

xCommand Control and Indication



Moeller is Eaton

EATON

Powering Business Worldwide



xCommand
Control and Indication



xStart
Switching, protecting and actuating motors



xCommand
xSystem
Automation, control and visualization



Matching of Voltage and Current



xEnergy
Xpole
Energy distribution, switching and protection



Xboard
Optimal switchgear enclosure



SmartWire-Darwin Communication System



Foot and palm switches FAK, pilot devices RMO, signal towers SL

Position switches LS, pressure switches MCS, sensors

Cam switches T, switch-disconnectors P up to 315 A



Mini contactor relays, contactor relay, contactors DIL

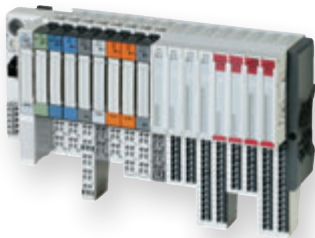
Overload relay Z..., ZEB, ZEV, EMT6

Motor protective circuit breaker PKZ and PKE

MSC motor-starter combinations

DS, DM soft starters

Frequency inverters M-Max™, H-Max™



Timing relays DILET, ETR; measuring relays EMR and monitoring relays EMR

Easy control relay MFD-Titan multi-function display

Safety relay easySafety, safety-related control relay ESR5

Automation solutions, SPS, I/O systems, visualisation

Transformers STN, UTI; universal power supply units AING



Busbar system SASY – accessories for control panel building

Compact circuit-breakers NZM, compact switch-disconnectors N up to 1600 A

IZM circuit-breakers, IN switch-disconnectors up to 6300 A

Circuit-breakers, fuses



Insulated enclosures CI, small enclosures CI-K

CS sheet steel wall-mounting enclosure



Commercial and logistic notes, approvals, After Sales Service, type / alphabetical index



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Engineering

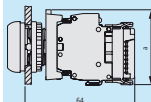
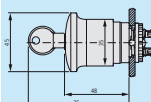
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Dimensions

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Ordering

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Technical data

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Ordering

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Technical data

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Dimensions

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System overview

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Ordering

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Technical data

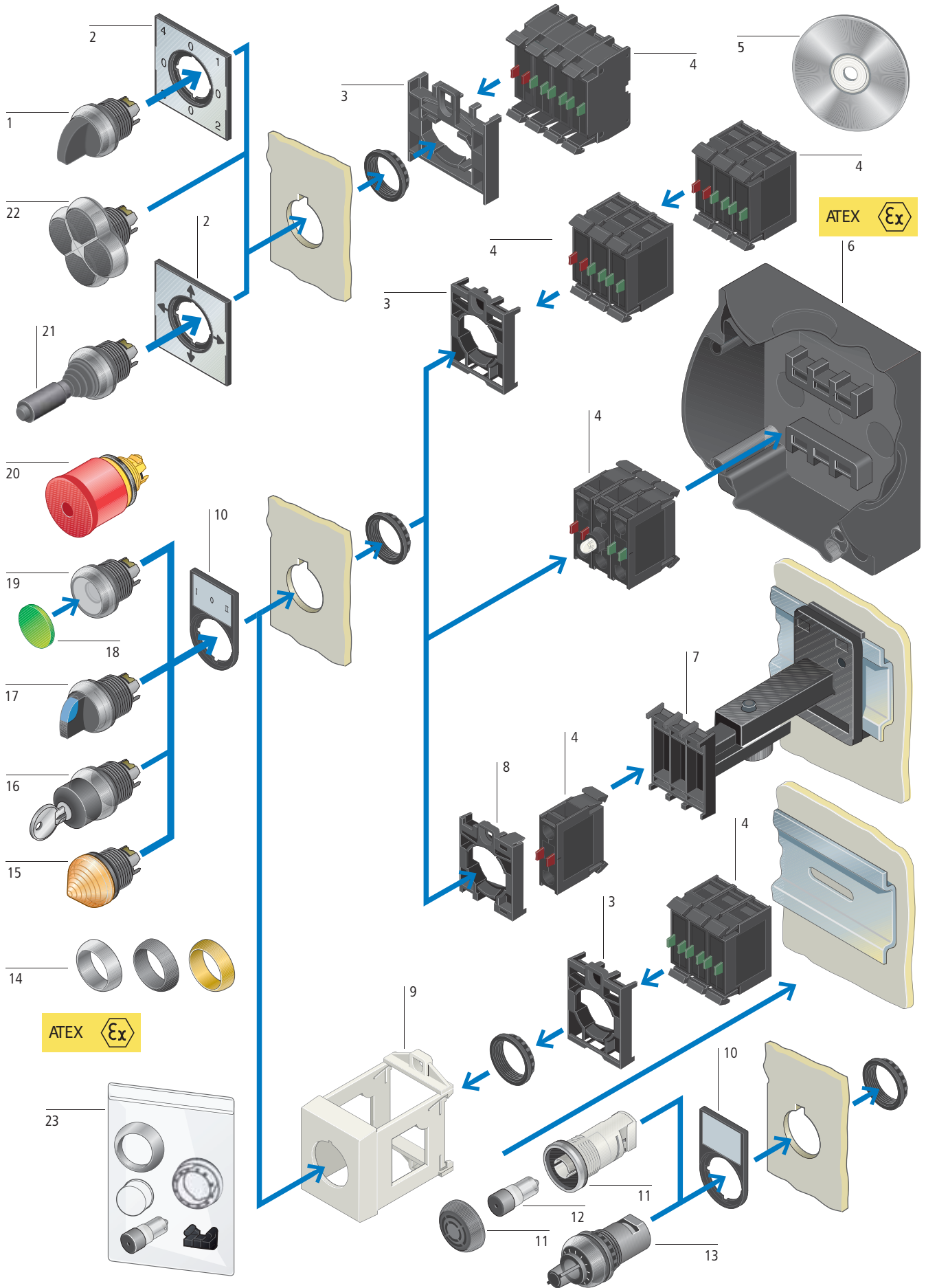
SL signal towers	2/108
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Dimensions

SL signal towers	2/109
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System overview





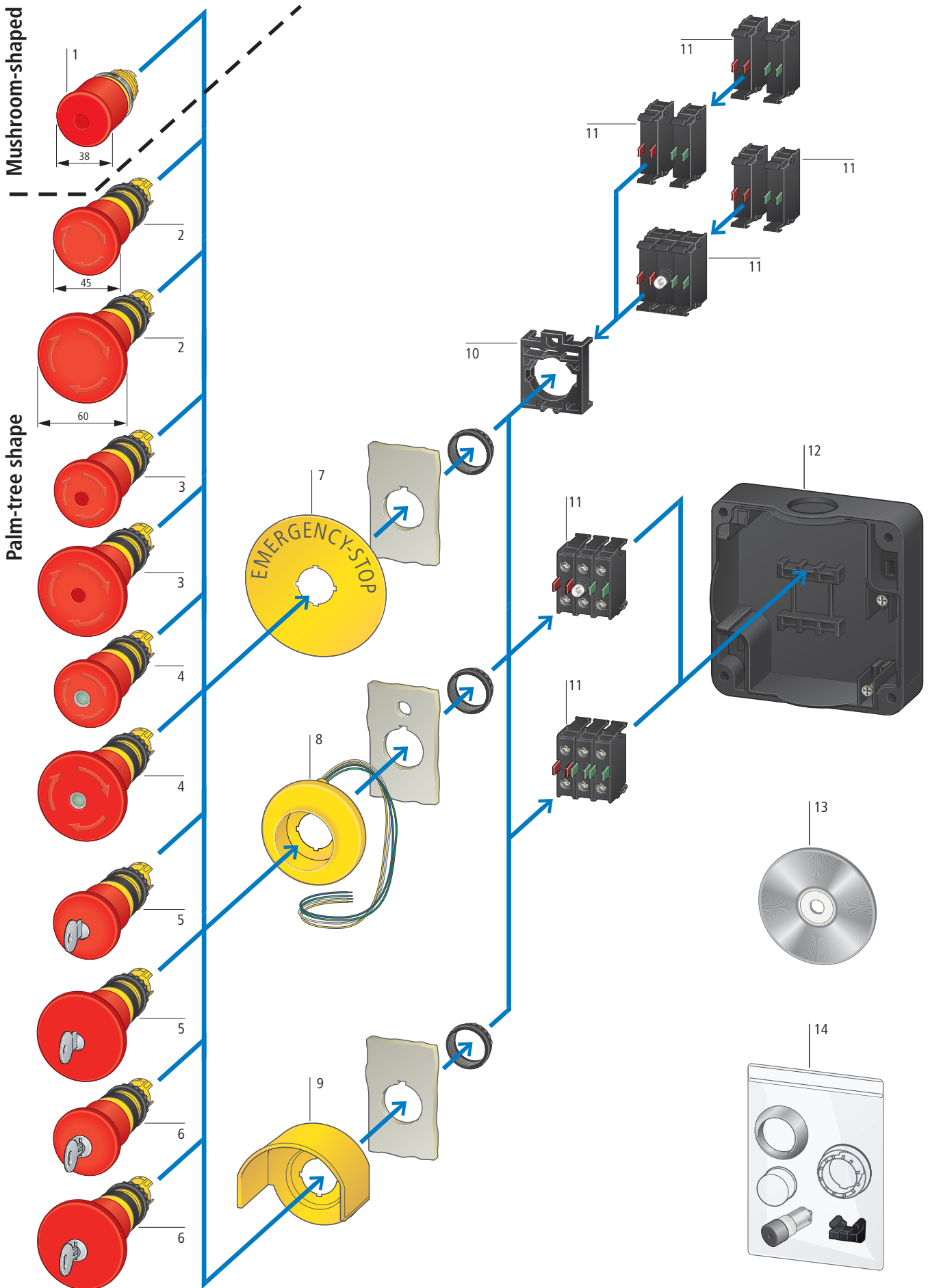
4-way selector switch actuators	1	Telescopic clip	7	Key-operated buttons	16
4 positions		For mounting depth compensation when rear mounting devices in CI enclosures, CI-K enclosures and cabinets		2 and 3 positions	
With rotary head or thumb-grip				Programmable maintained/momentary function and key withdraw	
Maintained function 0-1-0-2-0-3-0-4				Suitable for master key systems	
→ Page 2/20		→ Page 2/48		→ Page 2/21	
Labels with label mounts	2	Centring adapter	8	Selector switch actuators	17
Colour: aluminium-coloured		For centring of actuator and indicator elements when using telescopic clip		2 and 3 positions	
Labels: inscribed, can be inscribed individually, blank				With rotary head, thumb-grip	
→ Page 2/25		→ Page 2/48		Programmable maintained/momentary function	
Fixing adapters	3	IVS top-hat rail adapter	9	Illuminated selector switch actuators with transparent thumb-grip	
For flush mounting plates		for fitting directly onto IEC/EN 60175 mounting rail		Colours: white, green, red, yellow, blue	
for contact and LED elements, M22-A...		→ Page 2/49		→ Page 2/20	
for contact elements, M22-A4		Label mounts	10	Button plates/Button lenses	18
→ Page 2/31		For insert labels		Laser inscription for pushbutton actuators and mushroom-headed pushbutton	
(Double) contact elements	4	Colour: black		Button lenses for illuminated pushbutton actuators and indicator lights, flat	
Normally closed contact (NC) and normally open contact (N/O)		Insert labels, aluminium-colored, with and without inscription, can be engraved		With standard texts and symbols or with custom labelling	
Universalcontacts suitable for use with electronic devices		→ Page 2/35		→ Page 2/36	
Positive opening safety function according to IEC/EN 60947-5-1		Acoustic device	11	Pushbutton actuators	19
Maximum 2 levels, each with 3 contact elements		Protection type IP40 without buzzer		Momentary and maintained	
→ Page 2/31		→ Page 2/27		Flat and extended	
LED elements	4	Buzzer	12	with and without guard ring	
Voltage range: 12 – 30 V AC/DC		Continuous tone, pulsed tone		Mushroom-headed pushbutton	
85 – 264 V AC		18 – 30 V AC/DC		Double actuators	
→ Page 2/33		→ Page 2/27		Colours: white, green, red, yellow, blue, black	
Labeling with convenience	5	Potentiometer	13	Illuminated pushbutton actuators	
All button plates, indicator lights and additional button labels from the RMQ-Titan range can be laser inscribed with any inscription and symbol as required.		Resistance values from 470 kΩ - 1 MΩ		Colours: white, green, red, yellow, blue	
Download: www.moeller.net/de/support , Keyword: "Labeleditor"		3 individual connections		→ Page 2/17	
		With screw terminals		Emergency stop pushbuttons/ Emergency switching off pushbuttons	20
		→ Page 2/27		Tamper-proof according to ISO 13850/EN 418	
Surface mounting enclosure	6	Bezels	14	Can be secured by sealable shroud	
Surface mounting enclosures IP67 up to 6 mounting locations		• Silver		Additional labels, with and without inscription	
Surface mounting enclosures IP55 up to 12 mounting locations		• Black		→ Page 2/8	
Flush mounting panel, IP54, up to 6 mounting locations		• 24 carat gold can only be ordered via M22-Combination			
Shrouds IP40 for flush mounting panels		→ Page 2/48		Joystick	21
→ Page 2/45		Indicator lights	15	4 positions	
		Flat and conical designs		→ Page 2/24	
		Colours: white, green, red, yellow, blue		4-way pushbutton	22
		→ Page 2/26		4 positions	
				Pushbutton actuators, momentary	
				→ Page 2/24	
				Accessories devices	23
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Product Features

- Order with the designation M22-COMBINATION → Page 2/6 and the suffix M22-ATEX or FAK-COMBINATION- → Page 2/78 with the suffix FAK-ATEX → Page 2/45
- Snap-fitting modular system
- bezel silver, black or gold
- Mounting diameter: 22.3 mm
- Minimum grid dimension: 30 x 40 mm
- Protection type: minimum IP66
- Up to 6 contacts per mounting location
- For switching differing potentials
- Approved throughout the world



System overview





Emergency stop pushbuttons Emergency switching off pushbuttons	1
Mushroom-shaped	
Non-illuminated	
Illuminated with LED	
with Lock mechanism MS1–MS20	
with lock mechanism for master key system	
Tamper-proof according to ISO 13850/EN 418	
European Machinery Safety Directive 2006/42/EC	
Can be secured by sealable shroud	
Additional labels, with and without inscription	
Release by turning	
→ Page 2/7	
Emergency stop pushbuttons Emergency switching off label	2
Palm-tree shape	
Non-illuminated	
Diameter 45 mm and 60 mm	
Tamper-proof according to ISO 13850/EN 418	
European Machinery Safety Directive 2006/42/EC	
Additional labels, with and without inscription	
Release by turning	
→ Page 2/8	
Emergency stop pushbuttons Emergency switching off pushbuttons	3
Palm-tree shape	
Illuminated with LED	
Diameter 45 mm and 60 mm	
Tamper-proof according to ISO 13850/EN 418	
European Machinery Safety Directive 2006/42/EC	
Additional labels, with and without inscription	
Release by turning	
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Emergency stop pushbuttons Emergency switching off pushbuttons	4
Palm-tree shape	
with mechanical operated indicator	
Diameter 45 mm and 60 mm	
Tamper-proof according to ISO 13850/EN 418	
European Machinery Safety Directive 2006/42/EC	
Additional labels, with and without inscription	
Release by turning	
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Emergency stop pushbuttons Emergency switching off pushbuttons	5
Palm-tree shape	
with lock mechanism MS1–MS20	
Diameter 45 mm and 60 mm	
Tamper-proof according to ISO 13850/EN 418	
European Machinery Safety Directive 2006/42/EC	
Additional labels, with and without inscription	
Release by turning	
→ Page 2/8	
Emergency stop pushbuttons Emergency switching off pushbuttons	6
Palm-tree shape	
with Ronis 455 lock mechanism	
Diameter 45 mm and 60 mm	
Tamper-proof according to ISO 13850/EN 418	
European Machinery Safety Directive 2006/42/EC	
Can be secured by sealable shroud	
Additional labels, with and without inscription	
Release by turning or pulling	
→ Page 2/9	
Emergency stop labels Emergency switching off label	7
Round, square, and rectangular types	
Single-language, multi-language, can be individually labeled	
→ Page 2/11	
Illuminated ring	8
Versions: 24 V AC/DC, 120 V AC, 230 V AC	
Continuous light	
Flashing light with separate actuation	
Continuous light with separate actuation, 24 V AC/DC	
can be actuated separately with three LED rows	
→ Page 2/10	
Guardring	9
against accidental actuation	
for 38 mm and 45 mm designs	
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Mounting adapter	10
For flush mounting plates	
for contact and LED elements, M22-A...	
for contact elements, M22-A4	
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Contact elements, indicator lights	11
Normally open contact and normally closed contact	
Universalcontacts suitable for use with electronic devices	
Positive opening safety function according to IEC/EN 60947-5-1	
Up to 2 levels with 3 contact elements each	
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Surface mounting enclosure	12
Surface mounting enclosures IP67 up to 6 mounting locations	
Surface mounting enclosures IP55 up to 12 mounting locations	
Flush mounting plate, IP54, up to 6 mounting locations	
Shrouds IP40 for flush mounting	
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Labeling with convenience	13
All button plates, indicator lights and additional button labels from the RMQ-Titan range can be laser inscribed with any inscription and symbol as required.	
Download: www.moeller.net/de/support	
Keyword: "Labeleditor"	
Accessories	14
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		Contact configuration: ☉ = Safety function by positive opening according to IEC/EN 60947-5-1 N/O = normally open contact NC = normally closed contact	Circuit symbol	Protection type	Part no. Article no.	Price See price list	Std. pack	Notes	
Emergency switching-off actuators									
Tamper-proof according to ISO 13850/EN 418 Pull to release Max. contacts to be fitted together: 4 x M22-(C)K... Red mushroom head (RAL 3000), yellow base									
	-	1 NC ☉		IP66, IP69K	M22-PV/K01 216515		5 off	 BAUART GEPRÜFT TYPE APPROVED 	
	1 N/O	1 NC ☉		IP66, IP69K	M22-PV/K11 216516		5 off		
Emergency switching-off key-release mushroom									
Tamper-proof according to ISO 13850/EN 418 with one key, individual lock mechanism MS1, not suitable for master key systems Release by using the key Red mushroom head (RAL 3000), yellow base									
	-	1 NC ☉		IP66, IP69K	M22-PVS/K01 216514		5 off	 BAUART GEPRÜFT TYPE APPROVED	
Emergency switching-off actuators									
Tamper-proof according to ISO 13850/EN 418 Pull to release									
	-	-	2 NC ☉		●	RAL 1004	IP66, IP69K	M22-PV/KC02/IY 216524	1 off
	-	1 N/O	1 NC ☉		●	RAL 1004	IP66, IP69K	M22-PV/KC11/IY 216525	1 off
Emergency switching-off key-release mushroom									
with 1 key Lock mechanism MS1									
	1	1 N/O		●	RAL 1004	IP67, IP69K	M22-PVS/KC11/IY 216523	1 off	
customized complete unit									
To order use form F0315 → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; max. 10 characters.							M22-COMBINATION-* 228298	1 off	

Notes

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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13

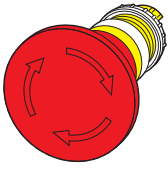

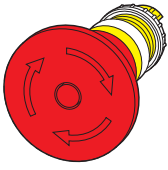

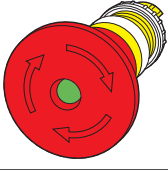

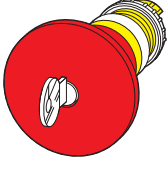



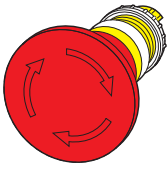

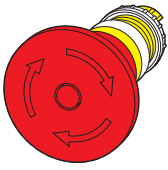



	Illumination		Colour mushroom head	RAL no.	Protection type	Bezel: silver Part no. Article no.	Price See price list	Std. pack
Emergency stop pushbutton/Emergency switch-off actuators								
Release by pulling Mushroom button diameter 38 mm ATEX → Engineering								
	Non-illuminated	Pull to release		RAL 3000	IP66, IP69K	M22-PV 216876		5 off
	Non-illuminated	Pull to release		RAL 3000	IP66, IP69K	M22-PV-GVP 216877		50 off
	Illuminated with LED element	Pull to release		RAL 3000	IP66, IP69K	M22-PVL 216878		5 off
Emergency stop pushbutton/Emergency switch-off actuators								
Release by turning Mushroom button diameter 38 mm ATEX → Engineering								
	Non-illuminated	Turn to release		RAL 3000	IP67, IP69K	M22-PVT 263467		5 off
	Illuminated with LED element	Turn to release		RAL 3000	IP67, IP69K	M22-PVLT 263469		5 off
Emergency stop pushbutton/Emergency switch-off actuators								
Release by turning with key Mushroom button diameter 38 mm With 1 key ATEX → Engineering								
	Non-illuminated	Individual lock mechanism MS1 Not suitable for master key systems		RAL 3000	IP67, IP69K	M22-PVS 216879		5 off
	Non-illuminated	Individual lock mechanism MS1 - MS20 not suitable for master key systems *→1, 2, 3, ...20		RAL 3000	IP67, IP69K	M22-PVS-MS* 216880		1 off
	Non-illuminated	suitable for master key systems To order use form F0276 → Data sheet in Online Catalog Delivery time about 4 to 6 weeks For master key systems see → Page 2/23		RAL 3000	IP67, IP69K	M22-PVS-SA(*) .* 104826		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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13

Illumination		Colour mushroom head	RAL no.	Protection type	Bezel: silver Part no. Article no.	Price See price list	Std. pack
Emergency stop pushbutton actuators							
Release by turning Palm-shaped, diameter 45 mm							
	Non-illuminated	–	●	RAL 3000	IP67, IP69K	M22-PVT45P 121462	1 off 
	Illuminated with LED element	–	●	RAL 3000	IP67, IP69K	M22-PVLT45P 121460	1 off 
Emergency stop pushbutton actuators							
with mechanical switch position indication Release by turning Palm-shaped, diameter 45 mm							
	Non-illuminated	Switch position indication green → pushbutton released Switch position indicator red → pushbutton actuated	●	RAL 3000	IP67, IP69K	M22-PVT45P-MPI 121463	1 off 
Emergency stop pushbutton actuators							
Release by turning with key Palm-shaped, diameter 45 mm With 1 key							
	Non-illuminated	Individual lock mechanism MS1 Not suitable for master key systems	●	RAL 3000	IP67, IP69K	M22-PVS45P-MS1 121468	1 off 
	Non-illuminated	Individual lock mechanisms MS1 - MS20 Not suitable for master key systems *→1, 2, 3, ...20	●	RAL 3000	IP67, IP69K	M22-PVS45P-MS* 121470	1 off 
	Non-illuminated	Individual lock mechanism Ronis 455 Not suitable for master key systems	●	RAL 3000	IP67, IP69K	M22-PVS45P-RS 121466	1 off 
Emergency stop pushbutton actuators							
Release by turning Palm-shaped, diameter 60 mm							
	Non-illuminated	–	●	RAL 3000	IP67, IP69K	M22-PVT60P 121464	1 off 
	Illuminated with LED element	–	●	RAL 3000	IP67, IP69K	M22-PVLT60P 121461	1 off 

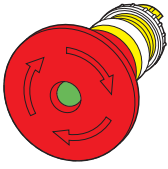


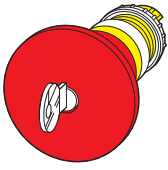






Information relevant for export to North America

NA Certification

Request filed for UL and CSA













Illumination		Colour mushroom head	RAL no.	Protection type	Bezel: silver Part no. Article no.	Price See price list	Std. pack
Emergency stop pushbutton actuators							
with mechanical switch position indication Release by turning Palm-shaped, diameter 60 mm							
	Non-illuminated	Switch position indication green → pushbutton released Switch position indication red → pushbutton actuated	●	RAL 3000	IP67, IP69K	M22-PVT60P-MPI 121465	1 off  
	Emergency stop pushbutton/Emergency switching-off pushbuttons						
Release by turning with key Palm-shaped, diameter 60 mm With 1 key							
	Non-illuminated	Individual lock mechanism MS1 Not suitable for master key systems	●	RAL 3000	IP67, IP69K	M22-PVS60P-MS1 121469	1 off  
	Non-illuminated	Individual lock mechanisms MS1 - MS20 Not suitable for master key systems *→1, 2, 3, ...20	●	RAL 3000	IP67, IP69K	M22-PVS60P-MS* 121471	1 off  
	Non-illuminated	Individual lock mechanism Ronis 455 not suitable for master key systems	●	RAL 3000	IP67, IP69K	M22-PVS60P-RS 121467	1 off  

Information relevant for export to North America



NA Certification

Request filed for UL and CSA


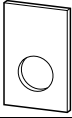



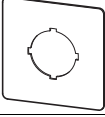

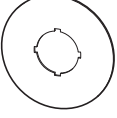





	RAL value	Protection type	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Guard-ring						
Protection against accidental actuation						
	RAL 1004	IP65	M22-XGPV 231273		1 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
Sealable shroud						
For devices with mushroom diameter 38 mm transparent with collapse point, can be reused after Emergency Stop/switching off in a 30 × 50 grid, adjacent drilling dimensions must be closed with blanking plugs M22(S)-B						
	–	IP65	M22-PL-PV 216397		2 off 	UL/CSA certification not required
LED-Illuminated ring						
Yellow with yellow LEDs → Engineering (circuit diagrams)						
60 mm diameter 24 V AC/DC Three groups of 4 LEDs each (in series), can be actuated separately (e.g. for run light)			M22-XPV60-Y-24 121477		1 off 	NA Certification Request filed for UL and CSA
60 mm diameter 120 V AC One group of 8 LEDs (in series)			M22-XPV60-Y-120 121476		1 off 	
60 mm diameter 230 V AC One group of 8 LEDs (in series)			M22-XPV60-Y-230 138280		1 off 	
Customized complete unit						
→ Engineering To order use form F0315 → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; max. 10 characters.						
			M22-COMBINATION-* 228298		1 off	

Note: Contact elements → Page 2/32



Inscription	Language	RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Emergency-stop labels, IP66						
ATEX → Engineering Lettering black						
	Emergency-stop	en	● RAL 1004	M22-XZK1-D99 121089	10 off	UL/CSA certification not required
	Arresto di emergenza	it	● RAL 1004	M22-XZK1-I99 121370		
	HÄTÄPYSÄYTYS	fi	● RAL 1004	M22-XZK1-SF99 121371		
	Quadilingual	de, en, fr, it	● RAL 1004	M22-XYK11 121373		
	Quadilingual	de, en, fr, it	● RAL 1004	M22-XAK11 121085		
	Quadilingual	de, en, es, pt	● RAL 1004	M22-XAK12 121086		
	Quadilingual	de, en, nl, fr	● RAL 1004	M22-XAK13 121087		
	Quadilingual	en, sv, fi, da	● RAL 1004	M22-XAK14 121088		
	Quadilingual	de, en, fr, it	● RAL 1004	M22-XBK11 121372		
	Emergency switching off label					
ATEX → Engineering Lettering black						
	NOT-AUS	de	● RAL 1004	M22-XZK-D99 216471	10 off	UL/CSA certification not required
	Emergency-Stop	en	● RAL 1004	M22-XZK-GB99 216472		
	Arrêt d'urgence	fr	● RAL 1004	M22-XZK-F99 216473		
	EMERGENZA	it	● RAL 1004	M22-XZK-I99 216474		
	NOODSTOP	nl	● RAL 1004	M22-XZK-NL99 216475		
	NÖDSTOPP	sv	● RAL 1004	M22-XZK-S99 216476		
	HÄTÄ-SEIS	fi	● RAL 1004	M22-XZK-SF99 216477		
	NØDSTOP	da	● RAL 1004	M22-XZK-DK99 216478		
	-	de, en, fr, it	● RAL 1004	M22-XYK1 216484		
	-	de, en, fr, it	● RAL 1004	M22-XAK1 216465		
	-	de, en, es, pt	● RAL 1004	M22-XAK2 216466		
	-	de, en, nl, fr	● RAL 1004	M22-XAK3 216467		
	-	en, sv, fi, da	● RAL 1004	M22-XAK4 216468		
	Quadilingual	de, en, fr, it	● RAL 1004	M22-XBK1 216483		








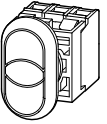

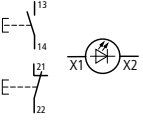




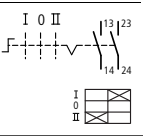

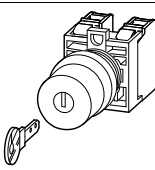




Inscription	Language	RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Emergency-Stop labels						
	-		RAL 1004	M22-XZK-* 216479	10 off 	UL/CSA certification not required
Blank	-		RAL 1004	M22-XZK 216470		
	With custom inscription via Labeleditor, → Engineering	-		RAL 1004	M22-XYK-* 231181	
	With custom inscription via Labeleditor, → Engineering	-		RAL 1004	M22-XAK-* 216469	
Blank	-		RAL 1004	M22-XAK 216464		
	With custom inscription via Labeleditor, → Engineering	-		RAL 1004	M22-XBK-* 231762	
Blank	-		RAL 1004	M22-XBK 269580		



	Colour mushroom head	RAL no.	Protection type	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Stop pushbuttons							
ATEX → Engineering							
	Non-illuminated, pull to release	●	RAL 9005	IP66, 69K	M22S-PV 225528	5 off 	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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
	Non-illuminated, turn to release	●	RAL 9005	IP67, 69K	M22S-PVT 271499		
	Illuminated, pull to release	●	RAL 9005	IP66, 69K	M22S-PVL 230962		
	Illuminated, turn to release	●	RAL 9005	IP67, 69K	M22S-PVLT 271540		
Guard-ring for Stop pushbutton							
	-	-	-	IP67, 69K	M22G-XGPV 271610	1 off 	UL/CSA certification not required




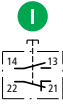

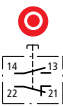


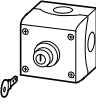
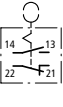

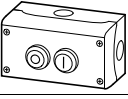
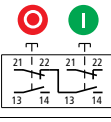

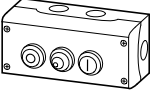
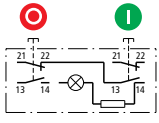

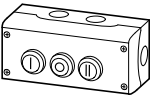
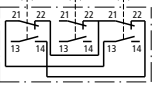


	Button plate	Contact configuration: ☉ = Safety function by positive opening according to IEC/EN 60947-5-1		Circuit Symbol	Protection type	Bezel: silver Part no. Article no.	Price See price list	Std. pack
Pushbutton actuator								
Flat actuator								
		-	1 NC ☉		IP67, IP69K	M22-D-R-X0/K01 216510		5 off 
		1 N/O	-		IP67, IP69K	M22-D-G-X1/K10 216512		5 off 
Double actuator with LED element ancilliary lens white								
85 - 264 V AC								
		1 N/O	1 NC ☉		IP66	M22-DDL-GR-X1/X0/K11/230-W 216509		5 off 
Selector switch actuators								
Thumb-grip, black Maintained/momentary function, can be changed with coding adapters M22-XC-Y → Engineering Switch positions 0, I and II correspond with the position of the actuator as viewed from the front. Bezel gold-plated → Page 2/48								
	2 positions, maintained	-	1 N/O	-		IP66	M22-WRK/K10 216518	5 off 
	3 positions, maintained	-	2 N/O	-		IP66	M22-WRK3/K20 216520	5 off 
Key-operated button								
Maintained/momentary function and key withdraw convertible with coding adapters M22-XC → Engineering 2 positions, maintained MS1 lock mechanism, with 1 key								
	-	-	1 N/O	1 NC ☉		IP66	M22-WRS/K11 216517	5 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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13



	Number of locations	Contact configuration: ⊕ = Safety function by positive opening according to IEC/EN 60947-5-1	Circuit symbol	Color enclosure top	Protection type	Bezel: silver Part no. Article no.	Price See price list	Std. pack
	Number	N/O = normally open contact	NC = normally closed contact		RAL no.			
Pushbutton actuator								
Flush actuator								
	1	1 N/O	1 NC ⊕		●	RAL 7035 IP67, IP69K	M22-D-G-X1/KC11/I 216522	1 off 
	1	1 N/O	1 NC ⊕		●	RAL 7035 IP67, IP69K	M22-D-R-X0/KC11/I 216521	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 CCN		NKCR					
	CSA File No.		012528					
	CSA Class No.		3211-03					
	NA Certification		UL Listed, CSA certified					
	Degree of Protection		UL/CSA Type 3R, 4X, 12, 13					
Key-operated button								
Maintained/momentary function and key withdraw convertible with coding adapters M22-XC → Engineering with 1 key 2 positions, maintained Lock mechanism MS1								
	1	1 N/O	1 NC ⊕		●	RAL 7035 IP66	M22-WRS/KC11/I 216526	1 off 
Two-way pushbutton station								
Without indicator light								
	2	2 N/O	2 NC ⊕		●	RAL 7035 IP67, IP69K	M22-I2-M1 216529	1 off 
	2	2 N/O	2 NC ⊕		●	RAL 7035 IP67, IP69K	M22-I3-M2 216533	1 off 
Three-way pushbutton station								
	3	3 N/O	3 NC ⊕		●	RAL 7035 IP67, IP69K	M22-I3-M1 216532	1 off 
Customized complete unit								
→ Engineering To order use form F0315 → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; max. 10 characters.						M22-COMBINATION-* 228298	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					
	Degree of Protection		UL/CSA Type 3R, 4X, 12, 13					



Construction type	Button plate	Bezel: silver		Bezel: black		Std. pack	Information relevant for export to North America
		Part no. Article no.	Price See price list	Part no. Article no.	Price See price list		
Double pushbutton actuators with indicator light, IP66 ATEX (Ex) → Engineering White acillary lens Momentary Bezel gold-plated → Page 2/48 							
Pushbuttons and indicator lights protruding		M22-DDL-GR 216698		M22S-DDL-GR 216699		5 off 	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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
		M22-DDL-GR-X1/X0 216700		M22S-DDL-GR-X1/X0 216701			
		M22-DDL-GR-GB1/GB0 216702		M22S-DDL-GR-GB1/GB0 216703			
		M22-DDL-WS 216704		M22S-DDL-WS 216705			
		M22-DDL-WS-X1/X0 216706		M22S-DDL-WS-X1/X0 216707			
		M22-DDL-WS-GB1/GB0 216708		M22S-DDL-WS-GB1/GB0 216709			
		M22-DDL-S-X7/X7 216710		M22S-DDL-S-X7/X7 216711			
		M22-DDL-S-X4/X5 218145		M22S-DDL-S-X4/X5 218146			
	With customized inscription to order via Labeleditor → Notes	M22-DDL-*. *.* 226770		M22S-DDL-*. *.* 230350			
Pushbuttons and indicator lights flat		M22-DDLF-GR-X1/X0 284814		M22S-DDLF-GR-X1/X0 284815		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking NA Certification Request filed for UL and CSA Degree of Protection UL/CSA Type 3R, 4X, 12, 13
		M22-DDLF-WS-X1/X0 284816		M22S-DDLF-WS-X1/X0 284817			
	With customized inscription to order via Labeleditor → Notes	M22-DDLF-*. *.* 284818		M22S-DDLF-*. *.* 284819			
Pushbutton I and indicator light flat, pushbutton O protruding		M22-DDLM-GR-X1/X0 284830		M22S-DDLM-GR-X1/X0 284831		5 off 	
		M22-DDLM-WS-X1/X0 284832		M22S-DDLM-WS-X1/X0 284833			
	With customized inscription to order via Labeleditor → Notes	M22-DDLM-*. *.* 107062					

Notes

1st wildcard (*) = Colour of button plate B = blue, G = green, R = red, W = black
 B/S = top blue/bottom black
 G/R = top green/bottom red
 G/S = top green/bottom black
 W/S = top white/bottom black

Wildcard 2 and 3 (*) = File name assigned by Labeleditor (enter twice), for further color combinations please enquire → Engineering



Button plate	Bezel: silver Part no. Article no.	Price See price list	Std. pack	Bezel: black Part no. Article no.	Price See price list	Std. pack	Notes		
Pushbutton actuators IP67, IP69K									
ATEX → Engineering									
Bezel gold-plated → Page 2/48									
Actuator flat momentary 		M22-D-S 216590	10 off 	M22S-D-S 216591		10 off 	-		
		M22-D-W 216592		M22S-D-W 216593			-		
		M22-D-R 216594		M22S-D-R 216595			-		
		M22-D-G 216596		M22S-D-G 216597			-		
		M22-D-Y 216598		M22S-D-Y 216599			-		
		M22-D-B 216600		M22S-D-B 216601			-		
		M22-D-GR 132671		M22S-D-GR 132672			-		
	-	M22-D-X 216602		M22S-D-X 216604			-		
	-	M22-D-X-GVP 216603					-		
		M22-D-R-X0 216605		M22S-D-R-X0 216606			10 off 	-	
		M22-D-G-X1 216607		M22S-D-G-X1 216608				-	
		M22-D-S-X0 216609		M22S-D-S-X0 216610				-	
		M22-D-W-X1 216611		M22S-D-W-X1 216612				-	
	Actuator flat, maintained 			M22-DR-S 216613			5 off 	M22S-DR-S 216614	
		M22-DR-W 216615	M22S-DR-W 216616						
		M22-DR-R 216617	M22S-DR-R 216618						
		M22-DR-G 216619	M22S-DR-G 216620						
		M22-DR-Y 216621	M22S-DR-Y 216622						
		M22-DR-B 216623	M22S-DR-B 216624						
-		M22-DR-X 216625	M22S-DR-X 216627						
-		M22-DR-X-GVP 216626							
		M22-DR-R-X0 216628	M22S-DR-R-X0 216629	5 off 	-				
		M22-DR-G-X1 216630	M22S-DR-G-X1 216631		-				
		M22-DR-S-X0 216632	M22S-DR-S-X0 216633		-				
		M22-DR-W-X1 216634	M22S-DR-W-X1 216635		-				

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
 Degree of Protection UL/CSA Type 3R, 4X, 12, 13



Button plate	Bezel: silver Part no. Article no.	Price See price list	Std. pack	Bezel: black Part no. Article no.	Price See price list	Std. pack	Notes
Pushbutton actuators IP67, IP69K							
ATEX → Engineering							
Bezel gold-plated → Page 2/48							
Actuator extended, momentary 	M22-DH-S 216636		5 off 	M22S-DH-S 216637		5 off 	-
	M22-DH-W 216638			M22S-DH-W 216639			-
	M22-DH-G 216643			M22S-DH-G 216645			-
	M22-DH-R 216641			M22S-DH-R 216642			-
	M22-DH-Y 216646			M22S-DH-Y 216647			-
	M22-DH-B 216649			M22S-DH-B 216650			-
	M22-DH-R-X0 216655			M22S-DH-R-X0 216656			-
	M22-DH-G-X1 216657			M22S-DH-G-X1 216658			-
	M22-DH-S-X0 216659			M22S-DH-S-X0 216660			-
	M22-DH-W-X1 216661			M22S-DH-W-X1 216662			-
Actuator extended, maintained 	M22-DRH-S 216663		5 off 	M22S-DRH-S 216664		5 off 	Programmable maintained/momentary pushbutton function
	M22-DRH-W 216665			M22S-DRH-W 216666			
	M22-DRH-R 216667			M22S-DRH-R 216668			
	M22-DRH-G 216669			M22S-DRH-G 216670			
	M22-DRH-Y 216671			M22S-DRH-Y 216672			
	M22-DRH-B 216673			M22S-DRH-B 216674			
	M22-DRH-R-X0 216675			M22S-DRH-R-X0 216676			
	M22-DRH-G-X1 216677			M22S-DRH-G-X1 216678			
	M22-DRH-S-X0 216679			M22S-DRH-S-X0 216680			
	M22-DRH-W-X1 216681			M22S-DRH-W-X1 216682			
Pushbuttons with guard ring, momentary, IP66, IP69K							
ATEX → Engineering							
Bezel gold-plated → Page 2/48							
	M22-DG-X 220921		5 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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13



Button plate	Colour of mushroom head	Bezel: silver			Std. pack	Bezel: black			Notes			
		Part no. Article no.	Price See price list			Part no. Article no.	Price See price list					
Mushroom-headed pushbuttons, IP67, IP69K												
ATEX → Engineering												
Bezel gold-plated → Page 2/48												
Momentary												
			M22-DP-S 216712		5 off 	M22S-DP-S 216713		5 off 	–			
			M22-DP-R 216714			M22S-DP-R 216715			–			
			M22-DP-G 216716			M22S-DP-G 216717			–			
			M22-DP-Y 216718			M22S-DP-Y 216719			–			
			M22-DP-R-X0 216720			M22S-DP-R-X0 216721			–			
			M22-DP-G-X1 216722			M22S-DP-G-X1 216723			–			
			M22-DP-S-X0 216724			M22S-DP-S-X0 216725			–			
			M22-DP-W-X1 216726			M22S-DP-W-X1 216727			–			
	–		M22-DP-S-X 216728			M22S-DP-S-X 216730			–			
	–		M22-DP-R-X 216731			M22S-DP-R-X 216733			–			
	–		M22-DP-G-X 216734			M22S-DP-G-X 216736			–			
	–		M22-DP-Y-X 216737			M22S-DP-Y-X 216739			–			
	Maintained											
				M22-DRP-S 216743			5 off 		M22S-DRP-S 216744		5 off 	Programmable maintained/momentary pushbutton function 3 mm O I O I M22-DR... M22-D...
			M22-DRP-R 216745		M22S-DRP-R 216746							
			M22-DRP-G 216747		M22S-DRP-G 216748							
			M22-DRP-Y 216749		M22S-DRP-Y 216750							
			M22-DRP-R-X0 216751		M22S-DRP-R-X0 216752							
			M22-DRP-G-X1 216753		M22S-DRP-G-X1 216754							
			M22-DRP-S-X0 216755		M22S-DRP-S-X0 216756							
			M22-DRP-W-X1 216757		M22S-DRP-W-X1 216758							
–			M22-DRP-S-X 216759		M22S-DRP-S-X 216761							
–			M22-DRP-R-X 216762		M22S-DRP-R-X 216764							
–			M22-DRP-G-X 216765		M22S-DRP-G-X 216767							
–			M22-DRP-Y-X 216768		M22S-DRP-Y-X 216770							

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
 Degree of Protection UL/CSA Type 3R, 4X, 12, 13



Function:
 ▷ = Momentary
 ▽ = Maintained

Button plate

Inscription

Function

Bezel: Silver
 Part no.
 Article no.

Price
 See price list

Std. pack

Bezel: black
 Part no.
 Article no.

Price
 See price list

Std. pack

Selector switch actuators, IP66

ATEX (Ex) → Engineering; Bezel gold-plated → Page 2/48
 Maintained/momentary, can be changed with coding adapter kit → Page 2/23
 Two positions

With rotary knob

	▷ 40°		-	-	M22-W 216853	5 off 	M22S-W 216854	5 off
	▽ 60°		-	-	M22-WR 216855		M22S-WR 216856	
	▷ 60°		-	-	M22-WR-X92 216857		M22S-WR-X92 216858	
	▽ 60°	-	AUTO HAND	-	M22-WR-X91 216859		M22S-WR-X91 216860	
	▽ 60°	-	* = with customized inscription through Labeleditor → Engineering	-	M22-WR-* 226836		M22S-WR-* 226837	

With thumb-grip

	▷ 40°	-	-	-	M22-WK 216865	5 off 	M22S-WK 216866	5 off 	
	▽ 60°	-	-	-	M22-WRK 216867		10 off 		M22S-WRK 216869
	▽ 60°	-	-	-	M22-WRK-GVP 216868		50 off 		off

With thumb-grip, V position

	▽ 60°	-	-	-	M22-WKV 216874	5 off 	M22S-WKV 216875	5 off
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3 positions (with plunger bridge → engineering)

With rotary knob

	40° ▽ 40°		-	-	M22-W3 216861	5 off 	M22S-W3 216862	5 off
	60° ▽ 60°		-	-	M22-WR3 216863		M22S-WR3 216864	
	60° ▽ 60°		AUTO 0 MAN.	-	M22-WR3-X94 226838		M22S-WR3-X94 226839	
	60° ▽ 60°		* = with customized inscription through Labeleditor → Engineering	-	M22-WR3-* 226840		M22S-WR3-* 226841	

With thumb-grip

	40° ▽ 40°	-	-	-	M22-WK3 216870	5 off 	M22S-WK3 216871	5 off
	60° ▽ 60°	-	-	-	M22-WRK3 216872		M22S-WRK3 216873	
	-	-	-	-	M22-WRK3-*1) 217436		M22S-WRK3-*1) 217437	

4 positions

Not suitable for coding adapters
 Use fixing adapter M22-A4 → Page 2/31, labels → Page 2/25

With rotary knob

	45°		-		M22-WR4 279419	5 off 	M22S-WR4 279430	5 off
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With thumb-grip

	45°		-		M22-WRK4 279431	5 off 	M22S-WRK4 279432	5 off
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Notes

1) The * wildcard can represent values 1 or 2:
 * = 1: for 60°
 * = 2: for 40°

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
	Degree of Protection	UL/CSA Type 3R, 4X, 12, 13






Function:		Key withdrawable in position		Bezel: Silver	Price See price list	Std. pack	Bezel: black	Price See price list	Std. pack
▷ = Momentary ▽ = Maintained				Part no. Article no.			Part no. Article no.		
Key-operated buttons for individual lock mechanisms, IP66.									
ATEX (Ex) → Engineering Bezel gold-plated → Page 2/48 Not suitable for master key systems With 1 key Convertible maintained/momentary function and key withdraw → Page 2/23									
Two positions									
Lock mechanism MS1	▷ 40°	–	0	–	M22-WS 216881	1 off 	M22S-WS 216882		1 off
	▽ 60°	–	0	I	M22-WRS 216887	5 off 	M22S-WRS 216889		5 off
	▽ 60°	–	0	I	M22-WRS-GVP 216888	25 off 			
	▽ 60°	–	0	–	M22-WRS-A1 229092	5 off 	M22S-WRS-A1 229093		5 off
Lock mechanism MS2 – MS20 (Lock mechanism number in the type designation)	▷ 40°	–	0	–	M22-WS-MS*1) 216883	1 off 	M22S-WS-MS*1) 216884		1 off
	▽ 60°	–	0	I	M22-WRS-MS*1) 216890	1 off 	M22S-WRS-MS*1) 216891		1 off
	▽ 50°	–	0	–	M22-WRS-MS*-A1¹⁾ 217440	5 off 	M22S-WRS-MS*-A1¹⁾ 217441		5 off
3 positions (with plunger bridge → Engineering)									
Lock mechanism MS1	40° ⇄ 40°	–	0	–	M22-WS3 216894	1 off 	M22S-WS3 216895		1 off
	60° ⇄ 60°	I	0	II	M22-WRS3 216900	5 off 	M22S-WRS3 216901		5 off
	60° ⇄ 60°	I	0	II	M22-WRS3-GVP 216902	25 off 			
	⇄	Selectable ²⁾	–	–	M22-WRS3-A*1⁴⁾ 229094	5 off 	M22S-WRS3-A*1⁴⁾ 229095		5 off
Lock mechanism MS1 – MS20 (Lock mechanism number in the type designation)	Selectable	Selectable ²⁾	–	–	M22-WRS3-MS*-A*1²⁾ 217442	5 off 	M22S-WRS3-MS*-A*1²⁾ 217443		5 off
	40° ⇄ 40°	–	0	–	M22-WS3-MS*1) 216896	1 off 	M22S-WS3-MS*1) 216897		1 off
	60° ⇄ 60°	I	0	II	M22-WRS3-MS*1) 216903	1 off 	M22S-WRS3-MS*1) 216904		1 off
2 or 3 positions									
Lock mechanism MS1 – MS20 (Lock mechanism number in the type designation)	Selectable	Selectable	–	–	M22-WRS*-MS*-.*1³⁾ 262521	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
 Degree of Protection UL/CSA Type 3R, 4X, 12, 13




Function:	Key withdrawable in position	Bezel: Silver Part no. Article no.	Price See price list	Std. pack	Bezel: black Part no. Article no.	Price See price list	Std. pack
> = Momentary > = Maintained							
Individual keys							
Replacement key for keyswitch AUTO - OFF/RESET - MANUAL							
							
For lock mechanism MS1		M22-ES-MS1 216416		5 off 			
For lock mechanism MS2 – MS20		M22-ES-MS* 216417		1 off 			

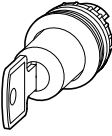


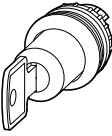
Notes

- 1) Delivery: 4 weeks from receipt of order by the factory
- 2) Example: M22(S)-WRS3-MS*-A*
- MS*: * = MS1- MS20 (number of individual lock mechanisms)
- A*: * = 1, function , withdrawable in switch position 0
- * = 2, function , withdrawable in switch position I, 0
- * = 3, function , withdrawable in switch position 0, II
- * = 4, function , withdrawable in switch position I, 0
- * = 5, function , withdrawable in switch position 0
- * = 6, function , withdrawable in switch position 0, II
- * = 7, function , withdrawable in switch position 0
- * = 10, function , withdrawable in switch position I, II
- 3) Example: M22(S)-WRS*-MS*-*
- WRS*: * = 2 or 3 positions (function and key withdrawability as M22-WRS or M22-WRS3)
- MS*: * = MS1- MS20 (number of individual lock mechanism)
- *: * = Customized inscription using Labeleditor; For * enter the automatically generated file name (→ Engineering) or "blank" if no inscription required
- 4) Version A10 can not be selected.

Information relevant for export to North America


UL/CSA certification not required



Function:	Key with-drawable in position	Bezel: Silver Part no. Article no.	Price See price list	Std. pack	Bezel: black Part no. Article no.	Price See price list	Std. pack
> = Momentary ↓ = Maintained							
Key-operated button actuators for master key systems IP66							
ATEX (Ex) → Engineering Bezel gold-plated → Page 2/48 With two keys							
Two positions 	> 40°	0	M22-WS-SA(*)-* 216885	5 off 	M22S-WS-SA(*)-* 216886	5 off 	
	↓ 60°	0	M22-WRS-SA(*)-* 216892		M22S-WRS-SA(*)-* 216893		
	60° ↓	0 1	M22-WRS-SA(*)-*-A8 285537		M22S-WRS-SA(*)-*-A8 285538		
3 positions 	60° ↓ 60°	1 0 1 1	M22-WRS3-SA(*)-*-A9 285539		M22S-WRS3-SA(*)-*-A9 285581		
	40° <↓> 40°	0	M22-WS3-SA(*)-* 216898		M22S-WS3-SA(*)-* 216899		
	60° ↓ 60°	0	M22-WRS3-SA(*)-* 216905		M22S-WRS3-SA(*)-* 216906		

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
 Degree of Protection UL/CSA Type 3R, 4X, 12, 13

Individual key for master key systems

ATEX (Ex) → Engineering



0

M22-ES-SA(*)-*
217444

10 off




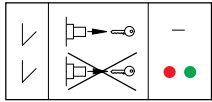


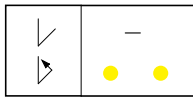

Notes

Master key systems: Delivery time 4 to 6 weeks after receipt of order
 To order use form F0276 → Data sheet in Online Catalog

Information relevant for export to North America



UL/CSA certification not required








Function	Part no. Article no.	Price See price list	Std. pack
Coding kit			
Not for key-operated button for master key systems			
To change key withdraw functionality → Engineering 		50°	M22-XC-R 216406 10 off 
To change maintained/momentary functionality → Engineering 		40°	M22-XC-Y 216407 10 off 

Information relevant for export to North America



UL/CSA certification not required



Inscription	Function: ↳ = Momentary = Maintained	For use with	Bezel: Silver			Bezel: black		
			Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Joystick, IP66								
ATEX (Ex) → Engineering Bezel gold-plated → Page 2/48, use adapter M22-A4 → Page 1/11 With one operating point per operating direction								
	2 positions	↔	-	M22-WJ2H 289195		1 off 	M22S-WJ2H 289197	1 off 
		—	-	M22-WRJ2H 289199			M22S-WRJ2H 289241	
		↕	-	M22-WJ2V 289196			M22S-WJ2V 289198	
			-	M22-WRJ2V 289240			M22S-WRJ2V 289242	
	4 positions	+	-	M22-WRJ4 279415		5 off 	M22S-WRJ4 279416	5 off 
	4 positions	↕↔	-	M22-WJ4 279417		5 off 	M22S-WJ4 279418	5 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
Degree of Protection UL/CSA Type 3R, 4X, 12, 13

With two operating points per operating direction
These joysticks are combined with normal normally open contacts M22-K10 and normally open contacts M22-K10P.



