ 4 (each phase)
Overload, short-term			20 x $I_{max.}$ / 0.5 s	30 x $I_{max.}$ / 10 ms
Auxilliary voltage			From measurement	
Input signal			Sine-shaped	
Accuracy class			1	
LED signal			1 pulse / 0.1 Wh	1 pulse / Wh
Pulse output				
Rated value			Max. 110 V AC/DC, 50 mA	
Switching contact (potential-free)			Optocoupler	
Pulse value (selectable)			1 pulse / 10 Wh, 100 Wh, 1 kWh, 10 kWh optional 1Imp. / 10 VArh, 100 VArh, 1 kVArh, 10 kVArh	1 pulse / 1 Wh, 10 - 100 Wh, 1 kWh, 10 kWh optional 1Imp. / 10 VArh, 100 VArh, 1 kVArh, 10 kVArh
Pulse duration (selectable)		ms	50, 100, 150, 200, 300, 400, 500	
Programmable parameters			Network types (single-phase, 3-phase, 3- or 4-conductor), External current and voltage transformers, mean performance, pulse output	Network types (3-phase, 3- or 4-conductor), Partial energy and double tariff, mean performance, pulse output
Overvoltage category			III	
Insulation voltage (phase - phase)		V	450	300
Rated impulse withstand voltage (1.2/50) µs		kV	5	
Test voltage				
Input/pulse output		kV	2.75	
All circuits and ground		kV	4	
Protection class			II	
Mechanical				
Standard front dimension		mm	45	
Device height		mm	89	
Mounting width		mm	71.2	
Weight		g	260	
Display			LCD 8 digit	
Digit height		mm	6	
Maximum display			Adjustable	999999.99 kWh
Resolution			Adjustable	10 W
Measurement display			arranged into 6 pages	arranged into 7 pages
Mounting			Quick attachment for top-hat rail IEC/EN 60715	
Protection type device front/ terminals			IP52/IP20	
Terminals top and bottom			Screw terminals	
Terminal capacities				
Current connections				
Solid		mm^2	0.05 - 4	1 - 10
Stranded		mm^2	0.05 - 2.5	1 - 13
Voltage connections				
Solid		mm^2	0.05 - 4	1 - 4
Stranded		mm^2	0.05 - 2.5	1 - 3
Admissible relative humidity			Also suitable for tropical conditions	
Reference temperature		°C	23 ± 2	
Temperature range		°C	-5 - +55	
Storage and transportation temperature range		°C	-25 - +70	
Pollution degree			2	

			FAZ/FIP-XAWM	FAZ/FIP-XDWM
Electrical				
Operating voltage range				
V AC			220 - 240	-
V DC			-	48
Rated frequency	f	Hz	50/60	-
Relay output for alarm, 250 V AC, floating		A	5	5
Function			Automatic control	
Function selector			Automatic 5 ×, OFF/RESET	
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	80	80
Mounting width		mm	70	70
Mounting			Top-hat rail to IEC/EN 60715	
Protection type				
Enclosed			IP40	
Terminal protection			Busbar tag shroud to BGV A2	
Terminals			Lift terminals	
Terminal capacity				
Solid		mm^2	2 x 1.5 1 x 2.5	2 x 1.5 1 x 2.5
Flexible		mm^2	2 x 1.5 1 x 2.5	2 x 1.5 1 x 2.5

			FAZ-...-NA FAZ-...-RT
Electrical			
Standards			UL 489, CSA C22.2 No.5, IEC 60947-2
Rated operating voltage			
UL/CSA 0.5 - 25 A		V AC	277/480 Y
UL/CSA 32 - 40 A		V AC	240
UL/CSA (per pole)		V DC	48
IEC		V AC	240/415
Rated frequency	f	Hz	50/60
Rated breaking capacity			
IEC		kA	15
Characteristic			B, C, D
Lifespan		Operations	> 20000
Mains voltage connection			Any (top/bottom)
Mechanical			
Standard front dimension		mm	45
Device height		mm	105
Mounting width per pole		mm	17.7
Mounting			Quick attachment with two engagement positions for top-hat rail to IEC/EN 60715
Terminals top and bottom			Twin-purpose terminals
Terminal capacity			
Solid		AWG	18 - 6
Flexible		AWG	18 - 10
Mounting position			Any
Calibration temperature			
UL 489, CSA C22.2 No. 5		°C	40
IEC 60947-2		°C	30

Z-NHK, Z-IHK-NA, FAZ-XAA-NA...

			Z-NHK	Z-IHK-NA
Electrical				
Standards			IEC/EN 60947-5-1, IEC/EN 62019	IEC/EN 60947-5-1, IEC/EN 62019
Rated voltage		V AC	230	250
Contact function			2 C	1 N/O + 1 NC
Rated frequency	f	Hz	50/60	50/60
Rated operational current	I_e	A	2	6
Thermal rated operational current	I_{th}	A	2	6
Rated operational current				
AC-13	I_e	A	3 (250 V AC)	3 (250 V AC)
AC-15	I_e	A	2 (250 V AC)	2 (250 V AC)
DC-12	I_e	A	0.5 (110 V DC)	0.5 (110 V DC)
Rated insulation voltage	U_i	V AC	250	250
Minimum operating voltage per contact	U_{min}	V DC	5	5
Minimum operating current	I_{min}	mA	10 (DC)	10 (AC/DC)
Rated impulse withstand voltage (1.2/ 50 µ)	U_{imp}	kV	2.5	4
Rated conditional short-circuit current with 6 A back-up fuse	I_k	kA	1	1
Max. admissible back-up fuse		A gL	6	
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	80	80
Mounting width		mm	8.8 (0.5 SU)	8.8 (0.5 SU)
Mounting			For fitting to to left side of FAZ-...-NA, FAZ-...-RT, FAZ-XAA-NA...	-
Protection type				
Enclosed			IP40	IP40
Terminal protection			Busbar tag shroud to BGV A3	Busbar tag shroud to BGV A3
Terminals			Lift terminals	Lift terminals
Terminal capacity				
		AWG	20 - 14	-
		mm^2		0.5 - 2.5
Terminal screws			M3 (Pozidriv Z0)	M3 (Pozidriv Z0)
Tightening torque of the terminal screws		Nm	-	≦ 1.2

			FAZ-XAA-NA12-110VAC	FAZ-XAA-NA110-415VAC
Electrical				
Voltage range		V AC	12 - 110	110 - 415
		V DC	12 - 60	110 - 230
Rated frequency	f	Hz	50/60	50/60
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	105	105
Mounting width		mm	17.5	17.5
Mounting			Quick attachment with two engagement positions for top-hat rail to EN 50022	Quick attachment with two engagement positions for top-hat rail to EN 50022
Protection type				
Enclosed			IP40	IP40
Terminal protection			Busbar tag shroud to BGV A3	Busbar tag shroud to BGV A3
Terminals top and bottom			Twin-purpose terminals	Twin-purpose terminals
Terminal capacity				
Solid		AWG	18 - 10	18 - 10
Two-wire		AWG	18 - 10	18 - 10