2 positions	↔↕	-	M22-WJ2H-2P 111508		1 off 		
2 positions	↕↔	-	M22-WJ2V-2P 111507		1 off 		
4 positions	↕↔	-	M22-WJ4-2P 110836		1 off 		

Information relevant for export to North America







NA Certification Request filed for UL and CSA

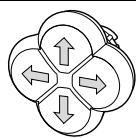
Pushbuttons, IP66, 4-way



ATEX (Ex) → Engineering

Pushbuttons not mechanically interlocked







No inscription, push-button color black	↕↔	-	M22-D4-S 279411		5 off 	M22S-D4-S 279412	5 off 
Custom pushbutton color and inscription, → Notes	↕↔	-	M22-D4-*.* 279413		5 off 	M22S-D4-*.* 279414	5 off 



Arrows white, push-button color black	↕↔	-	M22-D4-S-X7 286336		5 off 	M22S-D4-S-X7 286337	5 off 
---------------------------------------	----	---	------------------------------	--	--	-------------------------------	--

Opposite pushbutton mechanically interlocked



Arrows white, push-button color black	↕↔	-	M22-D14-S-X7 286338		5 off 	M22S-D14-S-X7 286339	5 off 
Custom pushbutton color and inscription, → Notes	↕↔	-	M22-D14-*.* 286340		5 off 	M22S-D14-*.* 286341	5 off 

Notes

-.*. : * B = blue, G = green, R = red, B = black, W = white, Y = yellow
State colors clockwise, starting at 12:00 o'clock



-.*. : *. = File name generated by Labeleditor
→ Engineering

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
Degree of Protection UL/CSA Type 3R, 4X, 12, 13

HPL02025EN



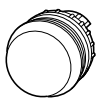



















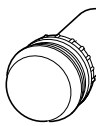













Inscription	For use with	Bezel: Silver Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Labels					
	No inscription	Joystick 4-way selector switch actuators	M22-XCK 279433	10 off 	UL/CSA certification not required
	4 direction arrows	Joystick 4-way selector switch actuators	M22-XCK1 279434		
	2 direction arrows, can be turned through 90°	Joystick 2 positions	M22-XCK3 290260		
	0-1-0-2-0-3-0-4	4-way selector switch actuators	M22-XCK2 279435		
	With customized inscription to order via Labeleditor → Engineering	Joystick 4-way selector switch actuators	M22-XCK-* 279436		

Notes -*.*: * B = blue, G = green, R = red, B = black, W = white, Y = yellow
State colors clockwise, starting at 12:00 o'clock,



-*.*: * = File name generated by Labeleditor
→ Engineering

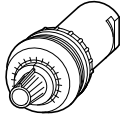



Color	Construction	Protection	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
Indicator lights							
LEDs for indicator lights → Page 2/33 and following							
		White	Flat	IP67, IP69K	M22-L-W 216771	10 off 	Product Standards IEC/EN 60947-5; UL 508; 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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
		Red	Flat	IP67, IP69K	M22-L-R 216772		
		Green	Flat	IP67, IP69K	M22-L-G 216773		
		Yellow	Flat	IP67, IP69K	M22-L-Y 216774		
		Blue	Flat	IP67, IP69K	M22-L-B 216775		
	—	Without lens ¹⁾	Flat	IP67, IP69K	M22-L-X 216776		
	—	Without lens ¹⁾	Flat	IP67, IP69K	M22-L-X-GVP 216777		
		White	Extended, conical	IP67, IP69K	M22-LH-W 216778	10 off 	
		Red	Extended, conical	IP67, IP69K	M22-LH-R 216779		
		Green	Extended, conical	IP67, IP69K	M22-LH-G 216780		
		Yellow	Extended, conical	IP67, IP69K	M22-LH-Y 216781		
		Blue	Extended, conical	IP67, IP69K	M22-LH-B 216782		
Indicator lights conical, BA 9s							
can be fitted in M20/M25 knockout in base For filament and neon bulbs up to 2.4 W							
		Red	Conical	IP67, IP69K	L-R 208689	1 off 	NA Certification Request filed for UL and CSA Degree of Protection UL/CSA Type 3R, 4X, 12, 13
		Green	Conical	IP67, IP69K	L-G 208690		
		Yellow	Conical	IP67, IP69K	L-Y 208691		
		White	Conical	IP67, IP69K	L-W 208692		
Compact indicator lights							
Without light elements For filament bulbs, neon bulbs and LEDs up to 2.4 W with BA 9s lamp socket							
		White	Flat	IP67, IP69K	M22-LC-W 216907	10 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 3R, 4X, 12, 13
		Red	Flat	IP67, IP69K	M22-LC-R 216908		
		Green	Flat	IP67, IP69K	M22-LC-G 216909		
		Yellow	Flat	IP67, IP69K	M22-LC-Y 216910		
		Blue	Flat	IP67, IP69K	M22-LC-B 216911		
	—	Without lens ¹⁾	Flat	IP67, IP69K	M22-LC-X 216912		
	—	Without lens ¹⁾	Flat	IP67, IP69K	M22-LC-X 216912		
		White	Extended, conical	IP67, IP69K	M22-LCH-W 216914	10 off 	
		Red	Extended, conical	IP67, IP69K	M22-LCH-R 216915		
		Green	Extended, conical	IP67, IP69K	M22-LCH-G 216916		
		Yellow	Extended, conical	IP67, IP69K	M22-LCH-Y 216917		
		Blue	Extended, conical	IP67, IP69K	M22-LCH-B 216918		

Notes

¹⁾ Lenses for indicator lights → Page 2/40



Circuit Symbol	Resistance	Bezel: Silver		Std. pack	Bezel: black		Std. pack
		Part no. Article no.	Price See price list		Part no. Article no.	Price See price list	
	R						
	kΩ						
Potentiometer, IP66							
<p>ATEX </p> <p>→ Engineering Bezel gold-plated → Page 2/48</p> <p>Three separate screw connections, P_{max} = 0.5 W</p> <p>Accuracy of resistance value: ± 10% (linear)</p> <p>M22...RH with large operating head</p> 		1	M22-R1K⁽²⁾ 229489	1 off 	M22S-R1K⁽²⁾ 232231	1 off 	
		4.7	M22-R4K7⁽²⁾ 229490		M22S-R4K7⁽²⁾ 232232		
		10	M22-R10K⁽³⁾ 229491		M22S-R10K⁽³⁾ 232233		
		47	M22-R47K⁽²⁾ 229492		M22S-R47K⁽²⁾ 232234		
		100	M22-R100K⁽²⁾ 229493		M22S-R100K⁽²⁾ 232235		
		470	M22-R470K⁽²⁾ 229494		M22S-R470K⁽²⁾ 232236		
		Selectable + Notes ¹⁾	M22-R*.*⁽²⁾ 263371		M22S-R*.*⁽²⁾ 263372		
		Selectable + Notes ¹⁾	M22-R*.*-RH⁽²⁾ 288863				

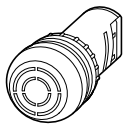

Notes

- ¹⁾ When ordering, the type reference must include the following details:
 First wildcard Δ Resistance
 2nd wildcard Δ Standard scale/inscription
- * - *: * = Available resistance value:
 1K = 1 kΩ
 2K2 = 2.2 kΩ
 4K7 = 4.7 kΩ
 10K = 10 kΩ
 22K = 22 kΩ
 47K = 47 kΩ
 100K = 100 kΩ
 470K = 470 kΩ
 1M = 1 MΩ
- * - *: * = Standard scale/inscription: X1000
 No scale/label: „blank“



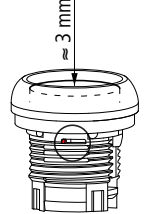
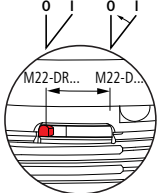

Information relevant for export to North America



- ²⁾ 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
 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
- ³⁾ Product Standards IEC/EN 60947-5-1; UL 508; CSA-22.2 No. 14-05; CE marking
 UL File No. E29184
 UL CCN NKCR
 CSA File No. 012528
 CSA Class No. 3211-03
 NA Certification UL Listed, CSA certified
 Degree of Protection IEC: IP 66; UL/CSA Type: 3R, 4X, 12, 13

	Bezel: Silver	Part no. Article no.	Price See price list	Std. pack	Bezel: black	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
Compact acoustic device, IP40										
 <p>Front black, without buzzer, BA 9s lamp socket</p>		M22-AMC 229015		1 off 					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
									Degree of Protection	UL/CSA Type 3R, 4X, 12, 13
Buzzer for acoustic device										
<p>for BA 9s base</p> <p>83 dB/10 cm,</p> <p>18 - 30 mA,</p> <p>positive pole at X1,</p> <p>f = 2300 Hz</p> 	Continuous tone,	M22-XAM 229025		1 off 					Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
	Pulsed tone, 24 V DC (+10 %/-15 %)	M22-XAMP 229028		1 off 					UL File No.	E29184
									UL CCN	NKCR
									CSA File No.	012528
									CSA Class No.	3211-03
									NA Certification	UL Listed, CSA certified



	Color Button plate	Bezel: Silver Part no. Article no.	Price See price list	Std. pack	Bezel: black Part no. Article no.	Price See price list	Std. pack	Notes	
Illuminated pushbutton actuators, IP67, IP69K									
ATEX → Engineering									
Bezel gold-plated → Page 2/48 Flat Momentary 		M22-DL-W 216922		10 off 	M22S-DL-W 216924		10 off 	–	
		M22-DL-R 216925			M22S-DL-R 216926				
		M22-DL-G 216927			M22S-DL-G 216928				
		M22-DL-Y 216929			M22S-DL-Y 216930				
		M22-DL-B 216931			M22S-DL-B 216932				
	–	M22-DL-X 216933			M22S-DL-X 216935				
	–	M22-DL-X-GVP 216934		50 off 					
		M22-DL-R-X0 216936		10 off 	M22S-DL-R-X0 216937		10 off 		
		M22-DL-G-X1 216938			M22S-DL-G-X1 216939				
		M22-DL-W-X0 216940			M22S-DL-W-X0 216941				
		M22-DL-W-X1 216942			M22S-DL-W-X1 216943				
	Bezel gold-plated → Page 2/48 Flat Maintained 		M22-DRL-W 216944		5 off 	M22S-DRL-W 216945		5 off 	Programmable maintained/momentary pushbutton function  
			M22-DRL-R 216946			M22S-DRL-R 216947			
		M22-DRL-G 216948			M22S-DRL-G 216949				
		M22-DRL-Y 216950			M22S-DRL-Y 216951				
		M22-DRL-B 216952			M22S-DRL-B 216953				
–		M22-DRL-X 216954			M22S-DRL-X 216956				
–		M22-DRL-X-GVP 216955		50 off 					
		M22-DRL-R-X0 216957		5 off 	M22S-DRL-R-X0 216958		5 off 		
		M22-DRL-G-X1 216959			M22S-DRL-G-X1 216960				
		M22-DRL-W-X0 216961			M22S-DRL-W-X0 216962				
		M22-DRL-W-X1 216963			M22S-DRL-W-X1 216964				
Bezel gold-plated → Page 2/48 Extended Momentary 			M22-DLH-W 216965		5 off 	M22S-DLH-W 216966		5 off 	
			M22-DLH-R 216967			M22S-DLH-R 216968			
		M22-DLH-G 216969			M22S-DLH-G 216970				
		M22-DLH-Y 216971			M22S-DLH-Y 216972				
		M22-DLH-B 216973			M22S-DLH-B 216974				
		M22-DLH-R-X0 216975			M22S-DLH-R-X0 216976				
		M22-DLH-G-X1 216977			M22S-DLH-G-X1 216978				
		M22-DLH-W-X0 216979			M22S-DLH-W-X0 216980				
		M22-DLH-W-X1 216981			M22S-DLH-W-X1 216982				




















Color Button plate	Bezel: Silver		Std. pack	Bezel: black		Std. pack	Notes
	Part no. Article no.	Price See price list		Part no. Article no.	Price See price list		
ATEX → Engineering							
Bezel gold-plated → Page 2/48 Extended Maintained 		M22-DRLH-W 216788	5 off 	M22S-DRLH-W 216791	5 off 	Programmable maintained/momentary pushbutton function 	
		M22-DRLH-R 216789		M22S-DRLH-R 216792			
		M22-DRLH-G 216796		M22S-DRLH-G 216798			
		M22-DRLH-Y 216799		M22S-DRLH-Y 216801			
		M22-DRLH-B 216802		M22S-DRLH-B 216803			
		M22-DRLH-R-X0 216804		M22S-DRLH-R-X0 216808			
		M22-DRLH-G-X1 216805		M22S-DRLH-G-X1 216809			
		M22-DRLH-W-X0 216806		M22S-DRLH-W-X0 216810			
		M22-DRLH-W-X1 216807		M22S-DRLH-W-X1 216811			
	Bezel gold-plated → Page 2/48 with guardring Momentary 	-		M22-DGL-X 230961			5 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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13



Function:		Color	Bezel: Silver	Price	Std. pack	Bezel: black	Price	Std. pack
▷ = Momentary ∨ = Maintained			Part no. Article no.	See price list		Part no. Article no.	See price list	
Illuminated selector switch actuators, thumb-grip, IP66								
ATEX (Ex) → Engineering								
Bezel gold-plated → Page 2/48								
Maintained/momentary function, can be changed with coding adapter M22-XC-Y → Engineering								
Momentary 	▷ 40°	○ White	M22-WLK-W 216812		5 off  	M22S-WLK-W 216813		5 off  
	▷ 40°	● Red	M22-WLK-R 216814			M22S-WLK-R 216815		
	▷ 40°	● Green	M22-WLK-G 216816			M22S-WLK-G 216817		
	▷ 40°	● Yellow	M22-WLK-Y 216818			M22S-WLK-Y 216819		
	▷ 40°	● Blue	M22-WLK-B 216820			M22S-WLK-B 216821		
Maintained 	∨ 60°	○ White	M22-WRLK-W 216823			M22S-WRLK-W 216824		
	∨ 60°	● Red	M22-WRLK-R 216825			M22S-WRLK-R 216826		
	∨ 60°	● Green	M22-WRLK-G 216827			M22S-WRLK-G 216828		
	∨ 60°	● Yellow	M22-WRLK-Y 216829			M22S-WRLK-Y 216830		
	∨ 60°	● Blue	M22-WRLK-B 216831			M22S-WRLK-B 216832		
3 positions								
Momentary 	40° ↕ 40°	○ White	M22-WLK3-W 216833		5 off  	M22S-WLK3-W 216834		5 off  
	40° ↕ 40°	● Red	M22-WLK3-R 216835			M22S-WLK3-R 216836		
	40° ↕ 40°	● Green	M22-WLK3-G 216837			M22S-WLK3-G 216838		
	40° ↕ 40°	● Yellow	M22-WLK3-Y 216839			M22S-WLK3-Y 216840		
	40° ↕ 40°	● Blue	M22-WLK3-B 216841			M22S-WLK3-B 216842		
Maintained 	60° ∨ 60°	○ White	M22-WRLK3-W 216843			M22S-WRLK3-W 216844		
	60° ∨ 60°	● Red	M22-WRLK3-R 216845			M22S-WRLK3-R 216846		
	60° ∨ 60°	● Green	M22-WRLK3-G 216847			M22S-WRLK3-G 216848		
	60° ∨ 60°	● Yellow	M22-WRLK3-Y 216849			M22S-WRLK3-Y 216850		
	60° ∨ 60°	● Blue	M22-WRLK3-B 216851			M22S-WRLK3-B 216852		
Selectable	Selectable → Notes		M22-WRLK3-*/* 217438			M22S-WRLK3-*/* 217439		
V position								
	∨ 60°	○ White	M22-WLKV-W 284393		5 off  	M22S-WLKV-W 284398		5 off  
	∨ 60°	● Red	M22-WLKV-R 284394			M22S-WLKV-R 284399		
	∨ 60°	● Green	M22-WLKV-G 284395			M22S-WLKV-G 284540		
	∨ 60°	● Yellow	M22-WLKV-Y 284396			M22S-WLKV-Y 284543		
	∨ 60°	● Blue	M22-WLKV-B 284397			M22S-WLKV-B 284544		

Notes


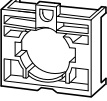
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 /: *= Color

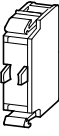







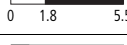

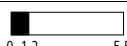


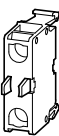



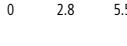



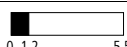
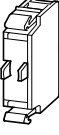

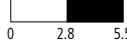

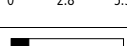

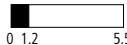




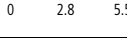
Information relevant for export to North America



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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13



Configuration	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America				
Fixing adapters								
Fixing adapter (front fixing) for 3contact LED elements For M22-(C)K... contact elements and M22-(C)LED... LED elements. Sequence numbers on fixing adapter								
 <table border="1"> <tr> <td>1/4</td> <td>3/6</td> <td>2/5</td> </tr> </table>	1/4	3/6	2/5	M22-A 216374		50 off 	UL/CSA certification not required	
1/4	3/6	2/5						
	M22-A-GVP 216375		500 off 					
Fixing adapter (front fixing) for 4 contact elements, can be used with M22-WR4, -D4, -WJ..., -WRJ... For M22-(C)K contact elements								
 <table border="1"> <tr> <td>3</td> <td>2</td> <td>4</td> <td>1</td> </tr> </table>	3	2	4	1	M22-A4 279437		10 off 	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
3	2	4	1					

Terminal type	Contact configuration: ⊕ = Safety function by positive opening according to IEC/EN 60947-5-1	Circuit symbol	Contact travel diagram, hub in connection with front element	Configuration	Part no. Article no.	Price See price list	Std. pack			
Contact elements										
Front fixing 	Screw terminals	1 N/O			<table border="1"> <tr> <td>1/4</td> <td>3/6</td> <td>2/5</td> </tr> </table>	1/4	3/6	2/5	M22-K10 216376	20 off
		1/4	3/6	2/5						
		1 N/O			M22-K10-GVP 216377	500 off 				
		1 N/O			<table border="1"> <tr> <td>1/4</td> <td>3/6</td> <td>2/5</td> </tr> </table>	1/4	3/6	2/5	M22-K10P 110835	20 off
		1/4	3/6	2/5						
		1 NC ⊕				M22-K01 216378	20 off 			
1 NC ⊕			M22-K01-GVP 216379	500 off 						
1 NC ⊕			M22-K01D 262165	20 off 						
Base fixing 	Screw terminals	1 N/O			<table border="1"> <tr> <td>2</td> <td>3</td> <td>1</td> </tr> </table>	2	3	1	M22-KC10 216380	20 off
		2	3	1						
		1 N/O			M22-KC10-GVP 216381	200 off 				
		1 NC ⊕			<table border="1"> <tr> <td>2</td> <td>3</td> <td>1</td> </tr> </table>	2	3	1	M22-KC01 216382	20 off
2	3	1								
1 NC ⊕			M22-KC01-GVP 216383	200 off 						
Front mounting 	Spring-cage terminals	1 N/O			<table border="1"> <tr> <td>1/4</td> <td>3/6</td> <td>2/5</td> </tr> </table>	1/4	3/6	2/5	M22-CK10 216384	20 off
		1/4	3/6	2/5						
		1 NC ⊕			<table border="1"> <tr> <td>1/4</td> <td>3/6</td> <td>2/5</td> </tr> </table>	1/4	3/6	2/5	M22-CK01 216385	
1/4	3/6	2/5								
1 NC ⊕			M22-CK01D 262510							
Base fixing 	Spring-cage terminals	1 N/O			<table border="1"> <tr> <td>2</td> <td>3</td> <td>1</td> </tr> </table>	2	3	1	M22-CKC10 216386	20 off
		2	3	1						
1 NC ⊕			<table border="1"> <tr> <td>2</td> <td>3</td> <td>1</td> </tr> </table>	2	3	1	M22-CKC01 216387	20 off 		
2	3	1								

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
 Degree of Protection/UL/CSA Type: -



Terminal type	Contact configuration: ☺ = Safety function through positive opening according to IEC/EN 60947-5-1	Circuit symbol	Contact travel diagram, hub in connection with front element	Configuration	Part no. Article no.	Price See price list	Std. pack
Double contact elements							
Front fixing. When using M22-PV emergency switching-off pushbuttons... max. 2 contact elements = 4 normally closed contacts / normally open contacts							
	Cage clamp	2 N/O			-		
		2 NC ☺			-		
		1 N/O 1 NC ☺			-		
Complete modules							
Assembly of contact element with screw terminals and mounting clamp, front fixing							
 	Screw terminals	1 N/O 1 NC ☺					
		1 N/O					
		1 NC ☺					

Notes

Configuration of fixing adapter with sequence numbers to EN 50013
 x = Sequence number on fixing adapter
 y = Function number on contact element

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
 Degree of Protection UL/CSA Type: -






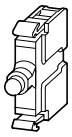












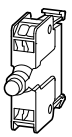












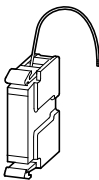


	Rated operational voltage	Rated operational current	Power consumption	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
	U _e V	I _e mA	P W						
LED elements with screw terminals									
→ Engineering									
Front mounting 	12-30 V AC/DC	8 - 15	0.26 at 24 V	○	M22-LED-W 216557		20 off 	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 Degree of Protection UL/CSA Type: -	
				●	M22-LED-R 216558				
				●	M22-LED-G 216559				
				●	M22-LED-B 218057				
	85 - 264 V AC, 50/60 Hz	5 - 15	0.33 at 230 V	○	M22-LED230-W 216563		20 off 		
				●	M22-LED230-R 216564				
				●	M22-LED230-G 216565				
				●	M22-LED230-B 218059				
	207 - 264 V AC, 50/60 Hz	12 - 15	0.33 at 230 V	—	M22-LED230H-*1) 106521		20 off 		
	Base fixing 	12-30 V AC/DC	8 - 15	0.26 at 24 V	○	M22-LEDC-W 216560			20 off
					●	M22-LEDC-R 216561			
					●	M22-LEDC-G 216562			
●					M22-LEDC-B 218058				
85 - 264 V AC, 50/60 Hz		5 - 15	0.33 at 230 V	○	M22-LEDC230-W 216566		20 off 		
				●	M22-LEDC230-R 216567				
				●	M22-LEDC230-G 216568				
				●	M22-LEDC230-B 218060				
207 - 264 V AC, 50/60 Hz		12 - 15	0.33 at 230 V	—	M22-LEDC230H-*1) 106522		20 off 		

Notes

1) Enter color at: *
W = white, R = red, G = green, B = blue

For pushbutton actuators, indicator lights, illuminated pushbutton actuators and illuminated selector switch actuators, the following applies:

- M22...-R only in combination with M22-LED...-R
- M22...-G only in combination with M22-LED...-G
- M22...-W only in combination with M22-LED...-W
- M22...-Y only in combination with M22-LED...-Y
- M22...-B in combination with M22-LED...-W or M22-LED...-B

	Rated operational voltage	Rated operational current	Power consumption	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
	U_e V	I_e mA	P W					 
LED elements with Cage Clamp								
→ Engineering Cage Clamp is a registered trademark of Wago Kontakttechnik GmbH/Minden, Germany								
								
	12-30 V AC/DC	8 - 15	0.26 at 24 V		M22-CLED-W 216569		20 off  	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking E29184 UL File No. NKCR UL CCN CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type: -
					M22-CLED-R 216570			
					M22-CLED-G 216571			
					M22-CLED-B 218061			
	85 - 264 V AC, 50/60 Hz	5 - 15	0.33 at 230 V		M22-CLED230-W 216575		20 off  	
					M22-CLED230-R 216576			
					M22-CLED230-G 216577			
					M22-CLED230-B 218063			
	12-30 V AC/DC	8 - 15	0.26 at 24 V		M22-CLEDC-W 216572		20 off  	
					M22-CLEDC-R 216573			
					M22-CLEDC-G 216574			
					M22-CLEDC-B 218062			
	85 - 264 V AC, 50/60 Hz	5 - 15	0.33 at 230 V		M22-CLEDC230-W 216578		20 off  	
					M22-CLEDC230-R 216579			
					M22-CLEDC230-G 216580			
					M22-CLEDC230-B 218064			
LED series elements with screw terminals								
Front and base fixing → Engineering								
								
LED resistor element For connecting 12-30 V LED elements			42-60 V AC/DC		M22-XLED60 231078		10 off  	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking E29184 UL File No. NKCR UL CCN CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type: -
			220 V AC/DC		M22-XLED220¹⁾ 271541			
LED test element For de-coupled function test (lamp test)			12-240 V AC/DC		M22-XLED-T 231079			
			85 - 264 V AC		M22-XLED230-T 231080			

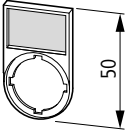


Notes

For pushbutton actuators, indicator lights, illuminated pushbutton actuators and illuminated selector switch actuators, the following applies:



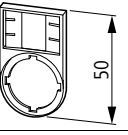


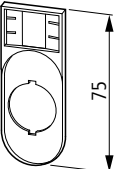

M22...-R only in combination with M22-LED...-R
M22...-G only in combination with M22-LED...-G
M22...-W only in combination with M22-LED...-W
M22...-Y only in combination with M22-LED...-Y
M22...-B in combination with M22-LED...-W or M22-LED...-B

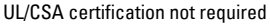







¹⁾ Maximum ambient temperature: -25 °C to +55 °C
The LED brightness is reduced.





Inscription	Part no. Article no.	Price See price list	Std. pack	Inscription	Part no. Article no.	Price See price list	Std. pack
Legend plates, complete							
IP66 30 x 50 mm, round, black (RAL 9005)							
	0 - I	M22S-ST-X88 216485	10 off 	FAULT	M22S-ST-GB8 216498		10 off 
	0 - I	M22S-ST-X89 218147		DÉFAUT	M22S-ST-F67 256795		
	I 0 II	M22S-ST-X93 216486		BETRIEB	M22S-ST-D7 216488		
	1	M22S-ST-X52 256797		RUN	M22S-ST-GB7 216497		
	2	M22S-ST-X53 256798		EN SERVICE	M22S-ST-F7 256793		
	STOP	M22S-ST-GB0 216494		HAND AUTO	M22S-ST-D11 216492		
	START	M22S-ST-GB1 216495		MAN. AUTO	M22S-ST-GB11 216500		
	AUS	M22S-ST-D5 218299		AUS EIN	M22S-ST-D10 216490		
	OFF	M22S-ST-GB5 218300		OFF ON	M22S-ST-GB10 216499		
	ARRÊT	M22S-ST-F0 256791		ARRÊT MARCHÉ	M22S-ST-F10 256794		
	EIN	M22S-ST-D6 216487		HAND 0 AUTO	M22S-ST-D12 216493		
	ON	M22S-ST-GB6 216496		MAN. 0 AUTO	M22S-ST-GB12 216501		
	MARCHE	M22S-ST-F1 256792		SOUS TENSION	M22S-ST-F68 256796		
	STÖRUNG	M22S-ST-D8 216489					

Information relevant for export to North America UL/CSA certification not required


Inscription	Color	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America 
Legend plates without label						
ATEX  → Engineering IP66 Round, black (RAL 9005), 30 mm wide						
	-	M22S-ST-X 216392		25 off 	Cannot be used for M22(S)-PV...	UL/CSA certification not required
	-	M22S-ST-X-GVP 216393		500 off 		
	For double actuators	M22S-STDD-X 216394		10 off 	-	

Insert labels for legends						Information relevant for export to North America 	
ATEX  → Engineering 18 x 27 mm							
	Aluminum-colored, no inscription	-	M22-XST 216480	100 off 	-	UL/CSA certification not required	
	Aluminum-colored, no inscription	-	M22-XST-GVP 216481	500 off 	-		
	*= With customized inscription to order via Labeleditor → Engineering	-	M22-XST-* 216482	1 off 	Letter height 3 mm, max. 3 lines, max. 12 characters per line Letter height 5 mm, max. 2 lines, max. 8 characters per line		

Inscription or explanation	For use with	Color	Style Flat		Style extended		Std. pack
			Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	
Selection aid for pushbuttons							
≤ 5 characters: letter height 5 mm, > 5 characters: letter height 3 mm							
–	M22(S)-D-X M22(S)-DR-X M22-DG-X	●	M22-XD-S 216421		M22-XDH-S 216428		10 off  
–		○	M22-XD-W 216422		M22-XDH-W 216429		
–		●	M22-XD-R 216423		M22-XDH-R 216430		
–		●	M22-XD-G 216424		M22-XDH-G 216431		
–		●	M22-XD-Y 216425		M22-XDH-Y 216432		
–		●	M22-XD-B 216426		M22-XDH-B 216433		
–		●	M22-XD-GR 132670				
with customized inscription via Labeleditor → Note		–	M22-XD-*.* 216427		M22-XDH-*.* 216434		
Zu		●	M22-XD-S-D2 218184		M22-XDH-S-D2 218229		
Auf		●	M22-XD-S-D3 218185		M22-XDH-S-D3 218230		
Ab		●	M22-XD-S-D4 218186		M22-XDH-S-D4 218231		
Aus		●	M22-XD-R-D5 218187		M22-XDH-R-D5 218232		
Ein		●	M22-XD-S-D6 218188		M22-XDH-S-D6 218233		
Entsperren		●	M22-XD-B-D14 218189		M22-XDH-B-D14 218234		
Vorwärts		●	M22-XD-S-D15 218190		M22-XDH-S-D15 218235		
Rückwärts		●	M22-XD-S-D16 218191		M22-XDH-S-D16 218236		
Heben		●	M22-XD-S-D17 218192		M22-XDH-S-D17 218237		
Senken		●	M22-XD-S-D18 218193		M22-XDH-S-D18 218238		
STOP		●	M22-XD-R-GB0 218194		M22-XDH-R-GB0 218239		
STOP		●	M22-XD-S-GB0 218195		M22-XDH-S-GB0 218240		
START		●	M22-XD-G-GB1 218196		M22-XDH-G-GB1 218241		
START		○	M22-XD-W-GB1 218197		M22-XDH-W-GB1 218242		
CLOSE		●	M22-XD-S-GB2 218198		M22-XDH-S-GB2 218243		
UP		●	M22-XD-S-GB3 218199		M22-XDH-S-GB3 218244		
DOWN		●	M22-XD-S-GB4 218200		M22-XDH-S-GB4 218245		
TEST		●	M22-XD-S-GB9 218201		M22-XDH-S-GB9 218246		
OFF		●	M22-XD-R-GB5 218202		M22-XDH-R-GB5 218247		
ON		●	M22-XD-S-GB6 218203		M22-XDH-S-GB6 218248		

Notes

When ordering, state complete part no. M22-XD(H)-*.*:

1st wildcard Δ color: -R, -G, -B, -W, -Y, -S -GR

2nd wildcard Δ file name generated by Labeleditor → Engineering

Text size 3 mm:

max. 8 characters in 1st line,
10 characters in 2nd line,
8 characters in 3rd line

Text size 5 mm:

Max. 5 characters per line

**Information relevant for export to North America**

UL/CSA certification not required



Inscription or explanation	For use with	Color, symbol	Style Flat	Price See price list	Style extended	Std. pack
			Part no. Article no.		Part no. Article no.	
Selection aid for pushbuttons						
≤ 5 characters: letter height 5 mm						
> 5 characters: letter height 3 mm						
RESET	M22(S)-D-X M22(S)-DR-X M22-DG-X		M22-XD-B-GB14 218204		M22-XDH-B-GB14 218249	10 off
FORWARD			M22-XD-S-GB15 218205		M22-XDH-S-GB15 218250	
REVERSE			M22-XD-S-GB16 218206		M22-XDH-S-GB16 218251	
RAISE			M22-XD-S-GB17 218208		M22-XDH-S-GB17 218252	
LOWER			M22-XD-S-GB18 218209		M22-XDH-S-GB18 218253	
Stopp			M22-XD-R-X0 218153		M22-XDH-R-X0 218155	
Stopp			M22-XD-S-X0 218154		M22-XDH-S-X0 218156	
Start			M22-XD-G-X1 218165		M22-XDH-G-X1 218210	
Start			M22-XD-S-X1 218166		M22-XDH-S-X1 218211	
Start			M22-XD-W-X1 218167		M22-XDH-W-X1 218212	
Start			M22-XD-G-X2 218168		M22-XDH-G-X2 218213	
Start			M22-XD-S-X2 218169		M22-XDH-S-X2 218214	
Increase			M22-XD-S-X4 218170		M22-XDH-S-X4 218215	
Acceptance			M22-XD-S-X5 218171		M22-XDH-S-X5 218216	
Reset			M22-XD-B-X6 218172		M22-XDH-B-X6 218217	
Direction of movement			M22-XD-S-X7 218173		M22-XDH-S-X7 218218	
Direction of movement			M22-XD-S-X8 218174		M22-XDH-S-X8 218219	
Hand			M22-XD-S-X9 218175		M22-XDH-S-X9 218220	
Automatic			M22-XD-S-X10 218176		M22-XDH-S-X10 218221	
Inch			M22-XD-S-X11 218177		M22-XDH-S-X11 218222	
Unlock			M22-XD-S-X12 218178		M22-XDH-S-X12 218223	
Loosen			M22-XD-S-X13 218179		M22-XDH-S-X13 218224	
Clamp			M22-XD-S-X14 218180		M22-XDH-S-X14 218225	
Release			M22-XD-S-X15 218181		M22-XDH-S-X15 218226	
Liquid			M22-XD-S-X16 218182		M22-XDH-S-X16 218227	
Horn			M22-XD-S-X17 218183		M22-XDH-S-X17 218228	

Notes

Information relevant for export to North America



UL/CSA certification not required



Inscription or explanation	For use with	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Button plates for mushroom-headed pushbuttons						
≤ 5 characters: letter height 5 mm > 5 characters: letter height 3 mm						
-	M22(S)-D(R)P-...		M22-XDP-S 216435		10 off	UL/CSA certification not required
-			M22-XDP-W 216436			
-			M22-XDP-R 216437			
-			M22-XDP-G 216438			
-			M22-XDP-Y 216439			
with customized inscription via Labeleditor → Note		-	M22-XDP-*.*) 216440			
Zu			M22-XDP-S-D2 218272			
Auf			M22-XDP-S-D3 218273			
Ab			M22-XDP-S-D4 218274			
Aus			M22-XDP-R-D5 218275			
Ein			M22-XDP-S-D6 218276			
Vorwärts			M22-XDP-S-D15 218277			
Rückwärts			M22-XDP-S-D16 218278			
Heben			M22-XDP-S-D17 218279			
Senken			M22-XDP-S-D18 218280			
STOP			M22-XDP-R-GB0 218281			
STOP			M22-XDP-S-GB0 218282			
START			M22-XDP-G-GB1 218283			
START			M22-XDP-W-GB1 218284			
CLOSE			M22-XDP-S-GB2 218285			
UP			M22-XDP-S-GB3 218286			
DOWN			M22-XDP-S-GB4 218287			
OFF			M22-XDP-R-GB5 218289			
ON			M22-XDP-S-GB6 218290			
TEST			M22-XDP-S-GB9 218288			
FORWARD			M22-XDP-S-GB15 218291			
REVERSE			M22-XDP-S-GB16 218292			

Notes

¹⁾ When ordering, the part no must include the following details:
 1st wildcard * Δ color: -R, -G, -B, -W, -Y, -S, -GR
 2nd wildcard * Δ file name generated by Labeleditor → Engineering



























Text size 3 mm:
 max. 8 characters in first line,
 10 characters in second line,
 8 characters in third line



Text size 5 mm:
 Max. 5 characters per line





Inscription or explanation	For use with	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Button plates for mushroom-headed pushbuttons						
≤ 5 characters: letter height 5 mm > 5 characters: letter height 3 mm						
RAISE	M22(S)-D(R)P-...		M22-XDP-S-GB17 218293		10 off  	UL/CSA certification not required
LOWER			M22-XDP-S-GB18 218294			
Stopp			M22-XDP-R-X0 218157			
Stopp			M22-XDP-S-X0 218158			
Start			M22-XDP-G-X1 218254			
Start			M22-XDP-S-X1 218255			
Start			M22-XDP-W-X1 218256			
Start			M22-XDP-G-X2 218257			
Start			M22-XDP-S-X2 218258			
Increase			M22-XDP-S-X4 218259			
Acceptance			M22-XDP-S-X5 218260			
Direction of movement			M22-XDP-S-X7 218261			
Direction of movement			M22-XDP-S-X8 218262			
Hand			M22-XDP-S-X9 218263			
Automatic			M22-XDP-S-X10 218264			
Inch			M22-XDP-S-X11 218265			
Unlock			M22-XDP-S-X12 218266			
Loosen			M22-XDP-S-X13 218267			
Clamp			M22-XDP-S-X14 218268			
Release			M22-XDP-S-X15 218269			
Liquid			M22-XDP-S-X16 218270			
Horn			M22-XDP-S-X17 218271			



Inscription or explanation	For use with	Color	Style flat		Std. pack	Style extended		Std. pack	Information relevant for export to North America
			Part no. Article no.	Price See price list		Part no. Article no.	Price See price list		
Lenses for indicator lights									
≤ 5 characters: letter height 5 mm > 5 characters: letter height 3 mm									
-	M22-L-X M22-LC-X		M22-XL-W 216453		10 off	M22-XLH-W 216459		10 off	UL/CSA certification not required
-			M22-XL-R 216454			M22-XLH-R 216460			
-			M22-XL-G 216455			M22-XLH-G 216461			
-			M22-XL-Y 216456			M22-XLH-Y 216462			
-			M22-XL-B 216457			M22-XLH-B 216463			
With customized inscription via Labeleditor → Note		-	M22-XL-*. *1) 216458						
Zu			M22-XL-W-D2 218403						
Auf			M22-XL-W-D3 218404						
Ab			M22-XL-W-D4 218405						
Aus			M22-XL-R-D5 218406						
Ein			M22-XL-W-D6 218407						
Vorwärts			M22-XL-W-D15 218408						
Rückwärts			M22-XL-W-D16 218409						
Heben			M22-XL-W-D17 218410						
Senken			M22-XL-W-D18 218411						
STOP			M22-XL-R-GB0 218412						
STOP			M22-XL-W-GB0 218413						
START			M22-XL-G-GB1 218414						
START			M22-XL-W-GB1 218415						
CLOSE			M22-XL-W-GB2 218416						
UP			M22-XL-W-GB3 218417						
DOWN			M22-XL-W-GB4 218418						
TEST			M22-XL-W-GB9 218419						
OFF			M22-XL-R-GB5 218420						
ON			M22-XL-W-GB6 218421						
FORWARD			M22-XL-W-GB15 218422						

Notes

¹⁾ When ordering, the part no must include the following details:
 1st wildcard Δ color: -R, -G, -B, -W, -Y, -S
 2nd wildcard Δ file name generated by Labeleditor → Engineering



























Text size 3 mm:
 max. 8 characters in first line,
 10 characters in second line,
 8 characters in third line



Text size 5 mm:
 Max. 5 characters per line





Inscription or explanation	For use with	Color, symbol	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Lenses for indicator lights						
≤ 5 characters: letter height 5 mm > 5 characters: letter height 3 mm						
REVERSE	M22-L-X M22-LC-X		M22-XL-W-GB16 218423		10 off  	UL/CSA certification not required
RAISE			M22-XL-W-GB17 218424			
LOWER			M22-XL-W-GB18 218425			
Stopp			M22-XL-R-X0 218163			
Stopp			M22-XL-W-X0 218164			
Start			M22-XL-G-X1 218384			
Start			M22-XL-W-X1 218385			
Start			M22-XL-G-X2 218386			
Start			M22-XL-W-X2 218387			
Increase			M22-XL-W-X4 218388			
Acceptance			M22-XL-W-X5 218389			
Direction of movement			M22-XL-W-X7 218390			
Direction of movement			M22-XL-W-X8 218391			
Hand			M22-XL-W-X9 218392			
Automatic			M22-XL-W-X10 218393			
Inch			M22-XL-W-X11 218394			
Unlock			M22-XL-W-X12 218395			
Loosen			M22-XL-W-X13 218396			
Clamp			M22-XL-W-X14 218399			
Release			M22-XL-W-X15 218400			
Liquid			M22-XL-W-X16 218401			
Horn			M22-XL-W-X17 218402			



Inscription or explanation	For use with	Color	Style flat Part no. Article no.	Price See price list	Std. pack	Style extended Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Lenses for illuminated pushbutton actuators									
≤ 5 characters: letter height 5 mm > 5 characters: letter height 3 mm									
-	M22(S)-DL-X M22(S)-DRL-X M22S-DGL-X		M22-XDL-W 216441		10 off 	M22-XDLH-W 216447		10 off 	UL/CSA certification not required
-			M22-XDL-R 216442			M22-XDLH-R 216448			
-			M22-XDL-G 216443			M22-XDLH-G 216449			
-			M22-XDL-Y 216444			M22-XDLH-Y 216450			
-			M22-XDL-B 216445			M22-XDLH-B 216451			
with customized inscription to order via Labeleditor → Note		-	M22-XDL-*.*) 216446			M22-XDLH-*.*) 216452			
Zu			M22-XDL-W-D2 218316			M22-XDLH-W-D2 218359			
Auf			M22-XDL-W-D3 218317			M22-XDLH-W-D3 218360			
Ab			M22-XDL-W-D4 218318			M22-XDLH-W-D4 218361			
Aus			M22-XDL-R-D5 218319			M22-XDLH-R-D5 218362			
Ein			M22-XDL-W-D6 218320			M22-XDLH-W-D6 218363			
Entsperren			M22-XDL-B-D14 218321			M22-XDLH-B-D14 218364			
Vorwärts			M22-XDL-W-D15 218322			M22-XDLH-W-D15 218365			
Rückwärts			M22-XDL-W-D16 218323			M22-XDLH-W-D16 218366			
Heben			M22-XDL-W-D17 218324			M22-XDLH-W-D17 218367			
Senken			M22-XDL-W-D18 218325			M22-XDLH-W-D18 218368			
STOP			M22-XDL-R-GB0 218326			M22-XDLH-R-GB0 218369			
STOP			M22-XDL-W-GB0 218327			M22-XDLH-W-GB0 218370			
START			M22-XDL-G-GB1 218328			M22-XDLH-G-GB1 218371			
START			M22-XDL-W-GB1 218329			M22-XDLH-W-GB1 218372			
CLOSE			M22-XDL-W-GB2 218330			M22-XDLH-W-GB2 218373			
UP			M22-XDL-W-GB3 218331			M22-XDLH-W-GB3 218374			
DOWN			M22-XDL-W-GB4 218332			M22-XDLH-W-GB4 218375			
TEST			M22-XDL-W-GB9 218333			M22-XDLH-W-GB9 218376			
OFF			M22-XDL-R-GB5 218334			M22-XDLH-R-GB5 218377			
ON			M22-XDL-W-GB6 218335			M22-XDLH-W-GB6 218378			

Notes

¹⁾ When ordering, the part no must include the following details:
 1st wildcard * Δ color: -R, -G, -B, -W, -Y
 2nd wildcard * Δ File name generated by Labeleditor → Engineering
































Text size 3 mm:
 max. 8 characters in first line,
 10 characters in second line,
 8 characters in third line



Text size 5 mm:
 Max. 5 characters per line





Inscription or explanation	For use with	Color, symbol	Style flat			Style extended			Information relevant for export to North America  
			Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	
Lenses for illuminated pushbutton actuators									
≤ 5 characters: letter height 5 mm > 5 characters: letter height 3 mm									
RESET	M22(S)-DL-X M22(S)-DRL-X M22S-DGL-X		M22-XDL-B-GB14 218336		10 off  	M22-XDLH-B-GB14 218379		10 off  	UL/CSA certification not required
FORWARD			M22-XDL-W-GB15 218337			M22-XDLH-W-GB15 218380			
REVERSE			M22-XDL-W-GB16 218338			M22-XDLH-W-GB16 218381			
RAISE			M22-XDL-W-GB17 218339			M22-XDLH-W-GB17 218382			
LOWER			M22-XDL-W-GB18 218340			M22-XDLH-W-GB18 218383			
Stopp			M22-XDL-R-X0 218159			M22-XDLH-R-X0 218161			
Stopp			M22-XDL-W-X0 218160			M22-XDLH-W-X0 218162			
Start			M22-XDL-G-X1 218295			M22-XDLH-G-X1 218341			
Start			M22-XDL-W-X1 218296			M22-XDLH-W-X1 218342			
Start			M22-XDL-G-X2 218297			M22-XDLH-G-X2 218343			
Start			M22-XDL-W-X2 218301			M22-XDLH-W-X2 218344			
Increase			M22-XDL-W-X4 218302			M22-XDLH-W-X4 218345			
Acceptance			M22-XDL-W-X5 218303			M22-XDLH-W-X5 218346			
Reset			M22-XDL-B-X6 218304			M22-XDLH-B-X6 218347			
Directions			M22-XDL-W-X7 218305			M22-XDLH-W-X7 218348			
Directions			M22-XDL-W-X8 218306			M22-XDLH-W-X8 218349			
Hand			M22-XDL-W-X9 218307			M22-XDLH-W-X9 218350			
Automatic			M22-XDL-W-X10 218308			M22-XDLH-W-X10 218351			
Inch			M22-XDL-W-X11 218309			M22-XDLH-W-X11 218352			
Unlock			M22-XDL-W-X12 218310			M22-XDLH-W-X12 218353			
Loosen		M22-XDL-W-X13 218311		M22-XDLH-W-X13 218354					
Clamp		M22-XDL-W-X14 218312		M22-XDLH-W-X14 218355					
Release		M22-XDL-W-X15 218313		M22-XDLH-W-X15 218356					
Liquid		M22-XDL-W-X16 218314		M22-XDLH-W-X16 218357					
Horn		M22-XDL-W-X17 218315		M22-XDLH-W-X17 218358					



	Protection type	Mounting locations	Color	RAL value	Knock-out cable entries	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
		Number			Number × M20				
Flush mounting panels									
No legend plates possible with vertical arrangements Protection type only in conjunction with a suitable enclosure and correct mounting.									
Aluminium with yellow paint finish for Emergency switching off		IP65	1		RAL 1004	-	M22-EY1 216542	5 off 	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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
Aluminium light anodized, including M22-XE...			1		RAL 7035	-	M22-E1 216541		
			2			-	M22-E2 216543		
			3			-	M22-E3 216544		
			4			-	M22-E4 216545	1 off 	
			5			-	M22-E5 216546		
		IP40	6			-	M22-E6 216547		
Shrouds									
Plastic, light grey Protection type only in combination with flush mounting plates M22-E...									
		IP55	1		RAL 7035	3	M22-H1 216548	1 off 	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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
			2			4	M22-H2 216549		
			3			4	M22-H3 216550		
		IP40	4			4	M22-H4 216551		
			5			5	M22-H5 216552		
			6			6	M22-H6 216553		
Set of plaster keys									
Comprising two plaster keys as mounting aids For plastering of shrouds									
		-	-	-	-	-	M22-UPE 216554	1 off 	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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13

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M22






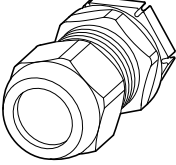
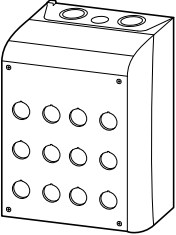



	Mounting locations	Cable entry knockouts		Color	RAL value	Protection type	Part no. Article no.	Price See price list	Std. pack
	Number	Floor Number × M...	Pages Number × M...						
Surface mounting enclosures									
With high-grade steel screws Enclosure base: anthracite									
ATEX ATEX part numbers for use in dust-laden areas, Zone 22, Category 3 → Engineering									
totally insulated									
	For emergency-switching-off pushbuttons	1	2 x 16	1 x 20 2 x 25/20		RAL 1004	IP67, IP69K	M22-IY1 216536	1 off
		1	2 x 16	1 x 20 2 x 25/20		RAL 1004	IP67, IP69K	M22-IY1-ATEX 104370	1 off
		1	2 x 16	1 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I1 216535	1 off
		1	2 x 16	1 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I1-ATEX 104371	1 off
		2	2 x 20	1 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I2 216537	1 off
		2	2 x 20	1 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I2-ATEX 104372	1 off
		3	2 x 20	2 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I3 216538	1 off
		3	2 x 20	2 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I3-ATEX 104373	1 off
		4	2 x 20	2 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I4 216539	1 off
		4	2 x 20	2 x 20 2 x 25/20		RAL 7035	IP67, IP69K	M22-I4-ATEX 104374	1 off
		6	2 x 20	2 x 20 2 x 25/20		RAL 7035	IP66	M22-I6 216540	1 off
		6	2 x 20	2 x 20 2 x 25/20		RAL 7035	IP66	M22-I6-ATEX 104375	1 off

Notes

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
 Degree of Protection UL/CSA Type 3R, 4X, 12, 13

Mounting locations	Cable entry knockouts		Color	RAL value	Protection type	Part no. Article no.	Price See price list	Std. pack
	Floor	Pages						
Number	Number × M...	Number × M...						
M20 connecting screw								
For connection of any M22-I... surface mounting enclosures Mounting by M20 cable entry from the side								
	-	-	-	-	-	IP67	M22-XI 229162	25 off  
M20 metric cable glands according to EN 50262								
With lock nut and built-in strain relief Polyamide, halogen free External diameter of cable 6 - 13 mm								
	-	-	-	-	-	IP68, IP69K	V-M20 206910	20 off
Surface mounting enclosures								
Including mounting plate for base fixing Enclosure base: anthracite								
	12	2 x 32/25	2 x 20 4 x 32/25		RAL 7035	IP55	M22-I12 222688	1 off  

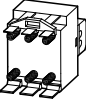

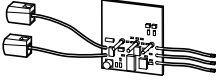

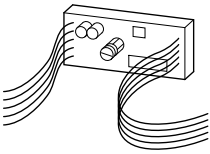
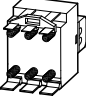

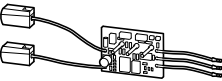

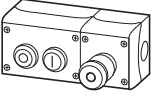
Notes

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
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13













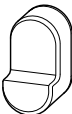










	Description	Part no. Article no.	Price See price list	Std. pack
AS-Interface connection for RMQ-Titan				
	For front mounting (RMQ-Titan)	AS-Interface slave Adapter element for RMQ-Titan AS-Interface information: 2 input bits, 1 output bit Module enclosure for snap fitting on the contact and LED elements: Inputs for 2 contact elements: M22-K01 (normally closed contact), M22-K10 (normally open contact) Output for 1 LED element: M22-LED-... Including AS-Interface connector as insulation piercing terminal	M22-ASI 231269	1 off 
	for base fixing (RMQ-Titan)	Adapter element for RMQ-Titan AS-Interface information: 2 input bits, 1 output bit Inputs for two contacts Output for 1 LED element: M22-LED-...	M22-ASI-C 231271	1 off 
	For surface mounting enclosures (RMQ-Titan)	External connections: 4 inputs/4 outputs For contact and lamp socket elements. RMQ-Titan surface mounting enclosures: M22-I3, M22-I4, M22-I6	RMQ-M1C-ASI 032314	1 off
Emergency switching off connections for AS-Interface for safety monitor				
	For front fixing	AS-Interface slave Adapter element for RMQ-Titan AS-Interface information: 1 dual-channel input, 1 output Module enclosure for snap fitting on the contact and LED elements: Inputs for 2 contact elements: M22-K01 (NC) Output for 1 LED element: M22-LED-... Including AS-Interface connector as insulation piercing terminal	M22-ASI-S 231270	1 off 
	For base fixing	AS-Interface slave Adapter element for RMQ-Titan or FAK AS-Interface information: 1 dual-channel input, 1 output For the following RMQ-Titan contact and LED elements: Inputs for 2 contact elements: M22-K01 (NC), M22-K01 (NC) Output for 1 LED element: M22-LED-...	M22-ASI-CS 231272	1 off 
	AS-Interface complete unit	M22-I2 and M22-I2Y surface mounting enclosures M22-PVL emergency-off button actuator and ON-OFF pushbutton actuator; ON illuminated 1 x M22-AS-Interface-CS and 1 x M22-AS-Interface-C 1 x M12A connector Addressing M22-PVL → 0; ON-OFF 1 A	M22-I1/2-M1-ASI 107405	1 off


Information relevant for export to North America



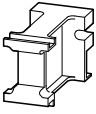
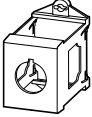





Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified


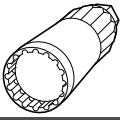

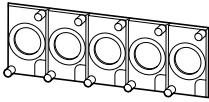

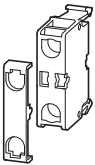

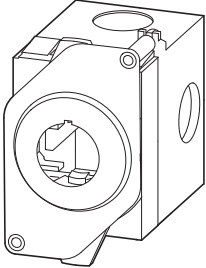
For use with	Color	RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Bezel gold (24 karat)						
Bezel not available individually: Can be ordered only through Eaton sales office as M22-COMBINATION-* (customer-specific complete devices)						
	–	–	M22-FR-AU 274150		1 off 	UL/CSA certification not required
Blanking plugs						
ATEX  → Engineering round design, IP67, IP69K For closing off of spare mounting locations						
	–	●	RAL 7035	M22-B 216388	50 off 	NA Certification Request filed for UL and Degree of Protection CSA UL/CSA Type 3R, 4X, 12, 13
–	–	●	RAL 7035	M22-B-GVP 216389	250 off 	
–	●	RAL 9005	M22S-B 216390	50 off 		
–	●	RAL 9005	M22S-B-GVP 216391	250 off 		
Pushbutton diaphragm for IP67, IP69K, silicone						
ATEX  → Engineering Transparent diaphragms for severe environmental conditions and use in the food industry. Do not use with legend plate mount M22S-ST since degree of protection is not guaranteed						
	M22(N/O)-D-(R)-... M22(N/O)-DL-... M22(N/O)-DRL-... M22(N/O)-L(C)-...	–	–	M22-T-D 216395	10 off 	NA Certification Request filed for UL and Degree of Protection CSA UL/CSA Type 3R, 4X, 12, 13
	M22(N/O)-DDL...	–	–	M22-T-DD 216396	10 off 	
For use with		Color	RAL value	Part no. Article no.	Price See price list	Std. pack
Protective diaphragm, silicone						
ATEX  → Engineering Prevents ingress of dirt and dust into the key opening						
	M22-WS...	–	–	M22-XWS 231275		5 off 
Telescopic clip						
For adjusting mounting depth for mounting in enclosures CI and panels with mounting depths from 115 to 155 mm. Infinitely adjustable, screw- and snap-on mounting (mounting rail IEC/EN 60715) up to 10 × M22-TC per enclosure permissible, of which 5 with maintained buttons. Do not use in combination with emergency switching-off pushbuttons						
Three contact/LED elements with base fixing, Including centring adapter						
	–	–	–	M22-TC 216398		10 off 
With top-hat rail IEC/EN 60715, width 44 mm For mounting of EASY, FAZ, PKZ, DIL etc. weighing ≤ 0.3 kg						
	EASY200, EASY500, EASY700, EASY800, MFD-CP8, EC4P Infinitely adjustable via scale from 75 to 115 mm	–	–	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






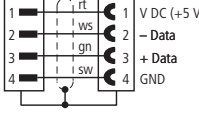



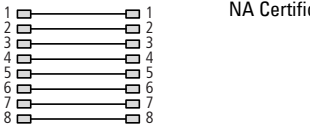














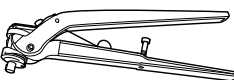




For use with		Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Extension					
	Telescopic clip for mounting depth 205 mm	M22-TCV 225527		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
IVS top-hat rail adapter					
	Top-hat rail to IEC/EN 60715 for front fixing	M22-IVS 216400		1 off 	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
Plunger bridge					
For actuating the middle contact element of the M22-W...3 non-illuminated 3-position selector switch actuator → Engineering					
	Middle contact of 3-position selector switch non-illuminated, (1 off) black	M22-XW 216405		10 off 	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
Guardring					
ATEX  → Engineering To protect against accidental operation, IP66					
	For pushbutton and selector switch actuators (button plates cannot be used)	M22-XGWK 231274		5 off 	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 Degree of Protection UL/CSA no. 3R, 4X, 12, 13
Threaded ring					
M22 x 1.5 mm					
	6.0 mm thick	M22-GR 216401		50 off 	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
	4.8 mm thick	M22-GR7 288852		50 off 	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
	6.0 mm thick	M22-GR-GVP 216404		500 off 	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
Set of adapter rings, 30/22.3 mm					
Black, consisting of adapter ring and fixing nut, IP67, IP69K					
	Mounting of \varnothing 22.3 devices in \varnothing 30.5 drilling dimensions Protection type is determined by the front element.	M22S-R30 216408		10 off 	UL/CSA certification not required

For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Mounting ring tool				
 Threaded ring, can be fitted on to electric screwdriver	M22-MS 216402		5 off 	UL/CSA certification not required
Fixing plate				
 M22-H... shrouds to the M22-E... flush mounting panel for up to 5 mounting locations	M22-XE5 218945		1 off 	UL/CSA certification not required
Dust cover				
 for M22-K... contacts (front fixing)	M22-XKDP 100647		50 off 	UL/CSA certification not required
Dust cover and mechanical fixing				
for M22... 5 x M20 knockouts				
 Max. 3 contacts	M22-ADC 106523		1 off	
Max. 4 contacts	M22-ADC4 106524			
Mechanical fixing	M22-XADC 107918			

Model	Lifespan at $t_a = +25\text{ }^\circ\text{C}$ $t_{\text{average}} \text{ (AC)}$ h	Color	Part no. Article no.	Price See price list	Std. pack
BA 9s filament bulbs for compact indicator lights					
High-grade versions from selected manufacturers					
 110 - 130 V/2.4 W	2000	-	A22-GL130 261361		100 off
24 V/2.0 W	5000	-	A22-GL24 261360		100 off
BA 9s single-chip LEDs for compact indicator lights					
For AC and DC (positive pole connected to X1), protected against polarity reversal, integral suppressor circuit-breaker up to 1500 V					
 12 - 30 V AC/DC/15 mA	100000		A22-LED-W 261362		10 off
12 - 30 V AC/DC/15 mA	100000		A22-LED-R 261364		
12 - 30 V AC/DC/15 mA	100000		A22-LED-G 261363		
12 - 30 V AC/DC/15 mA	100000		A22-LED-Y 261365		



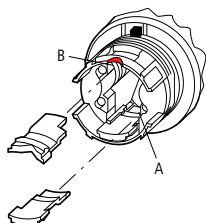
	For use with	Color	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America  
Built-in 2.0 A/A USB socket with connection cable							
IP65 with closed cover IP20 with plug connected							
	Front mounting prefabricated cable (60 cm) with permanently connected USB 2.0 A type	–	M22-USB-SA 107412		1 off  		NA Certification Request filed for UL and CSA
Built-in RJ45 socket							
IP65 with closed cover IP20 with plug connected							
	Front mounting RJ45, 8/8	–	M22-RJ45-SA 107413		1 off  		NA Certification Request filed for UL and CSA
Pushbuttons							
For enclosed overload relays Mounting diameter: 22.3 mm							
	ZW7... ZB12 ZB32 ZB65 ZB150	 	M22-DZ-B 254833 M22-DZ-B-GB14 254834		10 off  	Blue button plate Blue button plate Inscription: RESET	Product Standards UL 508; CSA-C22.2 No. 14; IEC/EN 60947; CE marking UL File No. NKCR UL CCN CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
	M22-DZ-X M22(S)-D-X M22(S)-DR-X M22-D6-X	  	M22-XD-R 216423 M22-XD-R-X0 218153 M22-XD-R-GB0 218194		10 off  	Without button plate, add button plate. Red button plate Red button plate with white circle Red button plate Inscription: STOP	UL/CSA certification not required
Bulb extractor							
With compact indicator light M22-LC(H)...							
	A22-GL... A22-LED...	–	M22-LG 216403		5 off  	–	UL/CSA certification not required
Notching tool							
Punching tool to produce the cutout for the anti-rotation lug to IEC/EN 60947-5-1 St 37 sheet steel, max. 3 mm thickness VA high-grade steel max. 1.5 mm thickness							
		–	BA/C-NZ-22 028144		1 off  	Price not eligible for discount	UL/CSA certification not required
ATEX (only in conjunction with M22-COMBINATION-*)							
For use in accordance with the ATEX directive in dust-laden areas, Zone 22, Category 3 → Engineering							
–	–	–	M22-ATEX 104380		1 off	–	–
Customized complete unit							
→ Engineering To order use form F0315 → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; max. 10 characters.							
–	–	–	M22-COMBINATION-* 228298		1 off	–	–





Engineering

For converting the maintained/momentary function and the key withdraw for 3 positions selector switch actuators



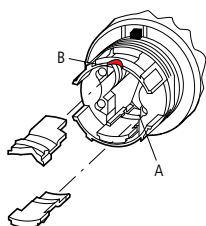
	0	I	O	II
	A			B
60° ↘ 60°	-	✓	✓	-
50° ↘ 50°	✓	x	✓	x
60° ↘ 50°	-	✓	✓	x
50° ↘ 60°	✓	x	✓	-
40° ↘ 40°	✓	x	✓	x
60° ↘ 40°	-	✓	✓	x
50° ↘ 40°	✓	x	✓	x
40° ↘ 60°	✓	x	✓	-
40° ↘ 50°	✓	x	✓	x

✓ = key withdrawable
x = key not withdrawable

Coding adapters

- 2x M22-XC-Y → Page 2/23
- 1x M22-XC-R → Page 2/23
- 1x

For converting between maintained/momentary function and key withdraw for 2 positions selector switch actuators



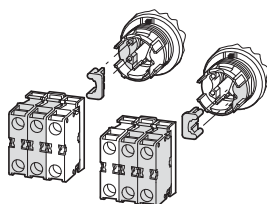
	0	I
	A	B
↘ 60°	✓	✓
↘ 50°	✓	x
↘ 40°	✓	x

✓ = key withdrawable
x = key not withdrawable

Coding adapters

- 2x M22-XC-Y → Page 2/23
- 1x M22-XC-R → Page 2/23
- 1x

Plunger bridge for the middle contact on 3-position selector switches M22(S)-W...3-....