Z-NH-..., Z-SLS/B, Z-D0

				Z-NH-...	Z-NH-1/	Z-NH-2/	Z-NH-2/
Electrical							
Standards				IEC 60269, VDE 0636, SEV 1086			
Nominal voltage							
AC			V AC	500	500	500	500
DC			V DC	230	440	440	440
Rated operational current			A	10 - 160	50 - 250	100 - 400	250 - 630
Rated frequency		f	Hz	45 - 62	45 - 62	45 - 62	45 - 62
Rated breaking capacity							
AC			kA	120	120	120	120
DC			kA	25	25	25	25
Max. heat dissipation							
I_n = 10 A			W	1.1	-	-	-
I_n = 16 A			W	1.6	-	-	-
I_n = 20 A			W	1.7	-	-	-
I_n = 25 A			W	1.9	-	-	-
I_n = 35 A			W	3.0	-	-	-
I_n = 40 A			W	3.5	-	-	-
I_n = 50 A			W	4.6	5.4	-	-
I_n = 63 A			W	5.4	6.3	-	-
I_n = 80 A			W	5.1	7.2	-	-
I_n = 100 A			W	6.9	8.6	8.8	-
I_n = 125 A			W	10.3	11.9	12.1	-
I_n = 160 A			W	11.0	13.9	14.0	-
I_n = 200 A			W	-	15.2	15.2	-
I_n = 250 A			W	-	21.8	21.8	19.4
I_n = 315 A			W	-	-	23.7	23.7
I_n = 400 A			W	-	-	30.5	30.5
I_n = 500 A			W	-	-	-	42.0
I_n = 630 A			W	-	-	-	47.0

				Z-SLS/B	Z-SLS/B24
Electrical					
Rated operating voltage					
Rated operating voltage		U_e	V AC	60 - 400	24 - 60
			V DC	60 - 220	24 - 60
Utilization category				gG (gL)	gG (gL)
Test voltage			kV	5	5
Mechanical					
Size				D01: 1, 2, 4, 6, 10, 13, 16 A D02: 20, 25, 32, 35, 40, 50, 63 A	

				Z-D0./SE
Electrical				
Standards				DIN VDE 0636, DIN 49522
Utilization category				gG (gL)
Rated voltage				
AC		U_n	V	400
DC		U_n	V	220
Rated frequency		f	Hz	45 - 65
Rated insulation voltage		U_i	V	2500
Rated short-circuit switching capacity				
AC			kA	50
DC			kA	8

			D01-S0/	D02-S0/
Electrical				
Number of poles			1P 3P	1P 3P
Rated operating voltage		V AC	400	400
		V DC	250	250
Rated conditional short-circuit current tested with links	I_e	kA	50 (AC) / 8 (DC)	50 (AC) / 8 (DC)
Rated frequency	f	Hz	-	-
Rated operational current	I_e	A	16	63
Conventional thermal current with fuse links	I_{th}	A	-	-
Rated operating mode			-	-
Overvoltage category			-	-
Utilization category			-	-
Rated impulse withstand voltage	U_{imp}	kV	-	-
Current heat loss per contact at I_e		W	-	-
Heat dissipation				
Heat dissipation per contact with fuse link at I_e		W	-	-
Max. permissible heat dissipation of the fuse links		W	-	-
Utilization category			gG (gL)	gG (gL)
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	68	68
Mounting width		mm	27 (per pole)	27 (per pole)
Weight		g	1P 76 3P 230	1P 76 3P 230
Electrical thread			E14	E18
Mounting			Quick attachment for top-hat rail IEC/EN 60715	
Protection type				
Enclosed			-	-
Terminals			Double function terminals	
Terminal capacity				
Solid		mm^2	1.5 - 35	1.5 - 35
Temperature range		°C	-	-
Terminal screw tightening torque		Nm	2.5 - 3	2.5 - 3
Pollution degree			-	-
Track resistance			CTI 200	CTI 200

			Z-DII./SE
Electrical			
Standards			DIN EN 60269-1 (VDE 0636 part 10), DIN EN 60269-3 (VDE 0636 part 30), DIN VDE 0636-301, CEE 16, IEC/EN 60269-1, IEC/EN 60269-3
Utilization category			gG (gL), DZ
Rated voltage			
AC	U_n	V	500
DC	U_n	V	400
Rated frequency	f	Hz	45 - 65
Insulation class			C-VDE0110
Rated short-circuit breaking capacity at 1.1 x U_n			
AC		kA	50/cosφ = 0.2
DC		kA	8/τ = 15 ms

			Z-SLS/NE0Z	Z-SLK/NE0Z
Electrical				
Number of poles			1P 1P+N 2P 3P 3P+N	1P 1P+N 2P 3P 3P+N
Rated operating voltage		V DC	1P up to 110V / 2P up to 220V	
Rated operating voltage		V AC	400	400
Rated operational current	I_e	A	63	63
Rated uninterrupted current	I_u	A	63	63
Rated short-circuit making capacity			50 kArms	50 kArms
Normally open contact			-	5A/250V
Switching category			AC 22 B, DC 21 B	AC 22 B, DC 21 B
Overvoltage category			IV	IV
Rated impulse withstand voltage	U_{imp}	kV	6	6
Current heat loss per current path at I_e		W	0.5	0.5
Heat dissipation				
Heat dissipation per contact with fuse link at I_e		W	7.5	7.5
Relay section electrical				
Operating voltage range		V AC	-	24 - 240
Operational voltage tolerance			-	±10%
Power consumption		VA	-	5
Frequency		Hz	-	50-60
Function display			-	Mains: 1 LED Fault: 1 LED
Duty factor		%	-	100
Response delay		ms	-	Approx. 100
Recovery time	t_W	ms	-	Approx.100
Relay contacts			-	2 changeover contacts, 5A/250V
Overvoltage category			-	III
Auxiliary contacts				
Rated impulse withstand voltage	U_{imp}	kV	-	4
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	86	86
Mounting width		mm	27/per pole (1.5 SU)	27/per pole (1.5SU) + 27
Weight		g	1P 113 1P+N 225 2P 224 3P 450 3P+N 472	1P 224 2P 345 3P 450 3P+N 472
Mounting			Quick attachment for top-hat rail IEC/EN 60715	
Protection type in fitted state			IP20	IP20
Terminals			Lift terminals	Lift terminals
Terminal capacity				
Solid		mm^2	1.5 - 35	1.5 - 35
Temperature range		°C	-25 ... +60	-25 ... +60
Flammability classification to EN 60730			V0, glow-wire test 960°C	
Terminal screw tightening torque		Nm	Max. 4.5	Max. 4.5
Pollution degree			3	3
Track resistance			CTI 600	CTI 600
Relay section mechanical				
Terminals			Lift terminals	Lift terminals
Terminal capacity				
Solid		mm^2	-	0.14 - 4
Flexible		mm^2	-	0.14 - 2.5
Terminal screw tightening torque		Nm		0.5 - 0.7