Customized inscription of devices using the Labeleditor software

Individually inscribe your device in 4 stages:

- Download the inscription software: www.moeller.net/support, keyword: "Labeleditor"
- Create label template (menu-guided in the software)
- Send the label template to the factory by email. The email address is automatically set for the selected product by the program. When your template is sent, the Labeleditor issues a file name such as "RMQ_Silver_12345.zip". This file name is part of the article to be ordered (see Ordering examples).
- Send order to the Eaton office or the electrical wholesalers.

Ordering examples

- M22-XST insert plate for M22S-ST-X legend plate mount with special inscription

Basic type: M22-XST-*

* = File name generated by Labeleditor

Please order: 1 x M22-XST-RMQ_Silver_xxxxxx.zip

- Button plate in green with special inscription

Basic type: M22-XDH-*

1. * = Colour (here "G" for green), 2. * = File name generated by Labeleditor* =

File name generated by Labeleditor

Please order: 1 x M22-XDH-G-RMQ_Silver_xxxxxx.zip

- Double pushbutton actuator with white button plates and special symbols

Basic type: M22-DDL-*_*_*

1. * = Colour (here "W" for white), 2. and 3. * = File name assigned by Labeleditor; must be stated here 2 x

Please order: 1 x M22-DDL-W-RMQ_Silver_xxxxxx.zip-RMQ_Silver_xxxxxx.zip

- Key-operated button, 2 positions, Individual lock mechanism no. MS1, individual symbol

Basic type: M22-WRS*-MS*_*

WRS*: * = Number of positions,

MS*: * = number of individual lock mechanism

-*: * = File name assigned by Labeleditor

Please order: 1 x M22-WRS2-MS1-RMQ_Silver_xxxxxx.zip



ATEX = ATmosphere Explosible (explosive atmosphere)

Eaton supplies devices from the RMQ-Titan and FAK range in compliance with **ATEX Directive 94/9/EC** (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). The approval has the test number BVS 06 ATEX E023U, BVS 06 ATEX E024X. The housings, pushbutton actuators, indicator lights, and foot and palm switches have the equipment code II3D IP5X T85°C.

According to **Directive 1999/92/EC** for the operator (binding as of 06/2006), approved devices with test number BVS 06 ATEX E023U, and BVS 06 ATEX E024 may be used in dust-laden areas, Zone 22, Category 3. The devices with surface-mounting enclosures with ATEX approval are used in dust-laden/hazardous areas, such as the following: mills, metal grinding works, wood processing works, cement works, aluminum industry, foodstuffs industry, grain storage and processing, and agriculture.

ATEX ordering examples:

- M22 complete unit
M22-COMBINATION-* User-definable customer ID; up to 10 characters → Page 2/6

M22-I1-ATEX ATEX housing → Page 2/45

M22-D-S Pushbutton actuator → Page 2/17

M22-KC10 Contact (N/O) → Page 2/31

M22-KC01 Contact (NC) → Page 2/31

- M22 front element
M22-COMBINATION-* User-definable customer ID; up to 10 characters → Page 2/6

M22-D-S Pushbutton actuator → Page 2/17

M22-ATEX ATEX complement suffix → Page 2/51

- FAK complete unit
FAK-COMBINATION-* User-definable customer ID; up to 10 characters → Page 2/78

FAK-ATEX ATEX accessory → Page 2/78

FAK-IU Enclosure base → Page 2/78

FAK-S Enclosure top → Page 2/78

M22-KC10 Normally open contact (N/O) → Page 2/31

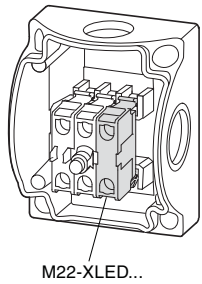
M22-KC10 Normally closed contact → Page 2/31

Engineering

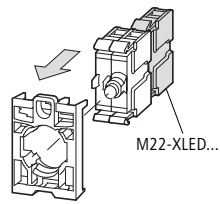
LED series resistor elements

M22-XLED

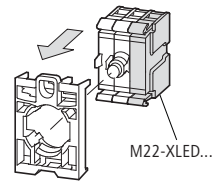
Surface mounting enclosure



Flush mounting at the rear

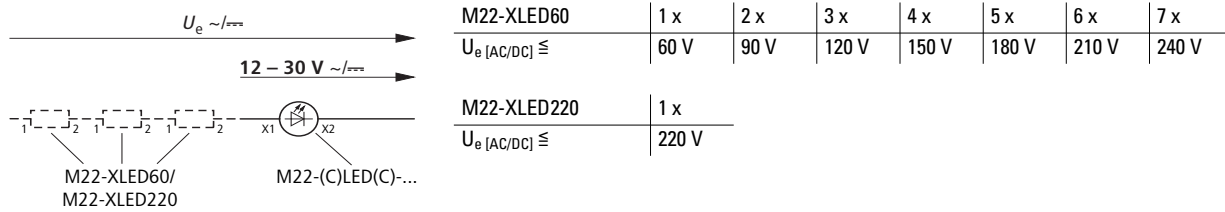


Flush mounting at the side



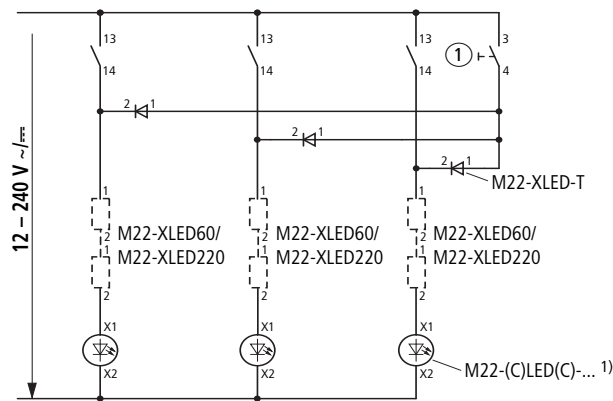
LED resistor element

M22-XLED60/M22-XLED220



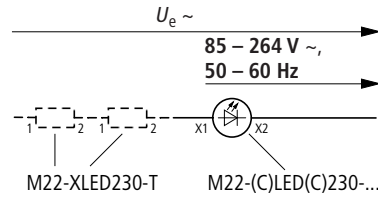
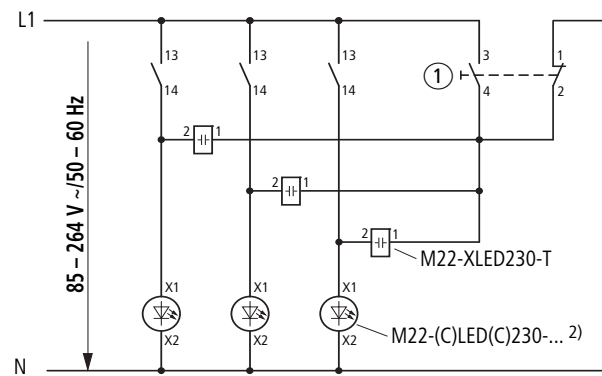
LED test element

M22-XLED-T



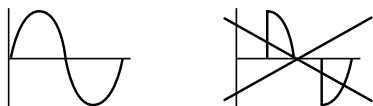
- ① Test button
- ¹⁾ Only for 12 - 30 V elements

M22-XLED230-T



M22-XLED230-T	1 x	2 x
$U_e \leq$	400 V~	500 V~

- ① Test button
- ²⁾ Only for 85 - 264 V elements





Technical data

			Contact elements	Double-contact elements	LED-elements	Illuminated pushbutton actuators, Pushbutton, Mushroom-headed pushbuttons momentary	Double actuators	Selector switch actuators, Illuminated selector switch actuators
General								
Standards			IEC/EN 60947 VDE 0660					
Lifespan, mechanical	Switch operations	x 10 ⁶	5	–	–	5	0.2	0.1
Operating frequency	Switch operations/h		≤ 3600	≤ 3600	–	≤ 3600	≤ 3600	≤ 2000
Actuating force		N	5	10	–	5	5	–
Operating torque (screw terminals)		Nm	0.8	–	0.8	–	–	0.3
Protection type (IEC/EN 60529)			IP20	IP20	IP20	IP67, IP69K	IP66	IP66
Climatic proofing			Damp heat, constant as per IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30					
Ambient temperature								
Open		°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Mounting position			Any	Any	Any	Any	Any	Any
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal		g	30	30	30	30	30	30
Terminal capacity								
Solid		mm ²	0.75 - 2.5	0.5 - 1.5	0.75 - 2.5	–	–	–
Stranded		mm ²	0.5 - 2.5	0.5 - 1.5	0.5 - 2.5	–	–	–
Flexible with ferrule		mm ²		0.5 - 1.0	–	–	–	–
Contacts								
Rated impulse withstand voltage	U _{imp}	V AC	6000	4000	6000	–	–	–
Rated insulation voltage	U _i	V	500	250	500	–	–	–
Overvoltage category/degree of pollution			III/3	III/3	III/3	–	–	–
Control circuit reliability								
At 24 V DC/5 mA	H _F	Fault probability	< 10 ⁻⁷ (i.e. 1 failure to 10 ⁷ operations)	–	–	–	–	–
At 5 V DC/1 mA	H _F	Fault probability	< 5 × 10 ⁻⁶ (i.e. 1 failure to 5 × 10 ⁶ operations)	–	–	–	–	–
Max. short-circuit protective device								
Fuseless		Part no.	PKZM0-10/FAZ-B6/1	PKZM0-10/FAZ-B6/1	–	–	–	–
Fuse	gG/gL	A	10	10	–	–	–	–
Switching capacity								
Rated operation current								
AC-15								
115 V	I _e	A	6	6	–	–	–	–
230 V	I _e	A	6	6	–	–	–	–
400 V	I _e	A	4	–	–	–	–	–
500 V	I _e	A	2	–	–	–	–	–
DC-13								
24 V	I _e	A	3	3	–	–	–	–
42 V	I _e	A	1.7	–	–	–	–	–
60 V	I _e	A	1.2	–	–	–	–	–
110 V	I _e	A	0.8	0.6	–	–	–	–
220 V	I _e	A	0.3	0.3	–	–	–	–
Lifespan, electrical								
AC-15								
230 V/0.5 A	Switch operations	x 10 ⁶	1.6	–	–	–	–	–
230 V/1.0 A	Switch operations	x 10 ⁶	1	–	–	–	–	–
230 V/3.0 A	Switch operations	x 10 ⁶	0.7	–	–	–	–	–
DC-13								
12 V/2.8 A	Switch operations	x 10 ⁶	1.2	–	–	–	–	–



			Key-operated buttons	Indicator light, Compact acoustic device, Compact indicator light, Potentiometer	Illuminated push-button actuators, Pushbutton actuators, Mushroom-headed pushbuttons maintained	Emergency stop pushbuttons, emergency switching-off pushbuttons actuators
General						
Standards			IEC/EN 60947 VDE 0660	IEC/EN 60947 VDE 0660	IEC/EN 60947 VDE 0660	IEC/EN 60947 VDE 0660
Lifespan, mechanical	Operations	x 10 ⁶	0.1	–	1	0.1
Operating frequency	Operations/h		≤ 100	–	≤ 1800	≤ 600
Actuating force		N	–	–	5	50
Operating torque		Nm	0.5	–	–	–
Protection type (IEC/EN 60529)			IP66	Indicator light compact: IP67, IP69K Acoustic device, compact: IP40 Potentiometer: IP66	IP67, IP69K	IP67, IP69K
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature						
Open		°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Mounting position			Any	Any	Any	Any
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal		g	30	30	30	50
Terminal capacity						
Solid		mm ²	–	0.5 - 1.5	–	–
Stranded		mm ²	–	0.5 - 1.5	–	–
Contacts						
Rated impulse withstand voltage	U_{imp}	V AC	–	4000	–	–
Rated insulation voltage	U_i	V	–	250	–	–
Overvoltage category/pollution degree			–	III/3	–	–

M22-AS-Interface..., RMQ-..., AS-Interface



		AS-Interface connection for RMQ-Titan RMQ-M1C-ASI	Adapter element for RMQ-Titan M22-ASI	M22-ASI-C
General				
Standards		EN 50081-1 EN 50082-1	IEC/EN 60947, DIN EN 50 295	IEC/EN 60947, DIN EN 50 295
Radio interference suppression		EN 55011, EN 55022	EN 55011, EN 55022	EN 55011, EN 55022
Limit value class		A	–	–
Protection type		IP20	IP20	IP00
Climatic proofing		Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclic, to IEC 60068-2-30		
Ambient temperature				
Open	°C	+25 - +55	+25 - +55	+25 - +55
Shock resistance, shock duration 11 ms	g	> 30	> 30	> 30
Vibrations IEC 60068-2-27 (amplitude 1 mm)	Hz	10 - 55	–	–
Dimensions	mm	92 x 46 x 30	–	–
Weight	kg	0.1	–	–
Fixing		Front fixing for RMQ-Titan	Front fixing for RMQ-Titan	Base fixing for RMQ-Titan
Mounting position		Any	Any	Any
Power supply				
Rated voltage to AS-Interface Specification	V DC	26.5 - 31.6	26.5 - 31.6	26.5 - 31.6
Terminal type		–	Yellow plug-in terminal as insulation piercing terminal	2 cables on board
Current supply		Completely from the AS-Interface cable	Completely from the AS-Interface cable	Completely from the AS-Interface cable
Addressing		Via AS-Interface line connection	Via AS-Interface line connection	Via AS-Interface line connection
Total power consumption of the AS interface	mA	–	≤ 40	≤ 40
AS-Interface		Protected against polarity reversal	Protected against polarity reversal	Protected against polarity reversal
Rated operational current at full load	mA	120	–	–
Rated operational current when idle (no I, Q set)	mA	normally 30	–	–
LED status indication		AS-Interface voltage: green LED	AS-Interface power line: green LED on element back AS-Interface ERROR, failure of AS-Interface master: red LED on element back	AS-Interface line POWER: green LED on card AS-Interface ERROR, failure of AS-Interface master: red LED on card
Inputs				
Inputs, protected against short-circuit	Number	4 (1 internal + 3 external)	2 (normally 22 V/5 mA)	2 (normally 22 V/5 mA)
Voltage range	V DC	24 - 30	–	–
Rated current per input	mA	normally 3.5	–	–
Switching level, high signal	V	≥ 15	–	–
Low signal	mA	–	–	–
Length of connecting cables	cm	≤ 200	–	–
Outputs				
Outputs, protected against short-circuit	Number	4 (1 internal + 3 external)	1 (normally 19 V/8 mA)	1 (normally 19 V/8 mA)
Voltage range	V DC	24 V DC (+10/-15%)	–	–
Max. current carrying capacity				
All outputs		–	–	–
Σ 3 external outputs		60	–	–
Length of connecting cables	cm	≤ 200	–	–
Profile		S-7.0	S-3.A.E	S-3.A.E
Specification		2.0	2.1	2.1
Addresses	Number	31	62	62



	M22-ASI-S	M22-ASI-CS
Emergency-stop connections		
Connection to AS-Interface cable	Yellow plug-in terminal as insulation piercing terminal	2 cables on board
Energy supply	Completely from the AS-Interface cable 26.5 - 31.6 V DC	Completely from the AS-Interface, cable 26.5 - 31.6 V DC
Fixing	RMQ-Titan front fixing	RMQ-Titan base fixing
Addressing	Via AS-Interface cable	Via AS-Interface cable
Max. total current	mA 45	45
Ambient temperature	°C -25 – +55	-25 – +55
Mechanical shock resistance	30 g/11 ms to IEC 60068-2-27	30 g/11 ms to IEC 60068-2-27
Protection type	IP20	IP00
Climatic proofing	Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30	Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30
Mounting position	Any	Any
Standards	EN 50178 EN 50295	EN 50178 EN 50295
Inputs	Dual-channel input (22 V/5 mA) (modulated with code sequence) (2 RMQ-Titan M22-K01 NC contact elements)	Dual-channel input (22 V/5 mA) (modulated with code sequence) (2 RMQ-Titan M22-K01 NC contact elements)
Outputs	1 output, normally 19 V/ 8 mA, protected against short-circuit	1 output, normally 19 V/ 8 mA, protected against short-circuit
Status indicators		
Power AS-Interface cable	Green LED on rear	Green LED on rear
Error AS-Interface, failure of AS-Interface master	Red LED on rear	Red LED on rear
Profile	S -7.B.E	S -7.B.E

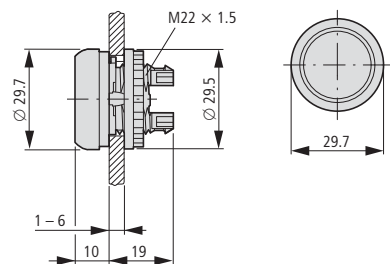
UL-File No. 29184	Pilot Duty	General Use	Terminal capacity
Rating data for approved types to UL/CSA 1)			
RMQ16 contact elements			
E10	C 300, Q 300		Cu cable min. AWG 18, max. AWG 14
E 01	C 300, R 300		
RMQ-Titan contact elements			
M22-K... M22-CK...	A 600, Q 300, > 300 V AC same polarity	10 A – 600 V AC 1 A – 250 V DC	2 x 14 - 18 AWG 2 x 12 - 22 AWG
RMQ-Titan LED elements			
M22-LED... M22-CLED...			2 x 14 - 18 AWG 2 x 12 - 22 AWG
M22-LC(H) M22-AMC			2 x 16 - 20 AWG 2 x 16 - 20 AWG

		UL 508 requirements UL 4X	NEMA recommendation NEMA 13
Protection types, RMQ-Titan			
All front elements	M22(S)-...	●	●
Legend plates	M22S-ST...	●	●
Emergency switching off labels	M22-XAK... M22-XZK... M22-XBK... M22-XYK...	● ● ● ●	● ● ● ●
Foot and palm switches	FAK-...	●	●
Signal towers	SL-...	●	—



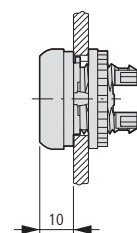
Dimensions

Actuating and indicator elements

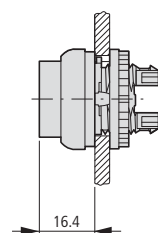


RMQ-Titan pushbutton actuators

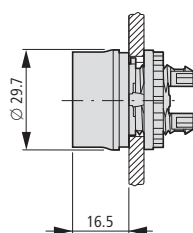
M22...-D...



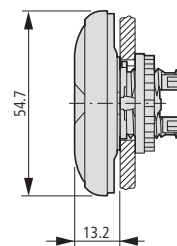
M22...-DH...



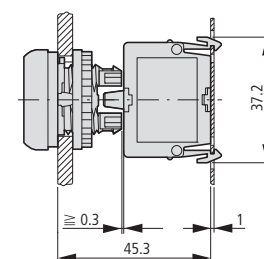
M22-DG(L)...



M22...-DD...

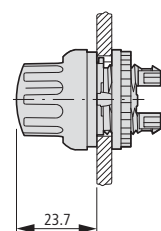


M22-D pushbuttons in base fixing

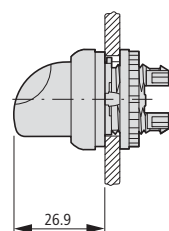


RMQ-Titan selector switch actuators

M22-W...



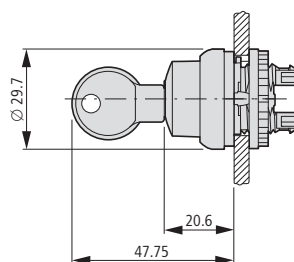
M22...-WL...



RMQ-Titan key-operated button

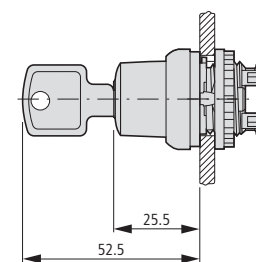
Individual lock mechanism

M22...-W(R)S...



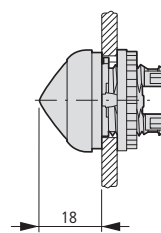
Master key systems

M22...-W...-S-SA...

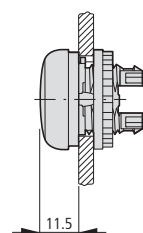


RMQ-Titan indicator light

M22-LH...

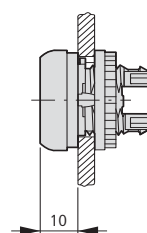


M22-L...

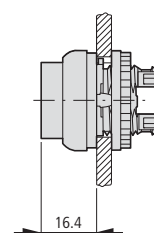


RMQ-Titan illuminated pushbutton actuators

M22...-DL...

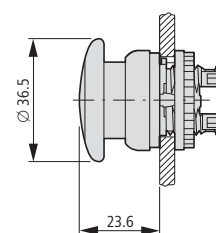


M22...-DLH...



RMQ-Titan mushroom-headed pushbutton

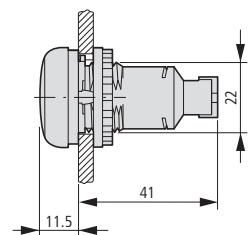
M22...-DP-...



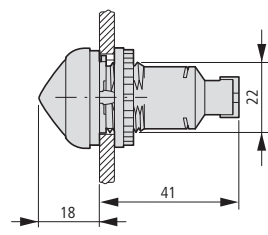
Indicator light, compact acoustic device, compact

M22-LC...

M22-AM...

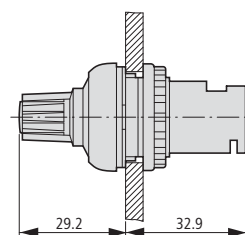


M22-LCH...



Potentiometer

M22...-R...K





Emergency stop pushbuttons/ emergency switching off pushbutton actuators

Mushroom-shaped

M22-PV...

M22S-PV...

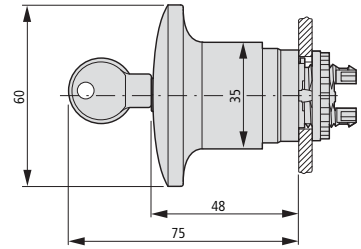
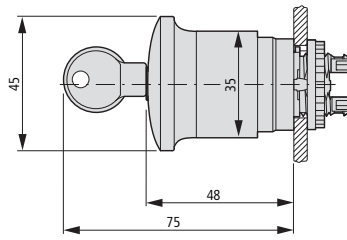
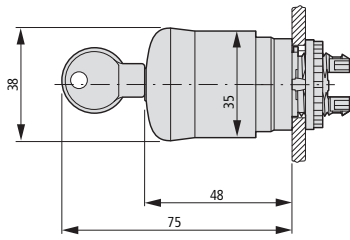
M22-PVL...

M22-PVS...

Palm-shaped

M22-PV...

M22-PV...60...



Front fixing (Construction type: Style Flat)

Fixing adapters

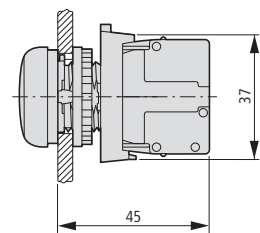
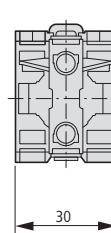
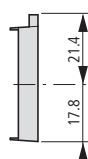
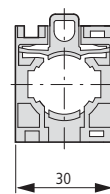
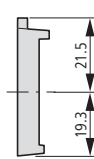
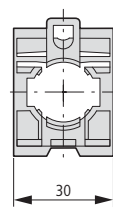
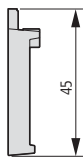
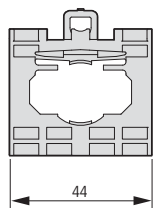
M22-A...

M22-A

Centring adapter

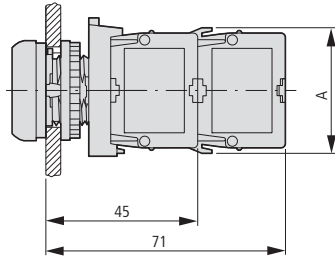
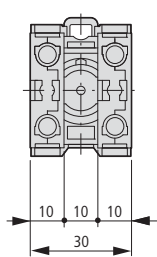
M22-ZA

RMQ-Titan indicator light

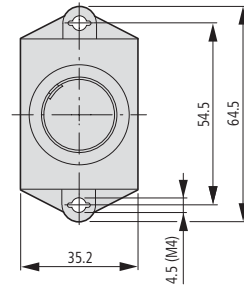
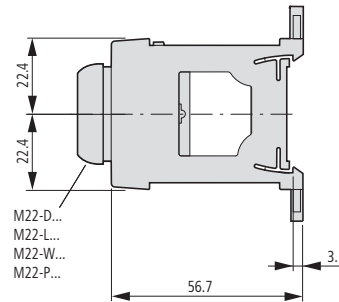


Pushbutton with M22-(C)K...

Pushbutton with M22-(C) LED... + M22-XLED...

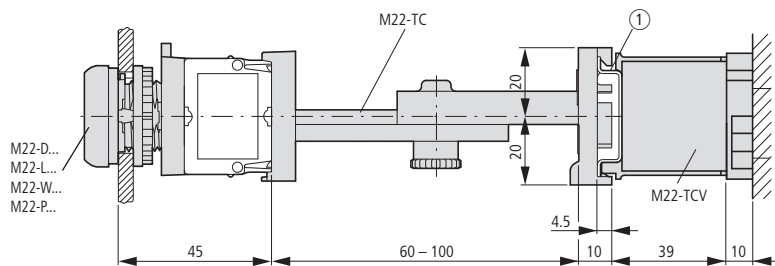


IVS top-hat rail adapter



	1 x M22-K...	2 x M22-K...	1 x M22-CK...	2 x M22-CK...
A	37.2	37.2	39	39

Pushbuttons, indicator lights with M22-TC telescopic clip and M22-TCV extension

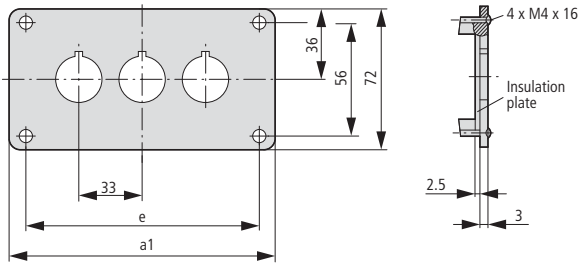


① Top-hat rail to IEC/EN 60715



Front fixing (Style Flat)

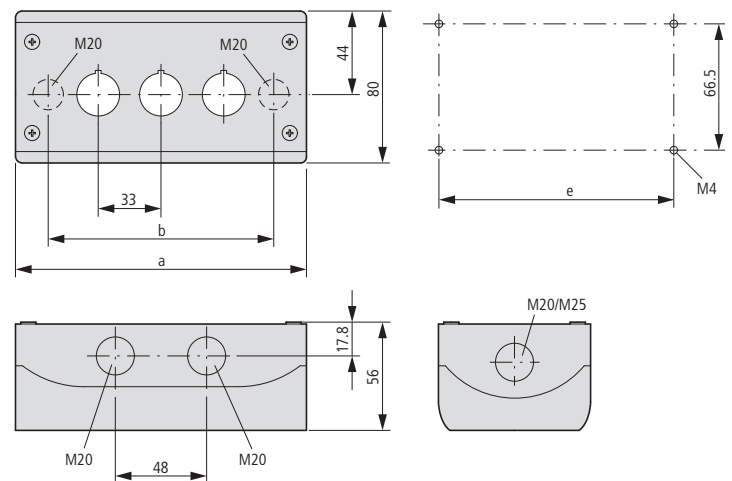
RMQ-Titan mounting panel
M22-E...



Part no.	a1	e
M22-E(Y)1	72	56
M22-E2	105	89
M22-E3	138	122
M22-E4	171	155
M22-E5	204	188
M22-E6	237	221

Base fixing (Construction type: Style mounting)

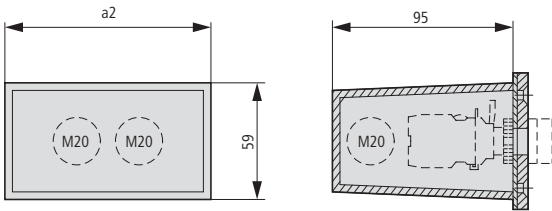
RMQ-Titan surface mounting enclosure
M22-I...



Part no.	Mounting locations	a	b	e	Cable entries
M22-I(Y)1	1	72	42.6	58.5	2 × M16 3 × M20 2 × M25
M22-I2	2	120	85.6	106.5	2 × M20 3 × M20 2 × M25
M22-I3	3	153	118.6	139.5	2 × M20 2 × M25 4 × M20
M22-I4	4	186	151.6	172.5	2 × M20 2 × M25 4 × M20
M22-I6	6	252	217.6	238.5	2 × M20 2 × M25 4 × M20

Shrouds

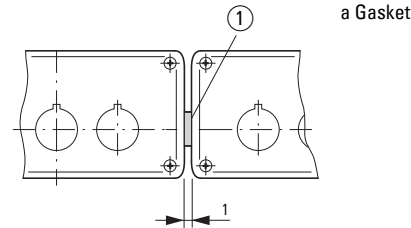
M22-H...



Part no.	a2	Cable entries	Construction type
M22-H1	42	3 × M20	One-piece
M22-H2	75	4 × M20	
M22-H3	108	4 × M20	
M22-H4	141	4 × M20	Split
M22-H5	174	5 × M20	
M22-HE6	207	6 × M20	

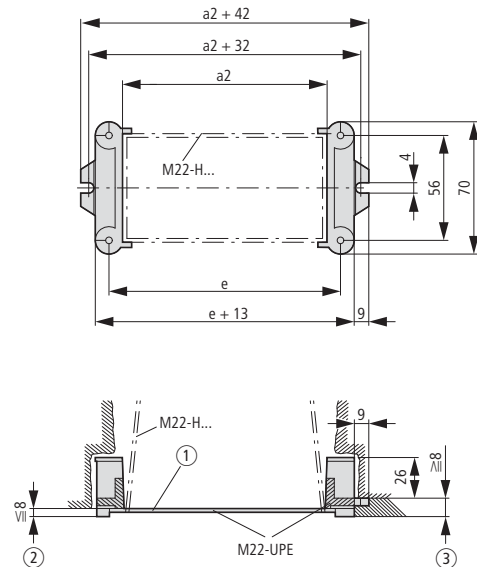
Combination of surface mounting enclosures

M22-XI



Shroud with plaster keys

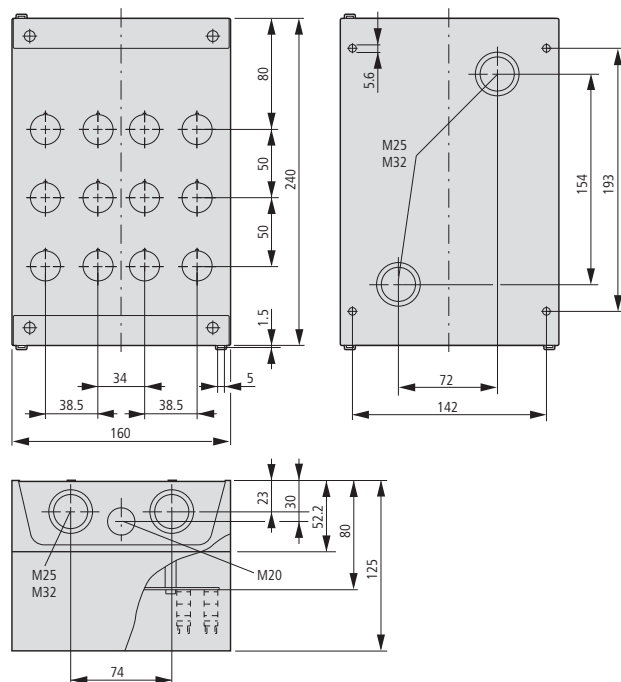
M22-UPE



- ① Box for closing off when plastering
- ② Plaster thickness less than 8 mm
- ③ Plaster thickness more than 8 mm

Surface mounting enclosure for 12 mounting locations

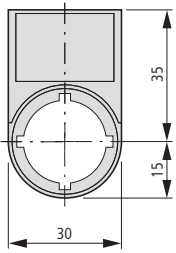
M22-I12



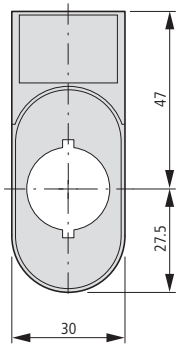


Label mounts

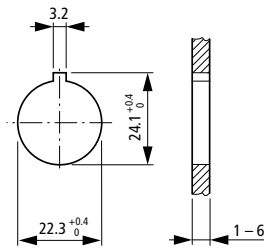
M22S-ST...



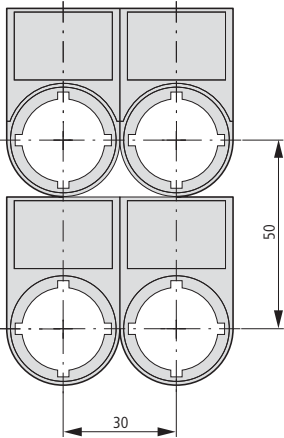
M22S-STDD-X



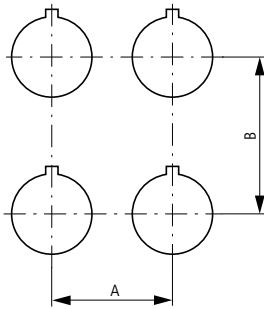
Mounting hole with lug slot



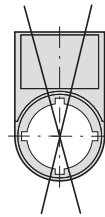
Grid dimension to IEC/EN 60947



Grid dimension for various combinations

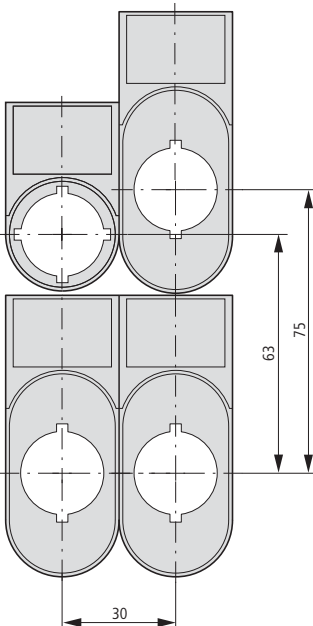


Actuator diaphragm cannot be combined with label mount

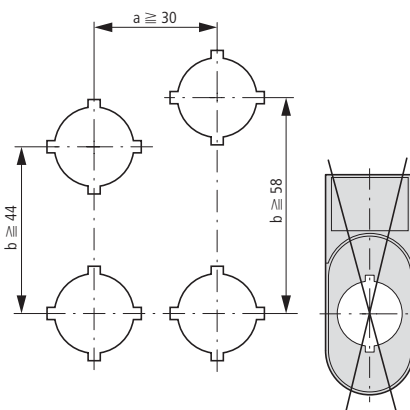


Part no.	A ≙ mm	B ≙ mm
M22(N/O)-...(IEC/EN 60947)	30	50
RMQ-Silver min.	30	40
M22-D... + M22-T-D	33	40
M22-D(R)P...	38	40
M22-PV...	45	45
M22-PV...45	55	55
M22-PV...60	70	70
M22-PV(L) + M22-PL-PV	48	56
M22-PV(L)(N/O...) + M22-D...	33	40
M22-DDL...	30	55
M22-DDL... + M22-T-DD	33	58
M22-ST...	30	50
M22-STDD...	30	75
M22-CK...	30	45
M22-CLED...	30	45
M22-XAK...	90	90
M22-XZK...	33	52
M22-XBK...	60	60
M22-XYK...	50	50
M22-D4	60	60
M22-WVR...4	50	50
M22-W...J4	100	100

Grid dimension for M22-DD...



Grid dimension for M22-DDL

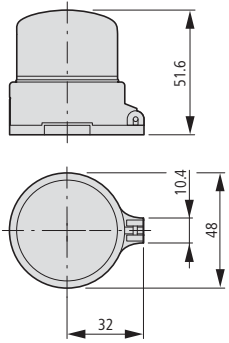


**Pushbutton diaphragm M22-T-DD
Actuator diaphragm cannot be combined with label mount**



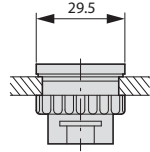
Emergency switching off sealable shroud

M22-PL-PV



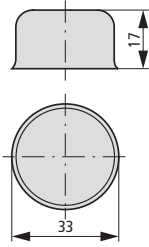
Blanking plugs

M22...B-...

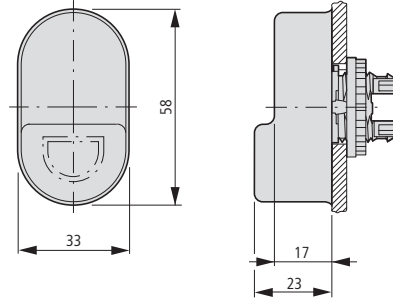


Pushbutton diaphragm

M22-T-D

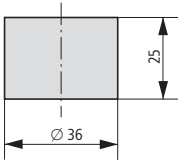


M22-T-D

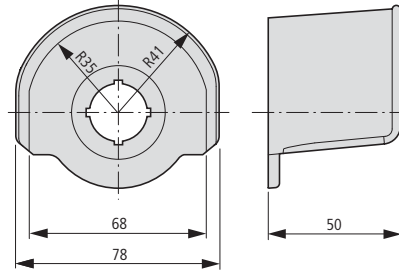


Guard-ring

M22-XGWK

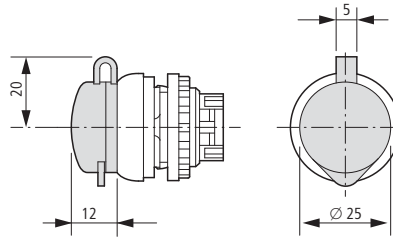


M22-XGPV



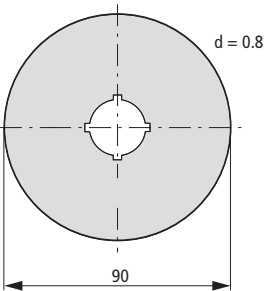
Protective diaphragm

M22-XWS

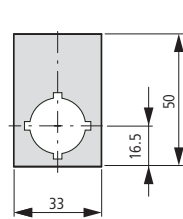


Emergency stop labels

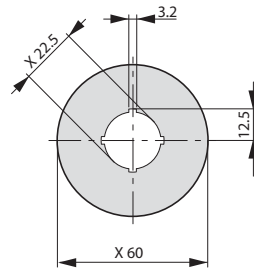
M22-XAK...



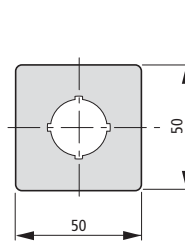
M22-X(Y)ZK...



M22-XBK-...

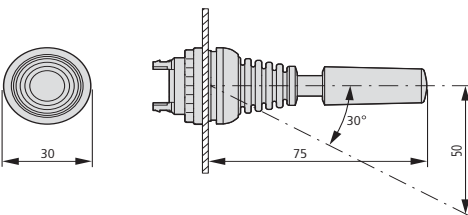


M22-XYK-...



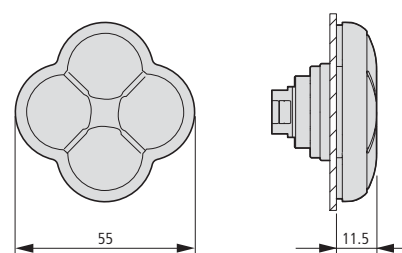
Joystick

M22...-W...J...



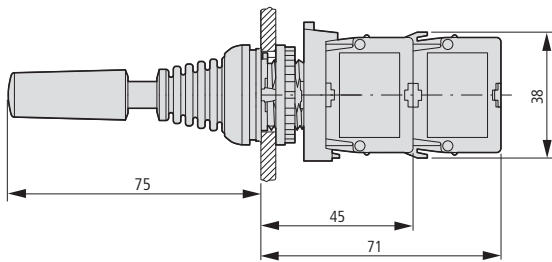
4-way pushbutton

M22-D...4-...



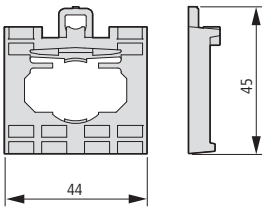
Joystick

M22-WJ..., M22-WRJ...

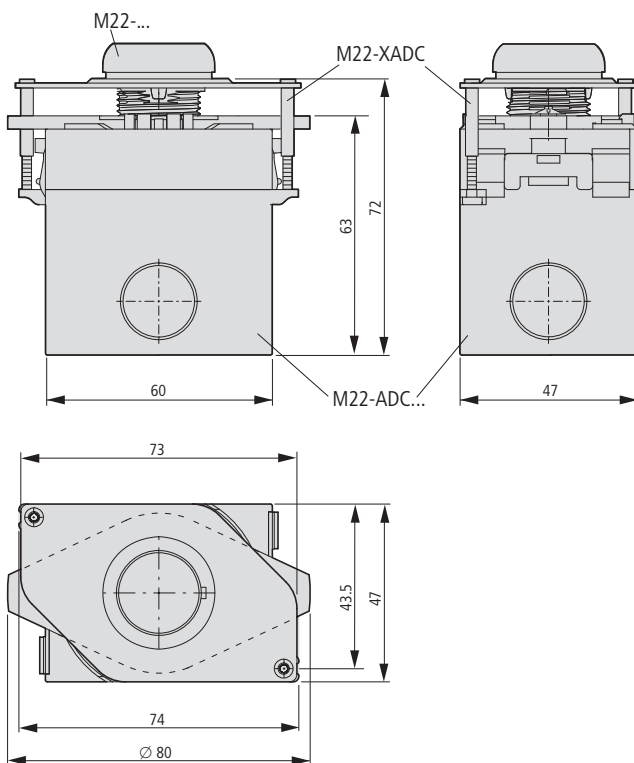


Fixing adapter

M22-A4



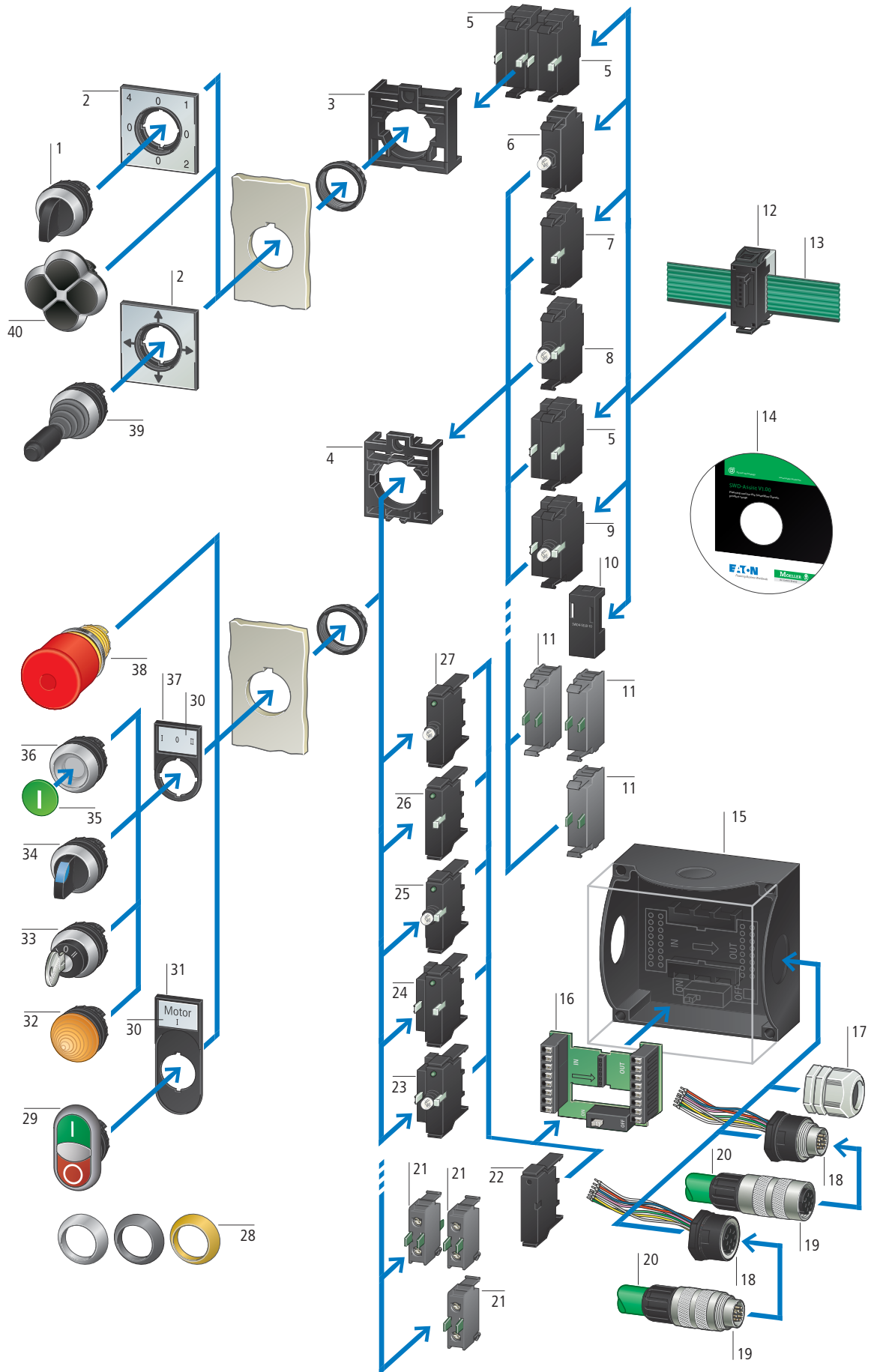
Dust cover







System overview





4-way selector switch actuators	1	Planning and ordering help, SWD?Assist	14	Function element with 2 positions for base fixing	26
→ Page 2/20		→ Features		→ Page 1/10	
Labels with label mounts	2	M22 surface mounting enclosure	15	LED element for base fixing	27
→ Page 2/25		→ Page 2/45		→ Page 1/11	
4-way adapter	3	PCB for built-in surface mounting enclosure	16	Bezels	28
→ Page 1/11		→ Page 1/11		→ Page 2/48	
Fixing adapters	4	Enclosure bushing for round cable	17	Double pushbutton actuators	29
→ Page 1/11		→ Page 2/46		→ Page 2/16	
Function element with 3 positions for front fixing	5	Enclosure bushing plug/socket	18	Labels for label mounts	30
→ Page 1/10		→ Page 1/18		→ Page 2/35	
LED element for front fixing	6	Plug connectors for SWD round cables	19	Indicator lights	32
→ Page 1/11		→ Page 1/18		→ Page 2/26	
M22 contact elements	7	SWD round cable	20	Key-operated buttons	33
→ Page 2/31		→ Page 1/18		→ Page 2/21	
Function element with 2 positions and LED for front fixing	8	Contacts for base fixing	21	Selector switch actuators	34
→ Page 1/10		→ Page 2/31		→ Page 2/20	
Function element with 3 positions and LED for front fixing	9	Link for base slots	22	Pushbutton actuators	36
→ Page 1/10		→ Page 1/11		→ Page 2/17	
Link for external device plug	10	Function element with 3 positions and LED for base fixing	23	Button plates/Button lenses	35
→ Page 1/17		→ Page 1/10		→ Page 2/36	
Front fixing contacts	11	Function element with 3 positions for base fixing	24	Label mounts	31, 37
→ Page 2/31		→ Page 1/10		→ Page 2/35	
SWD external device plug	12	Function element with 2 positions and LED for base fixing	25	Emergency switching off pushbutton	38
→ Page 1/17		→ Page 1/10		→ Page 2/7	
SWD ribbon flat cable	13			Joystick	39
→ Page 1/17				→ Page 2/24	
				4-way pushbutton	40
				→ Page 2/24	



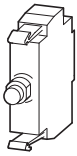
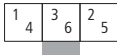






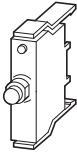
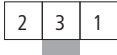






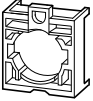
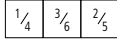


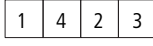
Features


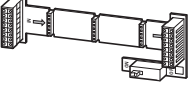

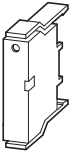



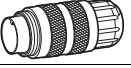
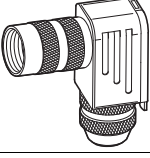
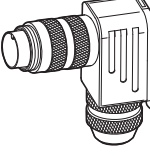
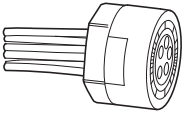

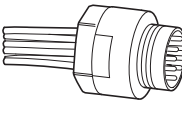

- SWD-RMQ connection for front fixing → Page 1/10
 - Adaption with standard adapter M22-A or M22-SWD-A4 for 4-way pushbutton
 - Combination with standard pilot devices of the M22 series.
 - Types with one or two change-over contacts and with/without integrated LED element
 - SmartWire-Darwin diagnostics LED for signalling the communication status of the function element
 - Connection to SmartWire-Darwin flat band cable via external device plug.
- Link for external device plug → Page 1/11
 - Connection to SmartWire-Darwin external device plug.
 - Suitable for the bridging of already adapted SmartWire-Darwin external device plugs (e.g. as a placeholder)
- Planning and ordering help (SWD-Assist)
 - Free download at: <http://downloadcenter.moeller.net>.
 - Easy generation of applications with the system SmartWire-Darwin.
 - Integrated function for the generation of ordering lists.
 - Integrated validity check.
- Surface mounting enclosure with PCB → Page 1/11
 - Connection of SmartWire-Darwin RMQ elements for base fixing.
 - Type with 1, 2, 3, 4 and 6 slots
 - Bridging of free slots with links for base fixing.
 - Integrated switchable terminating resistor.
- Housing bushing socket → Page 1/18
 - Use for M22 surface mounting enclosure or control panel.
 - Type plug/socket.
 - Prefabricated signal cable with ferrules for connection to PCB for surface mounting enclosure.
- SWD-RMQ connection for base fixing → Page 1/10
 - Use with surface mounting enclosure for M22 control circuit devices.
 - Combination with standard pilot devices of the M22 series.
 - Types with one or two change-over contacts and with/without integrated LED element
 - SmartWire-Darwin diagnostics LED for signalling of the communication status of the function element.
 - Connection to SmartWire-Darwin via PCB for built-in enclosure.



	Number of contacts	Circuit symbol	Contact travel diagram, stroke in connection with front element	Configuration	Colour LED	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
Function elements										
Front fixing										
	1				without LED	M22-SWD-K11 115964		20 off	NA Certification Request filed for UL and CSA	
	2				without LED	M22-SWD-K22 115965		10 off		
Base fixing										
	1				without LED	M22-SWD-KC11 115995		20 off		
	2				without LED	M22-SWD-KC22 115996		10 off		
Front fixing										
	1				-	M22-SWD-K11LED-W 115972		20 off		
	1				○	M22-SWD-K11LED-B 115973				
	1				●	M22-SWD-K11LED-G 115974				
	1				●	M22-SWD-K11LED-R 115975				
	2				-	M22-SWD-K22LED-W 115978		10 off		
	2				○	M22-SWD-K22LED-B 115979				
	2				●	M22-SWD-K22LED-G 115980				
	2				●	M22-SWD-K22LED-R 115981				
Base fixing										
	1				-	M22-SWD-K11LEDC-W 116003		20 off		
	1				○	M22-SWD-K11LEDC-B 116004				
	1				●	M22-SWD-K11LEDC-G 116005				
	1				●	M22-SWD-K11LEDC-R 116006				
	2				-	M22-SWD-K22LEDC-W 116009		10 off		
	2				○	M22-SWD-K22LEDC-B 116010				
	2				●	M22-SWD-K22LEDC-G 116011				
	2				●	M22-SWD-K22LEDC-R 116012				



		Configuration	Colour LED	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
LED elements							
Front fixing							
			   	M22-SWD-LED-W 115966		 	NA Certification Request filed for UL and CSA
				M22-SWD-LED-B 115967			
				M22-SWD-LED-G 115968			
				M22-SWD-LED-R 115969			
Base fixing							
			   	M22-SWD-LEDC-W 115997		 	NA Certification Request filed for UL and CSA
				M22-SWD-LEDC-B 115998			
				M22-SWD-LEDC-G 115999			
				M22-SWD-LEDC-R 116000			
Fixing adapters							
Front fixing							
	For 1 function element M22-SWD-K... or LED element M22-SWD-LED... In addition 1 or 2 contact elements M22-K... possible Sequence number on fixing adapter		-	M22-A 216374		 	UL/CSA certification not required
	For 2 function elements M22-SWD-K22... For use with M22-WR4, -WRJ4, -D4 in conjunction with M22-(SWD)-K						

Mounting locations Number	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Printed circuit boards				
PCBs for surface mounting enclosure M22-I.. for mounting base function elements M22-SWD...K Integrated, connectable SWD network terminator.				
 Number of mounting locations : 1	M22-SWD-I1-LP01 115990		1 off 	NA Certification Request filed for UL and CSA
Number of mounting locations : 2	M22-SWD-I2-LP01 115991			
Number of mounting locations : 3	M22-SWD-I3-LP01 115992			
Number of mounting locations : 4	M22-SWD-I4-LP01 115993			
Number of mounting locations : 6	M22-SWD-I6-LP01 115994			
Bridge				
Bridging of open mounting locations of device plug or M22-SWD-I PCB				
 Link for unused mounting locations of M22-SWD-I...LP (base fixing)	M22-SWD-SEL8-10 116698		5 off 	NA Certification Request filed for UL and CSA
Connectors for SWD round cables				
 8-pole socket, straight	SWD4-SF8-67 116033		1 off 	NA Certification Request filed for UL and CSA
 8-pole plug, straight	SWD4-SM8-67 116034			
 8-pole socket, 90° angled	SWD4-SF8-67W 116035			
 8-pole plug, 90° angled	SWD4-SM8-67W 116036			
Housing bushing socket				
For flushmounting in surface mounting enclosure M22-I... 8-pole socket/ plug, IP67, for connection to SWD4-S(M,F)-67... 8 prefabricated cables for connection to PCB M22-SWD-I...				
 8-pole socket, M20	SWD4-SF8-20 116031		1 off 	NA Certification Request filed for UL and CSA
 8-pole plug, M20	SWD4-SM8-20 116032		1 off 	





Technical data

			M22-SWD-K11	M22-SWD-KC11	M22-SWD-LED-...
General					
Standards			IEC/EN 61131-2 EN 50178		
Dimensions (W x H x D)		mm	12 X 42 X 39	12 X 45 X 37	10 X 42 X 45
Weight		g	10	10	10
Mounting position			Any		
Ambient mechanical conditions					
Protection type (IEC/EN 60529)			IP20	IP20	IP20
Vibrations (IEC/EN 61131-2:2008)					
Constant amplitude 3.5 mm		Hz	5 ... 8.4	5 ... 8.4	5 ... 8.4
Constant acceleration, 1 g		Hz	8.4 ... 150	8.4 ... 150	8.4 ... 150
Mechanical shock resistance (IEC/EN 60068-2-27)		Shocks	9	9	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50	50	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3	0.3	0.3
Electromagnetic compatibility (EMC)					
Overvoltage category			Not applicable		
Pollution degree			2	2	2
Electrostatic discharge (IEC/EN 61131-2:2008)					
Air discharge (Level 3)		kV	8	8	8
Contact discharge (Level 2)		kV	4	4	4
Electromagnetic fields (IEC/EN 61131-2:2008)					
80-1000 MHz		V/m	10	10	10
1.4 - 2 GHz		V/m	3	3	3
2 - 2.7 GHz		V/m	1	1	1
Radio interference suppression (SmartWire-Darwin)			EN 55011 Class A		
Burst (IEC/EN 61131-2:2008, Level 3)					
Supply cables		kV	2	2	2
SmartWire-Darwin cables		kV	1	1	1
Radiated RFI (IEC/EN 61131-2:2008, Level 3)		V	10	10	10
Ambient climatic conditions					
Operating ambient temperature (IEC 60068-2)		°C	-30 ... +55	-30 ... +55	-30 ... +55
Condensation			Prevent with suitable measures		
Storage		°C	-40...80	-40...80	-40...80
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	9 ... 95	9 ... 95	9 ... 95
SmartWire-Darwin network					
Station type			SmartWire-Darwin station (slave)		
Baud rate setting			Automatic		
SmartWire-Darwin status LED			Green		
Connections			Plug, 8-pole		
Plug connectors			SWD4-8SF2-5	M22-SWD-I...LP	SWD4-8SF2-5
Number of mating cycles			50	50	50
Function element					
Contacts			1 change-over contact	1 change-over contact	-
Lifespan mechanical/electrical	Operations		1 X 10 ⁶	1 X 10 ⁶	-
LED display			No	No	Yes
Diagnostics			Yes	Yes	No
Fixing			Front fixing	Base fixing	Front fixing

Notes

Maximum current consumption of SWD stations → chapter SmartWire-Darwin, page 19



M22-SWD-LEDC-...	M22-SWD-K11-LED...	M22-SWD-K11LEDC-...	M22-SWD-K22	M22-SWD-KC22	M22-SWD-K22-LED...	M22-SWD-K22LEDC-...
IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178	IEC/EN 61131-2 EN 50178
10 X 45 X 42	12 X 42 X 45	12 X 45 X 42	17 X 42 X 39	17 X 45 X 37	17 X 42 X 45	17 X 45 X 42
10	10	10	14	14	14	14
Any						
IP20	IP20	IP20	IP20	IP20	IP20	IP20
5 ... 8.4	5 ... 8.4	5 ... 8.4	5 ... 8.4	5 ... 8.4	5 ... 8.4	5 ... 8.4
8.4 ... 150	8.4 ... 150	8.4 ... 150	8.4 ... 150	8.4 ... 150	8.4 ... 150	8.4 ... 150
9	9	9	9	9	9	9
50	50	50	50	50	50	50
0.3	0.3	0.3	0.3	0.3	0.3	0.3
Not applicable						
2	2	2	2	2	2	2
8	8	8	8	8	8	8
4	4	4	4	4	4	4
10	10	10	10	10	10	10
3	3	3	3	3	3	3
1	1	1	1	1	1	1
EN 55011 Class A						
2	2	2	2	2	2	2
1	1	1	1	1	1	1
10	10	10	10	10	10	10
-30 ... +55	-30 ... +55	-30 ... +55	-30 ... +55	-30 ... +55	-30 ... +55	-30 ... +55
Prevent with suitable measures						
-40 ... 80	-40 ... 80	-40 ... 80	-40 ... 80	-40 ... 80	-40 ... 80	-40 ... 80
9 ... 95	9 ... 95	9 ... 95	5 ... 95	5 ... 95	5 ... 95	5 ... 95
SmartWire-Darwin station (slave)						
Automatic						
Green						
Plug, 8-pole						
M22-SWD-I...LP	SWD4-8SF2-5	M22-SWD-I...LP	SWD4-8SF2-5	M22-SWD-I...LP	SWD4-8SF2-5	M22-SWD-I...LP
50	50	50	50	50	50	50
-	1 change-over contact	1 change-over contact	2 change-over contacts	2 change-over contacts	2 change-over contacts	2 change-over contacts
-	1 X 10 ⁶	1 X 10 ⁶	1 X 10 ⁶	1 X 10 ⁶	1 X 10 ⁶	1 X 10 ⁶
Yes	Yes	Yes	No	No	Yes	Yes
No	Yes	Yes	Yes	Yes	Yes	Yes
Base fixing	Front fixing	Base fixing	Front fixing	Base fixing	Front fixing	Base fixing



			SWD4-RC8-10	SWD4-8SF2-5	SWD4-8SFF2-5
General					
Standards			IEC/EN 61131-2 EN 50178		
Dimensions (W x H x D)		mm	48.5 x 34.5 x 10	15 x 36.5 x 17.5	48.5 x 34.5 x 10
Weight		g	10	5.5	4.5
Mounting position			Any	Any	Any
Ambient mechanical conditions					
Protection type (IEC/EN 60529)			IP20	IP20	IP20
Vibrations (IEC/EN 61131-2:2008)					
Constant amplitude 3.5 mm		Hz	5 ... 8.4	5 ... 8.4	5 ... 8.4
Constant acceleration, 1 g		Hz	8.4 ... 150	8.4 ... 150	8.4 ... 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms			Shocks	9	9
Drop to 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	–	8
Contact discharge (Level 2)			kV	4	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)					
SmartWire-Darwin cables		kV	1	–	–
Radiated RFI (IEC/EN 61131-2:2008, Level 3)			V	10	–
Ambient climatic conditions					
Operating ambient temperature (IEC 60068-2)		°C	–25 ... +55	–25 ... +55	–25 ... +55
Condensation			Prevent with suitable measures		
Storage		°C	–40...70	–40...70	–40...70
Relative humidity, non-condensing (IEC/EN 60068-2-30)			%	5 ... 95	5 ... 95
Connection options					
SWD-In			Plug, 8-pole	Plug connector	Plug, 8-pole
Number of mating cycles			≥200	1	≥200
SWD-Out			–	Socket, 8-pole	Plug, 8-pole
Number of mating cycles			–	≥200	≥200

Notes

Maximum current consumption of SWD stations → chapter SmartWire-Darwin, page 19

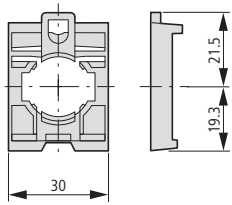


SWD4-SF8-20	SWD4-SM8-20	SWD4-8FRF-10	SWD4-SFL8-20	SWD4-SML8-20
IEC/EN 61131-2 EN 50178				
24 x 26 x 162	24 x 26 x 170	35 x 90 x 35	35 x 83 x 40	35 x 83 x 46
20	22.5	42	50	50
Any	Any	Any	Any	Any
IP67				
IP67	IP67	IP20	IP67	IP67
		5 ... 8.4	5 ... 8.4	5 ... 8.4
		8.4 ... 150	8.4 ... 150	8.4 ... 150
-	-	9	9	9
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	8	8	8
-	-	4	4	4
-	-	-	10	10
-	-	-	3	3
-	-	-	1	1
-	-	-	-	-
-	-	-	-	-
-	-	-	10	10
-	-	-	-	-
-25 ... +55	-25 ... +55	-25 ... +55	-25 ... +55	-25 ... +55
Prevent with suitable measures				
-40...70	-40...70	-40...70	-40...70	-40...70
5 ... 95	5 ... 95	5 ... 95	5 ... 95	5 ... 95
-	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole	Plug, 8-pole
-	≥500	≥200	≥200	≥500
Socket, 8-pole	-	Push in terminals	Socket, 8-pole	Plug, 8-pole
≥500	-	-	≥500	≥200

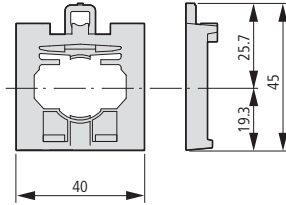
Dimensions

Fixing adapter (front fixing) for 3-contact LED elements

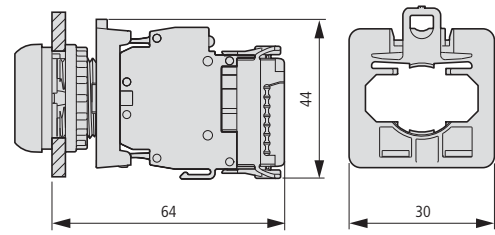
M22-A



M22-SWD-A4

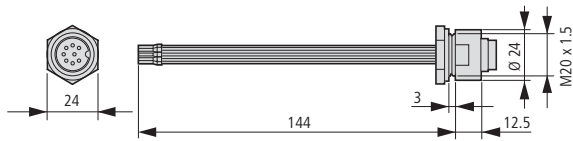


Function elements

M22-SWD-K...
M22-SWD-LED...

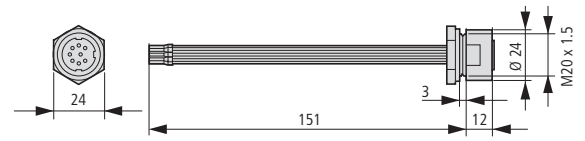
Housing bushing plug

SWD4-SM8-20



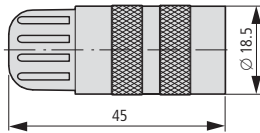
Housing bushing socket

SWD4-SF8-20

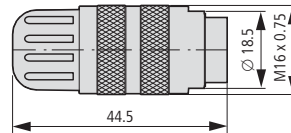


Plug connector for SWD round cable, straight

SWD4-SF8-67

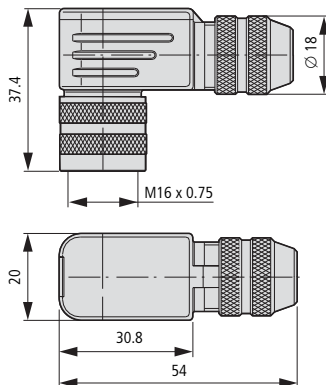


SWD4-SM8-67

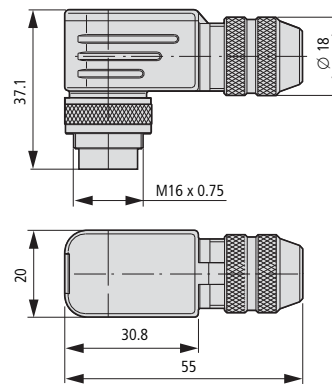


Plug connector for SWD round cable, angled

SWD4-SF8-67W

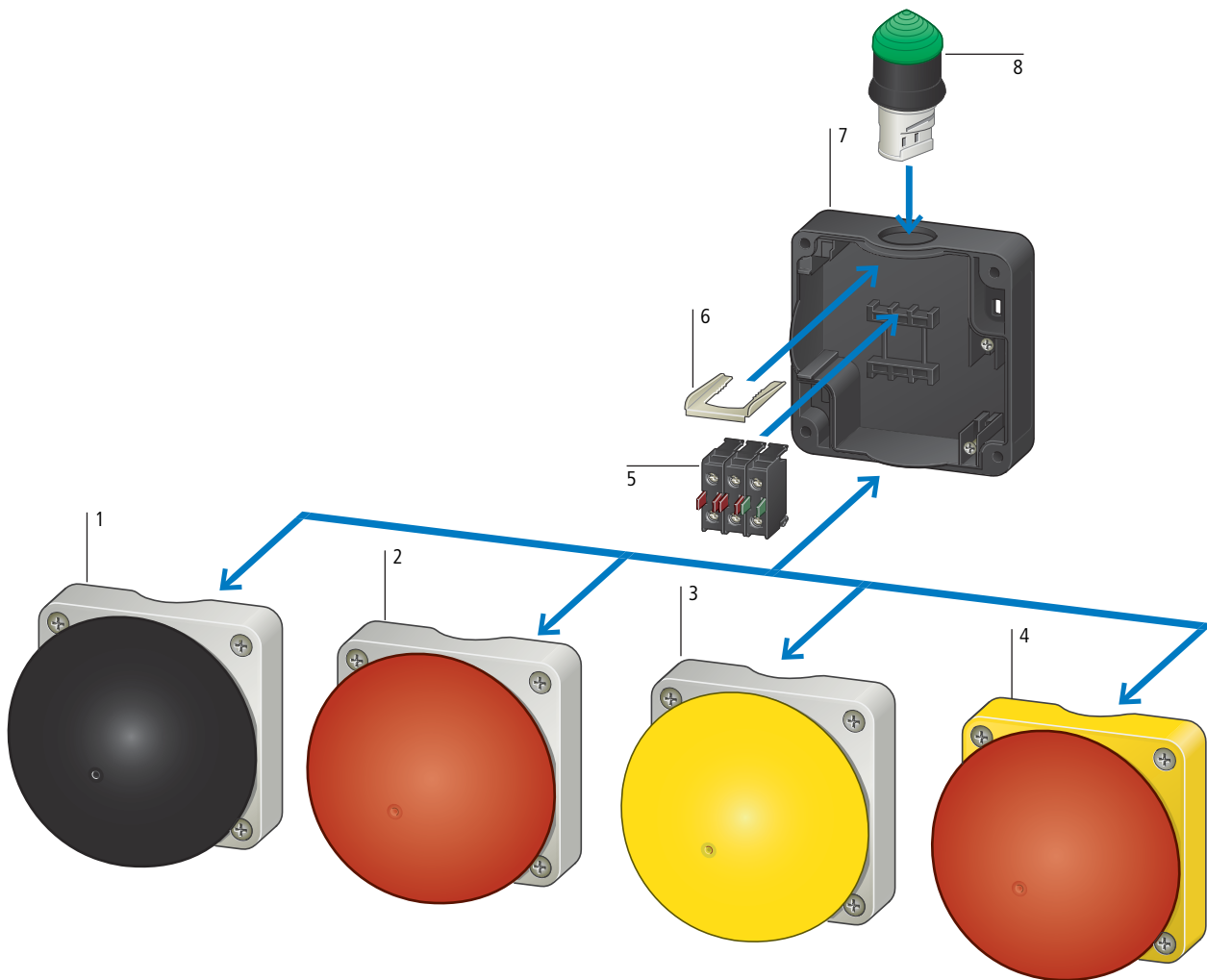


SWD4-SM8-67W





System overview



Enclosure base	7
Prepared for contact elements	
Base fixing (not for ...SMC... contacts)	
→ Page 2/78	

Operator only with mushroom head	1, 2, 3, 4
Various color combinations	
Yellow/red for Emergency stop or emergency switching off applications	
European Machinery Safety Directive 2006/42/EC	
For foot or hand operation	
→ Page 2/78	

Contact elements	5
Base fixing	
→ Page 2/31	

Indicator lights	6, 8
Conical	
BA9s base	
→ Page 2/26	



Equipping with contacts:
 ⊕ = Positive opening safety function according to IEC/EN 60947-5-1
 N/O = normally open contact NC = normally closed contact

Circuit symbol

Color of mushroom head

Indicator lights

Degree of protection

FAK foot and palm switches

Momentary

	Enclosure base: black (RAL 9005) Enclosure top: only light gray (RAL 7035)	1 N/O	1 NC		Black		IP67, IP69K
		1 N/O	1 NC		Red		IP67, IP69K

Maintained

	Pull to release Emergency stop pushbutton tamper-proof to ISO 13850/EN 418 Enclosure base: black (RAL 9005) Enclosure top: yellow (RAL 1004)	-	1 NC		Red		IP67, IP69K
		1 N/O	1 NC		Red		IP67, IP69K
		-	2 NC	-	Red		IP67, IP69K
	Enclosure base: gray Enclosure top: yellow Button, red Release by button on the side For Emergency-Stop applications according to ISO 13850 Can also be used as emergency switching off device	1 N/O	1 NC		Red		IP65

Customized complete unit

* = Freely selectable customer identification or stock no.: max. 10 characters
 An order consists of: enclosure base, enclosure top, contact elements for base fixing (→ Page 2/31)
 ATEX → Engineering

Enclosure base

For max. 3 contact elements							IP67, IP69K
					Black		IP67, IP69K

Enclosure top

Momentary

				-	Gray	Black	IP67, IP69K
				-	Gray	Red	IP67, IP69K
				-	Gray	Yellow	IP67, IP69K

Maintained

				-	Yellow	Red	IP67, IP69K
--	--	--	--	---	--------	-----	-------------

ATEX

ATEX → Engineering
 Only in conjunction with FAK-COMBINATION-
 For use in accordance with the ATEX directive in dust-laden areas, Zone 22, Category 3
 Ordering examples → Engineering

IP67, IP69K



Part no. Article no.	Price See price list	Std. pack	Approval mark	Information relevant for export to North America
FAK-S/KC11/I 229749		1 off 	 INDUSTRIE FORUM DESIGN HANNOVER	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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
FAK-R/KC11/I 229746		1 off 	 BAUART GEPRÜFT TYPE APPROVED totally insulated ATEX → Engineering	
FAK-R/V/KC01/IY 229747		1 off 		
FAK-R/V/KC11/IY 229748				
FAK-R/V/KC02/IY 256790				
FAK-R/V/KC11A/I 001475		1 off		
FAK-COMBINATION-* 229758		1 off		
FAK-IU 229753		1 off		
FAK-S 095540		1 off 		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 Degree of Protection UL/CSA Type 3R, 4X, 12, 13
FAK-R 071810				
FAK-Y 229754				
FAK-R/V/Y 229755				
FAK-ATEX 104381		1 off		



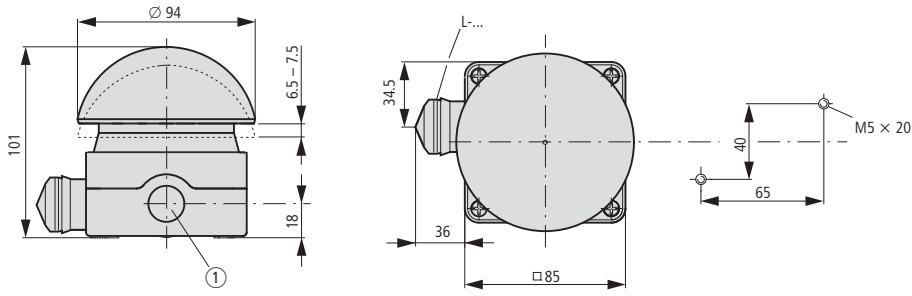
Technical data

			FAK foot and palm switch		FAK-R/V/KC11A/I
			Momentary	Maintained	Maintained
General					
Standards			IEC/EN 60947, VDE 0660	IEC/EN 60947, VDE 0660	IEC/EN 60947, VDE 0660
Lifespan, mechanical	Operations	x 10 ⁶	1	0.1	0.1
Operating frequency	Operations/h		≤ 3600	≤ 600	≤ 600
Actuating force		N	20 - 40	40 - 60	15 - 25
Operating torque		Nm	–	–	–
Protection type, IEC/EN 60529			IP67, IP69K	IP67, IP69K	IP65
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30		
Ambient temperature					
Open		°C	-25 - +40	-25 - +40	-25 - +40
Mounting position			Any	Any	Any
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal		g	> 15	> 15	> 15



Dimensions

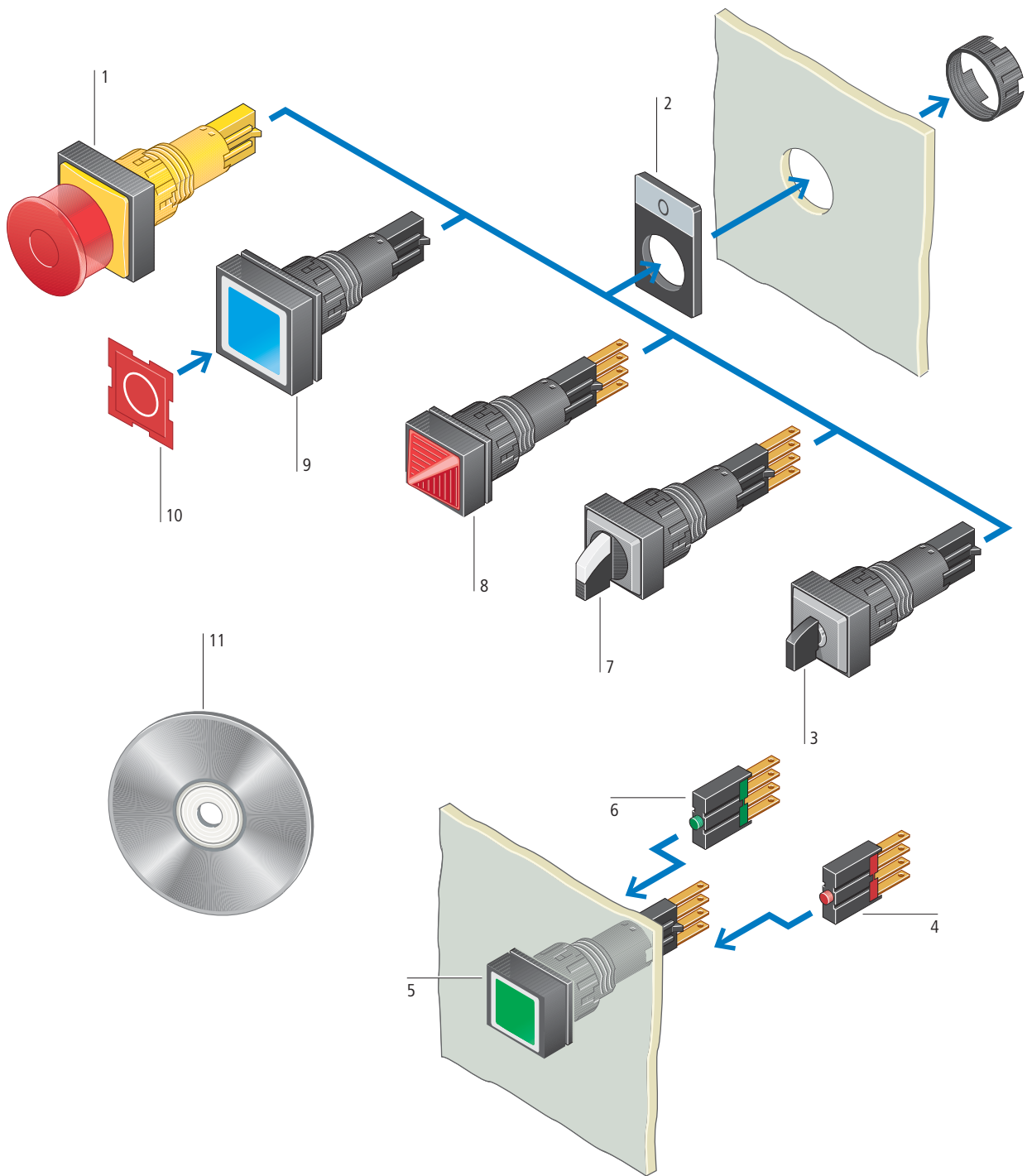
Foot and palm switch RMQ-Titan
FAK...



3 x M20 (Pg 13.5) lateral
1 x M16 in the base



System overview





Emergency stop pushbuttons	1	Illuminated pushbutton actuators	5	Pushbutton actuators	9
Can also be used as emergency switching-off devices		Momentary and maintained		Momentary and maintained	
Tamper-proof according to ISO 13850/EN 418		Replaceable insert labels		Replaceable button plates	
Illuminated and non-illuminated		Colors: white, green, red, yellow, blue Custom laser labeling		Colors: white, green, red, yellow, blue, black	
Additional labels, with and without inscription		→ Page 2/85		→ Page 2/84	
European Machinery Safety Directive 2006/42/EC		Contact element N/O (green)	6	Button plates/insert labels	10
→ Page 2/90		With blade terminal		Wear-resistant button plates for pushbutton actuators	
Label mounts	2	Universal contacts suitable for use with electronic devices		Transparent insert plates for illuminated pushbuttons and indicator lights	
For insert labels		→ Page 2/84		With and without inscription	
Color: light gray, black, yellow		Selector switch actuators	7	With standard texts and symbols or with custom laser labeling	
Insert labels, with inscription and blank		2 and 3 positions		→ Page 2/91	
→ Page 2/94		Switching angle 45°		Labeling with convenience	11
Key-operated buttons	3	Momentary and maintained		All button plates, indicator lights and additional button labels from the RMQ-Titan range can be laser inscribed with any inscription and symbol as required.	
2 and 3 positions		Illuminated selector switch actuators with built-in lamp socket		Download: www.moeller.net/de/support , Keyword: "Labeleditor"	
Switching angle 45°		Colors: white, green, red			
Momentary and maintained		→ Page 2/86			
Various lock mechanisms		Indicator lights	8		
→ Page 2/88		Flat and conical designs			
Contact element NC (red)	4	Built-in lamp socket			
With blade terminal		For filament bulbs and LEDs			
Universal contacts suitable for use with electronic devices		Colors: white, green, red, yellow, blue Custom laser labeling			
Positive opening safety function according to IEC/EN 60947-5-1		→ Page 2/89			
→ Page 2/84					

Product Features

- Front dimension and minimum grid dimensions
18 x 18 mm or 25 x 25 mm
- Mounting diameter 16.2 mm to EN 50007
- Protection type IP65
- For switching differing potentials
- Suitable for use with electronic devices to IEC/EN 61131-2
- Technical data to IEC/EN 60947-5-1
- Approved throughout the world



Color Button plate	Front dimensions 18 x 18 mm	Front dimensions 25 x 25 mm	Part no. Article no.	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
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Pushbutton actuators, IP65

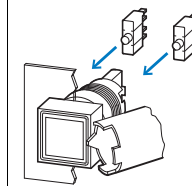
Momentary			
	Green	Q18D-11 086332	Q25D-11 090471
	Red	Q18D-10 086299	Q25D-10 090421
	White	Q18D-20 054041	Q25D-20 054038
	Black	Q18D-19 054040	Q25D-19 054039
	Black	Q18D-SW 086788	Q25D-SW 087230
	White	Q18D-WS 086752	Q25D-WS 086808
	Green	Q18D-GN 086450	Q25D-GN 086409
	Red	Q18D-RT 086713	Q25D-RT 086444
	Yellow	Q18D-GE 086417	Q25D-GE 086343
	Blue	Q18D-BL 086384	Q25D-BL 086328
-	None	Q18D-X 093623	Q25D-X 093624

10 off

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	46552
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified
Degree of Protection	UL/CSA Type 1

Maintained			
	Black	Q18DR-SW 086269	Q25DR-SW 088739
	White	Q18DR-WS 086243	Q25DR-WS 088701
	Green	Q18DR-GN 086176	Q25DR-GN 088531
	Red	Q18DR-RT 086209	Q25DR-RT 088627
	Yellow	Q18DR-GE 090482	Q25DR-GE 088404
	Blue	Q18DR-BL 090241	Q25DR-BL 088110
-	None	Q18DR-X 093625	Q25DR-X 093626

10 off



Accessories	Page
Assembly aids and accessories	→ 2/96
Contact elements	
N/O	→ 2/84
NC	→ 2/84

⊖ = Safety function by positive opening according to IEC/EN 60947-5-1	Circuit symbol	Contact sequence	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
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N/O = normally open contact
NC = normally closed contact

Contact elements

Admissible operating voltage: 5 – 250 V

	1 N/O				E10 090351	50 off
	-	1 NC ⊖				E01 090401

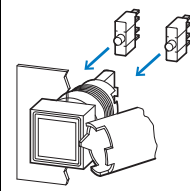
Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	46552
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified

Notes

$\begin{matrix} | \\ xy \end{matrix}$ x = Sequence number on front element
 $\begin{matrix} | \\ y \end{matrix}$ y = Function number on contact element



Color Lens	Front dimensions		Part no. Article no.	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
	18 x 18 mm	25 x 25 mm					
Illuminated pushbutton actuators, IP65							
Momentary Without filament bulb		-	Q18LT-WS 089202	Q25LT-WS 086262	10 off	10 off	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking E29184 NKCR 46552 3211-03 UL Listed, CSA certified UL/CSA Type 1
		-	Q18LT-GN 089067	Q25LT-GN 086206			
		-	Q18LT-RT 089776	Q25LT-RT 086238			
		-	Q18LT-GE 088808	Q25LT-GE 086173			
		-	Q18LT-BL 088764	Q25LT-BL 090479			
	-	Without lens	Q18LT-X 051745	Q25LT-X 051746			
With filament bulb, 24 V		-	Q18LT-WS/WB 088561	Q25LT-WS/WB 090226	10 off	10 off	
		-	Q18LT-GN/WB 088509	Q25LT-GN/WB 089190			
		-	Q18LT-RT/WB 088537	Q25LT-RT/WB 089998			
		-	Q18LT-GE/WB 088449	Q25LT-GE/WB 089137			
		-	Q18LT-BL/WB 088338	Q25LT-BL/WB 089102			
	-	Without lens	Q18LTR-WS 088123	Q25LTR-WS 087232			
Maintained Without filament bulb		-	Q18LTR-WS 088123	Q25LTR-WS 087232	10 off	10 off	
		-	Q18LTR-GN 087831	Q25LTR-GN 086812			
		-	Q18LTR-RT 087918	Q25LTR-RT 086840			
		-	Q18LTR-GE 087764	Q25LTR-GE 086784			
		-	Q18LTR-BL 086813	Q25LTR-BL 086739			
	-	Without lens	Q18LTR-X 051735	Q25LTR-X 051736			
With filament bulb, 24 V		-	Q18LTR-WS/WB 086708	Q25LTR-WS/WB 086447	10 off	10 off	
		-	Q18LTR-GN/WB 086413	Q25LTR-GN/WB 086380			
		-	Q18LTR-RT/WB 086448	Q25LTR-RT/WB 086412			
		-	Q18LTR-GE/WB 086382	Q25LTR-GE/WB 086346			
		-	Q18LTR-BL/WB 086348	Q25LTR-BL/WB 086330			
	-	Without lens	Q18LTR-X 051735	Q25LTR-X 051736			



Accessories	Page
Assembly aids and accessories	→ 2/96
Contact elements	
N/O	→ 2/84
NC	→ 2/84

Contact configuration: ⊖ = Safety function via positive opening to IEC/EN 60947-5-1 N/O = normally open contact NC = normally closed contact	Circuit symbol	Contact sequence	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
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Contact elements							
Admissible operating voltage: 5 – 250 V							
	-			E10 090351	50 off	50 off	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking E29184 NKCR 46552 3211-03 UL Listed, CSA certified
	1 NC ⊖			E01 090401			





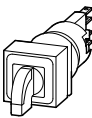

























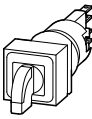

























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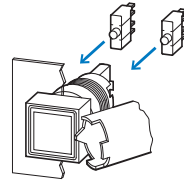
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 $\begin{matrix} | \\ xy \end{matrix}$ y = Function number on contact element



Function:		Color	Part no. Article no.	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
▷ = Momentary ▽ = Maintained								
Selector switch actuators, IP65 With VS anti-rotation feature								
Two positions								
	▷ 45°	○	Q18WK1 036515	Q25WK1 036599		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1	
	▽ 45°	○	Q18WK1R 036598	Q25WK1R 036600				
Three positions								
	45° ↙ 45°	○	Q18WK3 072308	Q25WK3 072372		5 off 		
	45° ↓ 45°	○	Q18WK3R 072309	Q25WK3R 072373				
	45° ↘ 45°	○	Q18WK3R1 072310	Q25WK3R1 072374				
	45° ↙ 45°	○	Q18WK3R2 072311	Q25WK3R2 072375				
Illuminated selector switch actuators, IP65 With VS anti-rotation feature								
Without filament bulb Two positions								
	▷ 45°	○	Q18LWK1-WS 040349	Q25LWK1-WS 040658		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1	
	▷ 45°	●	Q18LWK1-RT 039337	Q25LWK1-RT 040657				
	▷ 45°	●	Q18LWK1-GN 039336	Q25LWK1-GN 040656				
	▽ 45°	○	Q18LWK1R-WS 040376	Q25LWK1R-WS 040661				
	▽ 45°	●	Q18LWK1R-RT 040351	Q25LWK1R-RT 040660				
	▽ 45°	●	Q18LWK1R-GN 040350	Q25LWK1R-GN 040659				
With filament bulb Two positions								
	▷ 45°	○	Q18LWK1-WS/WB 038978	Q25LWK1-WS/WB 040379		5 off 	Accessories Assembly aids and accessories → 2/96 Contact elements N/O → 2/84 NC → 2/84	
	▷ 45°	●	Q18LWK1-RT/WB 038930	Q25LWK1-RT/WB 040378				
	▷ 45°	●	Q18LWK1-GN/WB 038883	Q25LWK1-GN/WB 040377				
	▽ 45°	○	Q18LWK1R-WS/WB 039335	Q25LWK1R-WS/WB 040476				
	▽ 45°	●	Q18LWK1R-RT/WB 039248	Q25LWK1R-RT/WB 040381				
	▽ 45°	●	Q18LWK1R-GN/WB 039247	Q25LWK1R-GN/WB 040380				

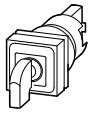
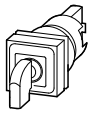



			Front dimensions 18 x 18 mm	Front dimensions 25 x 25 mm		Std. pack	Information relevant for export to North America 
Function:	Color	Part no.	Part no.	Price			
 = Momentary		Article no.	Article no.	See price list			
 = Maintained							
Illuminated selector switch actuators, IP65							
With VS anti-rotation feature							
Without filament bulb							
Three positions							
	45°  45°		Q18LWK3-WS 072322	Q25LWK3-WS 072358		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
	45°  45°		Q18LWK3-RT 072323	Q25LWK3-RT 072359			UL File No. E29184
	45°  45°		Q18LWK3-GN 072324	Q25LWK3-GN 072360			UL CCN NKCR
	45°  45°		Q18LWK3R-WS 072325	Q25LWK3R-WS 072361			CSA File No. 46552
	45°  45°		Q18LWK3R-RT 072326	Q25LWK3R-RT 072362			CSA Class No. 3211-03
	45°  45°		Q18LWK3R-GN 072327	Q25LWK3R-GN 072363			NA Certification UL Listed, CSA certified
	45°  45°		Q18LWK3R1-WS 072328	Q25LWK3R1-WS 072364			Degree of Protection UL/CSA Type 1
	45°  45°		Q18LWK3R1-RT 072329	Q25LWK3R1-RT 072365			
	45°  45°		Q18LWK3R1-GN 072330	Q25LWK3R1-GN 072366			
	45°  45°		Q18LWK3R2-WS 072331	Q25LWK3R2-WS 072367			
	45°  45°		Q18LWK3R2-RT 072332	Q25LWK3R2-RT 072368			
	45°  45°		Q18LWK3R2-GN 072333	Q25LWK3R2-GN 072369			
With filament bulb							
Three positions							
	45°  45°		Q18LWK3-WS/WB 072334	Q25LWK3-WS/WB 072346		5 off 	
	45°  45°		Q18LWK3-RT/WB 072335	Q25LWK3-RT/WB 072347			
	45°  45°		Q18LWK3-GN/WB 072336	Q25LWK3-GN/WB 072348			
	45°  45°		Q18LWK3R-WS/WB 072337	Q25LWK3R-WS/WB 072349			
	45°  45°		Q18LWK3R-RT/WB 072338	Q25LWK3R-RT/WB 072350			
	45°  45°		Q18LWK3R-GN/WB 072339	Q25LWK3R-GN/WB 072351			
	45°  45°		Q18LWK3R1-WS/WB 072340	Q25LWK3R1-WS/WB 072352			
	45°  45°		Q18LWK3R1-RT/WB 072341	Q25LWK3R1-RT/WB 072353			
	45°  45°		Q18LWK3R1-GN/WB 072342	Q25LWK3R1-GN/WB 072354			
	45°  45°		Q18LWK3R2-WS/WB 072343	Q25LWK3R2-WS/WB 072355			
	45°  45°		Q18LWK3R2-RT/WB 072344	Q25LWK3R2-RT/WB 072356			
	45°  45°		Q18LWK3R2-GN/WB 072345	Q25LWK3R2-GN/WB 072357			



Accessories	Page
Assembly aids and accessories	→ 2/96
Contact elements	
N/O	→ 2/84
NC	→ 2/84



Function:	Key withdrawable in position	Color	Part no. Article no.	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
<p>Front dimensions 18 x 18 mm Front dimensions 25 x 25 mm</p> <p>↳ = Momentary └ = Maintained</p>							
IP65, key-operated button actuators							
With 1 key and VS anti-rotation feature							
Two positions							
	↳ 45°	–	0	–	●	Q18S1 038806	Q25S1 038773
	└ 45°		0	–	●	Q18S1R 038805	Q25S1R 038772
	↳ 45°	–	0	–	●	Q18S1R-A1 072312	Q25S1R-A1 072376
	↳ 45°	–	0	–	●	Q18S1-GN 062148	Q25S1-GN 062150
	└ 45°		0	–	●	Q18S1R-GN 062151	Q25S1R-GN 062108
	↳ 45°	–	0	–	●	Q18S1-RT 046841	Q25S1-RT 046843
	└ 45°		0	–	●	Q18S1R-RT 046837	Q25S1R-RT 046839
	↳ 45°	–	0	–	○	Q18S1-WS 046849	Q25S1-WS 046851
	└ 45°		0	–	○	Q18S1R-WS 046845	Q25S1R-WS 046847
	↳ 45°	–	0	–	●	Q18S1-BL 045959	Q25S1-BL 046835
	└ 45°		0	–	●	Q18S1R-BL 062814	Q25S1R-BL 045502
Three positions							
	45° ↙ 45°	–	0	–	●	Q18S3 072313	Q25S3 072377
	45° ↓ 45°		0		●	Q18S3R 072314	Q25S3R 072378
	45° ↘ 45°	–	0	–	●	Q18S3R-A1 072315	Q25S3R-A1 072379
	45° ↘ 45°		0	–	●	Q18S3R-A2 072316	Q25S3R-A2 072380
	45° ↘ 45°	–	0		●	Q18S3R-A3 072317	Q25S3R-A3 072381
	45° ↘ 45°		0	–	●	Q18S3R-A4 072318	Q25S3R-A4 072382
	45° ↘ 45°	–	0	–	●	Q18S3R-A5 072319	Q25S3R-A5 072383
	45° ↙ 45°	–	0		●	Q18S3R-A6 072320	Q25S3R-A6 072384
	45° ↙ 45°	–	0	–	●	Q18S3R-A7 072321	Q25S3R-A7 072385
	45° ↙ 45°	–	0	–	●	Q18S3-GN 062149	Q25S3-GN 062153
	45° ↓ 45°		0		●	Q18S3R-GN 062152	Q25S3R-GN 062147
	45° ↙ 45°	–	0	–	●	Q18S3-RT 046842	Q25S3-RT 046844
	45° ↓ 45°		0		●	Q18S3R-RT 046838	Q25S3R-RT 046840
	45° ↙ 45°	–	0	–	○	Q18S3-WS 046850	Q25S3-WS 046852
	45° ↓ 45°		0		○	Q18S3R-WS 046846	Q25S3R-WS 046848
	45° ↙ 45°	–	0	–	●	Q18S3-BL 046368	Q25S3-BL 046836
	45° ↓ 45°		0		●	Q18S3R-BL 064430	Q25S3R-BL 045646

5 off 

Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking

UL File No. E29184

UL CCN NKCR

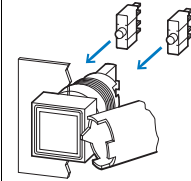
CSA File No. 46552

CSA Class No. 3211-03

NA Certification UL Listed, CSA certified

Degree of Protection UL/CSA Part no. 1




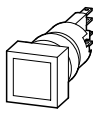







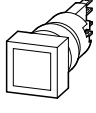






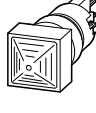













5 off 





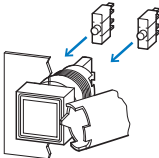








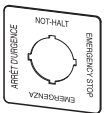







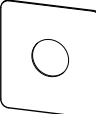

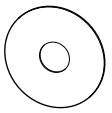



Accessories	Page
Assembly aids and accessories	→ 2/96
Contact elements	
N/O	→ 2/84
NC	→ 2/84







































Notes For each color there is a corresponding key.
→ Page 2/97



Color		 Front dimensions 18 x 18 mm Part no. Article no.	Front dimensions 25 x 25 mm Part no. Article no.	Price See price list	Std. pack 	Information relevant for export to North America 
Indicator lights, IP65						
Flat						
Without filament bulb						
		Q18LF-WS 088406	Q25LF-WS 090228		10 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
		Q18LF-GN 088337	Q25LF-GN 090000			
		Q18LF-RT 088387	Q25LF-RT 090198			
		Q18LF-GE 088303	Q25LF-GE 089252			
		Q18LF-BL 088270	Q25LF-BL 089229			
Without lens	—	Q18LX 051739	Q25LX 051740		10 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
With filament bulb, 24 V						
		Q18LF-WS/WB 088059	Q25LF-WS/WB 089151		10 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
		Q18LF-GN/WB 087947	Q25LF-GN/WB 088828			
		Q18LF-RT/WB 088001	Q25LF-RT/WB 089104			
		Q18LF-GE/WB 087915	Q25LF-GE/WB 088798			
		Q18LF-BL/WB 087860	Q25LF-BL/WB 088761			
Conical						
Without filament bulb						
		Q18LH-WS 088705	Q25LH-WS 086263		10 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
		Q18LH-GN 088629	Q25LH-GN 086207			
		Q18LH-RT 088655	Q25LH-RT 086241			
		Q18LH-GE 088585	Q25LH-GE 090481			
		Q18LH-BL 088560	Q25LH-BL 090428			
With filament bulb, 24 V						
		Q18LH-WS/WB 088535	Q25LH-WS/WB 090405		10 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
		Q18LH-GN/WB 088483	Q25LH-GN/WB 090312			
		Q18LH-RT/WB 088507	Q25LH-RT/WB 090354			
		Q18LH-GE/WB 088448	Q25LH-GE/WB 090285			
		Q18LH-BL/WB 088424	Q25LH-BL/WB 090240			

	Color	Protection	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
<div style="text-align: center;">  Front dimensions 25 x 25 mm </div>						
Emergency stop pushbuttons						
Overload-protected to ISO 13850, EN 418 Pushbutton remains in pushed position; pull to release Can also be used as emergency switching off pushbutton actuator						
<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;">   </div> <div style="width: 45%; text-align: right;">  Accessories Assembly aids and accessories → 2/96 Contact elements N/O → 2/84 NC → 2/84 </div> </div>						
Non-illuminated		IP65	Q25PV 072370		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
Illuminated With built-in multiple LED, 24 V DC, I _e = 15 mA Positive pole at X1 No bulb replacement required.		IP65	Q25LPV 072371		2 off 	UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
Emergency stop pushbuttons						
Overload-protected to ISO 13850, EN 418 Pushbutton remains in pushed position; pull to release						
Non-illuminated		IP65	Q25PV-S 257063		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
Illuminated With built-in multiple LED, 24 V DC, I _e = 15 mA Positive pole at X1 No bulb replacement required.		IP65	Q25LPV-S 257064		5 off 	UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
Emergency stop labels						
Yellow, black lettering		Square 50 × 50 mm de, en, fr, it	IP65	SQT11 121375	5 off 	UL/CSA certification not required
		Round ø 60 mm de, en, fr, it	IP65	SRT11 121374	5 off 	
Emergency-stop labels						
Yellow, black lettering		Square 50 × 50 mm de, en, fr, it	IP65	SQT1 058874	5 off 	UL/CSA certification not required
		Round ø 60 mm de, en, fr, it	IP65	SRT1 058873	5 off 	
Emergency-stop labels						
Blank, yellow Not suitable for engraving		Square 50 × 50 mm	IP65	SQ-GE 063263	5 off 	UL/CSA certification not required
		Round ø 60 mm	IP65	SR-GE 063264	5 off 	































Inscription	Symbol	Button plates for pushbutton actuators		Price See price list	Std. pack	Information relevant for export to North America  
		18 x 18 mm Part no. Article no.	25 x 25 mm Part no. Article no.			
Marking plates						
-		01TQ18 086816	01TQ25 091121		20 off  	UL/CSA certification not required
-		02TQ18 086859	02TQ25 091149			
-		03TQ18 087766	03TQ25 091184			
-		04TQ18 087834	04TQ25 091442			
-		05TQ18 087867	05TQ25 091471			
-		06TQ18 087920	06TQ25 091506			
With customized inscription via Labeleditor → Notes		XQ18D-*.*) 285286	XQ25D-*.*) 285287		1 off  	
OFF		10TQ18 087951	10TQ25 091536		20 off  	
STOP or OFF		19TQ18 054510	19TQ25 054508			
ON		11TQ18 088007	11TQ25 091562			
START or ON		20TQ18 054509	20TQ25 054507			
START or ON		21TQ18 088061	21TQ25 091586			
Direction of movement		32TQ18 088125	32TQ25 091618			
Direction of movement		36TQ18 088275	36TQ25 092592			
Electr. voltage		34TQ18 095386	34TQ25 092563			
Increase		37TQ18 088315	37TQ25 092608			
Decrease		38TQ18 088340	38TQ25 092645			
Manual actuation		40TQ18 088389	40TQ25 092709			
Automatic		41TQ18 088412	41TQ25 092774			
ON-OFF, momentary		43TQ18 088426	43TQ25 092791			
Unlock		52TQ18 088452	52TQ25 092825			
Lock		53TQ18 088487	53TQ25 092874			
Loosen		54TQ18 088512	54TQ25 093013			
Clamp		55TQ18 088545	55TQ25 093032			
Liquid START			921TQ25 047426			
Liquid STOP		63TQ18 088566	63TQ25 093060			
Horn		66TQ18 088590	66TQ25 093092			
Spindle START			811TQ25 053898			
Spindle STOP			814TQ25 047425			
ON-OFF, maintained		899TQ18 089232	899TQ25 093063			

Notes

¹⁾ When ordering, complete part no. XQ18D-*.*) or XQ25D-*.*):
 1st wildcard * Δ Color, e.g.: -R, -G, -B, -W, -Y, -S
 2nd wildcard * Δ File name generated by Labeleditor → Engineering























Illuminated pushbutton actuator, Indicator light, laser inscription → Page 2/97

Inscription	Symbol	Button plates for pushbutton actuators		Price See price list	Std. pack	Information relevant for export to North America 
		18 x 18 mm Part no. Article no.	25 x 25 mm Part no. Article no.			
Marking plates						
Direction of movement		911TQ18 089778	911TQ25 093100		20 off 	UL/CSA certification not required
Direction of movement		912TQ18 090181	912TQ25 093135			
		80TQ18 088631	80TQ25 093134			
		81TQ18 088663	81TQ25 093158			
		82TQ18 088715	82TQ25 093178			
		83TQ18 088744	83TQ25 093197			
		84TQ18 088766	84TQ25 093224			
		85TQ18 088811	85TQ25 093241			
		86TQ18 089069	86TQ25 093257			
		87TQ18 089107	87TQ25 093288			
		88TQ18 089165	88TQ25 093305			
		89TQ18 089205	89TQ25 093329			
STOP			110TQ25 093363			
STOP			112TQ25 063748			
ARRET			310TQ25 091446			
START			111TQ25 093399			
START			122TQ25 063746			
MARCHE			311TQ25 091475			
AUS			117TQ25 093434			
AUS			113TQ25 063749			
OFF			217TQ25 090911			
ARRET			317TQ25 091508			
EIN			121TQ25 093461			
EIN			123TQ25 063747			
ON			221TQ25 090934			
MARCHE			321TQ25 091563			

Notes





























Illuminated pushbutton actuators, Indicator lights, Laser inscription → Page 2/97



Inscription	Symbol	Button plates for pushbutton actuators 25 × 25 mm Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Marking plates					
LINKS		134TQ25 093494		20 off  	UL/CSA certification not required
LEFT		234TQ25 090987			
GAUCHE		334TQ25 092567			
RECHTS		135TQ25 093527			
RIGHT		235TQ25 091009			
DROITE		335TQ25 092594			
ZU		153TQ25 090632			
CLOSE		253TQ25 091089			
FERME		353TQ25 092609			
AUF		172TQ25 090732			
UP		272TQ25 091124			
MONTEE		372TQ25 092711			
AB		173TQ25 090822			
DOWN		273TQ25 091152			
DESCENTE		373TQ25 092775			
RESET		287TQ25 091185			
VOR		190TQ25 090852			
ZURÜCK		191TQ25 090866			

Notes

Illuminated pushbutton actuators, Indicator lights, Laser inscription → Page 2/97

Inscription		Label mounts Q25T... with insert label		Insert labels for Q25T...-X label mount		Std. pack	Information relevant for export to North America 
		Part no. Article no.	Price See price list	Part no. Article no.	Price See price list		
Blank, black, can be engraved		Q25TS-01 046184		01SQ25 037986		20 off 	UL/CSA certification not required
Blank, aluminum-colored, can be engraved		Q25TS-02 046185		02SQ25 038074			
Blank, yellow, not for engraving		Q25TGE-05 063259		05SQ25 063201			
AUS		Q25TS-117 046194					
EIN		Q25TS-121 046196					
ON		Q25TS-221 046197					
STOP		Q25TS-110 046190		110SQ25 038507			
START		Q25TS-111 046192					
Störung		Q25TS-150 046198					
FAULT		Q25TS-250 046199					
DÉFAUT		Q25TS-386 072306		386SQ25 072302			
Betrieb		Q25TS-183 046201					
EN SERVICE		Q25TS-383 046204					
HAND 0 AUTO		Q25TS-197 072305					
MAN. 0 AUTO		Q25TS-397 072307					
NOT-AUS		Q25TGE-199 063260		199SQ25 063200			
EMERGENCY STOP		Q25TGE-299 063261		299SQ25 063199			
RUN				283SQ25 038767			
EN SERVICE				383SQ25 038771			
ARRET D'URGENCE				399SQ25 048638			
-		Q25TS-10 046186		10SQ25 038268			
-		Q25TS-11 046187					
-		Q25TS-32 046188					
-		Q25TS-90 046189		90SQ25 038271			
-		Q25TS-93 072304		93SQ25 072300			
With customized inscription through Labeleditor → Notes	-	XQ25TS-*.* 109773				1 off 	UL/CSA certification not required





















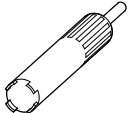












Notes

When ordering, complete part no. XQ25TS-*.*.
1st wildcard * Δ Color: AL = aluminum, B = black, Y = yellow
2nd wildcard * Δ File extension



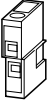



















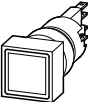








Color	RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Surface mounting enclosures, IP65¹⁾					
For conventional wiring or for mounting ILP1 printed circuit boards With plastic cover fixing screws Enclosure base: black (RAL 9005) 8 mounting locations Knockout cable entries Bottom: 4 × M20 Sides: 7 × M20					
		RAL 7035	I8 046299	2 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
Flush mounting plate, IP65¹⁾					
For conventional wiring or for mounting ELP 1 printed circuit boards 8 mounting locations					
		RAL 7035	E8 054423	1 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
		RAL 9005	E8-SW 065212	1 off 	UL File No. E29184 UL CCN NKCR CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
Customized complete unit					
To order use form F0315 → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; max. 10 characters.					
-	-	Configurable	M16-COMBINATION-* 232189	1 off	
Blanking plates, IP65					
For closing off of spare mounting locations in surface mounting enclosures or flush mounting panels in grid dimension 25 × 37.5 mm					
		RAL 9005	Q25AS 036602	10 off 	UL/CSA certification not required
		RAL 7035	Q25AGR 048641		
		RAL 1004	Q25AGE 048640		
Label mounts without insert label					
For additional marking of mounting locations in surface mounting enclosures or flush mounting panels in grid dimension 25 × 37.5 mm Suitable insert labels → 2/94					
		RAL 9005	Q25TS-X 036601	20 off 	UL/CSA certification not required
		RAL 7035	Q25TGR-X 063257		
		RAL 1004	Q25TGE-X 063258		

Notes Unused mounting locations must be closed off with blanking plates.
Each used mounting location must be fitted with a label mount.