			VLC14	VLC22
Electrical				
Number of poles			1P 1P+N 2P 3P 3P+N	1P 1P+N 2P 3P 3P+N
Rated operating voltage		V AC	690	690
Rated operational current	I_e	A	50	100
Rated conditional short-circuit current	I_e	kA	100	100
Rated frequency	f	Hz	50	50
Utilization category			AC 22 B	AC 21 B
Rated impulse withstand voltage	U_{imp}	kV	8	8
Max. permissible heat dissipation of the fuse		W	gG: 5, aM: 3	gG: 9.5, aM: 7
Mechanical				
Standard front dimension		mm	45	45
Device height		mm	94	121
Mounting width		mm	27/per pole	36/per pole
Weight		g	1P 100 1P+N 222 2P 201 3P 308 3P+N 437	1P 160 1P+N 355 2P 310 3P 480 3P+N 680
Mounting			Quick attachment for top-hat rail IEC/EN 60715	
Protection type				
Enclosed			IP20	
Terminals			Lift terminals	
Terminal capacity				
Solid		mm^2	1.5-10	2.5-35
Temperature range		°C	-25 ... +60	-25 ... +60
Terminal screw tightening torque				
Tightening torque		Nm	Max. 2	Max. 2.5
Pollution degree			1	1
Track resistance			CTI 400	CTI 400

			Z-D01/SE	Z-D02/SE
Electrical				
Rated operating voltage		V AC	400	400
		V DC	220	220
Utilization category			gG (gL)	gG (gL)
Rated frequency	f	Hz	45-65	45-65
Rated insulation voltage	U_i	V	2500	2500
Rated short-circuit switching capacity			50 kA (AC) 8 kA (DC)	50 kA (AC) 8 kA (DC)

			Z-SLS/B	Z-SLS/B24	Z-SLS/TR-SET
Electrical					
Rated operating voltage		V DC	-	24	-
Rated operating voltage		V AC	60 - 400	24	400
Utilization category			gG (gL)	gG (gL)	-
Test voltage		kV	5	5	5
Rated uninterrupted current	I_u	A	-	-	63

			C10-FD/...
Electrical			
Standards			IEC/EN 60947-1 Ed. 4.0, EN 60947-1:1999+A1:2000+A2:2001 IEC/EN 60947-3 Ed. 2.1, EN 60947-3:1999+A1:2001
No. of poles			1, 2
Rated voltage	U_e	V DC	1000
Rated operational current	I_e	A	20
Rated conditional short-circuit current		kA	10
Utilization category			DC 20 B
Rated insulation voltage	U_i	V DC	1000
Overvoltage category			II
Rated impulse withstand voltage	U_{imp}	kV	4
Current heat loss per contact without fuse		W	0.9
Max. heat dissipation of fuse		W	3
Mechanical			
Standard front dimension		mm	45
Device height		mm	83.3
Mounting width		mm	17.5/pole
Weight			
1P		g	58
2P		g	70
Mounting			Quick attachment for top-hat rail IEC/EN 60715
Protection type			IP20
Terminals top and bottom			Lift terminals
Terminal cross-section			0.5 - 10 mm² AWG 20 - 8
Tightening torque of the terminal screws		Nm	1.5
Ambient temperature range		°C	-25 - +40
Flammability classification			Glow wire 960 °C
Pollution degree			2
Track resistance			CTI 450

			Z-C10/SE 10 x 38	Z-C12/SE 14 x 51	Z-C22/SE 22 x 58
Electrical					
Standards			IEC 60269-1 and IEC 60269-2-1		
Utilization category			gG (gL)	gG (gL)	gG (gL)
Rated voltage	U_n	V AC	1 - 25 A/500 32 A/400	2 - 32 A/690 40 - 50 A/500	16 - 40 A/690 50 - 100 A/500
Utilization category			aM	aM	aM
Rated voltage	U_n	V AC	1 - 16 A/500 20 - 32 A/400	2 - 25 A/690 32 - 50 A/500	16 - 50 A/690 80 - 100 A/500
Rated frequency	f	Hz	50	50	50
Rated short-circuit breaking capacity		kA	100	100	100

			Z-C10/SE-.../PV 10 x 38
Electrical			
Standards			IEC 60269-1 and IEC 60269-4
Rated voltage	U_n	V DC	6 - 20 A/1000 25 A/900
Rated short-circuit breaking capacity		kA	30
τ = L/R		ms	2

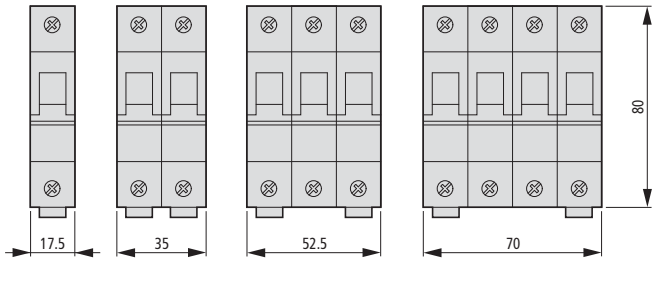
				GST...00-160	GST…1	GST…2	GST…3
General							
Standards				IEC/EN 60947-3			
Climatic proofing				Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature			°C	-25 ... +55	-25 ... +55	-25 ... +55	-25 ... +55
Installation altitude			m	max. 2000	max. 2000	max. 2000	max. 2000
Mounting position				Vertical, horizontal			
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3
Busbar tag shroud at the front							
Operational status				IP20	IP20	IP20	IP20
Front cover open				IP10	IP10	IP10	IP10
Direction of incoming supply				Any			
Weight			kg	0.72 GSTA 0.93 GST	2.5 GSTA 4.4 GST	3.3 GSTA 5.3 GST	4.6 GSTA 6.6 GST
Contacts							
Rated operating voltage		U_e	V AC	500 690	500 690	500 690	500 690
Rated operating voltage		U_e	V DC	220 440	220 440	220 440	220 440
Rated operational current		I_e	A	160 100	250 200	400 315	630 500
Rated frequency			Hz	40 - 60	40 - 60	40 - 60	40 - 60
Rated conditional short-circuit current AC			kA_{rms}	50	50	50	50
Rated conditional short-circuit current, DC			kA_{rms}	25	25	25	25
Utilization category AC-22B							
Rated making capacity			A	480 300	750 600	1200 945	1890 1500
Rated breaking capacity			A	480 300	750 600	1200 945	1890 1500
Utilization category DC-21B							
Rated making capacity			A	150	300	475	750
Rated breaking capacity			A	150	300	475	750
Lifespan, electrical	Operations			300	200	200	200
Lifespan, mechanical	Operations			1700	1400	800	800
Heat dissipation at I_{th} AC, without NH-SE			W	6.9 2.7	12.9 8.3	27 16.7	52 32.8
Heat dissipation at I_{th} DC, without NH-SE			W	4.6 1.8	8.6 5.5	18 11.2	34.7 21.8
Rated insulation voltage		U_i	V AC	750	750	750	750
Max. fuse link							
Size				NH00	NH1	NH2	NH3
Max. rated operational current, gL/gG			A	160	250	400	630
Max. admissible heat dissipation, NH-SE		P_v	W	12	23	34	48
Terminal capacity							
Box terminal							
Stranded			mm^2	1.5 - 70	-	-	-
Copper strip	Number of layers x width x thickness		mm	6 x 9 x 0.8	-	-	-
Tightening torque			Nm	2.6	-	-	-
Flange connection							
Bolt diameter				-	M10	M10	M10
Cable lug			mm	-	1 x 25 - 150	1 x 25 - 240	1 x 25 - 300
Flat rail			mm	-	30 x 10	30 x 10	40 x 10
Tightening torque			Nm	-	30 - 35	30 - 35	30 - 35
Box terminal							
Stranded copper			mm^2	1.5 - 70	25 - 150	25 - 240	25 - 300
Copper strip	Number of layers x width x thickness		mm	-	6 x 16 x 0.8	10 x 16 x 0.8	11 x 21 x 1
Tightening torque			Nm	-	9.5	23	23
Clamp-type cable terminal							
Stranded aluminum/copper			mm^2	-	70 - 150	120 - 240	120 - 300
Tightening torque			Nm	-	4.5	11	11
Double clamp-type terminal							
Stranded aluminum/copper			mm^2	-	2 x (70 - 95)	2 x (120 - 150)	2 x (120 - 240)
Tightening torque			Nm	-	4.5	11	11

				GS00-160	GSU1	GSU2	GSU3
General							
Standards				IEC/EN 60 269-2-1; VDE0636-201			
Climatic proofing				Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature			°C	-25 ... +55	-25 ... +55	-25 ... +55	-25 ... +55
Installation altitude			m	max. 2000	max. 2000	max. 2000	max. 2000
Mounting position				Vertical, horizontal	Vertical, horizontal	Vertical, horizontal	Vertical, horizontal
Overvoltage category/degree of pollution				III/3	III/3	III/3	III/3
Busbar tag shroud at the front							
Operational status				IP00	IP00	IP00	IP00
Direction of incoming supply				Any	Any	Any	Any
Weight			kg	0.4	1.7	2.1	2.7
Contacts							
Rated operating voltage		U_e	V AC	690	690	690	690
Rated operating voltage		U_e	V DC	440	440	440	440
Rated operational current		I_e	A	160	250	400	630
Rated frequency			Hz	40 - 60	40 - 60	40 - 60	40 - 60
Heat dissipation at I_{th} AC, without NH-SE			W	6.9	12.9	27	52
Heat dissipation at I_{th} DC, without NH-SE			W	4.6	8.6	18	34.7
Rated insulation voltage		U_i	V AC	750	750	750	750
Max. fuse link							
Size				NH00	NH1	NH2	NH3
Max. rated operational current, gL/gG			A	160	250	400	630
Max. admissible heat dissipation NH-SE		P_v	W	12	23	34	48
Terminal capacity							
Box terminal							
Stranded			mm^2	-	-	-	-
Copper strip	Number of layers x width x thickness		mm	-	-	-	-
Tightening torque			Nm	-	-	-	-
Flange connection							
Bolt diameter				-	M10	M10	M10
Cable lug			mm	-	1 x 25 - 150	1 x 25 - 240	1 x 25 - 300
Flat rail			mm	-	30 x 10	30 x 10	40 x 10
Tightening torque			Nm	-	30 - 35	30 - 35	30 - 35
Box terminal							
Stranded copper			mm^2	1.5 - 70	25 - 150	25 - 240	25 - 300
Copper strip	Number of layers x width x thickness		mm	6 x 9 x 0.8	6 x 16 x 0.8	10 x 16 x 0.8	11 x 21 x 1
Tightening torque			Nm	2.6	9.5	23	23
Clamp-type cable terminal							
Stranded aluminum/copper			mm^2	-	70 - 150	120 - 240	120 - 300
Tightening torque			Nm	-	4.5	11	11
Double clamp-type terminal							
Stranded aluminum/copper			mm^2	-	2 x 70 - 95	2 x 120 - 150	2 x 120 - 240
Tightening torque			Nm	-	4.5	11	11

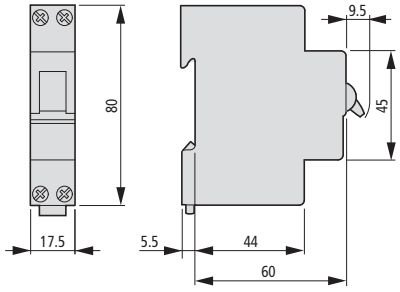
Dimensions

Miniature circuit-breakers (MCB)

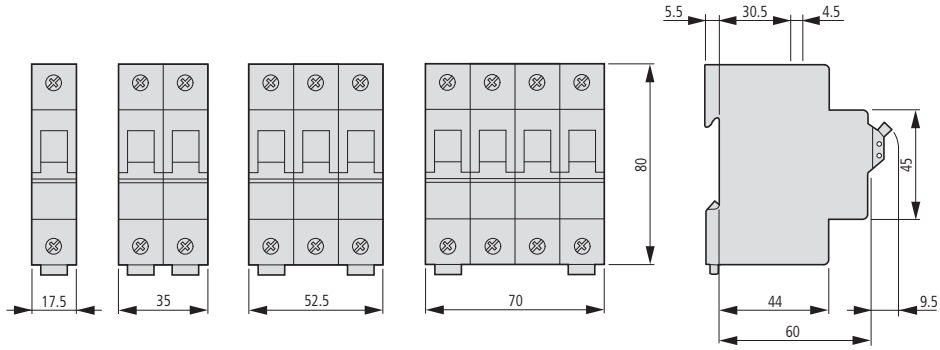
FAZ...



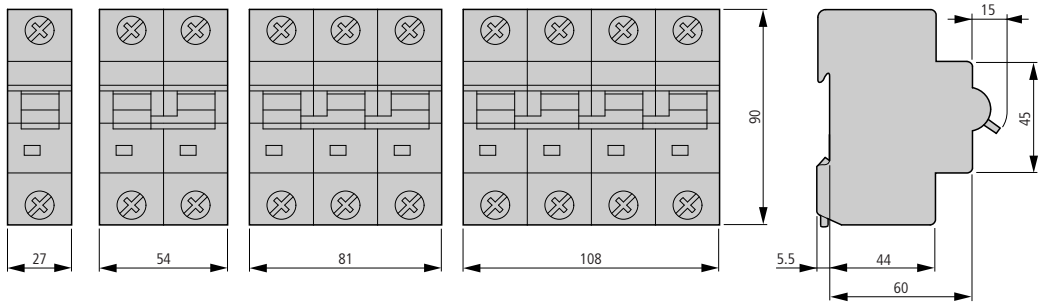
FAZ-PN-...



FAZT

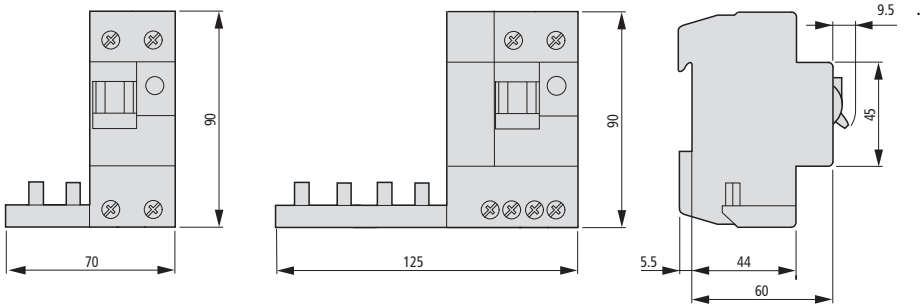


AZ...