Model	Durability EN 60064 at $t_a = +25^\circ\text{C}$ t_{average} (AC) h	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America 
Filament lamp W 2 x 4.6 d						
	6 V/1.0 W	10000	-	WBGL6 090223	50 off 	UL/CSA certification not required
	12 V/1.0 W	15000	-	WBGL12 089968	50 off 	
	24 - 28 V/1.0 W	7000	-	WBGL24 089247	100 off 	
Multiple LEDs W 2 x 4.6 d						
For AC/DC 	6 V/45 mA	60000		WBLED-GE6 055711	10 off 	UL/CSA certification not required
				WBLED-GN6 055712		
				WBLED-RT6 055713		
	12 V/24 mA	60000		WBLED-GE12 055714		
				WBLED-GN12 055715		
				WBLED-RT12 055716		
Single-chip LED W 2 x 4.6 d						
Positive pole to X1, Integral suppressor circuit up to 1000 V 	18 - 30 V DC/7 - 12.5 mA	100000		LEDWB-Y 208724	10 off 	UL/CSA certification not required
				LEDWB-G 208725		
				LEDWB-R 208726		
				LEDWB-W 208728		
				LEDWB-B 208727		
Combination box spanner						
For lock nut with bulb extractor 	-	-	-	R16-MS 090297	10 off 	UL/CSA certification not required
Insulated ferrule						
For fast-on connector 2.8 x 0.8 mm, connected from front $U_e > 50\text{ V AC}$, $U_e > 120\text{ V DC}$ 	-	-	-	ISH2,8 090267	100 off 	UL/CSA certification not required
Flat pin bushing						
2.8 x 0.8 mm for conductor cross-section 0.5 - 1 mm ² 	-	-	-	LT306.022.3 058863	100 off 	UL/CSA certification not required
Blanking plugs, IP65						
For closing off of spare mounting locations 	For grid dimension 18 x 18 mm	-		Q18BS 037985	10 off 	UL/CSA certification not required
	For grid dimension 25 x 25 mm	-		Q25BS 036976	10 off 	
Anti-rotation feature						
Guard-ring as anti-rotation feature for all RMQ16 pushbutton 	-	-	-	VS 046301	50 off 	UL/CSA certification not required



For use with		Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
IP20, screw adapter						
Conductor cross-sections 1 × 1.5 mm ² , 2 × 0.75 mm ²						
	For NC		SRA01 028101		20 off  	UL/CSA certification not required
	For N/O		SRA10 028100			
	For lamp socket		SRAL 028099			
Individual keys						
Standard lock mechanism, black, each colour corresponds to a specific lock mechanism						
	–		ES16 065190		10 off  	UL/CSA certification not required
	–		ES16-GN 030742		5 off  	
	–		ES16-RT 030741			
	–		ES16-WS 030743			
	–		ES16-BL 030744			
Transparent insert plates						
For better light diffusion						
–	For grid dimension 18 × 18 mm		01LQ18 090231		20 off  	UL/CSA certification not required
–	For grid dimension 25 × 25 mm		01LQ25 093180			
Lenses for illuminated pushbutton actuators						
With customized inscription to order via Labeleditor → Notes						
	For grid dimension 18 × 18 mm	–	XQ18LT-*.* 285288		1 off  	UL/CSA certification not required
	For grid dimension 25 × 25 mm	–	XQ25LT-*.* 285289			
Lenses for indicator lights, flush						
With customized inscription to order via Labeleditor → Notes						
–	For grid dimension 18 × 18 mm	–	XQ18LF-*.* 285310		1 off  	UL/CSA certification not required
–	For grid dimension 25 × 25 mm	–	XQ25LF-*.* 285311			
Insert labels for label mounts						
For laser inscription with Labeleditor → Notes						
–	For Q25TS-...	–	XQ25TS-*.* 109773		1 off  	

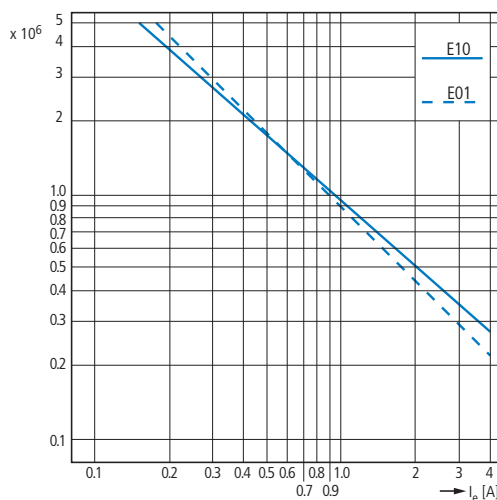
Notes When ordering, complete part no. XQ...-*.*:
 1st wildcard * ≙ Color, e.g.: -R, -G, -B, -W, -Y, -S
 2nd wildcard * ≙ file name generated by Labeleditor → Engineering


Technical data

			Contact elements	Illuminated pushbuttons (maintained)	Illuminated selector pushbuttons	Indicator lights
General						
Standards			IEC/EN 60947, VDE 0660			
Lifespan, mechanical	Operations	x 10 ⁶	> 100	> 30	> 3	–
Operating frequency	Operations/h		≤ 3600	≤ 1800	≤ 1800	–
Actuating force		N	3	4	–	–
Operating torque		Nm	–	–	≤ 0.2	–
Protection type, IEC/EN 60529			IP20 with ISH2.8	IP65	IP65	IP65
Climatic proofing			Damp heat, constant as per IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature						
Open		°C	-25 - +60	-25 - +60	-25 - +60	-25 - +60
Encapsulated		°C	-25 - +40	-25 - +40	-25 - +40	-25 - +40
Mounting position			Any	Any	Any	Any
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal			g	> 40	> 40	> 40
Terminal capacity			mm ²	0.5 - 1.0	0.5 - 1.0	0.5 - 1.0
Blade terminal			2.8 × 0.8 mm to DIN 46244			
Flat pin bushing			2.8 × 0.8 mm to DIN 46247 and IEC 60760			
Contacts						
Rated impulse withstand voltage	U _{imp}	V AC	4000	800	800	800
Rated insulation voltage	U _i	V	250	250	250	250
Overvoltage category/pollution degree			III/3	III/3	III/3	III/3
Rated operational voltage	U _e	V AC	250	24	24	24
Control circuit reliability						
At 24 V DC/5 mA	H _F	Fault probability	< 10 ⁻⁷ (i.e. 1 failure to 10 ⁷ operations)			–
At 5 V DC/1 mA	H _F	Fault probability	< 5 × 10 ⁻⁶ (i.e. 1 failure to 5 × 10 ⁶ operations)			–
Use of ISH insulated ferrule 2.8			On >24 V AC/DC recommended On >50 V AC or 120 V DC mandatory, also on unoccupied blade terminals			
Max. short-circuit protective device						
Fuseless		Part no.	FAZ-B6/1	–	–	–
Fuse	gG/gL	A	10	–	–	–
Switching capacity						
Rated operation current						
AC-15						
24 V	I _e	A	4	–	–	–
48 V	I _e	A	4	–	–	–
110 V	I _e	A	4	–	–	–
230 V	I _e	A	4	–	–	–
DC-13						
24 V	I _e	A	3	–	–	–
42 V	I _e	A	1	–	–	–
60 V	I _e	A	0.8	–	–	–
110 V	I _e	A	0.5	–	–	–
220 V	I _e	A	0.2	–	–	–



			Pushbutton actuators (maintained)	Selector switch actuators	Key-operated pushbutton actuators	Emergency switching-off pushbutton actuators
General						
Standards			IEC/EN 60947, VDE 0660	IEC/EN 60947, VDE 0660	IEC/EN 60947, VDE 0660	IEC/EN 60947, VDE 0660
Lifespan, mechanical	Operations	x 10 ⁶	> 3	> 3	> 3	> 0.1
Operating frequency	Operations/h		≤ 1800	≤ 1800	≤ 1800	≤ 600
Actuating force		N	4	–	–	25
Operating torque		Nm	–	0.2	0.4	–
Protection type, IEC/EN 60529			IP65	IP65	IP65	IP65
Climatic proofing			Damp heat, constant as per IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature						
Open		°C	-25 - +60	-25 - +60	-25 - +60	-25 - +60
Encapsulated		°C	-25 - +40	-25 - +40	-25 - +40	-25 - +40
Mounting position			Any	Any	Any	Any
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal		g	> 40	> 40	> 40	> 40
Terminal capacity		mm ²	0.5 - 1.0	0.5 - 1.0	0.5 - 1.0	0.5 - 1.0
Blade terminal			2.8 × 0.8 mm to DIN 46244			
Flat pin bushing			2.8 × 0.8 mm to DIN 46247 and IEC 60760			



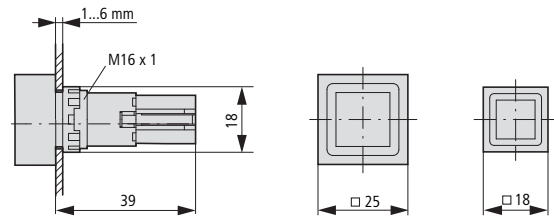
Durability, electrical AC-15 to IEC/EN 60947-5-1 at 230 V
I_e = rated operational current



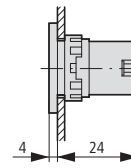
Dimensions

Actuating and indicator elements

Square style

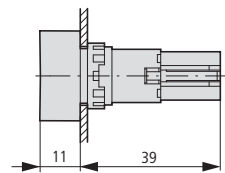


Q...BS

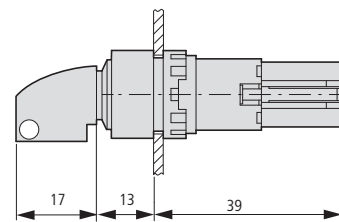


Q...D-...

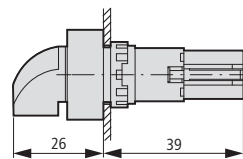
Q...DR-...



Q...S...



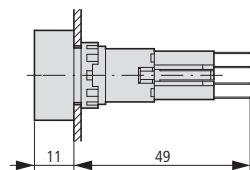
Q...WK...



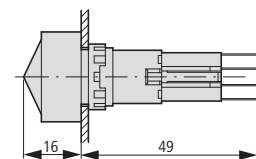
Q...LT-...

Q...LTR-...

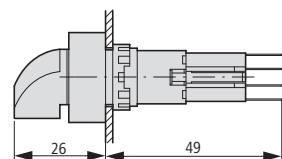
Q...LF-...



Q...LH-...

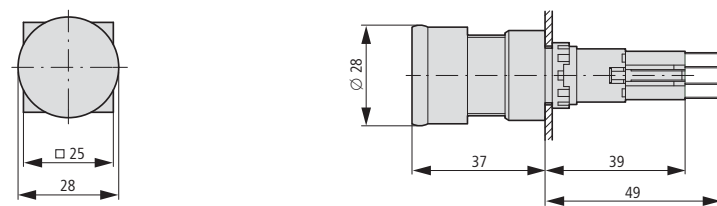


Q...LWK...



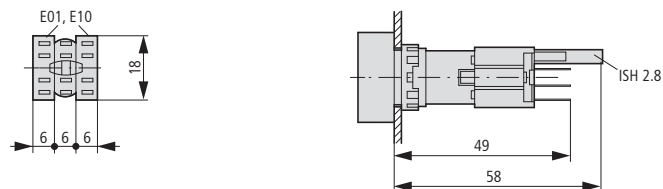
Q25PV...

Q25LPV...

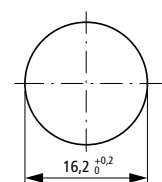


Front fixing

Q18, Q25, E89, SRA, VS, M16

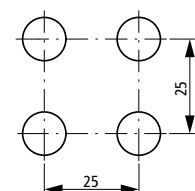


Drilling dimensions



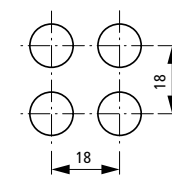
Grid dimension to IEC/EN 60947

Q25

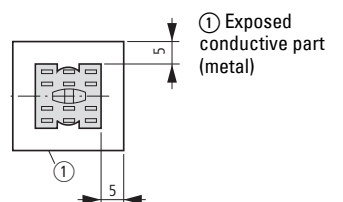


Minimum grid spacing dimension

Q18



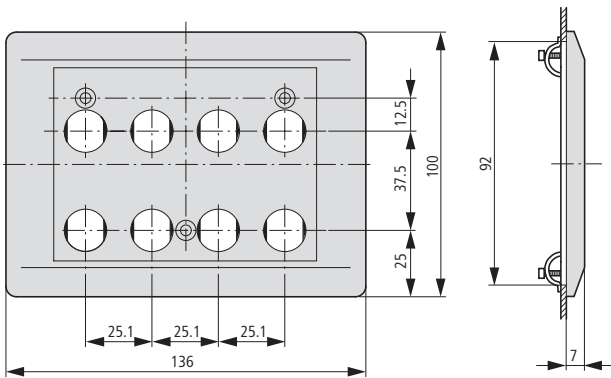
Mounting distance





Flush mounting panel

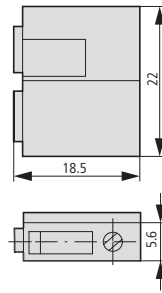
E8...



Size of cutout: 92 × 94

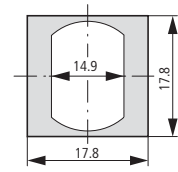
RMQ16 screw adapter

SRA...



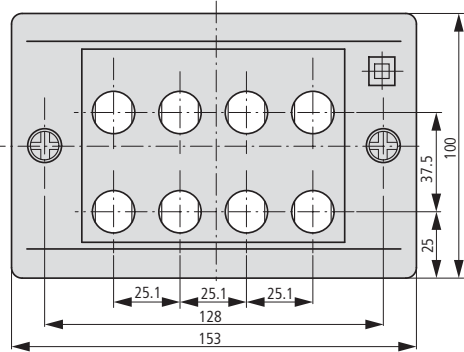
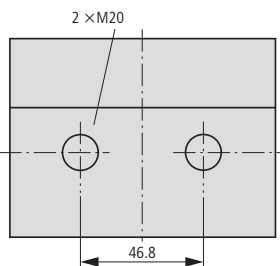
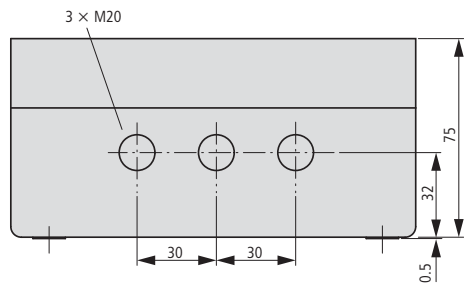
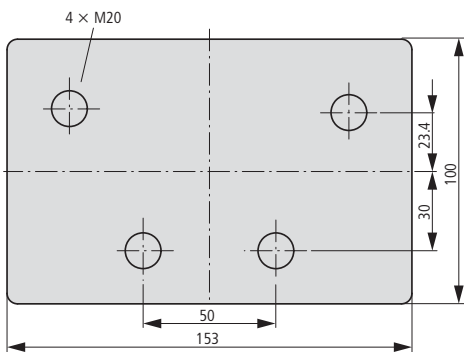
Anti-rotation feature

VS



RMQ16 housing extension

I8...

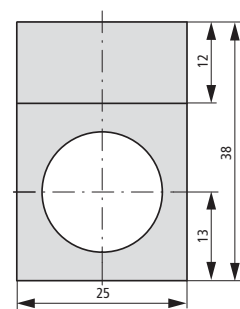


Fixing hole: 2 x Ø 4.5 mm

Distance: 128 mm

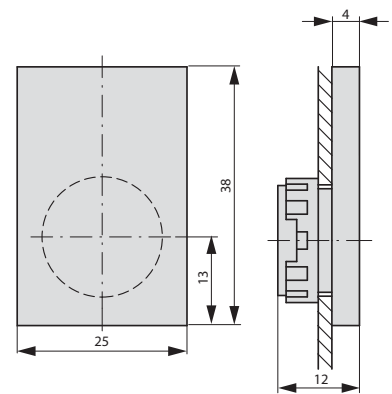
RMQ16 label mount

Q25TS...



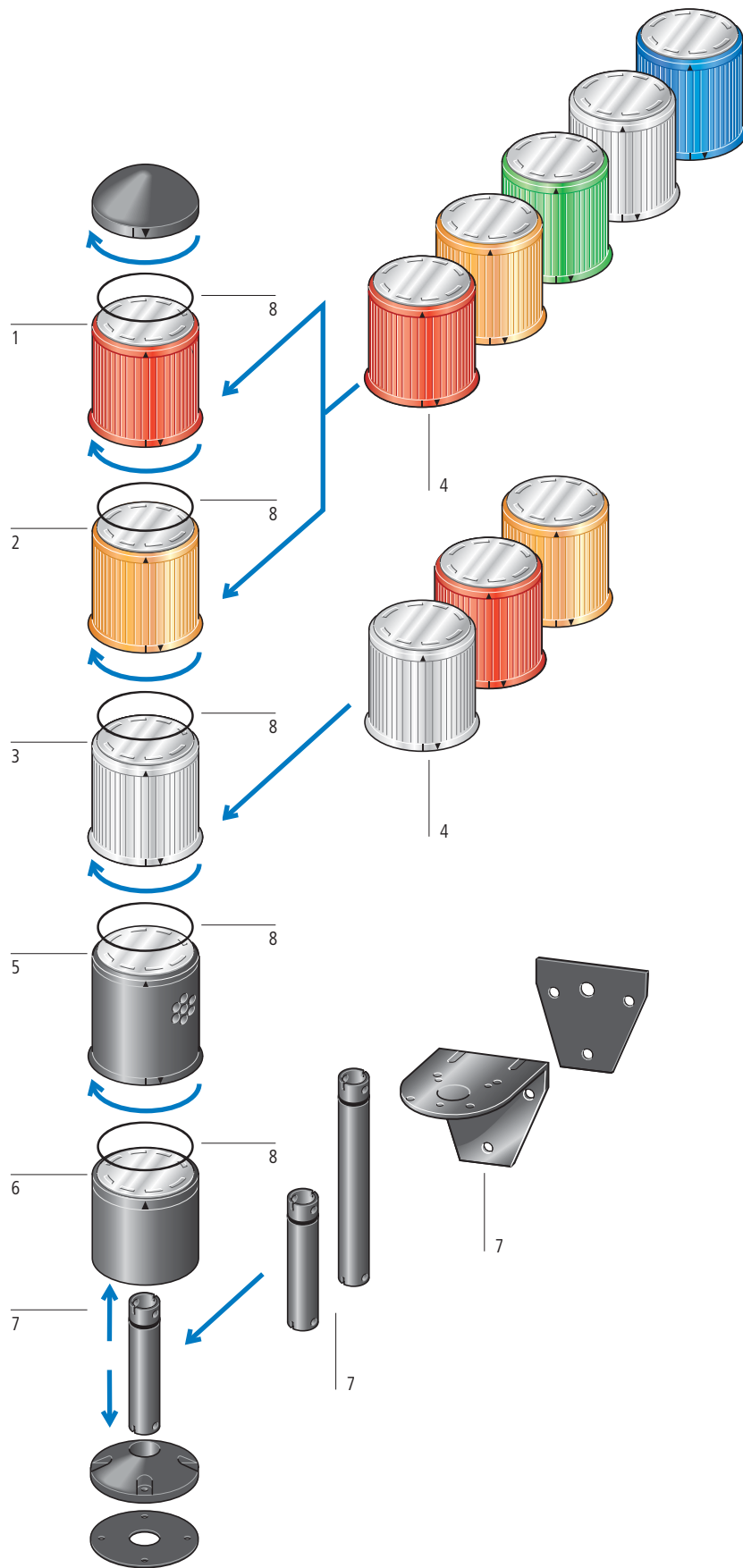
Blanking plates

Q25AS





System overview





Continuous light	1
Easy mounting with bayonet fitting	
Modules can be arranged in any order	
Protection type IP54	
Up to five levels can be actuated independently	
Operating mode: 100 % DF	
Without light elements	
→ Page 2/104	

Flashing light	2
Easy mounting with bayonet fitting	
Modules can be arranged in any order	
Protection type IP54	
Up to five levels can be actuated independently	
Operating mode: 100 % DF	
With filament bulb	
Flashing frequency: approx. 1 Hz	
→ Page 2/105	

Strobe light	3
Easy mounting with bayonet fitting	
Modules can be arranged in any order	
Protection type IP54	
Up to five levels can be actuated independently	
Operating mode: 100 % DF	
Flash power 1 Ws	
Flashing frequency: approx. 1 Hz	
→ Page 2/106	

Caps	4
Color: red, yellow, green, white, blue	
Fresnel grooves ensure even light distribution	

Acoustic device	5
Easy mounting with bayonet fitting	
Modules can be arranged in any order	
Protection type IP20	
Operating mode: 100 % DF	
Continuous tone or pulsed tone	
Sound pressure: about 90 dB at 60 cm	
Frequency: 2750 Hz	
→ Page 2/105	

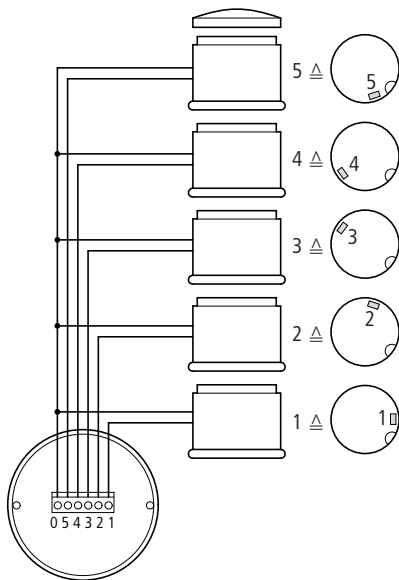
Base module	6
Easy mounting with bayonet fitting	
Protection type IP54	
For bottom mounting or in tubular column	
Terminal connection capacity 6 × 1.5 mm ²	
With top cover	
→ Page 2/104	

Accessories	7
Spacer available in four lengths	
Filament bulbs, LEDs	
90° wall mounting with commercial four-hole fixing	
→ Page 2/107	











Gaskets	8
For increasing the degree of protection type to IP65	
→ Page 2/107	
















Product feature of SL

- Individual programming by jumper: max. 5 modules and base module
- Customized combinations → Page 2/104
































Rated operational voltage U _e V	Modules Number	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Complete units						
Base module with foot and 100 mm tube including filament lamp Continuous light, IP54						
24 V AC/DC	3		SL-100-L-RYG/24 205352		1 off  	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
24 V AC/DC	2		SL-100-L-RG/24 205354		1 off  	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 Degree of Protection UL/CSA Type 12, with additional SL-IP65: part no. 4X
Customized complete unit						
To order use form F0315, → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; Maximum 10 characters						
-	-	-	SL-COMBINATION-* 229655		1 off  	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

Terminal type	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America  
Base module					
Black, with cover					
 Screw terminals	SL-B 205311		1 off  	-	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
 Cage clamp Cage clamp is a registered trademark of Wago Kontakttechnik GmbH, Minden,	SL-CB 218483		1 off  		Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking UL File No. E29184 UL CCN NKCR CSA File No. 012528 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified
Connection to AS-Interface	SL-B-ASI 222174		1 off	Base module (printed circuit board in base enclosure with 3 outputs): <ul style="list-style-type: none"> Total power supply from AS-Interface (max. 250 mA) using 2-way screw terminal Combination of 3 surface mounting modules with different functions (continuous, flashing, strobe light and acoustic indication) Status indication via LEDs Order stacking modules separately 	
Continuous light module					
Without light elements, filament lamps → Page 2/107, LED → Page 2/107					
	SL-L-W 205312		1 off  		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
	SL-L-R 205313				
	SL-L-G 205314				
	SL-L-Y 205315				
	SL-L-B 205316				



	Rated operational voltage U _e V	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Flashing light module						
Without light element, f ≈ 1 Hz						
	24 V AC/DC (+10 %/-15 %)		SL-BL24-W 205317		1 off  	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking E29184 NKCR UL File No. UL CCN CSA File No. CSA Class No. NA Certification 012528 3211-03 UL Listed, CSA certified
			SL-BL24-R 205318			
			SL-BL24-Y 205320			
			SL-BL24-G 205319			
			SL-BL24-B 205321			
	110 - 130 V AC		SL-BL130-W 205322			
			SL-BL130-R 205323			
			SL-BL130-G 205324			
			SL-BL130-Y 205325			
			SL-BL130-B 205326			
	230 V AC		SL-BL230-W 205327			
			SL-BL230-R 205328			
			SL-BL230-G 205329			
			SL-BL230-Y 205330			
			SL-BL230-B 205331			
Acoustic module						
IP20						
	Continuous tone f = 2750 Hz In 60 cm spacing 12 V: 77 dB 24 V: 83 dB 36 V: 90 dB	12 - 36 V AC/DC 8 - 12 mA		SL-A24 205341	1 off  	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking E29184 NKCR UL File No. UL CCN CSA File No. CSA Class No. NA Certification 012528 3211-03 UL Listed, CSA certified
	Continuous tone f = 2750 Hz In 60 cm spacing 110 V: 72 dB 230 V: 78 dB	110-230 V AC/DC 4 - 8 mA		SL-A110-230 205342		
	Pulsed tone 5 Hz with f = 2750 Hz In 60 cm spacing 12 V: 61 dB 24 V: 66 dB 36 V: 77 dB	12 - 36 V AC/DC 8 - 12 mA		SL-AP24 205343		
	Pulsed tone 5 Hz with f = 2750 Hz In 60 cm spacing 110 V: 67 dB 230 V: 73 dB	110-230 V AC/DC 4 - 8 mA		SL-AP110-230 205344		



	Rated operational voltage	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
	U _e V					
Strobe light module						
With flash tube, 1 Ws, f ≈ 1 Hz						
	24 V AC/DC (+10 ... -15 %) I _{emax} = 190 mA		SL-FL24-W 205332		1 off 	Product Standards IEC/EN 60947-5; UL [®] 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking E29184 NKCR UL File No. UL CCN CSA File No. CSA Class No. NA Certification 012528 3211-03 UL Listed, CSA certified
			SL-FL24-R 205333			
			SL-FL24-Y 205334			
	110 - 130 V AC I _{emax} = 31 mA		SL-FL130-W 205335			
			SL-FL130-R 205336			
			SL-FL130-Y 205337			
	230 V AC I _{emax} = 28 mA		SL-FL230-W 205338			
			SL-FL230-R 205339			
			SL-FL230-Y 205340			



	Lifespan EN 60064 at $t_a = +25\text{ }^\circ\text{C}$	Rated operational voltage	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
	t_{average} (AC) h	U_e V					
Accessories							
Stand with spacer							
	100 mm, plastic, black	–	–	–	SL-F100 205345	1 off 	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
	100 mm, metal	–	–	–	SL-F100M 265359		
	250 mm, plastic, black	–	–	–	SL-F250 205346		
	250 mm, metal	–	–	–	SL-F250M 268925		
	400 mm, metal	–	–	–	SL-F400 215275		
	800 mm, metal	–	–	–	SL-F800 215276		
Fixing bracket 90°, for wall mounting							
	Metal	–	–	–	SL-FW 205347	1 off 	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
Filament bulb BA 15d, 5 - 7 W							
	2000	24 V	–	SL-L24 205348	1 off 	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	
	5000	110 - 130 V	–	SL-L130 205349			
	5000	200 - 260 V	–	SL-L230 205350			
Multiple LED BA 15d							
	100000	18 - 30 V AC/DC 50/60 Hz 13 - 50 mA		SL-LED-W 215278	1 off 	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	
				SL-LED-R 215279			
				SL-LED-G 215280			
				SL-LED-Y 215281			
				SL-LED-B 215282			
	100000	110 - 230 V AC, 50/60 Hz 9 - 17 mA		SL-LED230-W 285532			
				SL-LED230-R 285533			
				SL-LED230-G 285534			
				SL-LED230-Y 285535			
				SL-LED230-B 285536			
Gasket set For increasing the degree of protection type to IP65 (Not for the acoustic device) for 3 modules Δ 4 units							
	–	–	–	–	SL-IP65 215277	1 off 	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 Degree of Protection UL/CSA Type 4X



Technical data

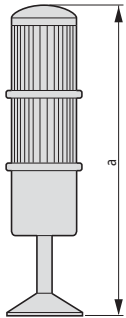
			SL signal towers
General			
Standards			IEC/EN 60947, VDE 0660
Protection type, IEC/EN 60529			IP54, IP65 with SL-IP65 gasket, IP20 with acoustic module SL-A
Climatic proofing			Damp heat, constant as per IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
Mounting position			Any
Mechanical shock resistance to IEC 60068-2-27 Shock duration 11 ms, half-sinusoidal		g	> 15
Terminal capacity			
Solid		mm ²	0.75 - 2.5
Stranded		mm ²	0.5 - 2.5
Contacts			
Rated impulse withstand voltage	U_{imp}	V AC	4000
Rated insulation voltage	U_i	V	250
Overvoltage category/pollution degree			III/3

			SL-B-ASI base module for signal towers
General			
Connection to AS-Interface cable			Screw terminal on printed circuit board
Addressing			Via connection to AS-Interface cable
Maximum total current		mA	≤ 250
Energy supply			Completely from the AS-Interface cable
Ambient temperature		°C	-25 - +55
Status LEDs on the printed circuit board			Status. Output Q0/function module position 1: green Status. Output Q1/function module position 2: green Status. Output Q2/function module position 3: green AS-Interface power line: green AS-Interface error, AS-Interface master failure: red
Profile			S-9.A.E



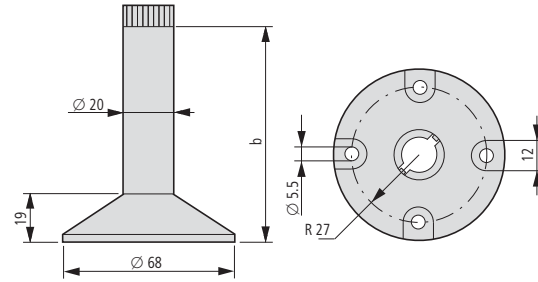
Dimensions

Signal towers
SL-100-...



Number of modules	a
1	227
2	289
3	351
4	413
5	475

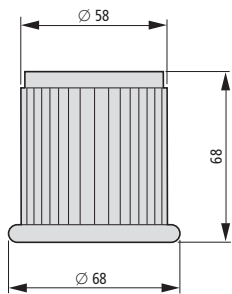
Stand with spacer
SL-F...



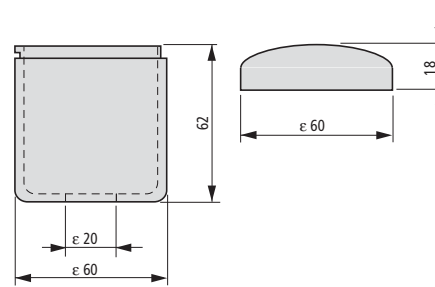
	b
SL-F100	85
SL-F250	235
SL-F400	402
SL-F800	802

Modules

- SL-L...
- SL-BL...
- SL-A...
- SL-FL...

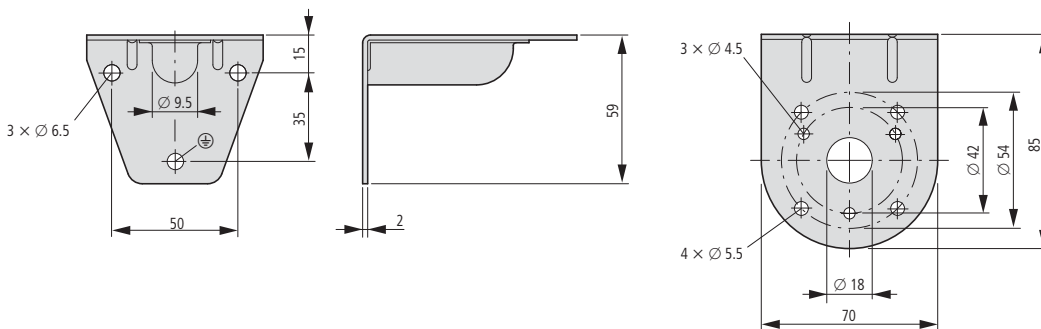


Basic modules with cover
SL-(C)B...



Fixing bracket

SL-FW





LS position switches

MCS pressure switches, sensors

Eaton safety and position switches are used wherever positions must be determined precisely. Available in various construction types, the sensors and proximity switches are non-contact for reliable switching. A wide spectrum of inductive, capacitive, optoelectronic and mechanical sensors with a multitude of connection variants for direct and alternating voltage with two or three conductors covers nearly every application.

Safety / position switches LS-Titan

Determine positions reliably +++ Cage clamp and screw terminal technology +++ Metal or insulated versions +++ Positive opening contacts +++ Easy mounting of the various operating heads → Page 3/2

Safety door switch, safety / position switches

Safety for personnel and processes +++ Secures and locks protective doors +++ Switches off safely in case of emergencies +++ Prevents unwanted manipulation → Page 3/12

MCS pressure switches

Pressure monitoring of fluid and gaseous media, i.e air pressure +++ Two adjustable operating points (ON/OFF operating point) +++ 1-pole or 3-pole, to control auxiliary circuits or switch loads → Page 3/31

Sensors, proximity switches

Inductive, capacitive and optical object recognition +++ Cylindrical construction types from 4 – 30 mm +++ Cubical construction types +++ AC and DC variants → Page 3/36



System overview

LS-Titan	3/2
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Ordering

LS-Titan safety position switch	3/3
LS-Titan position switch without positive opening	3/8
Operating heads	3/9
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System overview

Safety position switches LS...ZBZ, LS...ZB, LSR...	3/12
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Description

Safety position switches LS...ZBZ, LS...ZB, LSR...	3/14
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Ordering

Safety position switches LS...ZBZ	3/16
Actuators LS...ZBZ	3/17
Safety position switches LSR..., LS...ZB	3/18

Engineering

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Technical data

(Safety) position switch LS-Titan	3/22
Safety position switches LS...ZBZ	3/24

Dimensions

(Safety) position switch LS-Titan.	3/25
Safety position switches LS...ZBZ, LS...ZB, LSR...	3/27
Safety position switches LSR..., LS...ZB	3/29
Safety position switches LS4...ZB	3/30

Ordering

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Dimensions

Pressure switches	3/34
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Technical data

Pressure switches	3/35
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Inductive Sensors

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E57 Premium Plus series	3/46
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E56-Series	3/74

Capacitive sensors

E53-Series	3/77
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Optical sensors

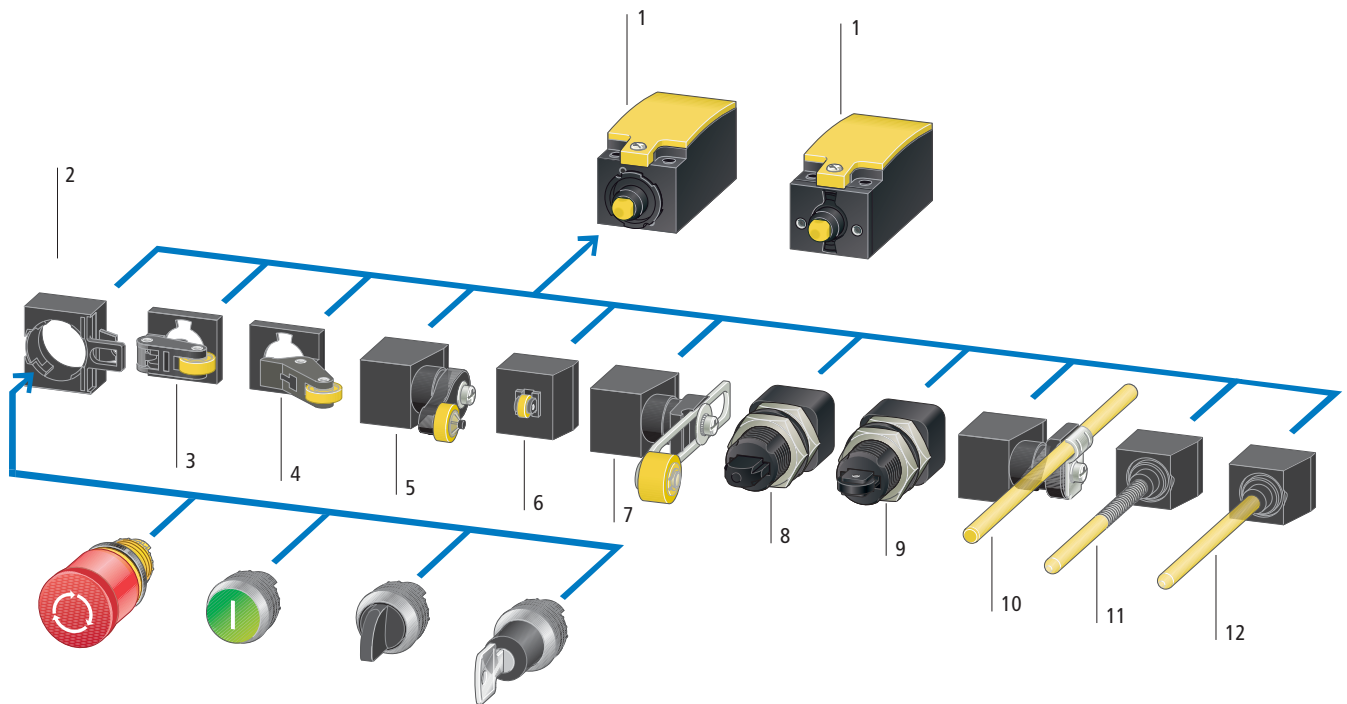
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Accessories

Ordering	3/105
Dimensions	3/108



System overview



LS, LSM

Basic units

Basic Unit	1
According to EN 50047	
With screw-on cover	
Contact configuration: 1N/O / 1NC, 2N/O, 2NC	
Cage Clamp, Screw terminals technology	
As snap-action or standard-action switch	
As electronic snap-action switch, (individually adjustable)	
As 4-20 mA analog signal encoder	
As 0-10 VDC analog signal encoder	
→ Page 3/3	

Operating heads

Can be rotated by 90°

Fixing adapters	2
Actuation through front element RMQ-Titan®	
Roller lever	3
For one-sided operation with higher operating speed	
Angled roller lever	4
For actuation along the unit axis	
Rotary lever	5
For transverse actuation, for pendulum movements	
→ Page 3/5	

Operating heads

Can be rotated by 90°

Roller plunger	6
For transverse actuation with low actuating force	
Adjustable roller lever	7
For length adjustment as required	
Rounded plunger, center fixing	8
For mounting in enclosure wall or mounting plate drilling M18 x 1	
Roller plunger, center fixing	9
For mounting in enclosure wall or mounting plate drilling M18 x 1	
Actuating rod	10
On conveyor belts for lightweight goods	
Spring rod	11
For flexible actuation from all sides	
Actuating rod	12
Withdrawable mechanism from front	
→ Page 3/5	

LS, LSM product features

- Modular system
- IP65 and IP66 protection type (except LSM)

Totally insulated

- Personnel protection
- Positive operation
- ☹ Safety function with positively opening contacts to IEC/EN 60947-5-1 up to Category 4 to EN 954-1

- Suitable for use with electronic units to IEC/EN 61131-2
- Devices for world markets

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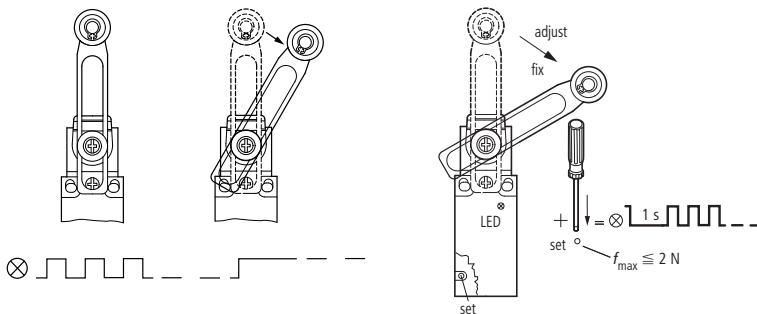
Ordering



Contact configuration	Circuit symbol	Contact travel ■ = Contact closed □ = Contact open	Color Enclosure cover	Part no. Article no.	Price See price list	Std. pack
<p>☉ Safety function safety function to IEC/EN 60947-5-1</p> <p>N/O = normally open contact NC = normally closed contact</p>						
Basic unit, expandable						
Operating point electronically adjustable, IP66, IP67						
Basic unit Visible status display, comparable with positive opening function Partly short-circuit-proof, restart after reset						
	1 N/O	1 NC				LSE-11 266121 2 off ¹⁾
	—	2 NC				LSE-02 266122 2 off ¹⁾

Notes

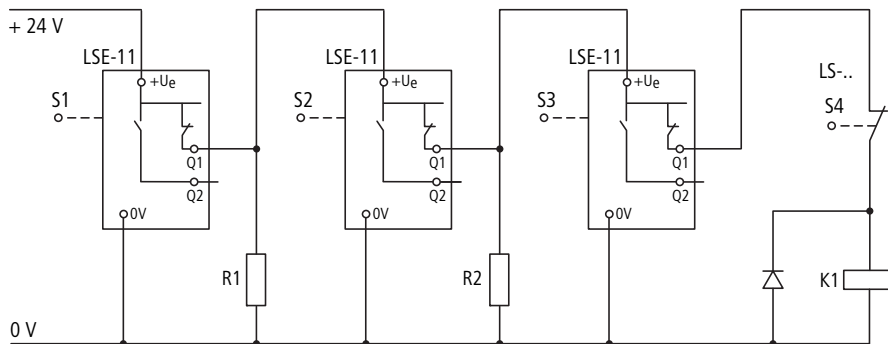
LSE-11 and LSE-02: Individual operating point adjustment:



The following applies to LSE-11 and LSE-02: ensure that the power supply operates correctly when setting the operating point.

Circuit example of series connection:

LSE-11 and LSE-02 can be used in safety-oriented circuits.



S1 is connected to 24 V DC
S2, S3 each switch with a delay of 0.7 s
R1, R2 e.g. series resistor element M22-XLED60 (2820 Ω/0.5 W)

¹⁾ Operating heads → Page 3/9

Information relevant for export to North America



Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Degree of Protection

IEC/EN 60947-5; UL 508;
CSA-C22.2 No. 14; CE marking
E29184
NKCR
12528
3211-03
UL Listed, CSA certified
IEC: IP66, 67, UL/CSA Type 3R,
4X (indoor use only), 12, 13

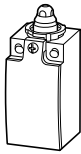


Contact configuration	Circuit symbol	Contact travel ■ = Contact closed □ = Contact open	Color Enclosure covers	Enclosure	Connection type	Part no. Article no.	Price See price list	Std. pack
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⊕ Positive opening safety function according to IEC/EN 60947-5-1
N/O = normally open NC = normally closed contact

Basic unit, expandable

Rounded plunger, IP66, IP67



-	2 NC ⊕			Yellow	plastic	Cage Clamp	LS-02 266107	10 off	1)2)
-	2 NC ⊕			Black		Cage Clamp	LS-02-SW 272009	10 off	1)2)
-	2 NC ⊕			Yellow		Screwed terminal	LS-S02 106729	10 off	2)
-	2 NC ⊕			Black		Screwed terminal	LS-S02-SW 106782	10 off	2)
-	2 NC ⊕			Yellow	metal	Cage Clamp	LSM-02 266142	2 off	1)2)
-	2 NC ⊕			Yellow	plastic EN 50047 Form B	Cage Clamp	LS-02A 116702	10 off	1)2)
-	2 NC ⊕			Yellow		Screwed terminal	LS-S02A 116703	10 off	2)
1 N/O	1 NC ⊕			Yellow	plastic	Cage Clamp	LS-11 266109	10 off	1)2)
1 N/O	1 NC ⊕			Black		Cage Clamp	LS-11-SW 272006	10 off	1)2)
1 N/O	1 NC ⊕			Yellow		Screwed terminal	LS-S11 106783	10 off	2)
1 N/O	1 NC ⊕			Black		Screwed terminal	LS-S11-SW 106807	10 off	2)
1 N/O	1 NC ⊕			Yellow	metal EN 50047 Form B	Cage Clamp	LSM-11 266144	2 off	1)2)
1 N/O	1 NC ⊕			Yellow	plastic EN 50047 Form B	Cage Clamp	LS-11A 116704	10 off	1)2)
1 N/O	1 NC ⊕			Yellow		Screwed terminal	LS-S11A 116705	10 off	2)
1 N/O	1 NC ⊕			Yellow	plastic	Cage Clamp	LS-11D 266114	10 off	1)2)
1 N/O	1 NC ⊕			Black		Cage Clamp	LS-11D-SW 272007	10 off	1)2)
1 N/O	1 NC ⊕			Yellow		Screwed terminal	LS-S11D 106791	10 off	2)
1 N/O	1 NC ⊕			Black		Screwed terminal	LS-S11D-SW 106797	10 off	2)
1 N/O	1 NC ⊕			Yellow	metal	Cage Clamp	LSM-11D 266149	2 off	1)2)
1 N/O	1 NC ⊕			Yellow	plastic	Cage Clamp	LS-11DA 292361	10 off	1)2)
1 N/O	1 NC ⊕			Yellow	plastic	Screwed terminal	LS-S11DA 106795	1 off	2)
1 N/O	1 NC ⊕			Yellow	metal	Cage Clamp	LSM-11DA 292363	1 off	1)2)
1 N/O	1 NC ⊕			Yellow	plastic EN 50047 Form B	Cage Clamp	LS-11S 266105	10 off	1)2)
1 N/O	1 NC ⊕			Black	plastic EN 50047 Form B	Cage Clamp	LS-11S-SW 272020	10 off	1)2)
1 N/O	1 NC ⊕			Yellow	plastic EN 50047 Form B	Screwed terminal	LS-S11S 106798	10 off	2)
1 N/O	1 NC ⊕			Black	plastic EN 50047 Form B	Screwed terminal	LS-S11S-SW 106806	10 off	2)
1 N/O	1 NC ⊕			Yellow	metal EN 50047 Form B	Cage Clamp	LSM-11S 266140	2 off	1)2)

Notes

1) Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage Clamp terminals from Wago: Jumper insert, grey, Wago article no. 264-402
2) Operating heads → Page 3/9

Information relevant for export to North America

	Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking E29184 NKCR 12528 3211-03 UL Listed, CSA certified IEC: IP66, 67, UL/CSA Type 3R, 4X (indoor use only), 12, 13
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Contact configuration		Circuit symbol	Contact travel		Color Enclosure covers	Enclosure	Connection type	Part no. Article no.	Price See price list	Std. pack
⊕ Positive opening safety function according to IEC/EN 60947-5-1 N/O = normally open contact	⊖ NC = normally closed contact		■ = Contact closed	□ = Contact open						
Complete units										
Rounded plunger, IP66, IP67 (front fixing)										
	—	2 NC ⊖			●	plastic	Cage Clamp	LS-02/F 292365		1 off
	—	2 NC ⊖			●	plastic	Screwed terminal	LS-S02/F 106780		1 off
	—	2 NC ⊖			●	metal	Cage Clamp	LSM-02/F 292371		1 off
	1 N/O	1 NC ⊖			●	plastic	Cage Clamp	LS-11/F 290176		1 off
	1 N/O	1 NC ⊖			●	plastic	Screwed terminal	LS-S11/F 106784		1 off
	1 N/O	1 NC ⊖			●	metal	Cage Clamp	LSM-11/F 292372		1 off
	1 N/O	1 NC ⊖			●	plastic	Screwed terminal	LS-S11D/F 106792		1 off
	1 N/O	1 NC ⊖			●	plastic	Cage Clamp	LS-11D/F 292366		1 off
	1 N/O	1 NC ⊖			●	metal	Cage Clamp	LSM-11D/F 292373		1 off
	1 N/O	1 NC ⊖			●	plastic	Cage Clamp	LS-11DA/F 292369		1 off
	1 N/O	1 NC ⊖			●	plastic	Screwed terminal	LS-S11DA/F 106796		1 off
	1 N/O	1 NC ⊖			●	metal	Cage Clamp	LSM-11DA/F 292376		1 off
	1 N/O	1 NC ⊖			●	plastic	Cage Clamp	LS-11S/F 292367		1 off
	1 N/O	1 NC ⊖			●	plastic	Screwed terminal	LS-S11S/F 106799		1 off
	1 N/O	1 NC ⊖			●	metal	Cage Clamp	LSM-11S/F 292374		1 off
Roller plungers, IP66, IP67										
	1 N/O	1 NC ⊖			●	plastic EN 50047 Form C	Cage Clamp	LS-11/P 266112		2 off
	1 N/O	1 NC ⊖			●	plastic EN 50047 Form C	Screwed terminal	LS-S11/P 106788		2 off
	1 N/O	1 NC ⊖			●	metal EN 50047 Form C	Cage Clamp	LSM-11/P 266147		2 off
	1 N/O	1 NC ⊖			●	plastic EN 50047 Form C	Cage Clamp	LS-11S/P 266118		2 off
	1 N/O	1 NC ⊖			●	plastic EN 50047 Form C	Screwed terminal	LS-S11S/P 106801		2 off
	1 N/O	1 NC ⊖			●	metal EN 50047 Form C	Cage Clamp	LSM-11S/P 266153		2 off
Spring rod actuator IP66, IP67										
Do not use spring-rod actuator as a safety position switch; admissible only with snap-action contact.										
	1 N/O	1 NC ⊖			●	plastic	Cage Clamp	LS-11S/S 266104		2 off
	1 N/O	1 NC ⊖			●	plastic	Screwed terminal	LS-S11S/S 106805		2 off
	1 N/O	1 NC ⊖			●	metal	Cage Clamp	LSM-11S/S 266139		2 off

Notes

- 1) Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden. Accessories for the Cage Clamp terminals from Wago: Jumper insert, grey, Wago article no. 264-402
- 2) The operating head can be rotated at 90° intervals to adapt to the specified operating direction.

Information relevant for export to North America

Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Degree of Protection

IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
E29184
NKCR
12528
3211-03
UL Listed, CSA certified
IEC: IP66, 67, UL/CSA Type 3R, 4X (indoor use only), 12, 13



Contact configuration
☉ Positive opening safety function according to IEC/EN 60947-5-1

N/O = normally open contact
NC = normally closed contact

Circuit symbol
■ = Contact closed
□ = Contact open

Contact travel
Color Enclosure cover

Enclosure

Connection type

Part no. Article no.