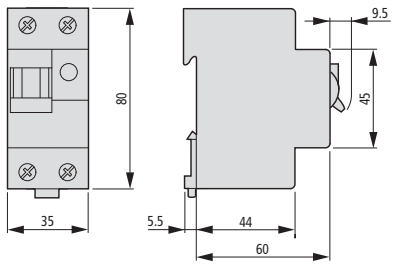
Residual-current protective modules

FIM-...



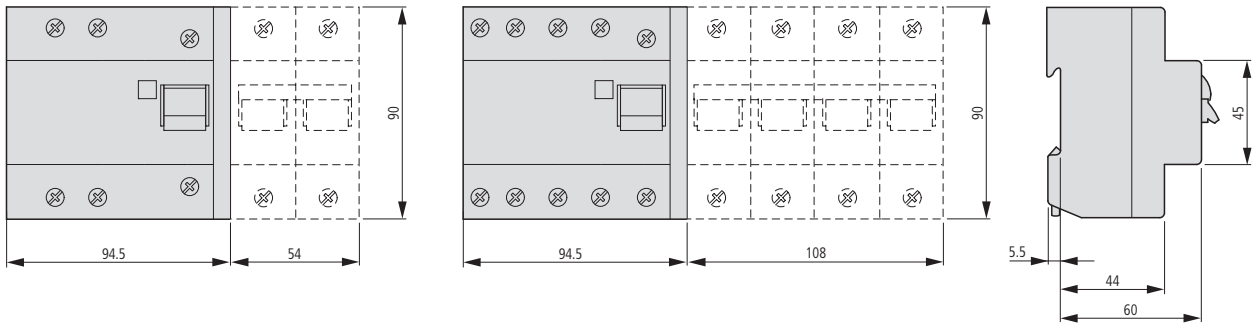
Combination switches

PKNM-...



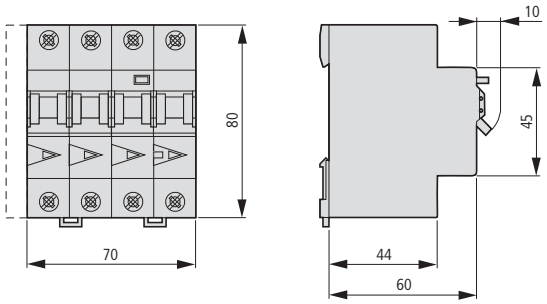
Residual-current protective modules

AZFIM...



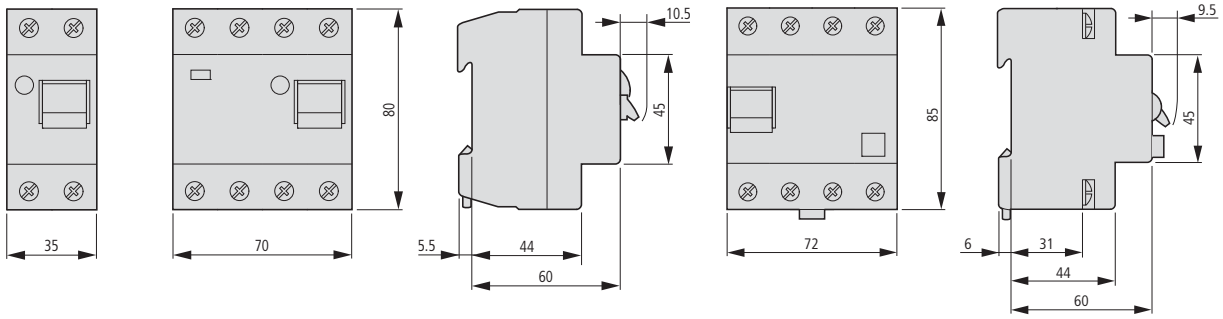
Combination FI/LS switches

mRB6..., mRB4...



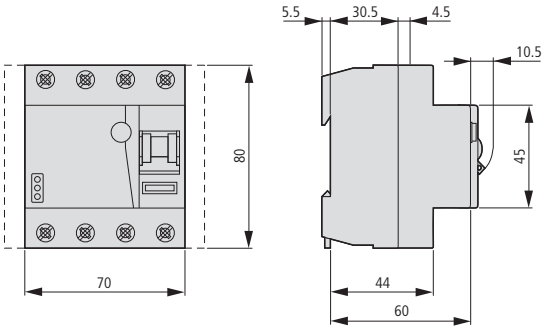
Residual-current devices

FI-...



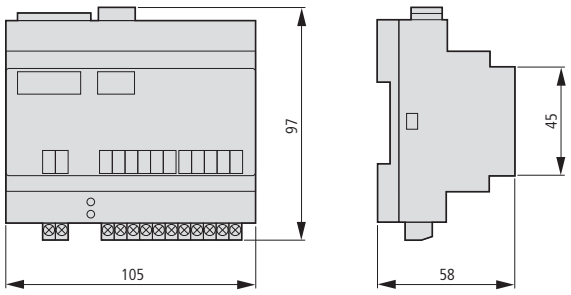
Residual-current devices

dRCM...



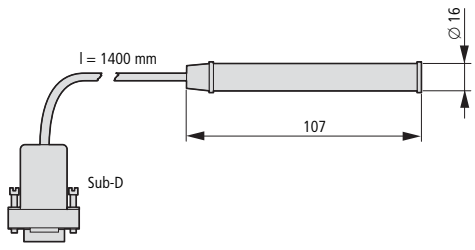
Remote monitoring unit

Z-CC/2CO



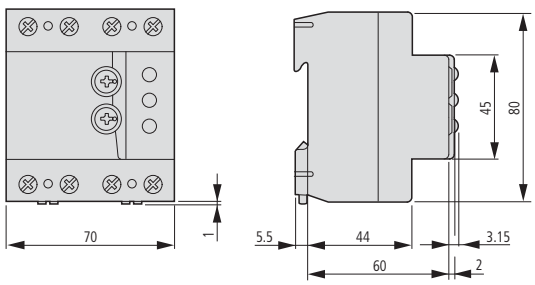
Temperature sensor

Z-CC/2CO-SE



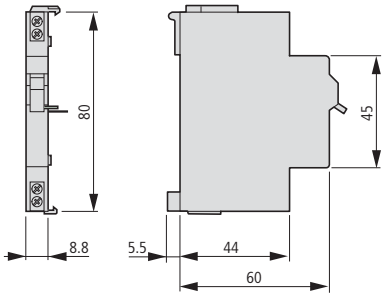
Leakage current meter

PDIM

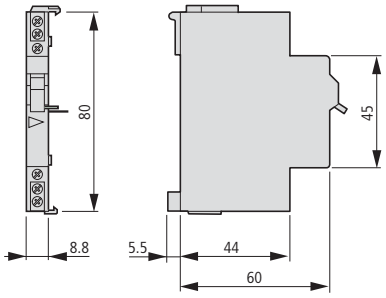


Auxiliary contacts

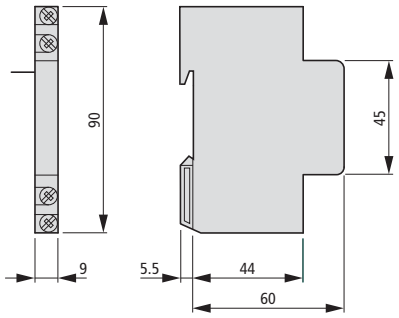
FAZ-XHIN11



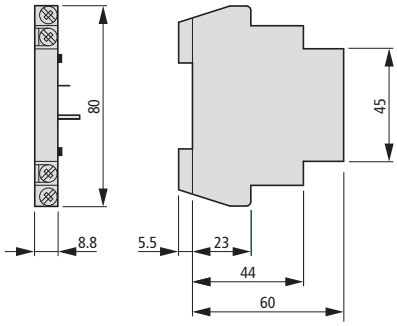
FAZ-XAM002



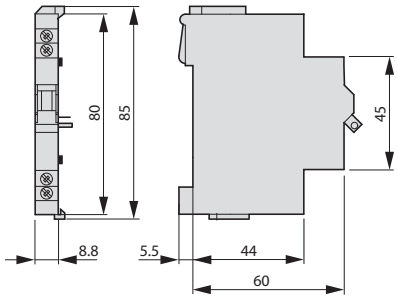
AZ-XHI11



FIP-XHI11

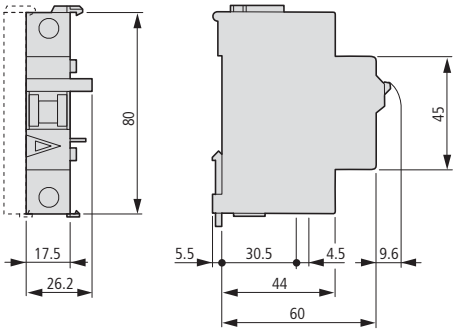


FIPA-XAM011



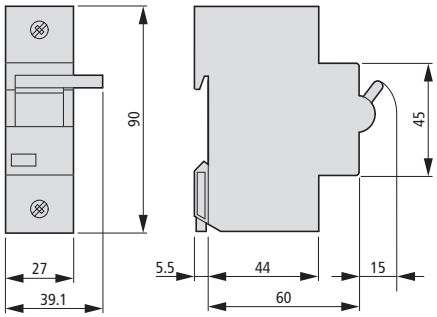
Shunt release

FAZ-XAA-C...



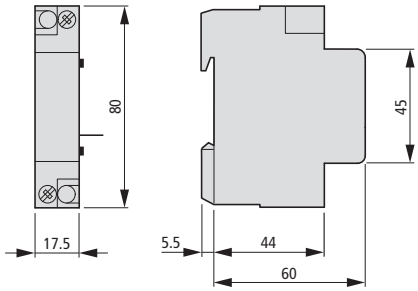
Shunt release

AZ-XAA...



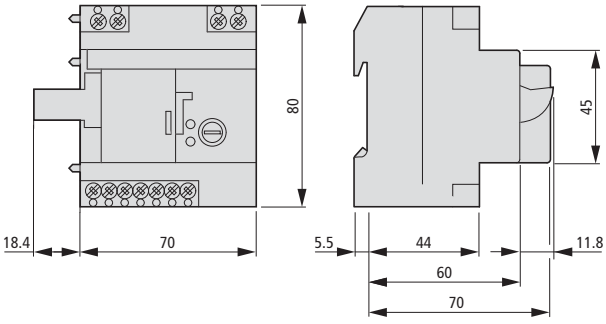
Under voltage release

FAZ-XUA...

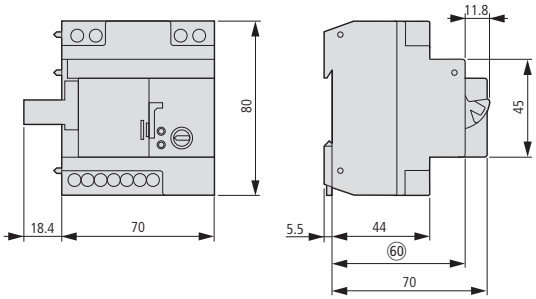


Remote switching modules

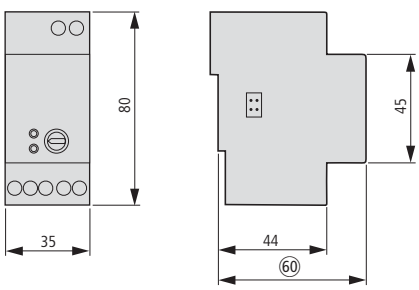
FAZ/FIP-...



Z-FW-LP
Z-FW-LPD

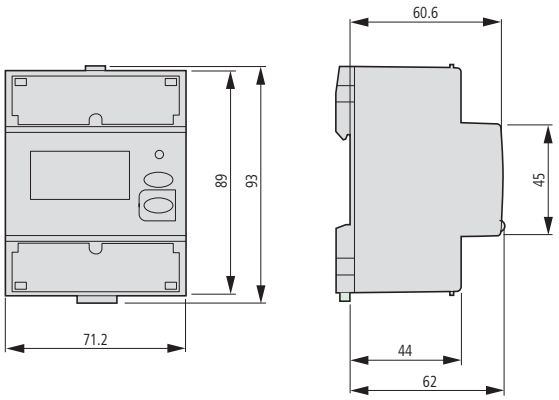


Z-FW-M0



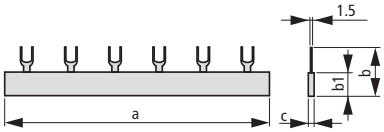
Power meter

KWZ-3PH...



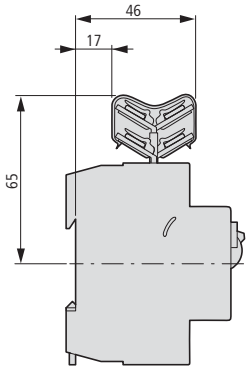
Euro-Vario busbars

EVG-10(16)/...



Connecting bracket

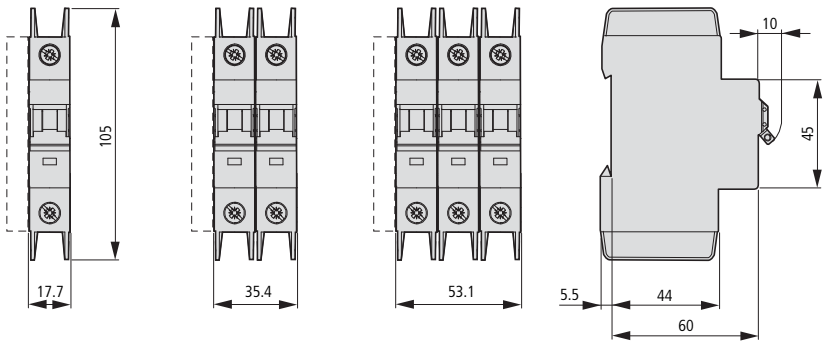
ZV-...-80A-...