Price See price list

Std. pack

Complete units

Roller lever IP66, IP67

Long



–	2 NC ☉			Zw = 6.9 mm	●	plastic	Cage Clamp	LS-02/L 266108	2 off	1) 2)
–	2 NC ☉			Zw = 6.9 mm	●	plastic	Screwed terminal	LS-S02/L 106781	2 off	2)
–	2 NC ☉			Zw = 6.9 mm	●	metal	Cage Clamp	LSM-02/L 266143	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 7.1 mm	●	plastic EN 50047 Form E	Cage Clamp	LS-11/L 266110	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 7.1 mm	●	plastic EN 50047 Form E	Screwed terminal	LS-S11/L 106785	2 off	2)
1 N/O	1 NC ☉			Zw = 7.1 mm	●	metal EN 50047 Form E	Cage Clamp	LSM-11/L 266145	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 7.7 mm	●	plastic	Cage Clamp	LS-11D/L 266115	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 7.7 mm	●	plastic	Screwed terminal	LS-S11D/L 106793	2 off	2)
1 N/O	1 NC ☉			Zw = 7.7 mm	●	metal	Cage Clamp	LSM-11D/L 266150	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 8.7 mm	●	plastic EN 50047 Form E	Cage Clamp	LS-11S/L 266116	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 8.7 mm	●	plastic EN 50047 Form E	Screwed terminal	LS-S11S/L 106800	2 off	2)
1 N/O	1 NC ☉			Zw = 8.7 mm	●	metal EN 50047 Form E	Cage Clamp	LSM-11S/L 266151	2 off	1) 2)

Short

1 N/O	1 NC ☉			Zw = 5.0 mm	●	plastic	Cage Clamp	LS-11/LS 290173	2 off	1) 2)
1 N/O	1 NC ☉			Zw = 5.0 mm	●	plastic	Screwed terminal	LS-S11/LS 106787	1 off	2)
1 N/O	1 NC ☉			Zw = 5.0 mm	●	plastic	Cage Clamp	LS-11D/LS 290174	1 off	1) 2)
1 N/O	1 NC ☉			Zw = 5.0 mm	●	plastic	Screwed terminal	LS-S11D/LS 106794	1 off	2)

Large

1 N/O	1 NC ☉			Zw = 9.6 mm	●	plastic	Cage Clamp	LS-11/LB 290175	1 off	1) 2)
1 N/O	1 NC ☉			Zw = 9.6 mm	●	plastic	Screwed terminal	LS-S11/LB 106786	1 off	2)

Notes

1) Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden.

Accessories for the Cage Clamp terminals from Wago: Jumper insert, grey, Wago article no. 264-402

2) The operating head can be rotated at 90° intervals to adapt to the specified operating direction.

Information relevant for export to North America



Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Degree of Protection

IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14;
CE marking
E29184
NKCR
12528
3211-03
UL Listed, CSA certified
IEC: IP66, 67, UL/CSA Type 3R, 4X
(indoor use only), 12, 13

HPL03007EN



Contact configuration	Circuit symbol	Contact travel	Color Enclosure covers	Enclosure	Connection type	Part no. Article no.	Price See price list	Std. pack	
<p>⊖ Positive opening safety function according to IEC/EN 60947-5-1</p> <p>N/O = normally open contact NC = normally closed contact</p>									
Complete units									
Rotary lever, IP66, IP67									
	1 N/O	1 NC ⊖			yellow	plastic EN 50047 Form A	Cage Clamp	LS-11/RL 266111	2 off 1)2)
	1 N/O	1 NC ⊖			yellow	metal EN 50047 Form A	Cage Clamp	LSM-11/RL 266146	2 off 1)2)
	1 N/O	1 NC ⊖			yellow	plastic EN 50047 Form A	Screwed terminal	LS-S11/RL 106789	2 off 2)
	1 N/O	1 NC ⊖			yellow	plastic EN 50047 Form A	Cage Clamp	LS-11S/RL 266117	2 off 1)2)
	1 N/O	1 NC ⊖			yellow	plastic EN 50047 Form A	Screwed terminal	LS-S11S/RL 106802	2 off 2)
	1 N/O	1 NC ⊖			yellow	metal EN 50047 Form A	Cage Clamp	LSM-11S/RL 266152	2 off 1)2)
Adjustable roller levers, IP66, IP67									
	1 N/O	1 NC ⊖			yellow	plastic	Cage Clamp	LS-11/RLA 266113	2 off 1)2)
	1 N/O	1 NC ⊖			yellow	plastic	Screwed terminal	LS-S11/RLA 106790	2 off 2)
	1 N/O	1 NC ⊖			yellow	metal	Cage Clamp	LSM-11/RLA 266148	2 off 1)2)
	1 N/O	1 NC ⊖			yellow	plastic	Cage Clamp	LS-11S/RLA 266119	2 off 1)2)
	1 N/O	1 NC ⊖			yellow	plastic	Screwed terminal	LS-S11S/RLA 106803	2 off 2)
	1 N/O	1 NC ⊖			yellow	metal	Cage Clamp	LSM-11S/RLA 266154	2 off 1)2)
Actuating rod IP66, IP67									
	1 N/O	1 NC ⊖			yellow	plastic	Cage Clamp	LS-11S/RR 266106	4 off 1)2)
	1 N/O	1 NC ⊖			yellow	plastic	Screwed terminal	LS-S11S/RR 106804	4 off 2)
	1 N/O	1 NC ⊖			yellow	metal	Cage Clamp	LSM-11S/RR 266141	4 off 1)2)
Customer specific complete units IP66, IP67									
(*) Use-definable customer ID or stock no.: up to 10 characters					plastic	-		LS-COMBINATION-* 266168	1 off 1)2)

Notes

- 1) Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage Clamp terminals from Wago: Jumper insert, grey, Wago article no. 264-402
- 2) The operating head can be rotated at 90° intervals to adapt to the specified operating direction.

Information relevant for export to North America



Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Degree of Protection

IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14;
CE marking
E29184
NKCR
12528
3211-03
UL Listed, CSA certified
IEC: IP66, 67, UL/CSA Type 3R, 4X
(indoor use only), 12, 13



Contact configuration

Circuit symbol

Contact travel
 = Contact closed
 = Contact open

Color
Enclosure cover

Enclosure

Connection type

Part no.
Article no.

Price
See price list

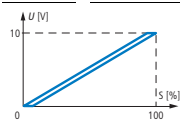
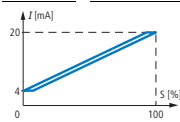
Std. pack

⊕ Positive opening safety function according to IEC/EN 60947-5-1
 N/O = normally open contact NC = normally closed contact

Basic unit, expandable

Analog electronic position switches IP66, IP67

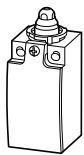
Basic unit
 Visual status indication
 Q1 = Analog output
 Q2 = Diagnostics output
 (the diagnostics output has a 0 V signal in the event of a fault.)



plastic Cage Clamp **LSE-AI** 269461 2 off ²⁾

plastic Cage Clamp **LSE-AU** 274096 2 off ²⁾

Rounded plunger, IP66, IP67



2 N/O –

2 N/O –

2 N/O –

2 N/O –

2 N/O –

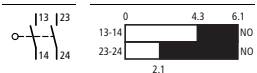
2 N/O –

2 N/O –

2 N/O –

2 N/O –

2 N/O –



plastic Cage Clamp **LS-20** 266120 10 off ¹⁾²⁾

plastic Cage Clamp **LS-20-SW** 272008 10 off ¹⁾²⁾

metal Screwed terminal **LS-S20** 106808 1 off ²⁾

metal Screwed terminal **LS-S20-SW** 106812 10 off ²⁾

metal Cage Clamp **LSM-20** 266155 2 off ¹⁾²⁾

plastic Cage Clamp **LS-20A** 292362 1 off ¹⁾²⁾

plastic Screwed terminal **LS-S20A** 106810 10 off ²⁾

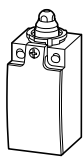
metal Cage Clamp **LSM-20A** 100051 2 off ¹⁾²⁾

plastic EN 50047 Form B Cage Clamp **LS-20B** 116706 10 off ¹⁾²⁾

plastic EN 50047 Form B Screwed terminal **LS-S20B** 116707 10 off ²⁾

Basic unit, not expandable

Rounded plunger, IP66, IP67 (front fixing)



2 N/O –

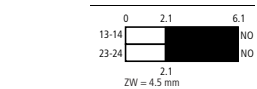
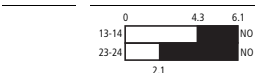
2 N/O –

2 N/O –

2 N/O –

2 N/O –

2 N/O –



plastic Cage Clamp **LS-20/F** 292368 1 off ¹⁾

plastic Screwed terminal **LS-S20/F** 106809 1 off ¹⁾

metal Cage Clamp **LSM-20/F** 292375 1 off ¹⁾

plastic Cage Clamp **LS-20A/F** 292370 1 off ¹⁾

plastic Screwed terminal **LS-S20A/F** 106811 1 off ¹⁾

metal Cage Clamp **LSM-20A/F** 292377 1 off ¹⁾

Notes

¹⁾ Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden.
 Accessories for the Cage Clamp terminals from Wago:
 Jumper insert, grey, Wago article no. 264-402
²⁾ Operating heads → Page 3/9

Information relevant for export to North America

































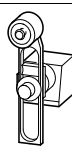










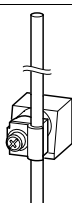








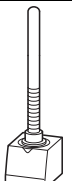




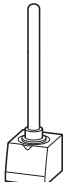







Product Standards

UL File No.
 UL CCN
 CSA File No.
 CSA Class No.
 NA Certification
 Degree of Protection

IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14;
 CE marking
 E29184
 NKCR
 12528
 3211-03
 UL Listed, CSA certified
 IEC: IP66, 67, UL/CSA Type 3R, 4X
 (indoor use only), 12, 13

HPL03009EN

		plastic	Price	Std. pack	metal	Price	Std. pack	Notes
		Part no. Article no.	See price list		Part no. Article no.	See price list		
	For installation in M18 × 1 enclosure wall or mounting plate drilling	LS-XZS 114024					1 off  	The operating head can be rotated at 90° intervals to adapt to the specified operating direction. Information relevant for export to North America   Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking E29184 UL File No. NKCR UL CCN 12528 CSA File No. 3211-03 CSA Class No. UL Listed, CSA Certified NA Certification
	For installation in M18 × 1 enclosure wall or mounting plate drilling	LS-XZRS 114025					1 off  	
	–	LS-XP 266125		10 off  	LSM-XP 266158		10 off  	
	Large	LS-XLB 290178		5 off  				
	Short	LS-XLS 290177		1 off  				
	Long	LS-XL 266123		10 off  	LSM-XL 266156		10 off  	
	–	LS-XLA 266124		10 off  	LSM-XLA 266157		10 off  	
	–	LS-XRL 266126		5 off  	LSM-XRL 266159		5 off  	
	D = 18 mm	LS-XRLA 266127		4 off  	LSM-XRLA 266160		4 off  	
	D = 30 mm	LS-XRLA30 266128		5 off  				
	D = 40 mm (rubber)	LS-XRLA40R 266130		5 off  				
	D = 40 mm	LS-XRLA40 266129		5 off  				
	Rod from insulated material	LS-XRR 266131		4 off  	LSM-XRR 266161		4 off  	
	Metal rod	LS-XRRM 266132		4 off  	LSM-XRRM 266162		4 off  	
	Not to be used as a safety position switch Use only in conjunction with snap-action contact.	LS-XS 266133		5 off  	LSM-XS 266163		5 off  	
	–	LS-XOR 290190		1 off  				
	Actuation through front element RMQ-Titan®	M22-LS 266137		10/1 off  			UL/CSA certification not required	



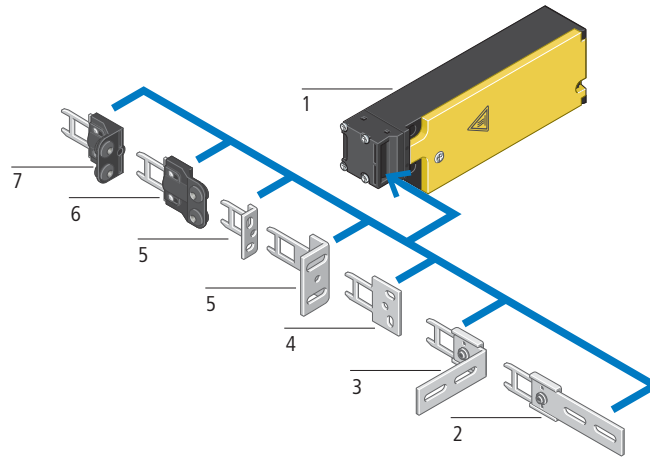


Description		Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America 	
Screw connection to fit M20 to 1/2"							
	M20 Screw connector for American pipe thread Metal 1/2"	V1 1/2"/M20-NA 225269		10 off 	The screw connection is for grounding; no total insulation For connection thread lengths up to 9 mm	Product Standards UL 508; CSA-C22.2 No. 14 E29184 UL File No. UL CCN CSA File No. 12528 CSA Class No. 3211-03 NA Certification UL Listed, CSA Certified Specially designed for NA✓	
	M20 Screw connector for American pipe thread Molded material 1/2"	V1 1/2"/M20 225270		10 off 	For connection thread lengths up to 9 mm	UL/CSA certification not required	
M20 diaphragm bolt, IP65							
	With built in push-through diaphragm External diameter of cable up to 13 mm IP65 with cable inserted	EMS20 225271		25 off	—		
Screw closure M20							
	(self-sealing grommet) For tightening/loosening using a standard spanner for sealing grommet plugs	LS-X20 266134		25 off	—		
Plug connector M12x1, IP66 Molded material I _{th} = 4 A Fuse: 6 A gG/gL							
4-pole U _e = 250 V		For use with					
	LS	"A" coded Standard to IEC/EN 60947-5-2	M12A 266135	10 off	M12A, M12B 		
	LS	"B"-coded 	M12B 266136	10 off			
5-pole U _e = 125 V							
	LSM	"A" coded Standard to IEC/EN 60947-5-2	M12A5 272202	10 off	M12A5, M12B5 		
	LSM	"B"-coded 	M12B5 272203	10 off			
Cage clamp twin NC contacts							
	—	For opening two terminals simultaneously	LS-XTW 290179	1 off 	—	UL/CSA certification not required	
Adapter plate, thickness 2.5 mm							
		For additional fixing with sideways operation, together with locating plate FS-AT (order separately)	LS-XAP 114026	1 off 	—		
Locating plate							
		For fixing with side motion	FS-AT 019610	20 off 	—		

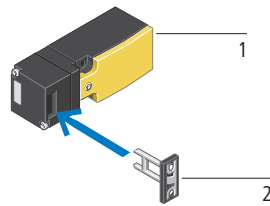


System overview

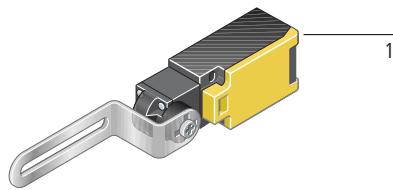
LS-...ZBZ



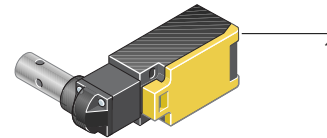
LS-...ZB



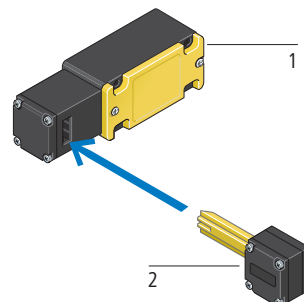
LSR-...TKG



LSR-...TS



LS4...ZB





LS-...ZBZ

Basic Unit 1 Spring or magnet-powered interlock For increased personnel and process protection Tamper-proof Multiple coded actuators Contact configuration: 1 N/O / 1 NC or 2 NC → Page 3/16	Angled flexible actuator 3 For doors that do not close precisely → Page 3/17	Flat compensating actuator 6 For increased tolerance compensation in the direction of door closure → Page 3/17
Flat flexible actuator 2 For doors that do not close precisely → Page 3/17	Flat actuator 4 For sliding doors → Page 3/17	Angled compensating actuator 7 For increased tolerance compensation in the direction of door closure → Page 3/17
	Angled actuator 5 For swing doors → Page 3/17	

LS-...ZB

Complete unit 1 For personnel protection Contact configuration: 1 NC, 1 N/O / 1 NC or 2 NC 5 directions of operation possible → Page 3/18	Actuator 2 Multiple coding protection against tampering
--	---

LSR-...TKG, LSR-...TS

Complete unit 1 For personnel protection Contact configuration: 1 N/O / 1 NC or 2 NC For swing doors with fixed connection to the door/hinge pin Multiple coded actuators Contact configuration: 1 N/O / 1 NC or 2 NC LSR-...TKG → Page 3/18 LSR-...TS → Page 3/18
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LS4.../ZB

Complete unit 1 Narrow enclosure version For personnel protection Contact configuration: 1 NC, 1 N/O / 1 NC → Page 3/16	Actuator 2 Multiple coding For horizontal or vertical operation
--	--

Product features

Interlocking unit to EN 1088

- For use in safety circuits
- ☉ Positive opening safety function according to IEC/EN 60947-5-1

- Protection type IP65
- Operating head can be turned 4 x 90°
- With M20 x 1.5 connecting thread

totally insulated



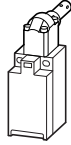
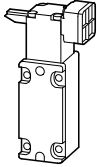
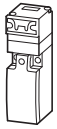


LS-...ZB

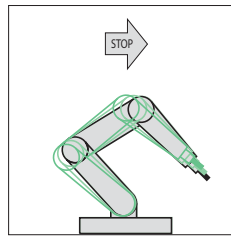
LS4/ZB

LSR-...TKG

LSR-...TS



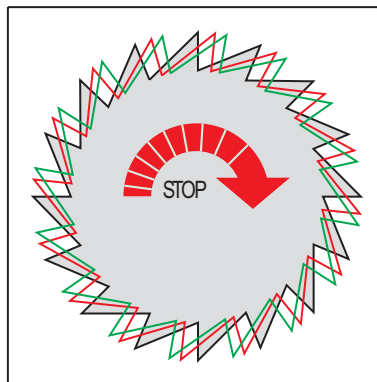
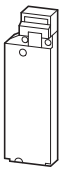
“Personnel protection” by monitoring of the protective mechanism



- Door open
- LS-...ZB disconnects power
- No danger

LS/ZBZ

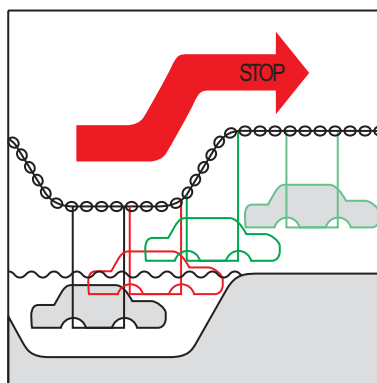
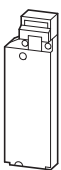
“Increased personnel protection” by monitoring and interlocking the protective mechanism



- Stop command
- Waiting time
- Machine is stopped
- Protective mechanism open
- No danger

LS/ZBZ

“Increased personnel protection” by monitoring and interlocking the protective mechanism

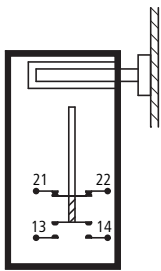


- Stop command
- Waiting time
- Process sequence halted
- Protective mechanism open
- Product OK

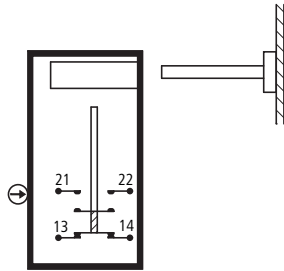


LS...ZB

Closed



Open



→ Personnel protection

Door open

→ Enabling contact (21-22) opening positively

Door open

→ Enabling contact safely open; tamperproof against simple tools

Door close

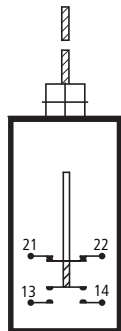
→ Triple coded actuator closes the enabling contact

Switch must never be used as a mechanical stop!

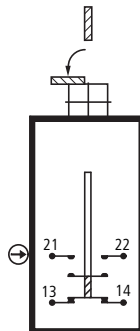


**LSR...TKG
LSR...TS**

Closed



Open



→ Personnel protection

Open of guard mechanism

→ Enabling contact (21-22) opening positively

Guard mechanism open

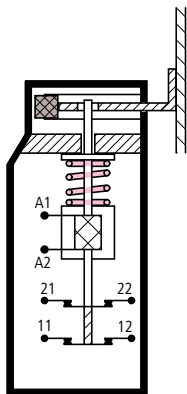
→ Enabling contact safely open; tamperproof against simple tools

Closing of guard mechanism

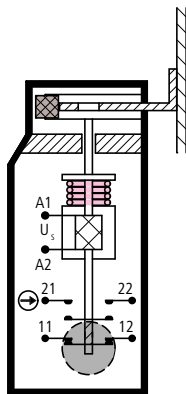
→ Closes enabling contact (21-22)

LS-S02-...FT-ZBZ, spring-powered interlock (closed-circuit current principle)

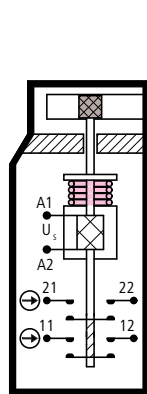
Interlocked



Released



Open



→ Increased personnel protection with separate signal for door position

Door closed and interlocked

→ De-energized: even with mains failure or wire breakage: door interlocked = safe state
Enabling contact (21-22)

To unlock door

→ Applies voltage to coil (A1, A2) e.g. via zero-speed monitor, enabling contact (21-22) opens

Door open

→ Both contacts blocked in the open position, even with tampering with simple tools

Door close

→ Triple-coded actuator cancels enabling contact inhibit; door position contact (11-12) closes

Interlock door

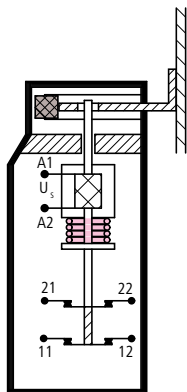
→ Disconnect coil voltage:
1st actuator interlocked
2nd enabling contact closed
→ Enable only when door locked

Switch must never be used as a mechanical stop!

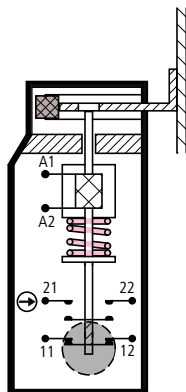


LS-S02-...MT-ZBZ, magnet-powered interlock (operating current principle)

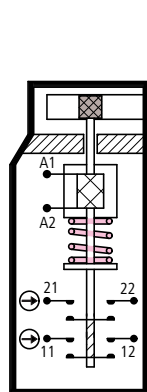
Interlocked



Released



Open



→ Process protection + increased personnel protection with separate signal for door position

Door closed and interlocked

→ Energized: Enables immediate access in the event of mains failure and wire breakage. Both contacts closed

To unlock door

→ Applies voltage to coil (A1, A2) e.g. via zero-speed monitor, enabling contact (21-22) opens

Door open

→ Only possible once it is released, door position contact (11-12) opens

Door close

→ Triple-coded actuator cancels enabling contact inhibit; door position contact (11-12) closes

Interlock door

→ Disconnect coil voltage:
1st actuator interlocked
2nd enabling contact closed
→ Enable only when door locked

Switch must never be used as a mechanical stop!





Contact configuration	Circuit symbol	Rated control voltage for magnet drive U_s	Part no. Article no.	Price See price list	Std. pack
⊕ Safety function by positive opening according to IEC/EN 60947-5-1 N/O = normally open contact NC = normally closed contact		V			

Basic units with spring-powered interlock (closed-circuit principle) IP65

- With interlock monitoring and auxiliary release mechanism
- Monitoring of door position: continuous

	1 N/O	1 NC ⊕		24 V DC	LS-S11-24DFT-ZBZ/X 106829	1 off
	–	2 NC ⊕		24 V DC	LS-S02-24DFT-ZBZ/X 106823	
	1 N/O	1 NC ⊕		120 V 50/60 Hz	LS-S11-120AFT-ZBZ/X 106825	
	–	2 NC ⊕		120 V 50/60 Hz	LS-S02-120AFT-ZBZ/X 106778	
	1 N/O	1 NC ⊕		230 V 50/60 Hz	LS-S11-230AFT-ZBZ/X 106827	
	–	2 NC ⊕		230 V 50/60 Hz	LS-S02-230AFT-ZBZ/X 106821	

Basic units with magnet-powered interlock (open-circuit principle) IP65¹⁾

- With interlock monitoring
- Monitoring of door position: continuous

	1 N/O	1 NC ⊕		24 V DC	LS-S11-24DMT-ZBZ/X 106830	1 off
	–	2 NC ⊕		24 V DC	LS-S02-24DMT-ZBZ/X 106824	
	1 N/O	1 NC ⊕		120 V 50/60 Hz	LS-S11-120AMT-ZBZ/X 106826	
	–	2 NC ⊕		120 V 50/60 Hz	LS-S02-120AMT-ZBZ/X 106820	
	1 N/O	1 NC ⊕		230 V 50/60 Hz	LS-S11-230AMT-ZBZ/X 106828	
	–	2 NC ⊕		230 V 50/60 Hz	LS-S02-230AMT-ZBZ/X 106822	

Notes

Electric circuitry with DIL contactors and ESR5 safety relay
→ Safety manual TB02000-009, Article no. 119906

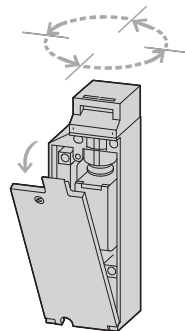
With the actuator inserted, the N/O contact is open and the NC contact is closed.



Switch must never be used as a mechanical stop!

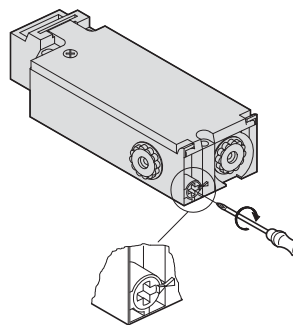
¹⁾ Time control of the release operation possible using ESR5-NV30-30

The operating head can be rotated manually in 90° steps to suit the specified level of actuation.



In the event of a loss of voltage, (e.g. during commissioning), the spring-powered LS-...FT-ZBZ can be released with a screwdriver. The auxiliary release mechanism must be sealed!

→ Instructional leaflet AWA 1310-2354



For protection type IP65, use V-M20 cable glands with max 9 mm long thread.















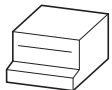

Cable gland V-M20 → Page 2/46

Information relevant for export to North America



Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	12528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA Certified
Degree of Protection	IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

HPL03017EN

	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America 
Actuators					
For combination with LS-...ZBZ/X basic units Stainless steel					
Flat actuator For sliding doors 	LS-XG-ZBZ 106833		10 off 	-	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking E29184 UL File No. NKCR UL CCN 12528 CSA File No. 3211-03 CSA Class No. UL Listed, CSA Certified NA Certification
Angled actuator For swing doors above 250 mm width 	Short LS-XW-ZBZ 106839		10 off 	From width: 350 mm	
	Long LS-XWA-ZBZ 106838		10 off 	From width: 550 mm	
Angled, flexible actuator For doors that do not close precisely 	LS-XF-ZBZ 106832		10 off 	-	
Flat, flexible compensating actuator For doors that do not close precisely 	LS-XFG-ZBZ 106831		10 off 	-	
Flat, compensating actuator With increased tolerance in closing direction for door that does not close precisely. 	LS-XNG-ZBZ 106834		1 off 	-	
Angled compensating actuator With increased tolerance in closing direction for door that does not close precisely. 	LS-XNW-ZBZ 106835		10 off 	-	
Accessories					
Dust protection cap Prevents ingress of foreign matter into the unit head 	LS-XSK-ZBZ 106837		10 off 	-	UL/CSA certification not required





Contact configuration	Circuit symbol	Contact travel	Approval mark	Connection type	Part no. Article no.	Price	Std. pack	
<p>⊕ Positive opening safety function according to IEC/EN 60947-5-1</p> <p>N/O = normally open contact NC = normally closed contact</p>		<p>■ = Contact closed</p> <p>□ = Contact open</p>				See price list		
Hasp-operated safety switch LSR-.../TKG, IP65								
	-	2 NC ⊕				Screwed terminal	LSR-S02-1-I/TKG 106848	1 off
	1 N/O	1 NC ⊕				Screwed terminal	LSR-S11-1-I/TKG 106847	1 off
Hinge-operated switch LSR-.../TS, IP65								
	-	2 NC ⊕				Screwed terminal	LSR-S02-1-I/TS 106852	1 off
	1 N/O	1 NC ⊕				Screwed terminal	LSR-S11-1-I/TS 106851	1 off
Safety position switches LS-...-ZB, IP65								
	-	2 NC ⊕				Cage Clamp	LS-02-ZB ¹⁾ 106817	2 off
	-	2 NC ⊕				Screwed terminal	LS-S02-ZB ¹⁾ 106874	2 off
	1 N/O	1 NC ⊕				Cage Clamp	LS-11-ZB ¹⁾ 106819	2 off
	1 N/O	1 NC ⊕				Screwed terminal	LS-S11-ZB ¹⁾ 106876	2 off
	1 N/O	1 NC ⊕				Cage Clamp	LS-11S-ZB ¹⁾ 106870	2 off
	1 N/O	1 NC ⊕				Screwed terminal	LS-S11S-ZB ¹⁾ 106877	2 off
Safety position switches LS4.../ZB, IP65								
	1 N/O	1 NC ⊕				Screwed terminal	LS4/S11-1/I/ZB ²⁾ 106857	1 off
	1 N/O	1 NC ⊕				Screwed terminal	LS4/S11-1/IA/ZB ²⁾ 106858	1 off
	1 N/O	2 NC ⊕				Screwed terminal	LS4/S12-7/IB/ZB ²⁾ 106859	1 off

Notes

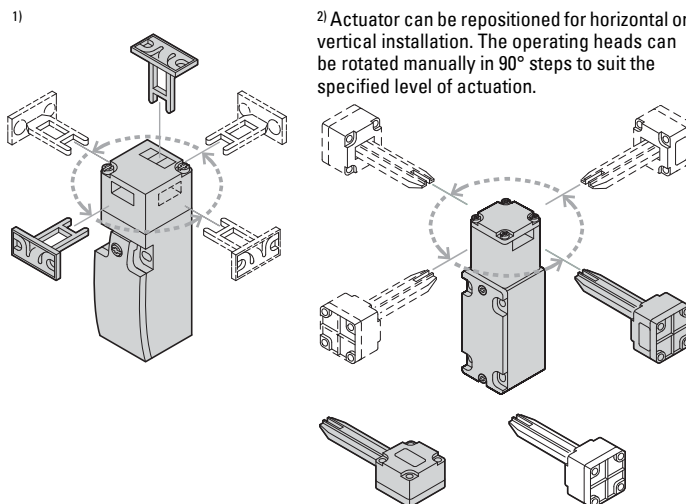
Electric circuitry with contactors DIL and safety relay ESR5
→ Safety manual TB02000-009, Article no. 119906



Switch must never be used as a mechanical stop!

For protection type IP65 use cable glands V-M20 with max. 9 mm connection thread length. Cable gland V-M20 → Page 2/46

With the actuator inserted, the N/O contact is open and the NC contact is closed.



²⁾ Actuator can be repositioned for horizontal or vertical installation. The operating heads can be rotated manually in 90° steps to suit the specified level of actuation.

Information relevant for export to North America



Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking E29184 NKCR 12528 3211-03 UL Listed, CSA Certified IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection

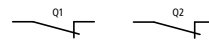
Engineering



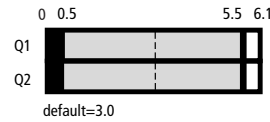
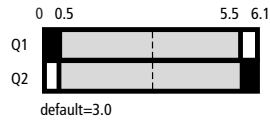
LSE-11



LSE-02



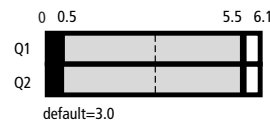
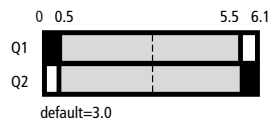
Basic units



Operating heads

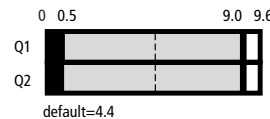
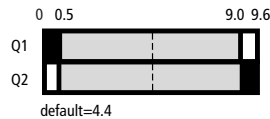
Roller plunger

- LS-XP
- LSM-XP
- LS-XOR



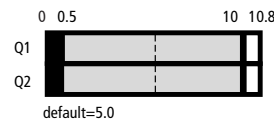
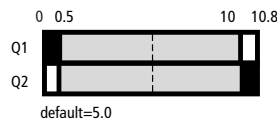
Roller lever

- LS-XL
- LSM-XL
- LS-XLS
- LS-XLB



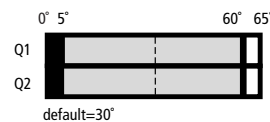
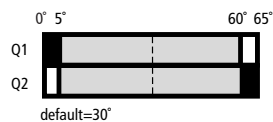
Angled roller lever

- LS-XLA
- LSM-XLA



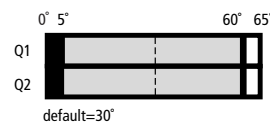
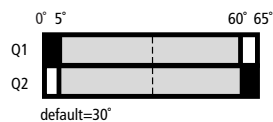
Rotary lever

- LS-XRL
- LSM-XRL



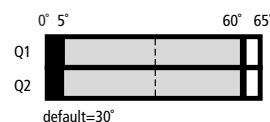
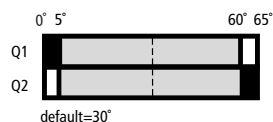
Adjustable roller lever

- LS-XRLA
- LSM-XRLA
- LS-XRLA30
- LS-XRLA40
- LS-XRLA40R



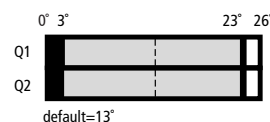
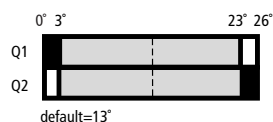
Actuating rod

- LS-XRR
- LSM-XRR
- LS-XRRM
- LSM-XRRM



Spring rod actuator

- LS-XS
- LSM-XS

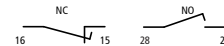
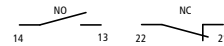
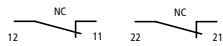


Notes: LS-(S)02A,
LS-(S)11A → Page 3/4
LS-(S)20B → Page 3/8

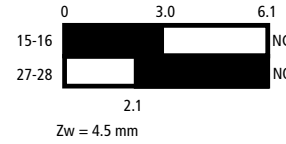
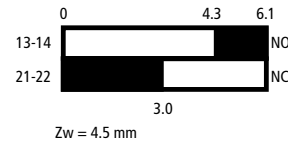
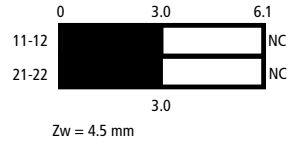
LS-02
LS-S02
LSM-02

LS-11
LS-S11
LSM-11

LS-11D
LS-S11D
LSM-11D



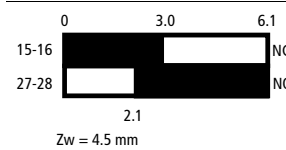
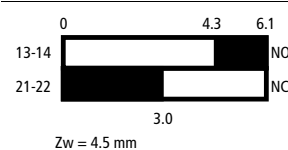
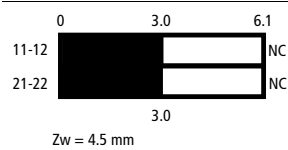
Basic units



Operating heads

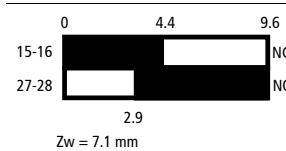
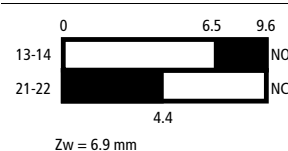
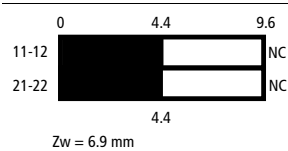
Roller plunger

LS-XP
LSM-XP

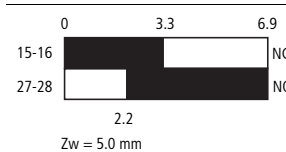
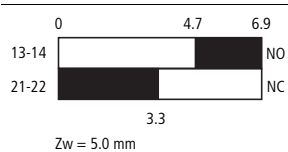
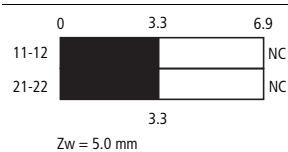


Roller lever

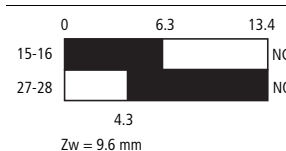
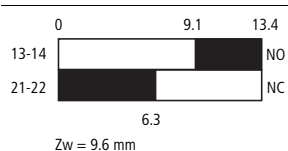
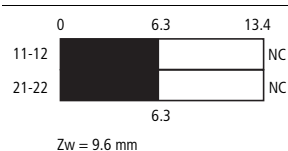
LS-XL, LSM-XL



Roller lever, short
LS-XLS

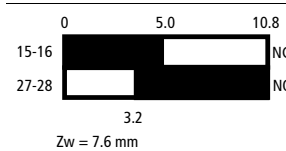
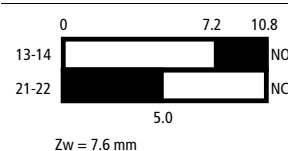
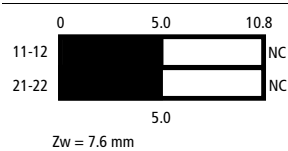


Roller lever, large
LS-XLB



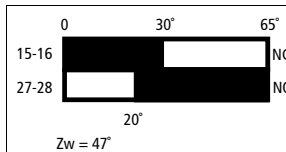
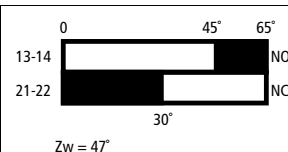
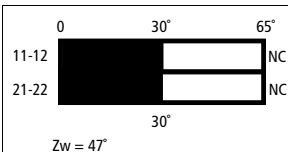
Angled roller lever

LS-XLA, LSM-XLA



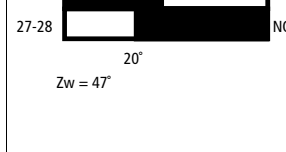
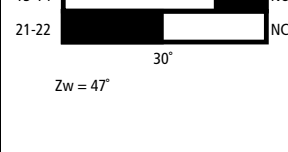
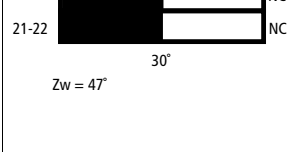
Rotary lever

LS-XRL, LSM-XRL



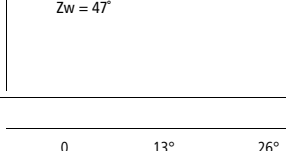
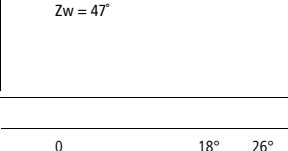
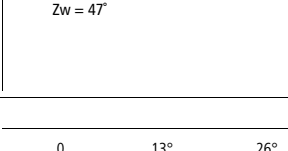
Adjustable roller lever

LS-XRLA, LSM-XRLA,
LS-XRLA30, LS-XRLA40,
LS-XRLA40R



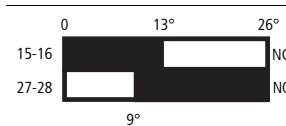
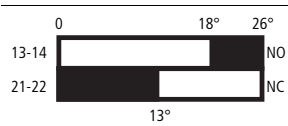
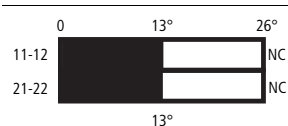
Actuating rod

LS-XRR, LSM-XRR,
LS-XRRM, LSM-XRRM



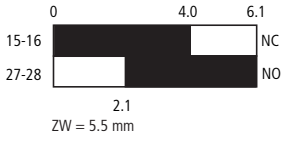
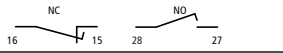
Spring rod actuator

LS-XS, LSM-XS

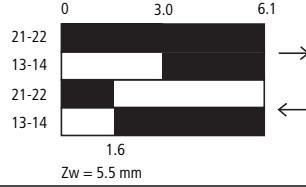
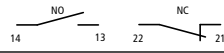




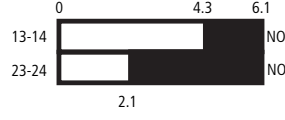
LS-11DA
LS-S11DA
LSM-11DA



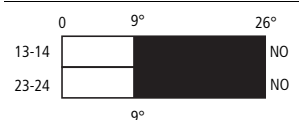
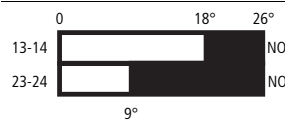
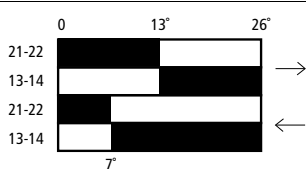
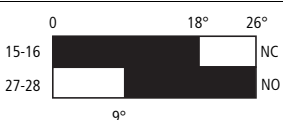
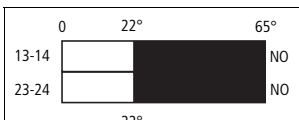
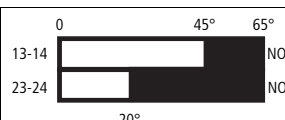
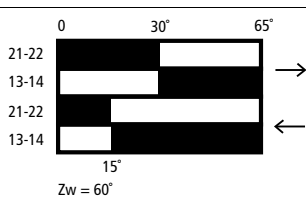
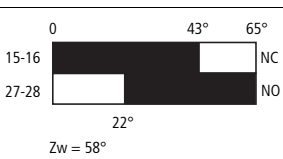
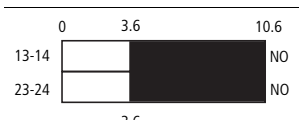
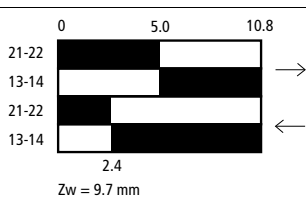
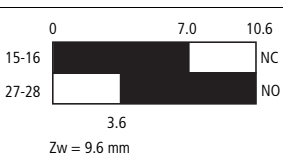
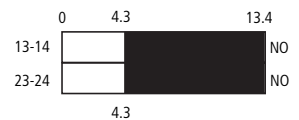
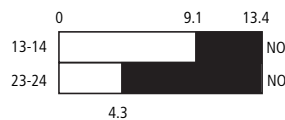
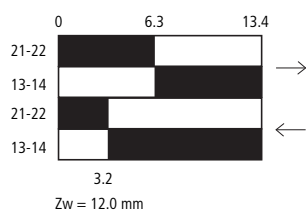
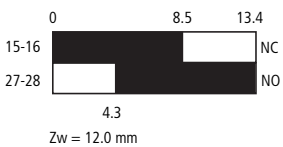
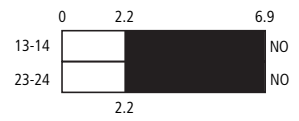
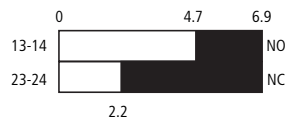
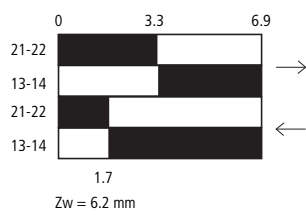
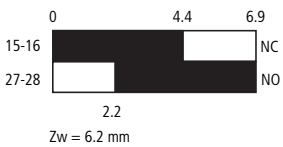
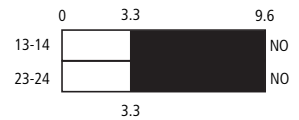
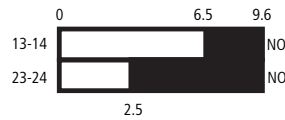
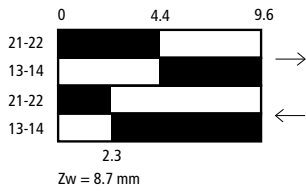
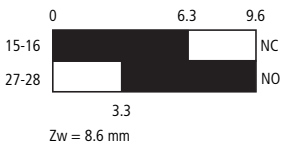
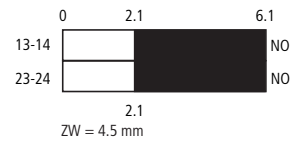
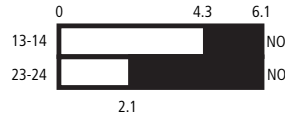
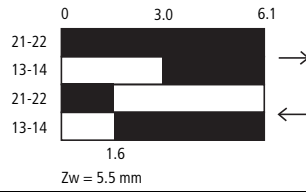
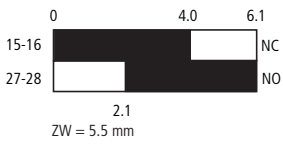
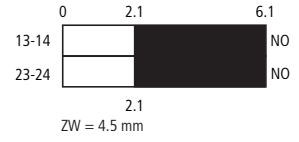
LS-11S
LS-S11S
LSM-11S



LS-20
LS-S20
LSM-20



LS-20A
LS-S20A
LSM-20A



Technical data

				Complete units IP66, IP67			
				LS, LSM	LSE11 LSE02	LSE-AI	LSE-AU
General							
Standards				IEC/EN 60947	IEC/EN 60947 EN 61000-4	IEC/EN 60947 EN 61000-4	IEC/EN 60947 EN 61000-4
Climatic proofing				Damp heat, constant, to IEC 60068-2-78, Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature			°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Mounting position				Any	Any	Any	Any
Protection type				IP66, IP67	IP66, IP67	IP66, IP67	IP66, IP67
Terminal capacity of screw terminal and Cage Clamp							
Solid			mm ²	1 x (0.5 - 2.5)	1 x (0.5 - 2.5)	1 x (0.5 - 2.5)	1 x (0.5 - 2.5)
Flexible with ferrule to DIN 46228			mm ²	1 x (0.5 - 1.5)	1 x (0.5 - 1.5)	1 x (0.5 - 1.5)	1 x (0.5 - 1.5)
Power supply							
Rated voltage			U _e V DC	–	12...30	24 (-15...+20 %)	24 (-15...+20 %)
Rated operational current							
12 V			I _e mA	–	15	–	–
24 V			I mA	–	18	28...45	24
30 V			I mA	–	19	–	–
Contacts/switching capacity							
Rated impulse withstand voltage			U _{imp} V AC	4000	–	–	–
Rated insulation voltage			U _i V	400	–	–	–
Overvoltage category/pollution degree				III/3	III/3	–	–
Rated operational current							
AC-15		24 V	I _e A	6	–	–	–
		230 V/240 V	I _e A	6	–	–	–
		400 V/415 V	I _e A	4	–	–	–
DC-13		24 V	I _e A	3	0.2	–	–
		110 V	I _e A	0.8	–	–	–
		220 V	I _e A	0.3	–	–	–
Analog output Q1							
Output voltage (max. 10 mA)			V DC	–	–	–	0...10
Output current			mA	–	–	4 - 20	–
Fault scenario			V	–	–	0	0
Resolution				Steps	–	100	100
Step tolerance				Steps	–	<1	<1
Shunt resistor, resistive load				Ω	–	< 400	> 1000
Digital diagnostics output Q2 (positive switching PNP)							
Response threshold			V	–	–	approx. U _e	approx. U _e
			mA	–	–	< 200	< 200
Fault scenario			V	–	–	0	0
Control circuit reliability							
At 24 V DC/5 mA			H _F Fault frequency	< 10 ⁻⁷ , < 1 fault in 10 ⁷ operations	–	–	–
At 5 V DC/1 mA			H _F Fault frequency	< 10 ⁻⁶ , < 1 fault in 5 x 10 ⁶ operations	–	–	–
Mains frequency				Hz	max. 400	–	–
Short-circuit rating to IEC/EN 60947-5-1							
Max. fuse			A gG/gL	6	–	–	–
Repetition accuracy				mm	± 0.02	± 0.02	± 0.02
UL-File No. E29184							
Rating data for approved types to UL/CSA							
Pilot Duty							
AC operated				A300	–	–	–
DC operated				Q300 (1 A, 250 V DC)	Q300 (0.2 A, 24 V DC)	–	–
UL-approved degrees of protection				NEMA 4, 12, 13	NEMA 4, 12, 13	NEMA 4, 12, 13	NEMA 4, 12, 13



				Complete units IP66, IP67		
				LS, LSM	LSE11 LSE02	LSE-AI LSE-AU
Mechanical data						
Lifespan						
Standard action contact	Operations	x 10 ⁶	8	–	–	3
Snap-action contact	Operations	x 10 ⁶	8	3 (electronic)	–	–
Contact temperature of roller head			°C	≤ 100	≤ 100	≤ 100
Mechanical shock resistance (half-sinusoidal shock, 20 ms)						
Standard action contact		g	25	–	–	–
Snap-action contact		g	–	–	–	–
Basic Unit		g	–	30	–	30
Operating frequency	Operations/h		≤ 6000	≤ 3000	–	≤ 3000
Switching point			–	0.5 - 5.5 mm, freely adjustable	–	–
Hysteresis			mm	–	0.4	0.4
Resolution			mm	–	0.04	0.06
Drive						
Mechanical						
Actuating force at beginning/end of stroke						
Basic units		N	1.0/8.0	3.5/8.0	–	3.5/8.0
LS(M)-XP		N	1.0/8.0	1.0/8.0	–	1.0/8.0
LS(M)-XL		N	1.0/8.0	1.0/8.0	–	1.0/8.0
LS(M)-XLA		N	1.0/8.0	1.0/8.0	–	1.0/8.0
Actuating torque of rotary drives			Nm	0.2	0.2	0.2
Max. operating speed with DIN cam						
Basic unit for angle of actuation	α = 0°/30°	m/s	1/0.5	1/0.5	–	1/0.5
LS(M)-XRL for angle of actuation	α = 0°	m/s	1.5	1.5	–	1.5
LS(M)-XRLA for angle of actuation	α = 30°, L = 125 mm	m/s	1.5	1.5	–	1.5
LS(M)-XRR for	L = 130 mm	m/s	1.5	1.5	–	1.5
LS(M)-XL for angle of actuation	α = 30°/45°	m/s	1	1	–	1
LS(M)-XLA for angle of actuation	α = 30°/45°	m/s	1	1	–	1
LS(M)-XP for angle of actuation	α = 0°/30°	m/s	1/1	1/1	–	1/1
Electromagnetic compatibility (EMC)						
Electrostatic discharge (ESD), to IEC EN 61000-4-2						
Air discharge		kV	–	8	–	8
Contact discharge		kV	–	4	–	4
Electromagnetic fields (RFI), to IEC EN 61000-4-2			V/m	–	10	10
Burst, to IEC/EN 61000-4-4						
Supply cables		kV	–	2	–	2
Signal cables		kV	–	2	–	2
High-energy pulses (surge) (IEC/EN 61000-4-5)			kV	–	0.5	0.5
Radiated RFI, to IEC/EN 61000-4-6			V	–	10	10

Notes

Accessories for the Cage Clamp terminals from Wago:
Power comb, gray, Wago Article No. 264-402

				plug connectors	
				M12A(B)	M12A(B)
General					
Pole				4	5
Protection type				IP66	IP66
Lifespan, mechanical			Operations	> 500	> 500
Characteristic values					
Rated operating voltage		U _e	V AC	250	125
Rated operational current		I _e	A	1	1
Overvoltage category/pollution degree				II/3	II/3

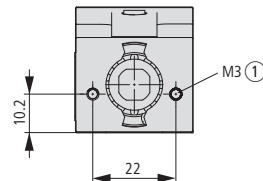
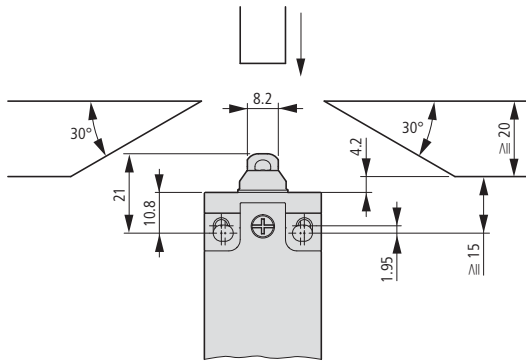


				Safety position switches			
				LS-...ZBZ	LS-...ZB	LS4...ZB	LSR...
General							
Standards				IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Climatic proofing				Damp heat, constant, to IEC 60068-2-78, Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature		°C		-25 - +40	-25 - +70	-25 - +70	-25 - +70
Mounting position				Any	Any	Any	Any
Protection type				IP65	IP65	IP65	IP65
Terminal capacity							
Solid		mm ²		1 x (0.75 - 2.5) 2 x (0.75 - 1.5)	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)
Flexible with ferrule to DIN 46228		mm ²		1 x (0.5 - 1.5) 2 x (0.5 - 1.5)	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Terminal screw				PH1	PH1	PH1	PH1
Terminal screw tightening torque		Nm		0.9	0.4	0.9	0.9
Contacts/switching capacity							
Rated impulse withstand voltage	U_{imp}	V AC		4000	6000	6000	6000
Rated insulation voltage	U_i	V		400	500	500	500
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3
Rated operational current							
AC-15	24 V	I_e	A	6	6	10	10
	230 V/240 V	I_e	A	6	6	6	6
	400 V/415 V	I_e	A	4	4	4	4
DC-13	24 V	I_e	A	3	3	3	3
	110 V	I_e	A	0.8	0.8	0.8	1
	220 V	I_e	A	0.3	0.3	0.3	0.5
Mains frequency		Hz		max. 400	max. 400	max. 400	max. 400
Short-circuit rating to IEC/EN 60947-5-1							
Max. fuse		A gG/gL		6	6	6	6
Repetition accuracy		mm		± 0.02	± 0.02	± 0.02	± 0.02
Mechanical data							
Lifespan							
Standard action contact	Operations	$\times 10^6$		1	10	10	20
Snap-action contact	Operations	$\times 10^6$		–	–	–	20
Mechanical shock resistance (half-sinusoidal shock, 20 ms)							
Standard action contact		g		10	25	5	25
Snap-action contact		g		–	2	–	2
Operating frequency	Operations/h			≤ 800	≤ 1800	≤ 1800	≤ 1800
Drive							
Mechanical							
Actuating force at beginning/end of stroke							
ZB/ZBZ (push-in/pull-out)		N		25/15	10/5	15/20	
Mechanical holding force acc. to GS-ET-19 (04/2004)							
XG, XW, XNG		N		1700	–	–	
XWA, XFG, XF		N		1600	–	–	
XNW		N		1200	–	–	
Electro mechanical							
For magnet							
Power consumption							
At 120 V AC		VA		8	–	–	
At 230 V AC		VA		11	–	–	
At 24 V DC		W		8	–	–	
Voltage tolerance		$\times U_s$		0.85 - 1.1			
Magnet duty factor		% DF		100	–	–	
UL-File No. E29184							
Rating data for approved types to UL/CSA 1)							
General Use							
AC operated		V		300	–	–	
AC operated		A		10	–	–	
Pilot Duty							
AC operated				A300	A300	A300	
DC operated				Q300	Q300 (1 A, 250 V DC)	Q300	
UL-approved degrees of protection				NEMA 4, 12, 13	NEMA 12, 13	–	

Dimensions

Basic units, non expandable (front fixing)

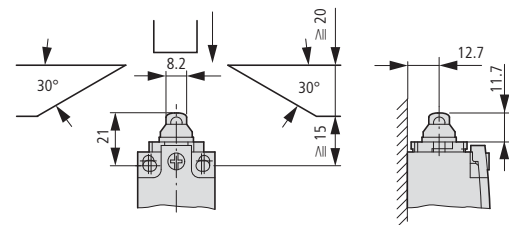
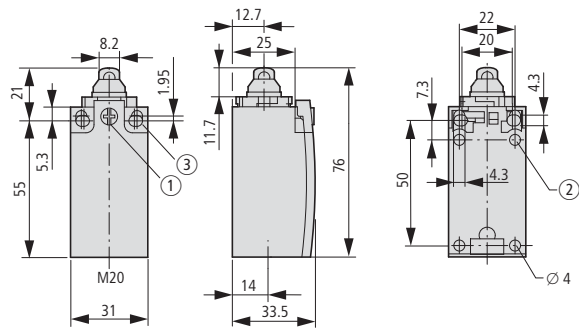
LS(M)-.../F



① Screw-in depth max. 12 mm

Basic units, expandable,

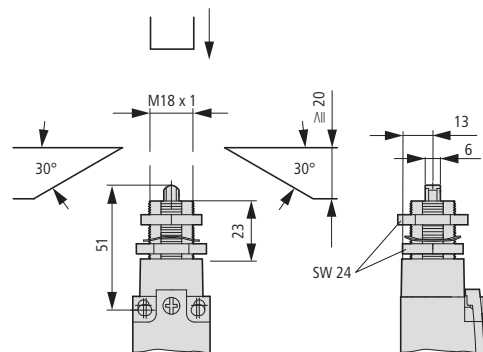
LS-..., LSM-..., LSE-...