Part no.	a	b	b1	c
EVG-(16)/1PHAS/2MODUL	33	25.9	14	3.4
EVG-(16)/1PHAS/6MODUL	105	25.9	14	3.4
EVG-(16)/1PHAS/12MODUL	210	25.9	14	3.4
EVG-(16)/2PHAS/4MODUL	75.5	30.9	19	7.3
EVG-(16)/2PHAS/6MODUL	105	30.9	19	7.3
EVG-(16)/2PHAS/12MODUL	209.5	30.9	19	7.3
EVG-(16)/3PHAS/6MODUL	102.5	30.9	19	10.3
EVG-(16)/3PHAS/9MODUL	156	30.9	19	10.3
EVG-(16)/3PHAS/12MODUL	209.5	30.9	19	10.3
EVG-(16)/3PHAS/16MODUL	285	30.9	19	10.3
EVG-(16)/3PHAS/20MODUL	353	30.9	19	10.3
EVG-(16)/4PHAS/8MODUL	138	30.9	19	13.3
EVG-(16)/4PHAS/12MODUL	209.5	30.9	19	13.3
EVG-(16)/3PHAS/N/5MODUL/LS	156	30.9	19	10.3
EVG-(16)/3PHAS/N/8MODUL/LS	209.5	30.9	19	10.3
EVG-(16)/1PHAS/2MODUL/HI	60	25.9	14	3.4
EVG-(16)/1PHAS/6MODUL/HI	156.5	25.9	14	3.4
EVG-(16)/1PHAS/9MODUL/HI	237	25.9	14	3.4
EVG-(16)/2PHAS/4MODUL/HI	75.5	30.9	19	7.3
EVG-(16)/2PHAS/6MODUL/HI	120	30.9	19	7.3
EVG-(16)/2PHAS/10MODUL/HI	209.5	30.9	19	7.3
EVG-(16)/3PHAS/6MODUL/HI	115	30.9	19	10.3
EVG-(16)/3PHAS/12MODUL/HI	237	30.9	19	10.3
EVG-(16)/3x 1PHAS/6MODUL/HI	152	30.9	19	10.3
EVG-(16)/3x 1PHAS/8MODUL/HI	209.5	30.9	19	10.3
EVG-(16)/3x 1PHAS/9MODUL/HI	229	30.9	19	10.3

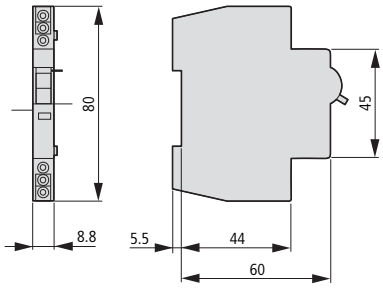
Miniature circuit-breakers (MCB)

FAZ-...-NA, FAZ-...-RT



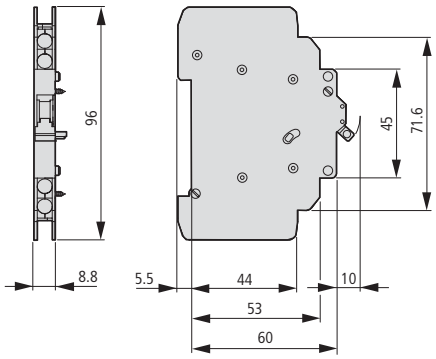
Tripping signal contact

Z-NHK



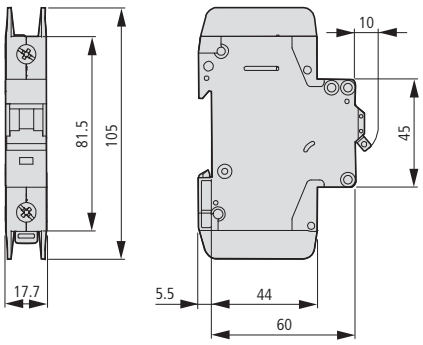
Auxiliary contacts

Z-IHK-NA



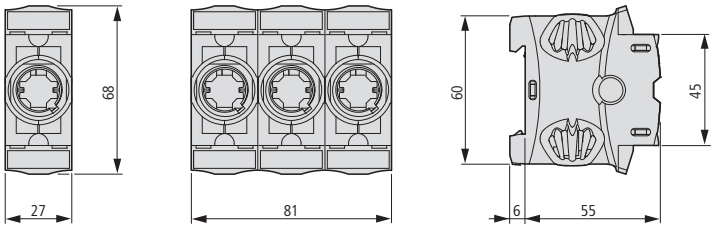
Shunt release

FAZ-XAA-NA...



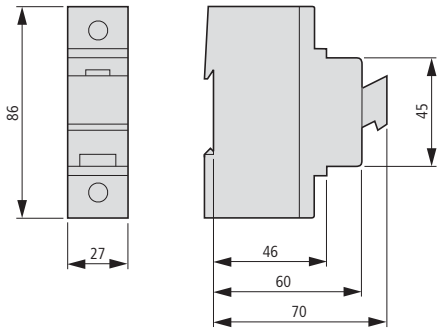
Fuse bases

D01-SO/...
D02-SO/...



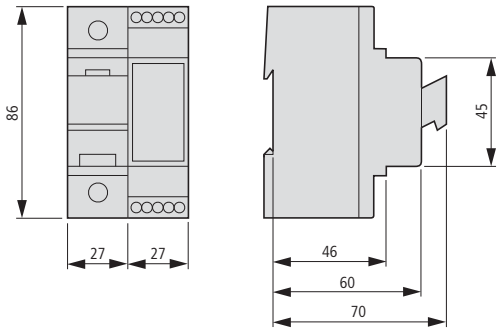
Fuse switch-disconnectors

Z-SLS/NEOZ/...



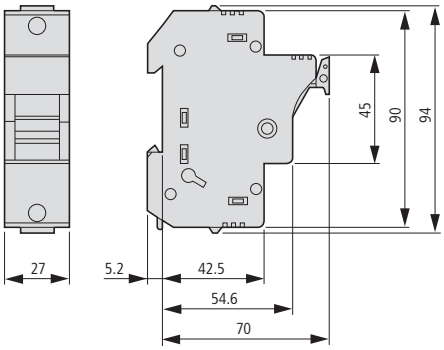
With fuse monitoring, empty

Z-SLK/NEOZ/...

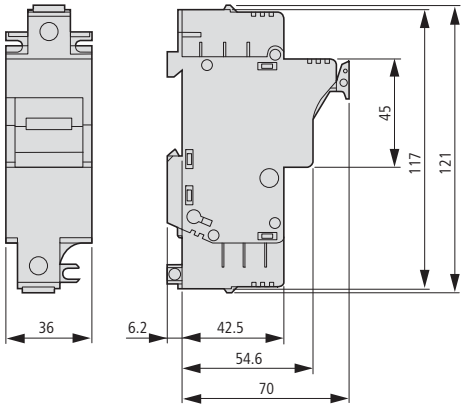


Fuse switch-disconnectors, empty

VLC14...

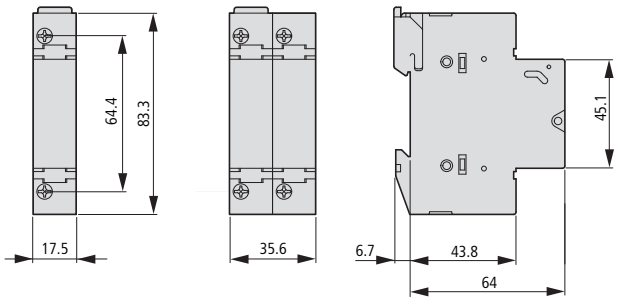


VLC22...