- ① Tightening torque of cover screw: 0.8 Nm ±0.2 Nm
 - ② Only with LS (insulated version)
 - ③ Fixing screw 2 x M4 ≥ 30
- $M_A = 1.5 \text{ Nm}$

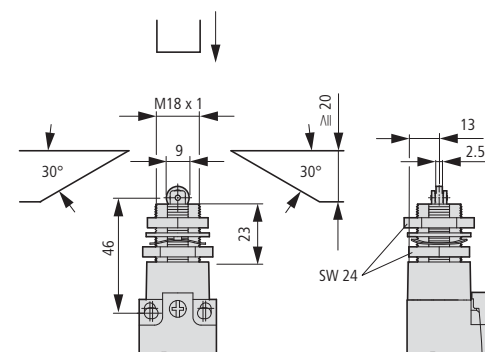
Rounded plunger, center fixing

LS-XZS



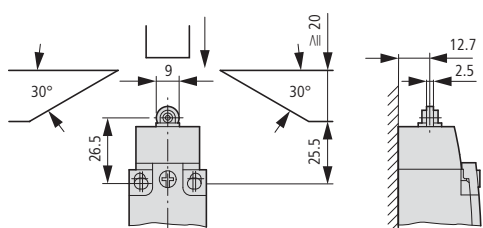
Roller plunger, center fixing

LS-XZRS



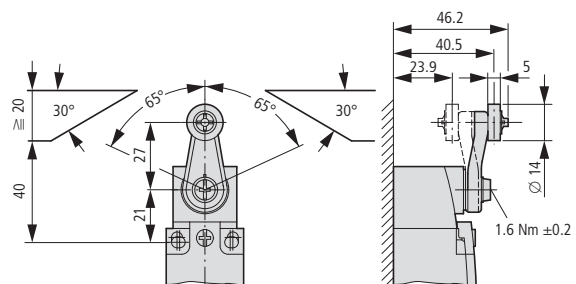
Roller plunger

LS(M)-.../P



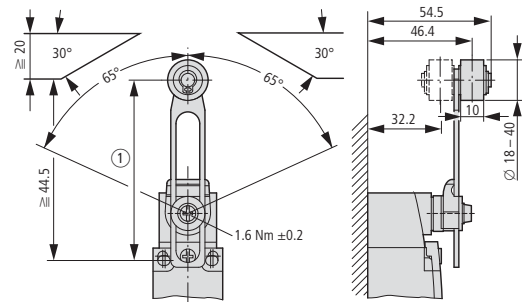
Rotary lever

LS(M)-.../RL



Adjustable roller lever

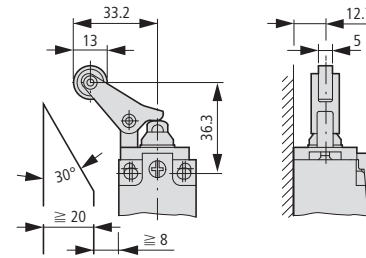
LS(M)-.../RLA



① Setting range from 54.5 to 97

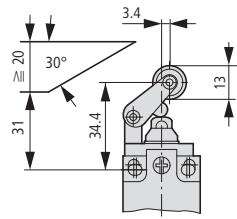
Angled roller lever

LS(M)-XLA



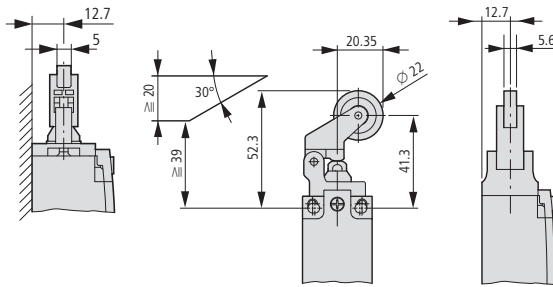
Roller lever

LS(M)-.../L



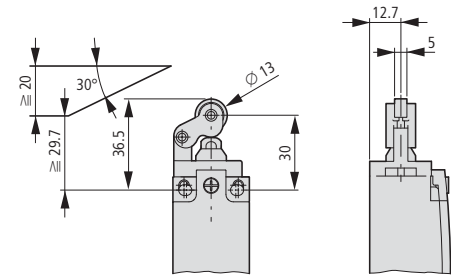
Roller lever

LS(M)-.../LB



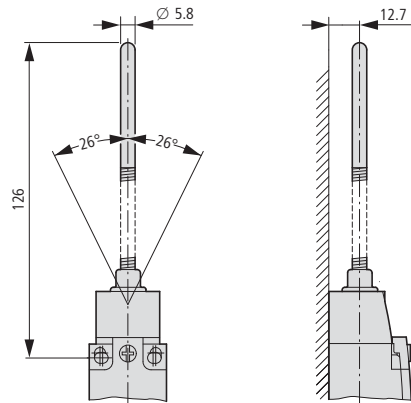
Roller lever

LS(M)-.../LS



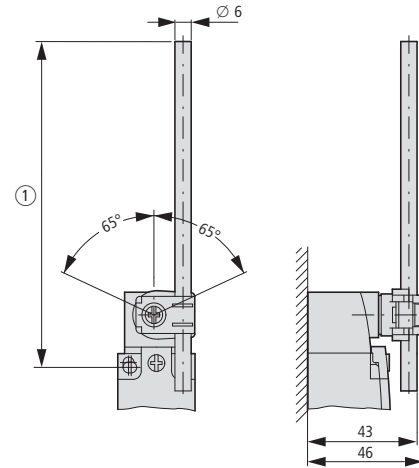
Spring rod

LS(M)-.../S



Actuating rod

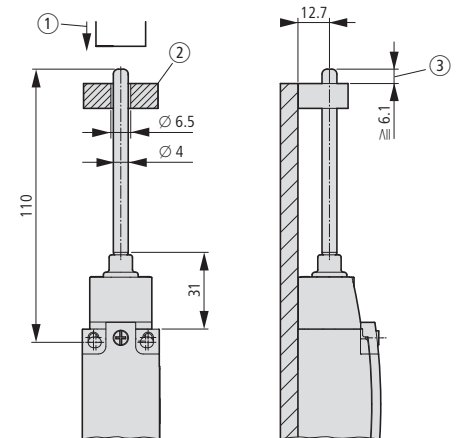
LS(M)-.../RR



① LS.../RR ≤ 150
LS.../RRM ≤ 210

Actuating rod

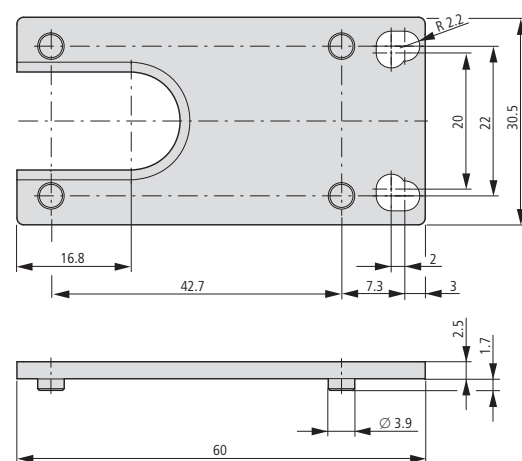
LS(M)-.../OR



① Approach direction, vertical
② Guide is done by customer, not included
③ Max. push-through

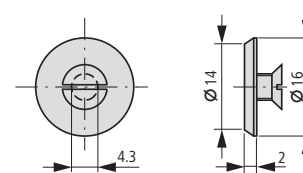
Adapter plate

LS-XAP

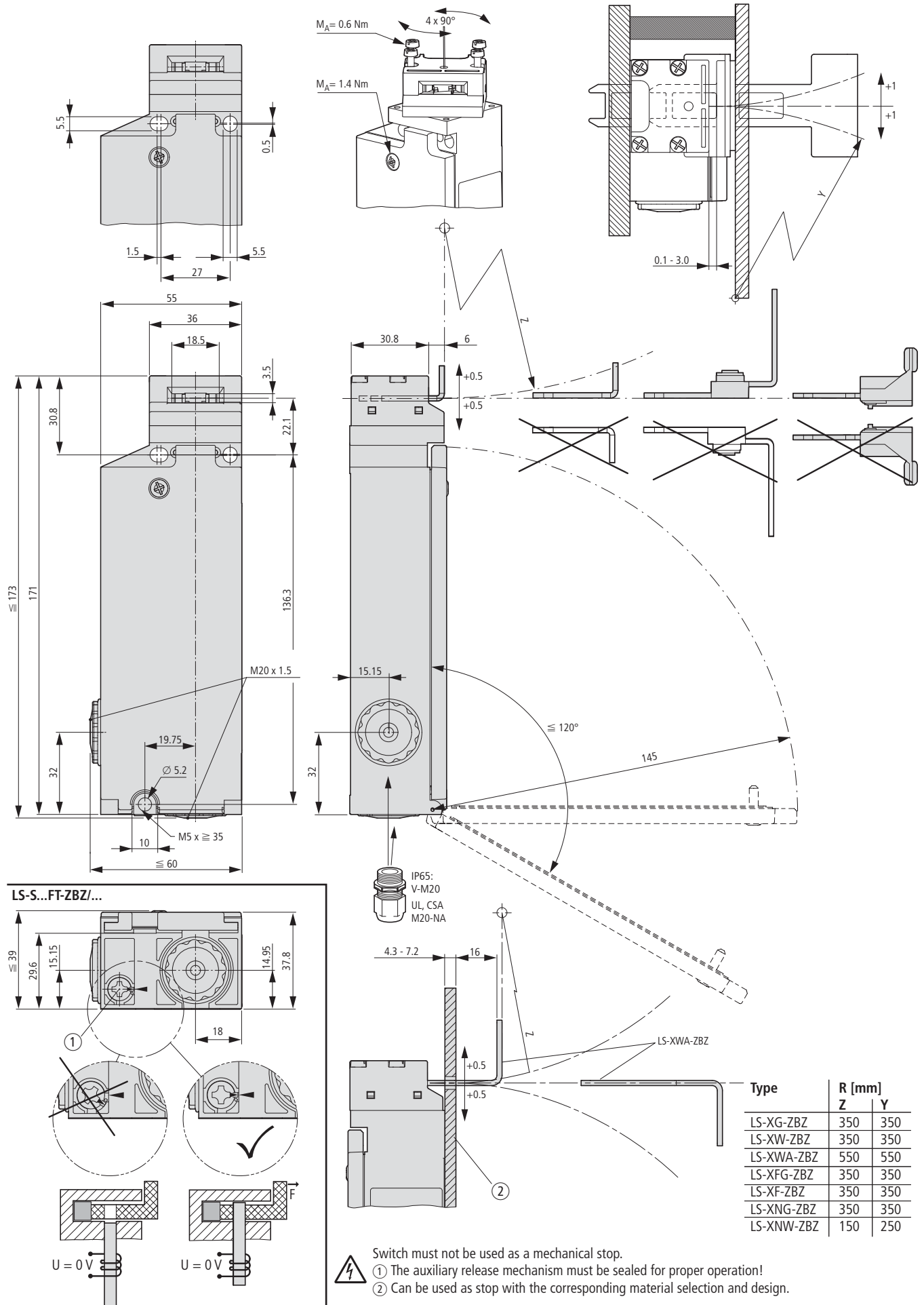


Locating plate

FS-AT

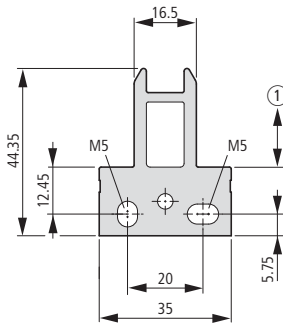


Safety position switches LS...ZBZ

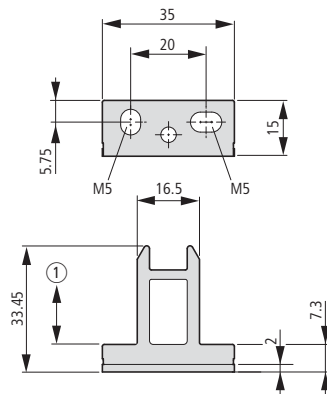


Actuating element

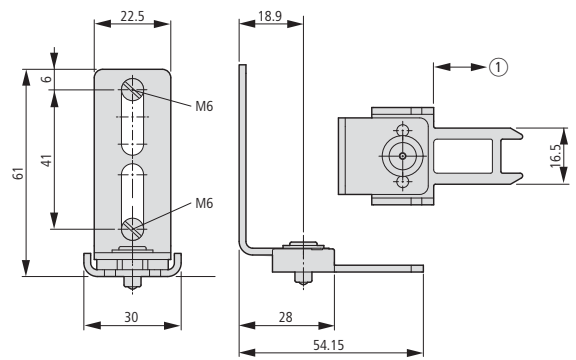
LS-XG-ZBZ



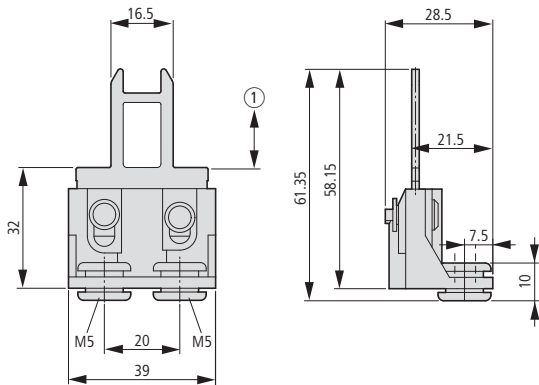
LS-XW-ZBZ



LS-XF-ZBZ

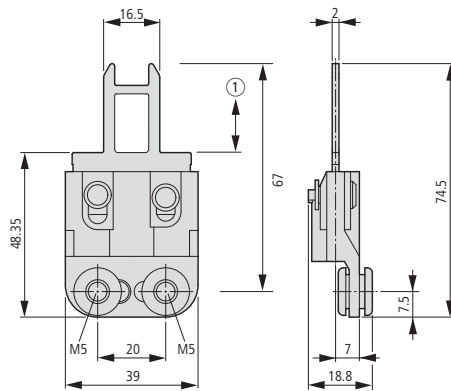


LS-XNW-ZBZ



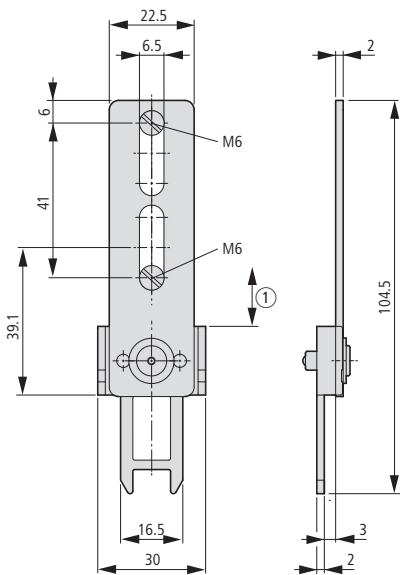
Fixing only allowed with M5 fixing screw and washer according to DIN EN ISO 7093

LS-XNG-ZBZ



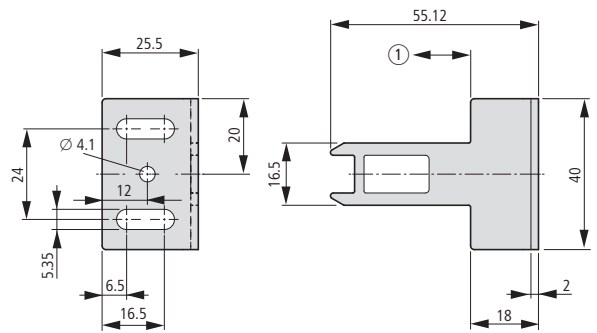
Fixing only allowed with M5 fixing screw and washer according to DIN EN ISO 7093

LS-XFG-ZBZ

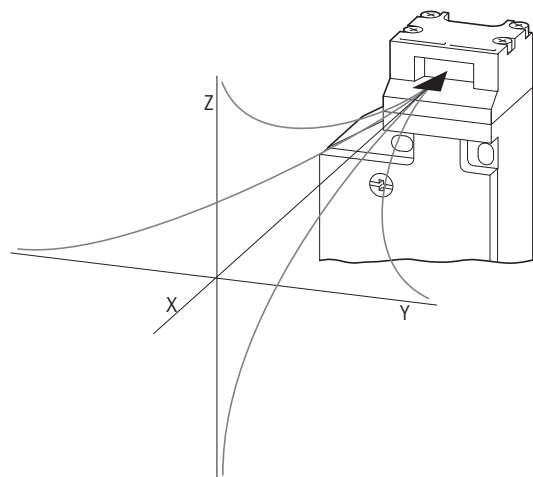


Part no.	R [mm]		
	F [N]	Z	Y
LS-XG-ZBZ	1700	350	350
LS-XW-ZBZ	1700	350	350
LS-XWA-ZBZ	1600	550	550
LS-XFG-ZBZ	1600	350	350
LS-XF-ZBZ	1600	350	350
LS-XNG-ZBZ	1700	350	350
LS-XNW-ZBZ	1200	150	250

LS-XWA-ZBZ



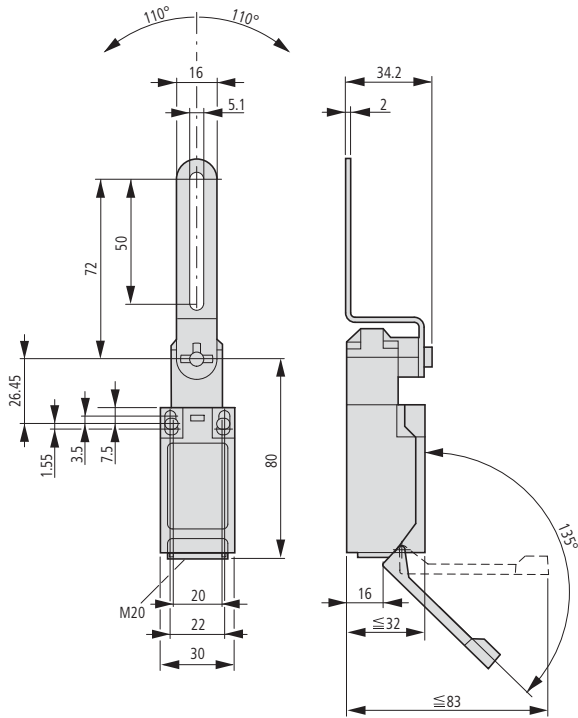
Pin with a 4 mm pin after mounting



① Distance to unit head = 0.1 ... 3.0 mm

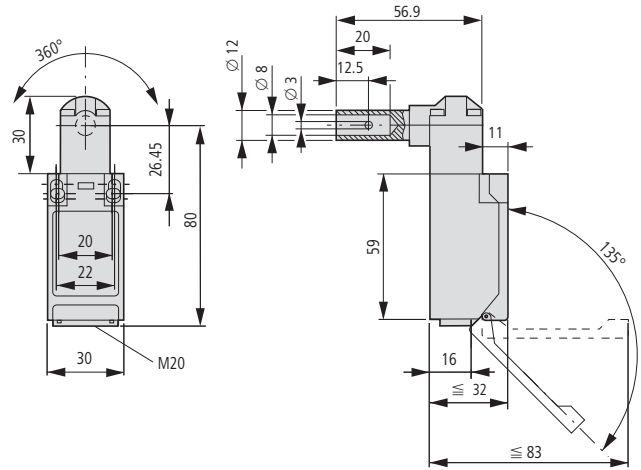
Hasp-operated safety switches

LSR.../TKG



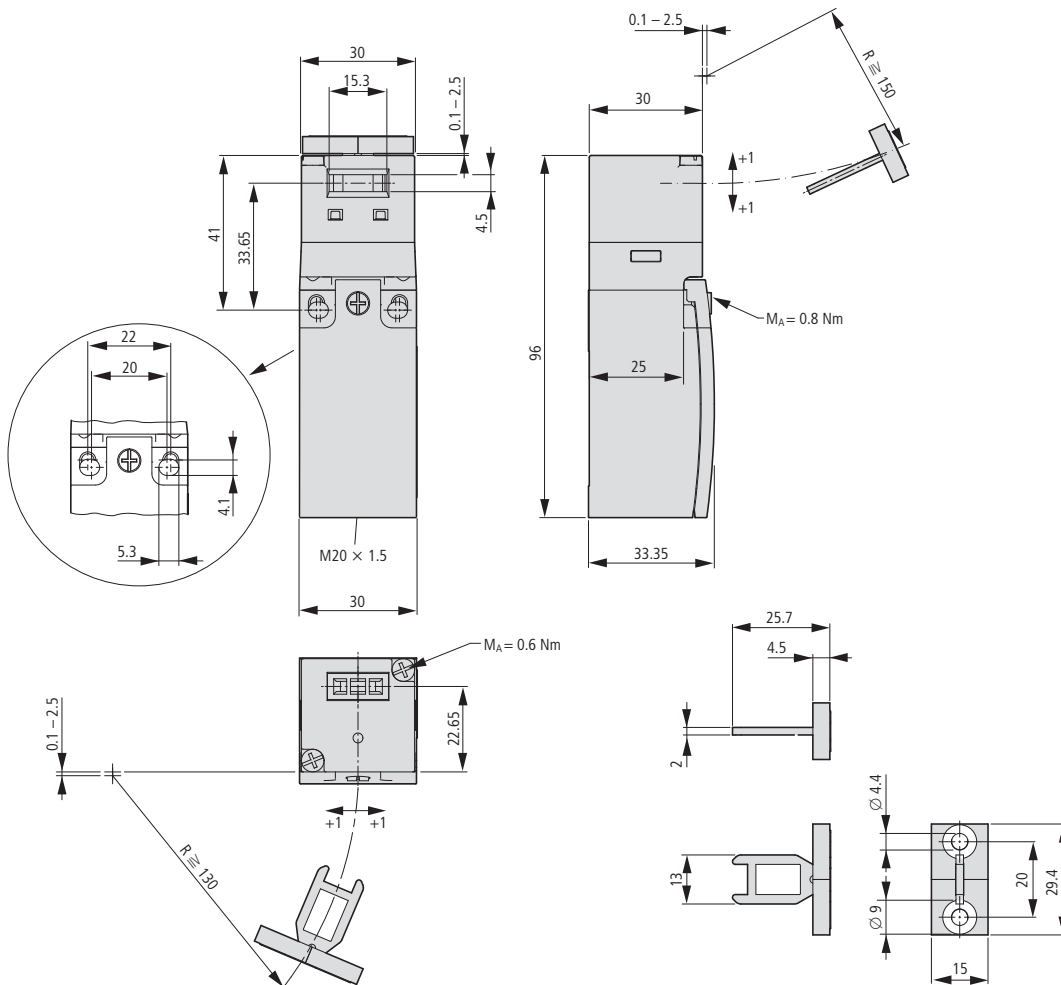
Safety hinge switches

LSR.../TS



Safety position switches

LS...ZB



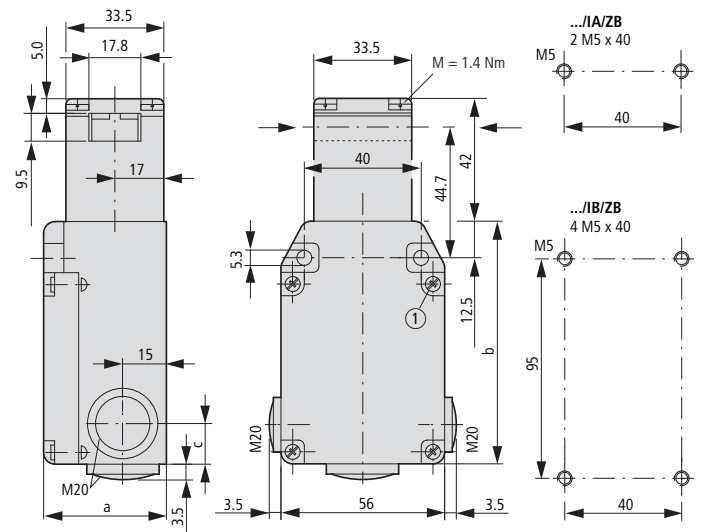
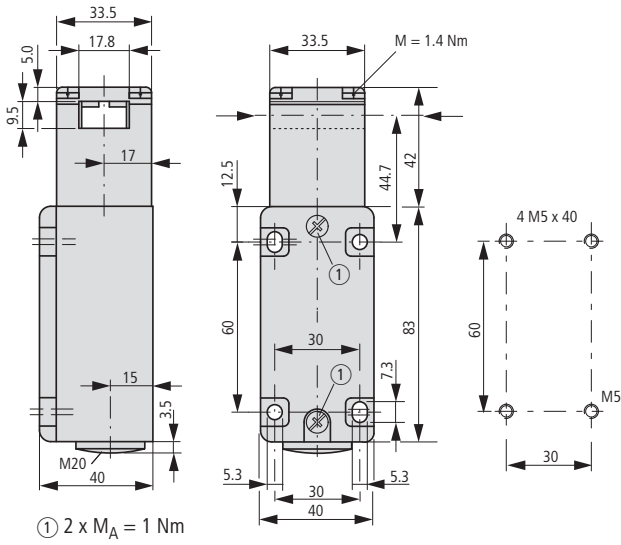
Switch must not be used as a mechanical stop.

Safety position switches

LS4...ZB

LS4/.../IA/ZB

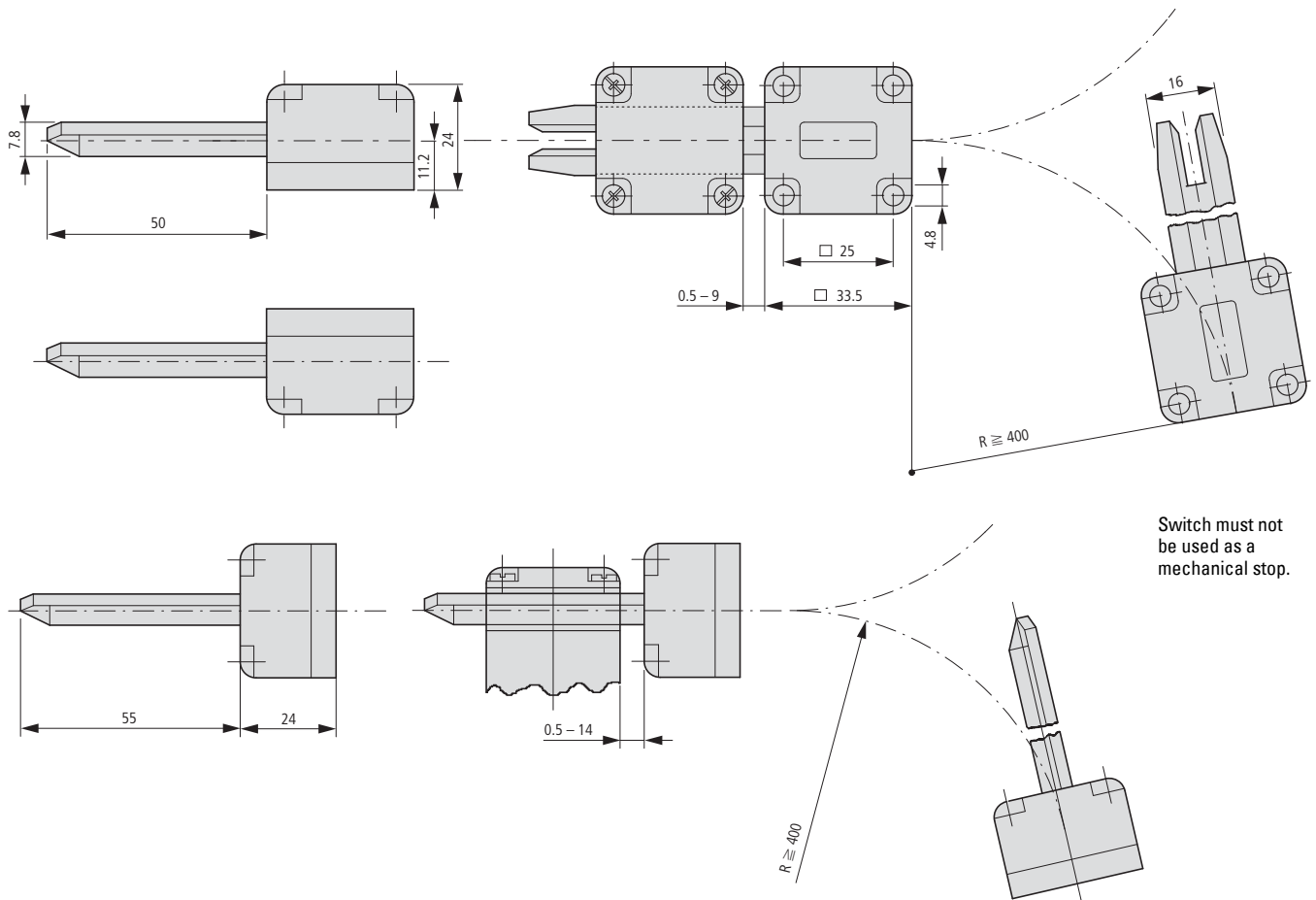
LS4/.../IB/ZB



① 4 x $M_A = 1 \text{ Nm}$

	a	b	c
LS4/S.../IA/ZB	41.5	83	16.7
LS4/S.../IB/ZB	43	115	29.5

Actuators



Switch must not be used as a mechanical stop.

HPL03031EN



Make and break pressure: **Separately** infinitely adjustable. Pressures can be set to any point within the area of the pressure diagram for the appropriate switch.

Max. operating pressure
bar

Part no. Article no. Price See price list

Std. pack Notes

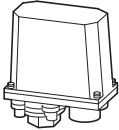
Pressure switches with main contacts IP65, 3 pole

		<p>Variable switching differential</p>	<p>7</p>	<p>MCSN4 057679</p>	<p>1 off</p>	<p>Features:</p> <ul style="list-style-type: none"> • With terminal cover as standard • 1 insulated protective wire terminal ⊕ • 1 insulated N terminal • 2 cable entry knockouts for M20, without cable gland • IP65 in conjunction with V-M20 cable gland • Pressure pipe flange R 1/2" • Please enquire: Pressure pipe flange R 1/4" • Neoprene diaphragm <p>R 1/4" corresponds to G 1/4 R 1/2" corresponds to G 1/2 to ISO 228-1</p> <p>For use as a motor load switch to IEC/EN 60947-4-1 for:</p>
		<p>With relief valve for 6 mm compression fitting</p>	<p>7</p>	<p>MCSN4-V 062425</p>		
		<p>Variable switching differential</p>	<p>15</p>	<p>MCSN11 029203</p>		<p>Three-phase current AC-3</p>
		<p>With relief valve for 6 mm compression fitting</p>	<p>15</p>	<p>MCSN11-V 033949</p>		<p>Single-phase current</p>
		<p>Variable switching differential</p>	<p>25</p>	<p>MCSN16 038695</p>		<p>Direct current DC-3</p>
		<p>With relief valve for 6 mm compression fitting</p>	<p>25</p>	<p>MCSN16-V 043441</p>		<p>For use as control switch:</p>
		<p>Variable switching differential</p>	<p>25</p>	<p>MCSN22 048187</p>		<p>Factory setting of cut-in and cut-out pressure via type suffix: → Page 3/33</p>
		<p>With relief valve for 6 mm compression fitting</p>	<p>25</p>	<p>MCSN22-V 052933</p>		



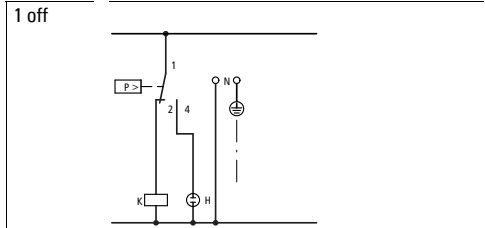
Contacts	Max. operating pressure	Make and break pressure: separately infinitely adjustable. Pressures can be set to any point within the area of the pressure diagram for the appropriate switch.	Variable switching differential Part no. Article no.	Price See price list	Std. pack	Notes
Number	bar					

Pressure switch with auxiliary contacts, IP65



1 changeover contact	7	<p>Min. switching differential: 0.2 bar Example: Cut-out pressure 3.3 bar Cut-in pressure 2.2 bar</p>
1 changeover contact with gold-plated	7	
2 changeover contacts with gold-plated contacts	7	

MCS4 019711
MCS4-G¹⁾ 058693
MCS4-SOND910-G¹⁾ 087792



Features:

- Pressure pipe flange R ¼"
- If required: pressure pipe flange R ½"
- IP65 in conjunction with V-M20 cable gland
- 1 Insulated protective wire terminal ⊕
- 2 cable entry knockouts for M20
- Neoprene diaphragm, resistant to aging, air, engine oil, and water
min. -25 °C, max. +80 °C

Factory setting of cut-in and cut-out pressure via type suffix: → Page 3/33

R ¼" corresponds to G ¼
R ½" corresponds to G ½ to ISO 228-1

Auxiliary contact to IEC/EN 60947-1

¹⁾ Gold contacts are specially suitable for switching small voltages and currents from 12 V AC/DC, 0.1 A.

1 changeover contact	15	<p>Min. switching differential: 0.3 bar Example: Cut-out pressure 8.5 bar Cut-in pressure 4.5 bar</p>
1 changeover contact with gold-plated	15	
2 changeover contact with gold-plated contacts	15	


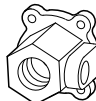
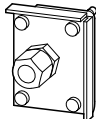

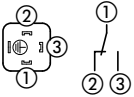
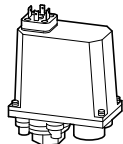
MCS11 088527
MCS11-G¹⁾ 058692
MCS11-SOND910-G¹⁾ 087793

1 changeover contact	25	<p>Min. switching differential: 0.7 bar Example: Cut-out pressure 17.5 bar Cut-in pressure 7.8 bar</p>
1 changeover contact with gold-plated	25	
2 changeover contact with gold-plated contacts	25	

MCS22 098019
MCS22-G¹⁾ 058691
MCS22-SOND910-G¹⁾ 087794

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For use with	Part no. Article no.	Price See price list	Std. pack	Notes
Pressure pipe flange				
	MCS with R 1/2"	+R1/2"-MCS 001627	1 off	Order no. when ordering basic unit
	MCS with R 1/2"	R1/2"-MCS 031617		Order no. when ordering separately
	MCSN(-V) with R 1/4"	+R1/4"-MCSN 001628		Order no. when ordering basic unit
	MCSN(-V) with R 1/4"	R1/4"-MCSN 033990		Order no. when ordering separately
Pressure pipe flange with pressure gauge connection				
	MCS, MCSN(-V)	+M-MCS 001625	1 off	Order no. when ordering basic unit
	MCS, MCSN(-V)	M-MCS 071913		Order no. when ordering separately
Compression fitting				
	MCS, MCSN	+E8-MCS 001624	1 off	Order no. when ordering basic unit
	MCS, MCSN	E8-MCS 040949		Order no. when ordering separately
Wall fixing bracket				
	MCS, MCSN	+W-MCS 001631	1 off	Order no. when ordering basic unit
	MCS, MCSN	W-MCS 050665	10 off	Order no. when ordering separately
External unit plug, IP65				
3 poles plus earth for socket adapters to DIN 43650-A/ISO 4400 Plug configuration: 				
	MCS MCS...-G Not for use with MCS...SOND910-G	+S3-MCS 201854	1 off	Order no. when ordering basic unit
Pressure setting				
Standard setting of the cut-in and cut-out pressures When ordering, the type reference must include the following details: 1st wildcard \triangle cut-in pressure in bar 2nd wildcard \triangle cut-out pressure in bar				
MCS, MCSN	+PMIN(*)/PMAx(*) 203948		1 off	Order no. when ordering basic unit

Notes

Ordering example

- Desired part no.: MCS4
 - Required cut-in pressure in bar: 2.2
 - Required cut-out pressure in bar: 3.3
- A maximum of one decimal place after the comma is possible with the pressure definition.
The correct part no. is:
MCS4 + PMIN(2.2)/PMAx(3.3)



Rating data for approved types to UL/CSA ¹⁾	Max. pressure psi ²⁾	Rated insulation voltage to UL/CSA V AC	Maximum motor rating HP = PS					Rated operational current I _e A	Part no. Article no.	Price See price list	Std. pack
			115 V HP	200 V HP	230 V HP	460 V HP	575 V HP				
MCS(N) pressure switches, IP55											
With transparent hood											
1 pole only for single-phase motors ⁴⁾	65	300	0.25 ³⁾	0.5 ³⁾	–	–	–	10	MCS4FORMCDN 024457		1 off
	160		0.25 ³⁾	0.5 ³⁾	–	–	–	10	MCS11FORMCDN 093273		
	315		0.25 ³⁾	0.5 ³⁾	–	–	–	10	MCS22FORMCDN 014965		
3 pole ⁴⁾	65	600	–	3	3	5	7.5	10	MCSN4FORMCDN 064798		1 off
	160		–	3	3	5	7.5	10	MCSN11FORMCDN 036322		
	230		–	3	3	5	7.5	10	MCSN16FORMCDN 045814		

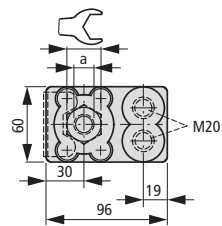
Notes

- ¹⁾ Devices for world markets IEC \triangle UL/CSA
- ²⁾ In North America, pressure is stated in pounds/inch (psi) (1 bar = 14.5 psi)
- ³⁾ Heavy Pilot Duty = High switching duty
- ⁴⁾ Selection data and application notes \rightarrow 3/32

Dimensions

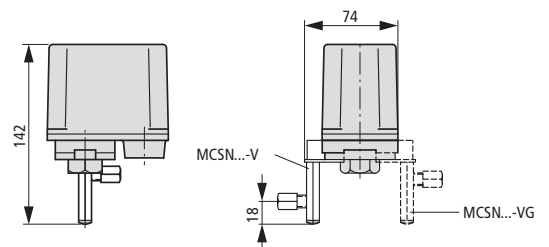
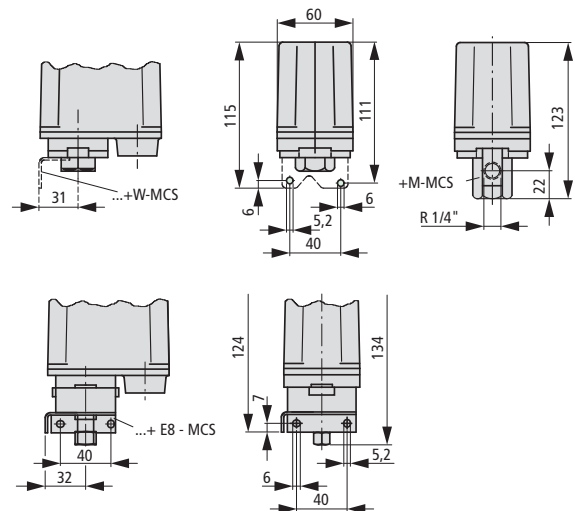
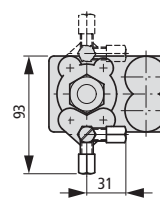
Pressure switches

MCS..., MCSN...



Part no.	Pipe in-lead	a	
MSC...	2 x M20	R 1/4"	27
MCSN...	2 x M20	R 1/2"	36

MCSN...V
With relief valve





			Pressure switches		
			MCS	MCS...SOND910-G	MCSN
General					
Standards			IEC/EN 60947-5-1		
Test pressure		bar	32	32	32
Bursting pressure		bar	90	90	90
Operating frequency	Operations/h		≤ 3000	≤ 3000	≤ 1500
Climatic proofing			Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30		
Ambient temperature		°C	-25 - 70	-25 - 70	-25 - 70
Protection type			IP65	IP65	IP65
Mounting position			Any	Any	Any
Mechanical shock resistance to IEC 60068-2-27	Half-sinusoidal shock 20 ms	g	> 10	> 10	> 10
Vibration resistance acc. to IEC/EN 60068-2-6	Amplitude 1 mm	Hz	36	36	36
Lifespan at 50 % - 12 % pressure differential	Operations	x 10 ⁶	1...2	1...2	0.5
Terminal capacity					
Solid		mm ²	1 x (0.75 - 2.5)	1 x (0.75 - 2.5)	1 x (0.75 - 2.5) 2 x (0.75 - 2.5)
Flexible with ferrule to DIN 46228		mm ²	1 x (0.5 - 1.5)	1 x (0.5 - 1.5)	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Terminations			Tunnel-type screw terminal	Tunnel-type screw terminal	Flat terminal with clamping washer
Terminal screw			M3	M3	M4
Terminal screw tightening torque		Nm	0.5	0.5	1.2
Contacts/switching capacity					
Rated impulse withstand voltage	U _{imp}	V AC	4000	4000	4000
Rated insulation voltage	U _i	V	400	400	400
Overvoltage category/pollution degree			III/3	III/3	III/3
Max. short-circuit protective unit					
Fuseless		Part no.	PKZ2/ZM6	PKZ2/ZM6	PKZ2/ZM16
Fuse	gG/gL	A	10	10	20
Type of coordination			–	–	1
AC-15					
Rated operational current					
230 V		A	2	–	–
AC-3					
Rated operational current					
230 V		A	–	–	15
400 V		A	–	–	11.5
Motor rating P					
230 V		kW	–	–	4
400 V		kW	–	–	5.5
DC-13					
Rated operational current					
24 V		A	2	0.8	–
110 V		A	0.25	0.25	–
DC-3					
Rated operational current					
24 V		A	–	–	16
110 V		A	–	–	12.5
250 V		A	–	–	2
Rated frequency	f	Hz	50	50	50

Description



- ① Outputs with function display on all models.
- ② All models with M12 plug connector or cable (2 m).
- ③ Versions for flush or non-flush mounting available.

Short description

Eaton's proximity sensors of the Global series have been developed specially for OEM series production. The sensors feature only the functions required for reliable operation. This means that you do not pay for additional, unnecessary functions but get the performance and features you expect from a sensor. Our DC versions feature a short-circuit protective unit and a rating of up to 2000 measuring cycles per second. The outputs of all models are equipped with a function display. The Global series includes models with various diameters from 8 to 30 mm, making it truly versatile in installation. Versions with various ranges are also available. The Global proximity sensors are DC or AC units with a 2- or 3-wire, NPN or PNP configuration. Versions for hard-wiring or with M12 plug connector are available. The DC versions have a rated load current of 100 mA, the AC versions 200 mA.

Product features







- The Global Proximity Line features solid performance and a basic feature set for reliable, cost-effective sensing.
- Available in a variety of sizes to fit in all of your applications: 8 mm, 12 mm, 18 mm und 30 mm diameters.
- The input voltage of the DC versions is 10 – 30 V DC with a 2- and 3-wire configuration (PNP and NPN).
- The input voltage of the AC versions is 2-AC 20...250 V.
- The operating frequency of the DC versions is 2 kHz.
- Versions for flush or non-flush installation available.
- Connection through cable (2 meters) or M12 plug connector.
- The DC versions feature short-circuit protection.

Approvals



HPL03037EN

Ordering







	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack	
E57 Global series											
2-wire											
M12 x 1											
	10 - 30 V DC	2	Flush	–	2 m connection cable	1 N/O	Metal	E57-12GS02-D 135883		1 off  	
		2	Flush	–	plug connector M12 x 1	1 N/O	Metal	E57-12GS02-DBB 135884			
		4	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-12GU04-D 135891			
		4	Non-flush	–	2 m connection cable	1 NC	Metal	E57-12GU04-D1 135892			
		4	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-12GU04-DBB 135893			
		8	Non-flush	–	2 m connection cable	1 NC	Metal	E57-12GE08-D1 135872			
		8	Non-flush	–	plug connector M12 x 1	1 NC	Metal	E57-12GE08-D1DBB 135873			
		8	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-12GE08-DBB 135874			
		8	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-12GE08-D 135871			
	20 - 250 V AC	2	Flush	–	2 m connection cable	1 N/O	Metal	E57-12GS02-A 135879			
		2	Flush	–	plug connector M12 x 1	1 N/O	Metal	E57-12GS02-AAB 135880			
		4	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-12GU04-A 135887			
		4	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-12GU04-AAB 135888			
	M18 x 1										
		10 - 30 V DC	5	Flush	–	2 m connection cable	1 N/O	Metal	E57-18GS05-D 135929		1 off  
5			Flush	–	plug connector M12 x 1	1 N/O	Metal	E57-18GS05-DBB 135930			
8			Non-flush	–	2 m connection cable	1 N/O	Metal	E57-18GU08-D 135937			
8			Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-18GU08-DBB 135938			
16			Non-flush	–	2 m connection cable	1 N/O	Metal	E57-18GE16-D 135917			
16			Non-flush	–	2 m connection cable	1 NC	Metal	E57-18GE16-D1 135918			
16			Non-flush	–	plug connector M12 x 1	1 NC	Metal	E57-18GE16-D1DBB 135919			
16			Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-18GE16-DBB 135920			
20 - 250 V AC			5	Flush	–	2 m connection cable	1 N/O	Metal	E57-18GS05-A 135925		
		5	Flush	–	plug connector M12 x 1	1 N/O	Metal	E57-18GS05-AAB 135926			
		8	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-18GU08-A 135933			
		8	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-18GU08-AAB 135934			
		16	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-18GE16-AAB 135916			

Information relevant for export to North America



Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
CSA report applies to both Canada and US
–
224447
4652-84
CSA certified
250 V AC, 30 V DC
IEC: IP67; UL/CSA Type: -

Rated operational voltage	Rated switching distance S_n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack		
E57 Global series											
2-wire											
M30 x 1.5											
	10 - 30 V DC	10	Flush	–	2 m connection cable	1 N/O	Metal	E57-30GS10-D 135973	1 off  		
		10	Flush	–	2 m connection cable	1 NC	Metal	E57-30GS10-D1 135974			
		10	Flush	–	plug connector M12 x 1	1 NC	Metal	E57-30GS10-D1DB 135975			
		10	Flush	–	plug connector M12 x 1	1 N/O	Metal	E57-30GS10-DBB 135976			
		15	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-30GU15-D 135983			
		15	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-30GU15-DBB 135984			
		25	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-30GE25-D 135961			
		25	Non-flush	–	2 m connection cable	1 NC	Metal	E57-30GE25-D1 135962			
		25	Non-flush	–	plug connector M12 x 1	1 NC	Metal	E57-30GE25-D1DB 135963			
		25	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-30GE25-DBB 135964			
	20 - 250 V AC	10	Flush	–	2 m connection cable	1 N/O	Metal	E57-30GS10-A 135969			
		10	Flush	–	plug connector M12 x 1	1 N/O	Metal	E57-30GS10-AAB 135970			
		15	Non-flush	–	2 m connection cable	1 N/O	Metal	E57-30GU15-A 135979			
		15	Non-flush	–	plug connector M12 x 1	1 N/O	Metal	E57-30GU15-AAB 135980			
	3-wire										
	M8 x 1										
	10 - 30 V DC	1	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57-08GS01-C 135859	1 off  		
		1	Flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GS01-CDB 135860			
		1	Flush	PNP	2 m connection cable	1 N/O	Stainless steel	E57-08GS01-G 135861			
		1	Flush	PNP	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GS01-GDB 135862			
		2	Non-flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57-08GU02-C 135863			
		2	Non-flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GU02-CDB 135864			
		2	Non-flush	PNP	2 m connection cable	1 N/O	Stainless steel	E57-08GU02-G 135865			
		2	Non-flush	PNP	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GU02-GDB 135866			
		3	Flush	NPN	2 m connection cable	1 NC	Stainless steel	E57-08GBE03-C 135850			
		3	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57-08GE03-C 135851			
		3	Flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GE03-CDB 135852			
		3	Flush	PNP	2 m connection cable	1 N/O	Stainless steel	E57-08GE03-G 135853			
		3	Flush	PNP	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GE03-GDB 135854			










Information relevant for export to North America**Product Standards**

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC60947-5-2;
CE marking
CSA report applies to both Canada and US
–
224447
4652-84
CSA certified
250 V AC, 30 V DC
IEC: IP67; UL/CSA Type: -

HPL03039EN









Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Global series									
3-wire									
M8 x 1									
	10 - 30 V DC	6	Non-flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57-08GE06-C 135855	1 off  
		6	Non-flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GE06-CDB 135856	
		6	Non-flush	PNP	2 m connection cable	1 N/O	Stainless steel	E57-08GE06-G 135857	
		6	Non-flush	PNP	plug connector M12 x 1	1 N/O	Stainless steel	E57-08GE06-GDB 135858	
M12 x 1									
	10 - 30 V DC	2	Flush	NPN	2 m connection cable	1 N/O	Metal	E57-12GS02-C 135881	1 off  
		2	Flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-12GS02-CDB 135882	
		2	Flush	PNP	2 m connection cable	1 N/O	Metal	E57-12GS02-G 135885	
		2	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-12GS02-GDB 135886	
		4	Non-flush	NPN	2 m connection cable	1 N/O	Metal	E57-12GU04-C 135889	
		4	Non-flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-12GU04-CDB 135890	
		4	Non-flush	PNP	2 m connection cable	1 N/O	Metal	E57-12GU04-G 135894	
		4	Non-flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-12GU04-GDB 135895	
		5	Flush	NPN	2 m connection cable	1 N/O	Metal	E57-12GE05-C 135867	
		5	Flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-12GE05-CDB 135868	
		5	Flush	PNP	2 m connection cable	1 N/O	Metal	E57-12GE05-G 135869	
		5	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-12GE05-GDB 135870	
		10	Non-flush	NPN	2 m connection cable	1 N/O	Metal	E57-12GE10-C 135875	
		10	Non-flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-12GE10-CDB 135876	
		10	Non-flush	PNP	2 m connection cable	1 N/O	Metal	E57-12GE10-G 135877	
		10	Non-flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-12GE10-GDB 135878	
M18 x 1									
	10 - 30 V DC	5	Flush	NPN	2 m connection cable	1 N/O	Metal	E57-18GS05-C 135927	1 off  
		5	Flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-18GS05-CDB 135928	
		5	Flush	PNP	2 m connection cable	1 N/O	Metal	E57-18GS05-G 135931	
		5	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-18GS05-GDB 135932	
		8	Flush	NPN	2 m connection cable	1 N/O	Metal	E57-18GE08-C 135912	
		8	Flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-18GE08-CDB 135913	
		8	Flush	PNP	2 m connection cable	1 N/O	Metal	E57-18GE08-G 135914	
		8	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-18GE08-GDB 135914	

Information relevant for export to North America



Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
CSA report applies to both Canada and US
-
224447
4652-84
CSA certified
250 V AC, 30 V DC
IEC: IP67; UL/CSA Type: -

Rated operational voltage	Rated switching distance S_n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Global series									
3-wire									
M18 x 1									
	10 - 30 V DC	8	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-18GE08-GDB 135915	1 off  
		8	Non-flush	NPN	2 m connection cable	1 N/O	Metal	E57-18GU08-C 135935	
		8	Non-flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-18GU08-CDB 135936	
		8	Non-flush	PNP	2 m connection cable	1 N/O	Metal	E57-18GU08-G 135939	
		8	Non-flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-18GU08-GDB 135940	
		18	Non-flush	NPN	2 m connection cable	1 N/O	Metal	E57-18GE18-C 135921	
		18	Non-flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-18GE18-CDB 135922	
		18	Non-flush	PNP	2 m connection cable	1 N/O	Metal	E57-18GE18-G 135923	
		18	Non-flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-18GE18-GDB 135924	
3-wire									
M30 x 1.5									
	10 - 30 V DC	10	Flush	NPN	2 m connection cable	1 N/O	Metal	E57-30GS10-C 135971	1 off  
		10	Flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-30GS10-CDB 135972	
		10	Flush	PNP	2 m connection cable	1 N/O	Metal	E57-30GS10-G 135977	
		10	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-30GS10-GDB 135978	
		15	Flush	NPN	2 m connection cable	1 N/O	Metal	E57-30GE15-C 135957	
		15	Flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-30GE15-CDB 135958	
		15	Flush	PNP	2 m connection cable	1 N/O	Metal	E57-30GE15-G 135959	
		15	Flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-30GE15-GDB 135960	
		15	Non-flush	NPN	2 m connection cable	1 N/O	Metal	E57-30GU15-C 135981	
		15	Non-flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-30GU15-CDB 135982	
		15	Non-flush	PNP	2 m connection cable	1 N/O	Metal	E57-30GU15-G 135985	
		15	Non-flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-30GU15-GDB 135986	
		29	Non-flush	NPN	2 m connection cable	1 N/O	Metal	E57-30GE29-C 135965	
		29	Non-flush	NPN	plug connector M12 x 1	1 N/O	Metal	E57-30GE29-CDB 135966	
		29	Non-flush	PNP	2 m connection cable	1 N/O	Metal	E57-30GE29-G 135967	
		29	Non-flush	PNP	plug connector M12 x 1	1 N/O	Metal	E57-30GE29-GDB 135968	