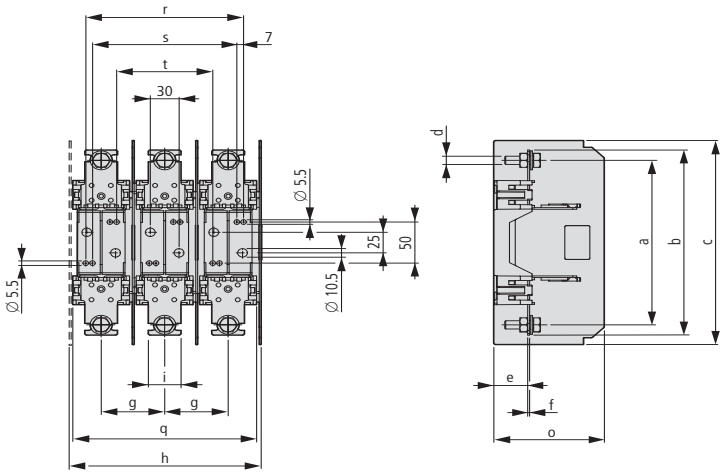
Fuse switch-disconnectors

C10-FD/20/...

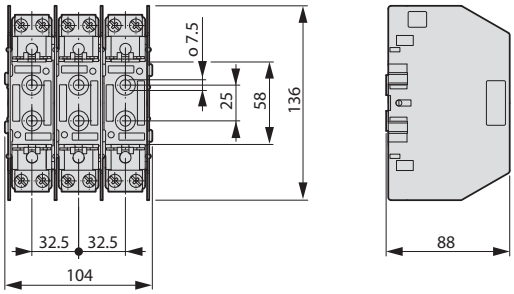


LV h.b.c. fuse bases

GSU1 GSU2 GSU3



GS00-160

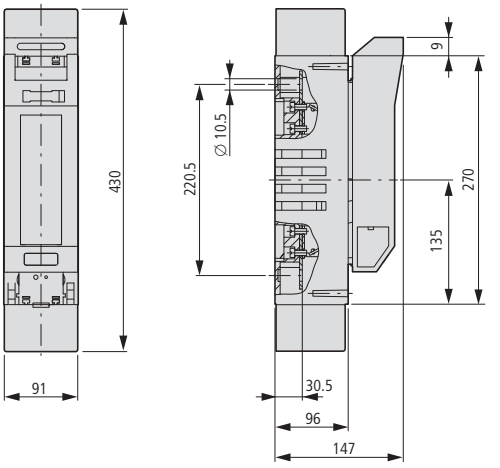


Part no.	a	b	c	d	e	f	g	h	l	o	q	r	s	t
GSU1	175	200	248	M10	35	2	66	200	34	107	191	164	150	100
GSU2	200	225	248	M10	35	2	66	200	34	115	191	164	150	100
GSU3	210	250	273	M10	35	3	84	254	40	132.5	245	200	186	136

LV h.b.c. fuse switch-disconnectors

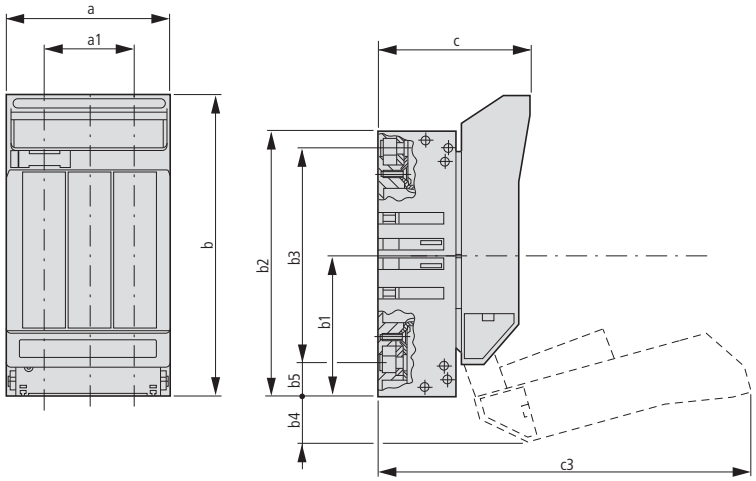
1 pole

GSTA00-160-1P



3 pole

GSTA00-160 GSTA1 GSTA2 GSTA3

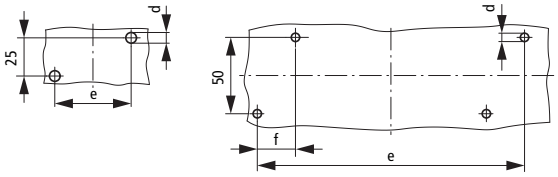


Part no.	a	a1	b	b1	b2	b3	b4	b5	c	c3	d	e	f
GSTA00-160-1P	49	-	169	79	149	120	-	-	86.5	-	7	-	-
GSTA00-160	106	66	169	79	149	120	25	26	86.5	197	7	50	-
GSTA1	182	116	250	115	230	184	30	23	111	294	5.5	150	-
GSTA2	208	132	275	128	256	217	30	19.5	125	330.5	5.5	175	25
GSTA3	254	164	283	135	270	238	30	16	142	348	5.5	200	50

LV h.b.c. fuse switch-disconnectors, drilling dimensions

GSTA00-160 GSTA2

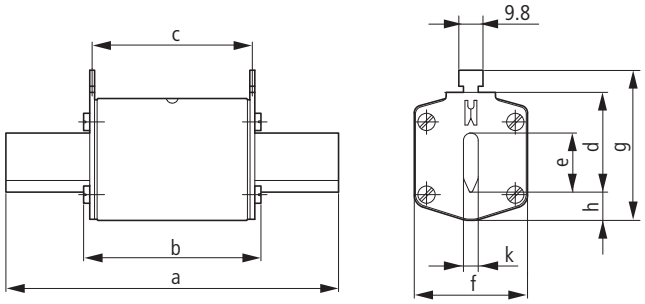
GSTA1 GSTA3



Part no.	a	a1	b	b1	b2	b3	b4	b5	c	c3	d	e	f
GSTA00-160-1P	49	-	169	79	149	120	25	-	86.5	197	7	-	-
GSTA00-160	106	66	169	79	149	120	25	26	86.5	197	7	50	-
GSTA1	182	116	250	115	230	184	30	23	111	294	5.5	150	-
GSTA2	208	132	275	128	256	217	30	19.5	125	330.5	5.5	175	25
GSTA3	254	164	283	135	270	238	30	16	142	348	5.5	200	50

LV h.b.c. fuse links

Z-NH-...



Part no.		a	b	c	d	e	f	g	h	k
Z-NH-00/	Up to 100 A	79	53	47	35	15	21	52	7.5	6
	125-160 A	79	53	47	35	15	28	56	12	6
Z-NH-1/	Up to 160 A	135	68	65	40	15	28	61	12	6
	200-250 A	135	72	65	40	20	46	65	14	6
Z-NH-2/	to 250 A	150	72	65	48	20	46	73	14	6
	315-400 A	150	72	65	48	26	54	73	14	6
Z-NH-3/	to 400 A	150	72	65	60	26	54	84	14	6
	500-630 A	150	72	65	60	33	65	84	14	6