Information relevant for export to North America

Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
CSA report applies to both Canada and US

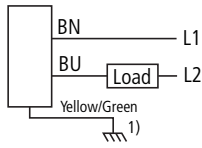
-
224447
4652-84
CSA certified
250 V AC, 30 V DC
IEC: IP67; UL/CSA Type: -

Engineering



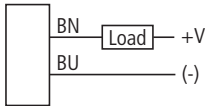
Circuit diagram

E57...-A

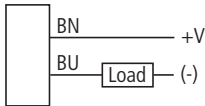


1) Internally connected to enclosure (wiring optional)

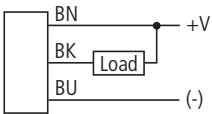
E57...-D
E57...-D1



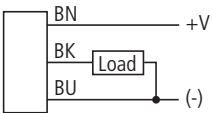
E57...-D
E57...-D1



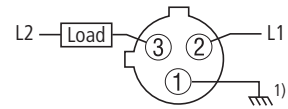
E57...-C



E57...-G

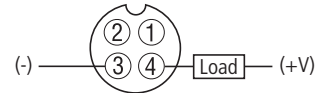


E57...-AAB

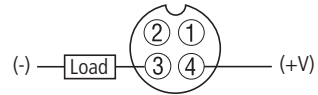


1) Internally connected to enclosure (wiring optional)

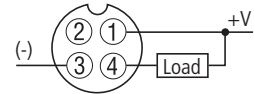
E57...-DDB
E57...-D1DB



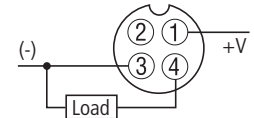
E57...-DDB
E57...-D1DB



E57...-CDB



E57...-GDB



Technical data

			E57-...(2-wire)			
			E57-12GS...A	E57-12GU...A	E57-18GS...A	E57-18GU...A
General						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	30 Shock duration 11 ms			
Characteristic values						
Repetition accuracy of S_n		%	1	3	1	3
Temperature drift of S_n		%	10	10	10	10
Switching hysteresis of S_n		%	15	15	15	15
Rated operating voltage			20 - 250 V AC	20 - 250 V AC	20 - 250 V AC	20 - 250 V AC
Operating current in the switched state at 24 V DC	I_b	mA	1.8	1.8	1.8	1.8
Rated operational current	I_e	mA	200	200	200	200
Voltage drop at I_e	U_d	V	8	8	8	8
Switching frequency		Hz	25	25	25	25
Min. load current	I_e	mA	5	5	5	5
Residual current due to the load in locked state at 230 V AC or 24 V DC	I_r	mA	0.01	0.01	0.01	0.01
Switching state indication		LED	Red	Red	Red	Red
Function			2-wire	2-wire	2-wire	2-wire
Construction type						
Design (outer dimensions)			M12 x 1	M12 x 1	M18 x 1	M18 x 1
Material			Metal	Metal	Metal	Metal

			E57-...(2-wire)		
			E57-18GE...A	E57-30GS...A	E57-30GU...A
General					
Standards			IEC/EN 60947-5-2		
Ambient temperature		°C	-25 - +70	-25 - +70	-25 - +70
Protection type			IP67	IP67	IP67
Mechanical shock resistance		g	30 Shock duration 11 ms		
Characteristic values					
Repetition accuracy of S_n		%	1	1	3
Temperature drift of S_n		%	10	10	10
Switching hysteresis of S_n		%	15	15	15
Rated operating voltage			20 - 250 V AC	20 - 250 V AC	20 - 250 V AC
Operating current in the switched state at 24 V DC	I_b	mA	1.8	1.8	1.8
Rated operational current	I_e	mA	200	200	200
Voltage drop at I_e	U_d	V	8	8	8
Switching frequency		Hz	25	25	25
Min. load current	I_e	mA	5	5	5
Residual current due to the load in locked state at 230 V AC or 24 V DC	I_r	mA	0.01	0.01	0.01
Switching state indication		LED	Red	Red	Red
Function			2-wire	2-wire	2-wire
Construction type					
Design (outer dimensions)			M18 x 1	M30 x 1.5	M30 x 1.5
Material			Metal	Metal	Metal

Notes

Further technical data can be found in the Online Catalogue at www.moeller.net



			E57...(3-wire)				
			E57-08...	E57-12... E57-12GE...	E57-12GS...	E57-12GU...	E57-18... E57-18GE...
General							
Standards			IEC/EN 60947-5-2				
Ambient temperature		°C	-0 - +60	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type			IP67	IP67	IP67	IP67	IP67
Mechanical shock resistance		g	30 Shock duration 11 ms				
Characteristic values							
Repetition accuracy of S _n		%	1	1	1	1	1
Temperature drift of S _n		%	10	10	10	10	10
Switching hysteresis of S _n		%	15	15	15	15	15
Rated operating voltage			10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC
Residual ripple of U _e		%	10	10	10	10	10
Operating current in the switched state at 24 V DC	I _b	mA	10	10	10	20	10
Rated operational current	I _e	mA	100	100	100	100	100
Voltage drop at I _e	U _d	V	1.5	1.5	1.5	1.5	1.5
Switching frequency		Hz	2000	2000	2000	1000	1000
Residual current due to the load in locked state at 230 V AC or 24 V DC	I _r	mA	0.01	0.01	0.01	0.01	0.01
Switching state indication		LED	Red	Red	Red	Red	Red
Protective functions			Short-circuit protection Protection against polarity reversal Protection against wire breakage				
Function			3-wire	3-wire	3-wire	3-wire	3-wire
Construction type							
Design (outer dimensions)			M8 x 1	M12 x 1	M12 x 1	M12 x 1	M18 x 1
Material			Stainless steel	Metal	Metal	Metal	Metal

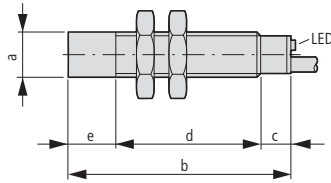
			E57-18...		E57-30...			
			E57-18GS...	E57-18GU...	E57-30GE...	E57-30GS...	E57-30GU...	
General								
Standards			IEC/EN 60947-5-2					
Ambient temperature		°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70	
Protection type			IP67	IP67	IP67	IP67	IP67	
Mechanical shock resistance		g	30 Shock duration 11 ms					
Characteristic values								
Repetition accuracy of S _n		%	1	1	1	1	1	
Temperature drift of S _n		%	10	10	10	10	10	
Switching hysteresis of S _n		%	15	15	15	15	15	
Rated operating voltage			10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	
Residual ripple of U _e		%	10	10	10	10	10	
Operating current in the switched state at 24 V DC	I _b	mA	10	20	10	10	20	
Rated operational current	I _e	mA	100	100	100	100	100	
Voltage drop at I _e	U _d	V	1.5	1.5	1.5	1.5	1.5	
Switching frequency		Hz	1000	500	500	500	200	
Residual current due to the load in locked state at 230 V AC or 24 V DC	I _r	mA	0.01	0.01	0.01	0.01	0.01	
Switching state indication		LED	Red	Red	Red	Red	Red	
Protective functions			Short-circuit protection Protection against polarity reversal Protection against wire breakage					
Function			3-wire	3-wire	3-wire	3-wire	3-wire	
Construction type								
Design (outer dimensions)			M18 x 1	M18 x 1	M30 x 1.5	M30 x 1.5	M30 x 1.5	
Material			Metal	Metal	Metal	Metal	Metal	

Notes

Further technical data can be found in the Online Catalogue at www.moeller.net

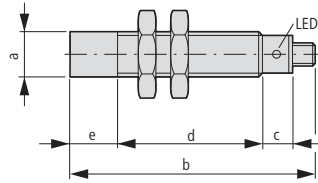
Dimensions

2 m connection cable



		a	b	c	d	e			a	b	c	d	e	
2-wire							3-wire							
20-250 V AC	E57-12GS02-A	M12x1	65	15	50	–	10-30 V DC	E57-08GE03-C	M8x1	46	6	40	–	
	E57-12GU04-A	M12x1	60	15	42	8		E57-08GE06-C	M8x1	46	1	41	4	
	E57-18GS05-A	M18x1	80	20	60	–		E57-08GE03-G	M8x1	46	6	40	–	
	E57-18GU08-A	M18x1	80	20	48	12		E57-08GE06-G	M8x1	46	1	41	4	
	E57-30GS10-A	M30	80	20	60	–		E57-08GS01-C	M8x1	45	–	45	–	
	E57-30GU15-A	M30	80	20	45	15		E57-08GS01-G	M8x1	45	–	45	–	
10-30 V DC	E57-12GS02-D	M12x1	50	–	50	–		E57-08GU02-C	M8x1	45	–	41	4	
	E57-12GU04-D	M12x1	50	–	42	8		E57-08GU02-G	M8x1	45	–	41	4	
	E57-12GU04-D1	M12x1	50	–	42	8		E57-12GE05-C	M12x1	51	2	49	–	
	E57-12GE08-D	M12x1	50	–	42	8		E57-12GE05-G	M12x1	51	2	49	–	
	E57-12GE08-D1	M12x1	50	–	42	8		E57-12GE10-C	M12x1	50.5	1.7	41	7.8	
	E57-18GS05-D	M18x1	55	5	50	–		E57-12GE10-G	M12x1	50.5	1.7	41	7.8	
	E57-18GU08-D	M18x1	55	5	38	12		E57-12GS02-C	M12x1	50	–	50	–	
	E57-18GE16-D	M18x1	55	5	38	12		E57-12GS02-G	M12x1	50	–	50	–	
	E57-18GE16-D1	M18x1	55	5	38	12		E57-12GU04-C	M12x1	50	–	42	8	
	E57-30GS10-D	M30	55	5	50	–		E57-12GU04-G	M12x1	50	–	42	8	
	E57-30GU15-D	M30	55	5	35	15		E57-18GE08-C	M18x1	67.5	2.5	65	–	
	E57-30GE25-D	M30	55	5	35	15		E57-18GE08-G	M18x1	65.5	2.5	65	–	
	E57-30GE25-D1	M30	55	5	35	15		E57-18GE18-C	M18x1	66	2.5	52	11.5	
									E57-18GE18-G	M18x1	66	2.5	52	11.5
									E57-18GS05-C	M18x1	55	5	50	–
								E57-18GS05-G	M18x1	55	5	50	–	
								E57-18GU08-C	M18x1	55	5	38	12	
								E57-18GU08-G	M18x1	55	5	38	12	
								E57-30GE15-C	M30	69	5	64	–	
								E57-30GE15-G	M30	69	5	64	–	
								E57-30GE29-C	M30	83	5	64	15	
								E57-30GE29-G	M30	83	5	64	15	
								E57-30GS10-C	M30	55	5	50	–	
								E57-30GS10-G	M30	55	5	50	–	
							E57-30GU15-C	M30	55	5	35	15		
							E57-30GU15-G	M30	55	5	35	15		

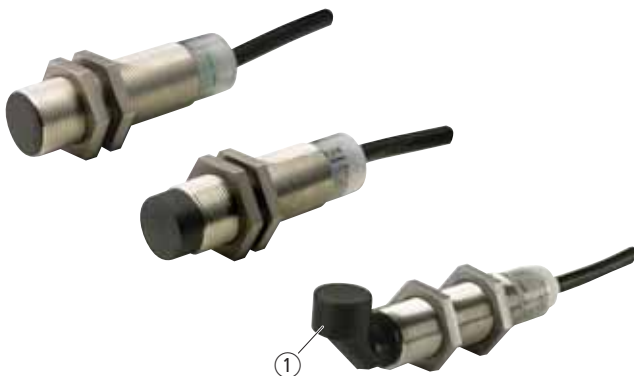
M12 plug connector



		a	b	c	d	e
2-wire						
20-250 V AC	E57-12GS02-AAB	M12x1	68	16	42	–
	E57-12GU04-AAB	M12x1	68	16	34	8
	E57-18GE16-AAB	M18x1	94	20	48	12
	E57-18GS05-AAB	M18x1	91	20	60	–
	E57-18GU08-AAB	M18x1	91	20	48	12
	E57-30GS10-AAB	M30	80	20	60	–
	E57-30GU15-AAB	M30	91	20	45	15
10-30 V DC	E57-12GS02-DDB	M12x1	69	16	42	–
	E57-12GU04-DDB	M12x1	68	16	34	8
	E57-12GE08-DDB	M12x1	68	16	34	8
	E57-12GE08-D1DB	M12x1	68	10	50	8
	E57-18GS05-DDB	M18x1	76	15	61	–
	E57-18GU08-DDB	M18x1	80	15	49	12
	E57-18GE16-DDB	M18x1	79	15	52	12
	E57-18GE16-D1DB	M18x1	79	15	52	12
	E57-30GS10-DDB	M30	75	15	60	–
	E57-30GU15-DDB	M30	79	15	45	15
	E57-30GE25-DDB	M30	78	15	48	15
	E57-30GE25-D1DB	M30	78	15	48	15

		a	b	c	d	e
3-wire						
10-30 V DC	E57-08GE03-CDB	M8x1	71	26	36	–
	E57-08GE03-CNB	M8x1	61	19	42	–
	E57-08GE03-GDB	M8x1	71	26	35	–
	E57-08GE03-GNB	M8x1	61	19	42	–
	E57-08GE06-CDB	M8x1	71	25	31	4
	E57-08GE06-GDB	M8x1	71	25	31	4
	E57-08GS01-CDB	M8x1	70	21	49	–
	E57-08GS01-GDB	M8x1	70	21	49	–
	E57-08GU02-CDB	M8x1	70	21	45	4
	E57-08GU02-GDB	M8x1	70	21	45	4
	E57-12GE05-CDB	M12x1	69	24	45	–
	E57-12GE05-GDB	M12x1	69	24	45	–
	E57-12GE10-CDB	M12x1	68.5	10.3	36	7.8
	E57-12GE10-GDB	M12x1	68.5	10.3	36	7.8
	E57-12GS02-CDB	M12x1	68	16	52	–
	E57-12GS02-GDB	M12x1	68	16	52	–
	E57-12GU04-CDB	M12x1	68	20	31	8
	E57-12GU04-GDB	M12x1	68	20	31	8
	E57-18GE08-CDB	M18x1	80	6	49	–
	E57-18GE08-GDB	M18x1	80	16	49	–
	E57-18GE18-CDB	M18x1	79	6	37	12
	E57-18GE18-GDB	M18x1	79	6	37	12
	E57-18GS05-CDB	M18x1	76	15	61	–
	E57-18GS05-GDB	M18x1	76	15	61	–
	E57-18GU08-CDB	M18x1	76	15	49	12
	E57-18GU08-GDB	M18x1	80	15	49	12
	E57-30GS10-CDB	M30	79	15	60	–
	E57-30GS10-GDB	M30	75	15	60	–
	E57-30GE15-CDB	M30	80	16	49	–
	E57-30GE15-GDB	M30	80	16	49	–
	E57-30GE29-CDB	M30	95	16	49	15
	E57-30GE29-GDB	M30	95	16	49	15
	E57-30GU15-CDB	M30	75	15	45	15
E57-30GU15-GDB	M30	75	15	45	15	

Description



① Measuring head angled 90° for difficult measuring tasks



Short description

Eaton's inductive proximity sensors of the Premium+ series feature an enhanced measuring performance, durability and selection. Unlike the standard sensors, the Premium+ models feature a rugged stainless steel enclosure, impact-resistant front caps and an impact-absorbing sealant. The sensors are now available in versions for AC, AC/DC and DC-only operation, with enclosure diameters of 12, 18 and 30 mm. Their interference immunity is unsurpassed at more than 20 volts/meter. The Premium+ series includes sensors with a specially short, cylindrical enclosure. Despite their small size, they feature the same measuring range as the longer standard sizes. This allows the sensors to be used in applications where mounting space is limited. All sensors are equipped with a LED with 360° visibility.

Product features

- New, wider product range – models with two-wire, three-wire, AC, DC and AC/DC connection.
- Resistant against mechanical and environmental strain.
- Designed with stainless steel barrel and new potting compound for robust, high temperature, high pressure washdown, as well as intense shock and vibration applications.
- Unmatched high noise immunity eliminates problems associated with electrical noise (all models > 20 Volt/meter).
- Output status lamp is visible through 360° from any direction and at all light conditions.
- AC/DC and DC models have resettable short-circuit and polarity reversal protection.
- Models with 90° measuring head offer unique problem-solving capabilities.
- Large temperature range (-25 to 70 °C).
- Small sizes for space-saving installation available.
- Versions with cable for with cable for hard wiring or M12 plug connector for fast installation and simple replacement.

Approvals



HPL03047EN

Ordering









Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Premium Plus										
2-wire										
M12 x 1										
	20 - 250 V AC	2	Flush	-	2 m connection cable	1 N/O	Stainless steel	E57LAL12A2¹⁾ 135995		1 off
			Flush	-	plug connector M12 x 1	1 N/O		E57LAL12A2SA¹⁾ 135998		
			Flush	-	2 m connection cable	1 NC		E57LBL12A2¹⁾ 136030		
			Flush	-	plug connector M12 x 1	1 NC		E57LBL12A2SA¹⁾ 136033		
		4	Non-flush	-	2 m connection cable	1 N/O		E57LAL12A2E¹⁾ 135996		
			Non-flush	-	plug connector M12 x 1	1 N/O		E57LAL12A2EA¹⁾ 135997		
			Non-flush	-	2 m connection cable	1 NC		E57LBL12A2E¹⁾ 136031		
			Non-flush	-	plug connector M12 x 1	1 NC		E57LBL12A2EA¹⁾ 136032		
M18 x 1										
	20 - 250 V AC	5	Flush	-	2 m connection cable	1 N/O	Stainless steel	E57LAL18A2¹⁾ 136007		
			Flush	-	2 m connection cable	1 NC		E57LBL18A2¹⁾ 136042		
			Flush	-	M12 plug connector x 1	1 NC		E57LBL18A2SA¹⁾ 136045		
	20 - 250 V AC	5	Flush	-	2 m connection cable	1 N/O		E57RAL18A2²⁾ 136066		
			Flush	-	2 m connection cable	1 NC		E57RBL18A2²⁾ 136078		
		8	Non-flush	-	2 m connection cable	1 N/O		E57RAL18A2E²⁾ 136067		
			Non-flush	-	2 m connection cable	1 NC		E57RBL18A2E²⁾ 136079		
	20 - 250 V AC	8	Non-flush	-	2 m connection cable	1 N/O		E57LAL18A2E¹⁾ 136008		
			Non-flush	-	plug connector M12 x 1	1 N/O		E57LAL18A2EA¹⁾ 136009		
			Non-flush	-	2 m connection cable	1 NC		E57LBL18A2E¹⁾ 136043		
			Non-flush	-	plug connector M12 x 1	1 NC		E57LBL18A2EA¹⁾ 136044		
	20 - 250 V AC	5	Flush	-	plug connector M12 x 1	1 N/O		E57RAL18A2SA²⁾ 136069		
			Flush	-	plug connector M12 x 1	1 NC		E57RBL18A2SA²⁾ 136081		
		8	Non-flush	-	plug connector M12 x 1	1 N/O		E57RAL18A2EA²⁾ 136068		
			Non-flush	-	plug connector M12 x 1	1 NC		E57RBL18A2EA²⁾ 136080		

Information relevant for export to North America



- 1) Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection
UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
50513
3211-03
UL Listed, CSA certified
250 V AC
IEC: IP67, IP69K; UL/CSA Type: -
- 2) Product Standards
UL File No.
UL CCN
NA Certification
Max. Voltage Rating
Degree of Protection
UL 508; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL Listed
250 V AC
IEC: IP67, IP69K; UL/CSA Type: 4, 4x, 6, 6P, 12, 13



Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack	
E57 Premium Plus											
2-wire											
	20 - 250 V AC	10	Flush	–	2 m connection cable	1 N/O	Stainless steel	E57LAL30A2 ¹⁾ 136018		1 off  	
			Flush	–	plug connector M12 x 1	1 N/O		E57LAL30A2SA ¹⁾ 136021			
			Flush	–	2 m connection cable	1 NC		E57LBL30A2 ¹⁾ 136054			
			Flush	–	plug connector M12 x 1	1 NC		E57LBL30A2SA ¹⁾ 136057			
			Non-flush	–	2 m connection cable	1 N/O		E57LAL30A2E ¹⁾ 136019			
			Non-flush	–	plug connector M12 x 1	1 N/O		E57LAL30A2EA ¹⁾ 136020			
			Non-flush	–	2 m connection cable	1 NC		E57LBL30A2E ¹⁾ 136055			
			Non-flush	–	plug connector M12 x 1	1 NC		E57LBL30A2EA ¹⁾ 136056			
		15	Non-flush	–	2 m connection cable	1 N/O		E57LAL30A2E ¹⁾ 136019			
			Non-flush	–	plug connector M12 x 1	1 N/O		E57LAL30A2EA ¹⁾ 136020			
			Non-flush	–	2 m connection cable	1 NC		E57LBL30A2E ¹⁾ 136055			
			Non-flush	–	plug connector M12 x 1	1 NC		E57LBL30A2EA ¹⁾ 136056			
3-wire											
	6 - 48 V DC	2	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57LAL12T110 ²⁾ 135999		1 off  	
			Flush	NPN	plug connector M12 x 1	1 N/O		E57LAL12T110SD ²⁾ 136002			
			Flush	PNP	2 m connection cable	1 N/O		E57LAL12T111 ²⁾ 136003			
			Flush	PNP	plug connector M12 x 1	1 N/O		E57LAL12T111SD ²⁾ 136006			
			Flush	NPN	2 m connection cable	1 NC		E57LBL12T110 ²⁾ 136034			
			Flush	NPN	plug connector M12 x 1	1 NC		E57LBL12T110SD ²⁾ 136037			
			Flush	PNP	2 m connection cable	1 NC		E57LBL12T111 ²⁾ 136038			
			Flush	PNP	plug connector M12 x 1	1 NC		E57LBL12T111SD ²⁾ 136041			
			4	Non-flush	NPN	2 m connection cable		1 N/O			E57LAL12T110E ²⁾ 136000
				Non-flush	NPN	plug connector M12 x 1		1 N/O			E57LAL12T110ED ²⁾ 136001
				Non-flush	PNP	2 m connection cable		1 N/O			E57LAL12T111E ²⁾ 136004
				Non-flush	PNP	plug connector M12 x 1		1 N/O			E57LAL12T111ED ²⁾ 136005
				Non-flush	NPN	2 m connection cable		1 NC			E57LBL12T110E ²⁾ 136035
				Non-flush	NPN	plug connector M12 x 1		1 NC			E57LBL12T110ED ²⁾ 136036
				Non-flush	PNP	2 m connection cable		1 NC			E57LBL12T111E ²⁾ 136039
				Non-flush	PNP	plug connector M12 x 1		1 NC			E57LBL12T111ED ²⁾ 136040





Information relevant for export to North America



- | | |
|--|--|
| <p>¹⁾ Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection</p> | <p>UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
50513
3211-03
UL Listed, CSA certified
250 V AC
IEC: IP67, IP69K; UL/CSA Type: -</p> |
| <p>²⁾ Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection</p> | <p>UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
50513
3211-03
UL Listed, CSA certified
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -</p> |

HPL03049EN



Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Premium Plus										
3-wire										
M18 x 1										
	6 - 48 V DC	5	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57RAL18T110 ¹⁾ 136070		1 off 
			Flush	PNP	2 m connection cable	1 N/O		E57RBL18T111 ¹⁾ 136074		
			Flush	NPN	2 m connection cable	1 NC		E57RBL18T110 ¹⁾ 136082		
			Flush	PNP	2 m connection cable	1 NC		E57RBL18T111 ¹⁾ 136086		
		5	Flush	NPN	2 m connection cable	1 N/O		E57LAL18T110 ²⁾ 136010		
			Flush	NPN	plug connector M12 x 1	1 N/O		E57LAL18T110SD ²⁾ 136013		
			Flush	PNP	2 m connection cable	1 N/O		E57LAL18T111 ²⁾ 136014		
			Flush	PNP	plug connector M12 x 1	1 N/O		E57LAL18T111SD ²⁾ 136017		
			Flush	NPN	2 m connection cable	1 NC		E57LBL18T110 ²⁾ 136046		
			Flush	NPN	plug connector M12 x 1	1 NC		E57LBL18T110SD ²⁾ 136049		
			Flush	PNP	2 m connection cable	1 NC		E57LBL18T111 ²⁾ 136050		
			Flush	PNP	plug connector M12 x 1	1 NC		E57LBL18T111SD ²⁾ 136053		
		8	Non-flush	NPN	2 m connection cable	1 N/O	E57RAL18T110E ¹⁾ 136071			
			Non-flush	PNP	2 m connection cable	1 N/O	E57RAL18T111E ¹⁾ 136075			
			Non-flush	NPN	2 m connection cable	1 NC	E57RBL18T110E ¹⁾ 136083			
			Non-flush	PNP	2 m connection cable	1 NC	E57RBL18T111E ¹⁾ 136087			
			Non-flush	NPN	2 m connection cable	1 N/O	E57LAL18T110E ²⁾ 136011			
			Non-flush	NPN	plug connector M12 x 1	1 N/O	E57LAL18T110ED ²⁾ 136012			
			Non-flush	PNP	2 m connection cable	1 N/O	E57LAL18T111E ²⁾ 136015			
			Non-flush	PNP	plug connector M12 x 1	1 N/O	E57LAL18T111ED ²⁾ 136016			
			Non-flush	NPN	2 m connection cable	1 NC	E57LBL18T110E ²⁾ 136047			
			Non-flush	NPN	plug connector M12 x 1	1 NC	E57LBL18T110ED ²⁾ 136048			
			Non-flush	PNP	2 m connection cable	1 NC	E57LBL18T111E ²⁾ 136051			
			Non-flush	PNP	plug connector M12 x 1	1 NC	E57LBL18T111ED ²⁾ 136052			

Information relevant for export to North America



- | | |
|---|---|
| <p>1) Product Standards
UL File No.
UL CCN
NA Certification
Max. Voltage Rating
Degree of Protection</p> | <p>UL 508; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL Listed
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -</p> |
| <p>2) Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection</p> | <p>UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
50513
3211-03
UL Listed, CSA certified
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -</p> |



Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack					
E57 Premium Plus															
3-wire															
M18 x 1															
	6 - 48 V DC	5	Flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E57RAL18T110SD ¹⁾ 136073		1 off 					
			Flush	PNP	plug connector M12 x 1	1 N/O		E57RAL18T111SD ¹⁾ 136077							
			Flush	NPN	plug connector M12 x 1	1 NC		E57RBL18T110SD ¹⁾ 136085							
			Flush	PNP	plug connector M12 x 1	1 NC		E57RBL18T111SD ¹⁾ 136089							
		8	Non-flush	NPN	plug connector M12 x 1	1 N/O		E57RAL18T110ED ¹⁾ 136072							
			Non-flush	PNP	plug connector M12 x 1	1 N/O		E57RAL18T111ED ¹⁾ 136076							
			Non-flush	NPN	plug connector M12 x 1	1 NC		E57RBL18T110ED ¹⁾ 136084							
			Non-flush	PNP	plug connector M12 x 1	1 NC		E57RBL18T111ED ¹⁾ 136088							
		3-wire													
		M30 x 1.5													
			6 - 48 V DC	10	Flush	NPN		2 m connection cable			1 N/O	Stainless steel	E57LAL30T110 ²⁾ 136022		1 off
					Flush	NPN		plug connector M12 x 1			1 N/O		E57LAL30T110SD ²⁾ 136025		
Flush	PNP				2 m connection cable	1 N/O	E57LAL30T111 ²⁾ 136026								
Flush	PNP				plug connector M12 x 1	1 N/O	E57LAL30T111SD ²⁾ 136029								
Flush	NPN				2 m connection cable	1 NC	E57LBL30T110 ²⁾ 136058								
Flush	NPN				plug connector M12 x 1	1 NC	E57LBL30T110SD ²⁾ 136061								
Flush	PNP				2 m connection cable	1 NC	E57LBL30T111 ²⁾ 136062								
Flush	PNP				plug connector M12 x 1	1 NC	E57LBL30T111SD ²⁾ 136065								
15	Non-flush				NPN	2 m connection cable	1 N/O	E57LAL30T110E ²⁾ 136023							
	Non-flush				NPN	plug connector M12 x 1	1 N/O	E57LAL30T110ED ²⁾ 136024							
	Non-flush			PNP	2 m connection cable	1 N/O	E57LAL30T111E ²⁾ 136027								
	Non-flush			PNP	plug connector M12 x 1	1 N/O	E57LAL30T111ED ²⁾ 136028								
	Non-flush			NPN	2 m connection cable	1 NC	E57LBL30T110E ²⁾ 136059								
	Non-flush			NPN	plug connector M12 x 1	1 NC	E57LBL30T110ED ²⁾ 136060								
	Non-flush			PNP	2 m connection cable	1 NC	E57LBL30T111E ²⁾ 136063								
	Non-flush			PNP	plug connector M12 x 1	1 NC	E57LBL30T111ED ²⁾ 136064								





Information relevant for export to North America



- | | |
|--|--|
| <p>1) Product Standards
UL File No.
UL CCN
NA Certification
Max. Voltage Rating
Degree of Protection</p> <p>2) Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection</p> | <p>UL 508; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL Listed
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -</p> <p>UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
50513
3211-03
UL Listed, CSA certified
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -</p> |
|--|--|

HPL03051EN







Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Premium Plus Short Series										
2-wire										
M12 x 1										
	20 - 250 V DC 40 - 250 V AC	2	Flush	–	2 m connection cable	1 N/O	Stainless steel	E57SAL12A2 136090		1 off 
			Flush	–	plug connector M12 x 1	1 N/O		E57SAL12A2SA 136093		
			Flush	–	2 m connection cable	1 NC		E57SBL12A2 136138		
			Flush	–	plug connector M12 x 1	1 NC		E57SBL12A2SA 136141		
	20 - 250 V AC	2	Flush	–	2 m connection cable	1 N/O		E57SAL12A4 136094		
			Flush	–	plug connector M12 x 1	1 N/O		E57SAL12A4SA 136097		
			Flush	–	2 m connection cable	1 NC		E57SBL12A4 136142		
			Flush	–	plug connector M12 x 1	1 NC		E57SBL12A4SA 136145		
	20 - 250 V DC 40 - 250 V AC	4	Non-flush	–	2 m connection cable	1 N/O		E57SAL12A2E 136091		
			Non-flush	–	plug connector M12 x 1	1 N/O		E57SAL12A2EA 136092		
			Non-flush	–	2 m connection cable	1 NC		E57SBL12A2E 136139		
			Non-flush	–	plug connector M12 x 1	1 NC		E57SBL12A2EA 136140		
20 - 250 V AC	4	Non-flush	–	2 m connection cable	1 N/O	E57SAL12A4E 136095				
		Non-flush	–	plug connector M12 x 1	1 N/O	E57SAL12A4EA 136096				
		Non-flush	–	2 m connection cable	1 NC	E57SBL12A4E 136143				
		Non-flush	–	plug connector M12 x 1	1 NC	E57SBL12A4EA 136144				
M18 x 1										
	20 - 250 V DC 40 - 250 V AC	5	Flush	–	2 m connection cable	1 N/O	Stainless steel	E57SAL18A2 136106		1 off 
			Flush	–	plug connector M12 x 1	1 N/O		E57SAL18A2SA 136109		
			Flush	–	2 m connection cable	1 NC		E57SBL18A2 136152		
			Flush	–	plug connector M12 x 1	1 NC		E57SBL18A2SA 136155		
	20 - 250 V AC	5	Flush	–	2 m connection cable	1 N/O		E57SAL18A4 136110		
			Flush	–	plug connector M12 x 1	1 N/O		E57SAL18A4SA 136113		
			Flush	–	2 m connection cable	1 NC		E57SBL18A4 136156		
			Flush	–	plug connector M12 x 1	1 NC		E57SBL18A4SA 136159		
	20 - 250 V DC 40 - 250 V AC	8	Non-flush	–	2 m connection cable	1 N/O		E57SAL18A2E 136107		
			Non-flush	–	plug connector M12 x 1	1 N/O		E57SAL18A2EA 136108		
			Non-flush	–	2 m connection cable	1 NC		E57SBL18A2E 136153		
			Non-flush	–	plug connector M12 x 1	1 NC		E57SBL18A2EA 136154		
20 - 250 V AC	8	Non-flush	–	2 m connection cable	1 N/O	E57SAL18A4E 136111				
		Non-flush	–	plug connector M12 x 1	1 N/O	E57SAL18A4EA 136112				
		Non-flush	–	2 m connection cable	1 NC	E57SBL18A4E 136157				
		Non-flush	–	plug connector M12 x 1	1 NC	E57SBL18A4EA 136158				

Information relevant for export to North America











Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Premium Plus Short Series										
2-wire										
M30 x 1.5										
	20 - 250 V DC 40 - 250 V AC	10	Flush	–	2 m connection cable	1 N/O	Stainless steel	E57SAL30A2 136122		1 off 
			Flush	–	plug connector M12 x 1	1 N/O		E57SAL30A2SA 136125		
			Flush	–	2 m connection cable	1 NC		E57SBL30A2 136168		
			Flush	–	plug connector M12 x 1	1 NC		E57SBL30A2SA 136171		
	20 - 250 V AC	10	Flush	–	2 m connection cable	1 N/O		E57SAL30A4 136126		
			Flush	–	plug connector M12 x 1	1 N/O		E57SAL30A4SA 136129		
			Flush	–	2 m connection cable	1 NC		E57SBL30A4 136172		
			Flush	–	plug connector M12 x 1	1 NC		E57SBL30A4SA 136175		
	20 - 250 V DC 40 - 250 V AC	15	Non-flush	–	2 m connection cable	1 N/O		E57SAL30A2E 136123		
			Non-flush	–	plug connector M12 x 1	1 N/O		E57SAL30A2EA 136124		
			Non-flush	–	2 m connection cable	1 NC		E57SBL30A2E 136169		
			Non-flush	–	plug connector M12 x 1	1 NC		E57SBL30A2EA 136170		
20 - 250 V AC	15	Non-flush	–	2 m connection cable	1 N/O	E57SAL30A4E 136127				
		Non-flush	–	plug connector M12 x 1	1 N/O	E57SAL30A4EA 136128				
		Non-flush	–	2 m connection cable	1 NC	E57SBL30A4E 136173				
		Non-flush	–	plug connector M12 x 1	1 NC	E57SBL30A4EA 136174				
3-wire										
M12 x 1										
	6 - 48 V DC	2	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57SAL12T110 136098		1 off 
			Flush	NPN	plug connector M12 x 1	1 N/O		E57SAL12T110SD 136101		
			Flush	PNP	2 m connection cable	1 N/O		E57SAL12T111 136102		
			Flush	PNP	plug connector M12 x 1	1 N/O		E57SAL12T111SD 136105		
		4	Flush	PNP	2 m connection cable	1 NC		E57SBL12T111 136148		
			Flush	PNP	plug connector M12 x 1	1 NC		E57SBL12T111SD 136151		
			Non-flush	NPN	2 m connection cable	1 N/O		E57SAL12T110E 136099		
			Non-flush	NPN	plug connector M12 x 1	1 N/O		E57SAL12T110ED 136100		

Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified
Max. Voltage Rating	250 V AC, 250 V DC
Degree of Protection	IEC: IP67, IP69K; UL/CSA Type: 4, 4x, 6, 6P, 12, 13

HPL03053EN

Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack	
E57 Premium Plus Short Series											
3-wire											
M12 x 1											
	6 - 48 V DC	4	Non-flush	PNP	2 m connection cable	1 N/O	Stain-less steel	E57SAL12T111E 136103		1 off  	
			Non-flush	PNP	plug connector M12 x 1	1 N/O		E57SAL12T111ED 136104			
			Non-flush	NPN	2 m connection cable	1 NC		E57SBL12T110E 136146			
			Non-flush	NPN	plug connector M12 x 1	1 NC		E57SBL12T110ED 136147			
			Non-flush	PNP	2 m connection cable	1 NC		E57SBL12T111E 136149			
			Non-flush	PNP	plug connector M12 x 1	1 NC		E57SBL12T111ED 136150			
3-wire											
M18 x 1											
	6 - 48 V DC	5	Flush	NPN	2 m connection cable	1 N/O	Stain-less steel	E57SAL18T110 136114		1 off  	
			Flush	NPN	plug connector M12 x 1	1 N/O		E57SAL18T110SD 136117			
			Flush	PNP	2 m connection cable	1 N/O		E57SAL18T111 136118			
			Flush	PNP	plug connector M12 x 1	1 N/O		E57SAL18T111SD 136121			
			Flush	NPN	2 m connection cable	1 NC		E57SBL18T110 136160			
			Flush	NPN	plug connector M12 x 1	1 NC		E57SBL18T110SD 136163			
			Flush	PNP	2 m connection cable	1 NC		E57SBL18T111 136164			
			Flush	PNP	plug connector M12 x 1	1 NC		E57SBL18T111SD 136167			
			8	Non-flush	NPN	2 m connection cable		1 N/O			E57SAL18T110E 136115
				Non-flush	NPN	2 m connection cable		1 NC			E57SBL18T110E 136161
				Non-flush	NPN	plug connector M12 x 1		1 N/O			E57SAL18T110ED 136116
				Non-flush	PNP	2 m connection cable		1 N/O			E57SAL18T111E 136119
		Non-flush		PNP	plug connector M12 x 1	1 N/O	E57SAL18T111ED 136120				
		Non-flush		NPN	plug connector M12 x 1	1 NC	E57SBL18T110ED 136162				
		Non-flush	PNP	2 m connection cable	1 NC	E57SBL18T111E 136165					
		Non-flush	PNP	plug connector M12 x 1	1 NC	E57SBL18T111ED 136166					

Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified
Max. Voltage Rating	250 V AC, 250 V DC
Degree of Protection	IEC: IP67, IP69K; UL/CSA Type: -



Function	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options:	Contact configuration N/O = normally open contact NC = normally closed contact	Material	Part no. Article no.	Price See price list	Std. pack	
E57 Premium Plus Short Series											
3-wire											
M30 x 1.5											
	6 - 48 V DC	10	Flush	NPN	2 m connection cable	1 N/O	Stain-less steel	E57SAL30T110 136130		1 off 	
				NPN	plug connector M12 x 1	1 N/O		E57SAL30T110SD 136133			
			Flush	PNP	2 m connection cable	1 N/O		E57SAL30T111 136134			
			Flush	PNP	plug connector M12 x 1	1 N/O		E57SAL30T111SD 136137			
			Flush	NPN	2 m connection cable	1 NC		E57SBL30T110 136176			
			Flush	NPN	plug connector M12 x 1	1 NC		E57SBL30T110SD 136179			
			Flush	PNP	2 m connection cable	1 NC		E57SBL30T111 136180			
			Flush	PNP	plug connector M12 x 1	1 NC		E57SBL30T111SD 136183			
			15	Non-flush	NPN	2 m connection cable		1 N/O			E57SAL30T110E 136131
					NPN	2 m connection cable		1 NC			E57SBL30T110E 136177
	NPN	plug connector M12 x 1			1 N/O	E57SAL30T110ED 136132					
	PNP	2 m connection cable			1 N/O	E57SAL30T111E 136135					
	PNP	plug connector M12 x 1			1 N/O	E57SAL30T111ED 136136					
	NPN	plug connector M12 x 1			1 NC	E57SBL30T110ED 136178					
	PNP	2 m connection cable			1 NC	E57SBL30T111E 136181					
	PNP	plug connector M12 x 1			1 NC	E57SBL30T111ED 136182					

Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified
Max. Voltage Rating	250 V AC, 250 V DC
Degree of Protection	IEC: IP67, IP69K; UL/CSA Type: -

Engineering



Circuit diagram

Rated operating voltage

2-wire sensors

20–250 V AC/DC and AC-only
Example AC connection

20–250 V AC/DC

Example DC connection

3-wire sensors

6–48 V DC

Contacts

N/O and NC

N/O and NC (NPN)

N/O and NC (PNP)

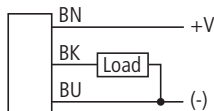
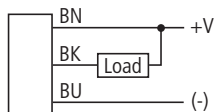
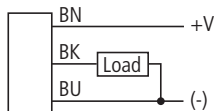
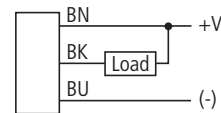
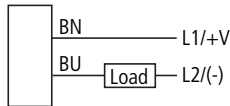
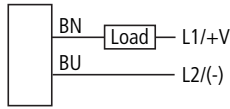
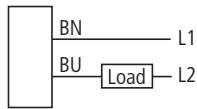
N/O (NPN)

N/O (PNP)

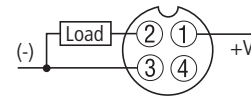
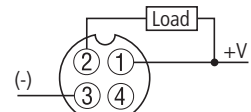
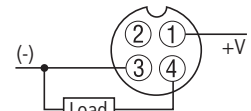
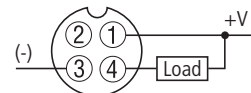
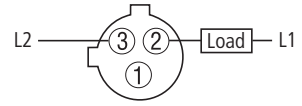
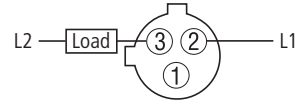
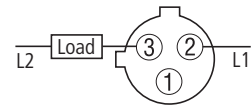
NC (NPN)

NC (PNP)

2 m connection cable



M12 plug connector (front view plug)



Technical data

		E57-L...L12A	E57-L...L12T	E57-S...L12A	E57-S...L12T
General					
Standards		IEC/EN 60947-5-2	IEC/EN 60947-5-2	IEC/EN 60947-5-2	IEC/EN 60947-5-2
Ambient temperature	°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type		IP67	IP67	IP67	IP67
Mechanical shock resistance	g	30 Shock duration 11 ms	30 Shock duration 11 ms	30 Shock duration 11 ms	30 Shock duration 11 ms
Characteristic values					
Temperature drift of S_n	%	10	10	10	10
Switching hysteresis of S_n	%	20	15	20	15
Rated operating voltage		20 - 250 V AC	6 - 48 V DC	40 - 250 V AC 20 - 250 V DC	6 - 48 V DC
Rated operational current	I_e	250	500	500	500
Switching frequency	Hz	20	800	20	800
Switching state indication	LED	Red	Red	Red	Red
Function		2-wire	3-wire	2-wire	3-wire
Construction type					
Design (outer dimensions)		M12 x 1	M12 x 1	M12 x 1	M12 x 1
Material		Stainless steel	Stainless steel	Stainless steel	Stainless steel

		E57-L...L18A	E57-L...L18T	E57-S...L18A	E57-S...L18T	E57-R...L18A	E57-R...L18T
General							
Standards		IEC/EN 60947-5-2					
Ambient temperature	°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type		IP67	IP67	IP67	IP67	IP67	IP67
Mechanical shock resistance	g	30 Shock duration 11 ms					
Characteristic values							
Temperature drift of S_n	%	10	10	10	10	10	10
Switching hysteresis of S_n	%	20	15	20	15	20	15
Rated operating voltage		40 - 250 V AC 20 - 250 V DC	6 - 48 V DC	40 - 250 V AC 20 - 250 V DC	6 - 48 V DC	20 - 250 V AC	6 - 48 V DC
Rated operational current	I_e	250	500	500	500	500	500
Switching frequency	Hz	20	500	20	500	20	500
Switching state indication	LED	Red	Red	Red	Red	Red	Red
Function		2-wire	3-wire	2-wire	3-wire	2-wire	3-wire
Construction type							
Design (outer dimensions)		M18 x 1	M18 x 1	M18 x 1	M18 x 1	M18 x 1	M18 x 1
Material		Stainless steel					

		E57-L...L30A	E57-L...L30T	E57-S...L30A	E57-S...L30T
General					
Standards		IEC/EN 60947-5-2	IEC/EN 60947-5-2	IEC/EN 60947-5-2	IEC/EN 60947-5-2
Ambient temperature	°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type		IP67	IP67	IP67	IP67
Mechanical shock resistance	g	30 Shock duration 11 ms	30 Shock duration 11 ms	30 Shock duration 11 ms	30 Shock duration 11 ms
Characteristic values					
Temperature drift of S_n	%	10	10	10	10
Switching hysteresis of S_n	%	20	15	20	15
Rated operating voltage		20 - 250 V AC	6 - 48 V DC	40 - 250 V AC 20 - 250 V DC	6 - 48 V DC
Rated operational current	I_e	250	500	500	500
Switching frequency	Hz	20	300	20	300
Switching state indication	LED	Red	Red	Red	Red
Function		2-wire	3-wire	2-wire	3-wire
Construction type					
Design (outer dimensions)		M30 x 1.5	M30 x 1.5	M30 x 1.5	M30 x 1.5
Material		Stainless steel	Stainless steel	Stainless steel	Stainless steel

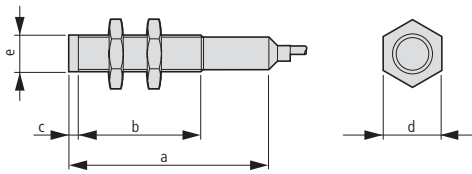
Notes

Further technical data can be found in the Online Catalogue at www.moeller.net

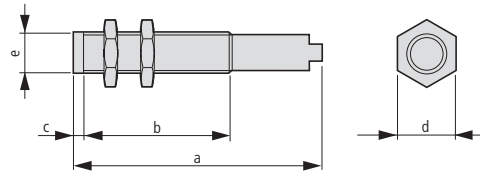
Dimensions



2 m connection cable



M12 plug connector



Construction type	Installation type	Dimensions in (mm)				
		a	b	c	d	e

2-wire, 2 m connection cable

12 mm	Flush	62.4	50.3	-	16.8	M12x1
	Non-flush	72.7	50.3	9.14	16.8	M12x1
18 mm	Flush	64.5	50.9	-	23.8	M18x1
	Non-flush	66.0	37.2	14.1	23.8	M18x1
30 mm	Flush	69.3	50.3	-	35.9	M30x1.5
	Non-flush	69.3	37.8	13.26	35.9	M30x1.5

2-wire, M12 plug connector

12 mm	Flush	68.4	50.3	-	16.8	M12x1
	Non-flush	77.7	50.3	9.14	9.14	M12x1
18 mm	Flush	69.06	50.9	-	23.8	M18x1
	Non-flush	69.4	37.2	14.1	23.8	M18x1
30 mm	Flush	73.8	50.3	-	35.9	M30x1.5
	Non-flush	73.8	37.8	13.26	35.9	M30x1.5

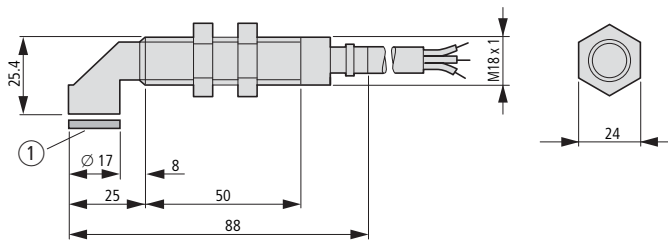
3-wire, 2 m connection cable

12 mm	Flush	62.4	50.3	-	16.8	M12x1
	Non-flush	72.7	50.3	9.14	16.8	M12x1
18 mm	Flush	64.5	50.9	-	23.8	M18x1
	Non-flush	66.0	37.2	14.1	23.8	M18x1
30 mm	Flush	69.3	50.3	-	35.9	M30x1.5
	Non-flush	69.3	37.8	13.26	35.9	M30x1.5

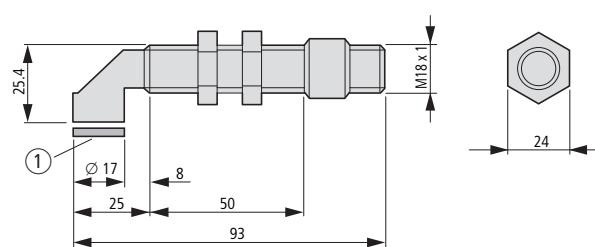
3-wire, M12 plug connector

12 mm	Flush	68.7	50.3	-	16.8	M12x1
	Non-flush	77.7	50.3	9.14	16.8	M12x1
18 mm	Flush	69.3	50.9	-	23.8	M18x1
	Non-flush	69.4	37.2	14.1	23.8	M18x1
30 mm	Flush	74.1	50.3	-	35.9	M30x1.5
	Non-flush	74.1	37.8	13.26	35.9	M30x1.5

E57R...A2...
E57R...110...
E57R...111...

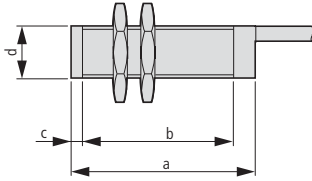


E57R...SA
E57R...EA
E57R...SD
E57R...ED

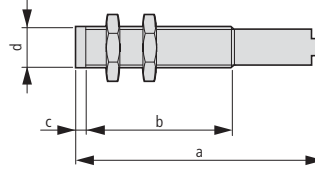


① Sensor surface

2 m connection cable



M12 plug connector



		a	b	c	d
2-wire, AC, 2 m connection cable					
12 mm	Flush	51.7	39.6	0.5	M12x1
	Non-flush	51.7	35.1	5	M12x1
18 mm	Flush	35.4	21.82	0.5	M18x1
	Non-flush	35.4	15.32	7	M18x1
30 mm	Flush	40.2	25.15	0.8	M30x1.5
	Non-flush	44.9	17.27	13.26	M30x1.5

2-wire, AC, M12 plug connector

12 mm	Flush	57.8	39.6	0.5	M12x1
	Non-flush	57.8	35.1	5	M12x1
18 mm	Flush	40.0	21.82	0.5	M18x1
	Non-flush	40.0	15.32	7	M18x1
30 mm	Flush	44.8	25.15	0.8	M30x1.5
	Non-flush	49.5	17.27	13.26	M30x1.5

2-wire, AC/DC, 2 m connection cable

12 mm	Flush	62.4	50.27	-	M12x1
	Non-flush	62.4	45.77	5	M12x1
18 mm	Flush	64.5	50.9	-	M18x1
	Non-flush	64.5	44.4	7	M18x1
30 mm	Flush	69.3	53.8	-	M30x1.5
	Non-flush	69.3	41.4	13.26	M30x1.5

2-wire, AC/DC, M12 plug connector

12 mm	Flush	68.4	50.27	-	M12x1
	Non-flush	68.4	45.77	5	M12x1
18 mm	Flush	69.06	50.9	-	M18x1
	Non-flush	69.06	44.4	7	M18x1
30 mm	Flush	73.8	53.8	-	M30x1.5
	Non-flush	73.8	41.4	13.26	M30x1.5

3-wire, DC, 2 m connection cable

12 mm	Flush	35.2	23.9	0.5	M12x1
	Non-flush	35.2	18.59	5	M12x1
18 mm	Flush	35.4	21.82	0.5	M18x1
	Non-flush	35.4	15.32	7	M18x1
30 mm	Flush	40.2	21.26	0.8	M30x1.5
	Non-flush	44.9	13.46	13.26	M30x1.5

3-wire, DC, M12 plug connector

12 mm	Flush	41.5	23.9	0.5	M12x1
	Non-flush	41.5	18.59	5	M12x1
18 mm	Flush	40.3	21.82	0.5	M18x1
	Non-flush	40.3	15.32	7	M18x1
30 mm	Flush	45.0	21.26	0.8	M30x1.5
	Non-flush	49.7	13.46	13.26	M30x1.5

Description



- ① Two-color 360° output signal lamp
② Shock absorbing Ryton face cap material®

Brief description

The iProx is Eaton's most powerful and versatile inductive, cylindrical sensor. With its mounting microprocessor and unique Smart-Sense™ technology this sensor has three times the range of other sensors in its class and offers unmatched configurability. Both shielded and unshielded versions of the sensor have an extended range so that the sensor can be positioned further away from the target object. This reduces the risk of a collision with the target object and increases operational reliability. The iProx also has many additional functions, which can be activated through the optionally available programming tools. With Windows software ProxView the sensor can be programmed for any application. Sensor characteristics such as range can be set to the nearest tenth of a millimeter. The outputs can be configured as N/O or NC. Even interference immunity and response time can be adjusted. In addition the iProx features a mounting logic for timing delays and speed detection – without complex PLC programming. With its large range, high quality, sophisticated design, and adaptability to its environment, iProx is the ideal choice for demanding applications.







Product features

- Available as DC 3-wire version.
- Reliably detect metal targets at up to three times the range of conventional shielded or unshielded tubular inductive sensors
- Quality construction using a stainless steel barrel, 360° degree dual-color LED indicator, Ryton impact-resistant face cap® and vibration-absorbing potting compound.
- The automatic configuration automatically detects NPN and PNP connections and switches the sensor accordingly and without user intervention.
- Configurable range, band detection, background (metal) object detection, timing delays and speed detection thanks to the microprocessor-based Smart-Sense™ technology.
- Optional computer programming cable and Windows-based ProxView configuration software makes it easy to customize sensors.
- Resistant to high interference levels (up to 20 V/m).
- Resistant to extreme temperatures (-40 °C).

Approvals



Ordering

	Rated operational voltage	Rated switching distance S_n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
iProx series										
3-wire										
M12 x 1										
	6 - 48 V DC	4	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E59-M12A105C02-D1 136205		1 off 
			Flush	PNP	2 m connection cable	1 NC	Stainless steel	E59-M12A105C02-D2 136206		
			Flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E59-M12A105D01-D1 136207		
			Flush	PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M12A105D01-D2 136208		
	6 - 48 V DC	10	Non-flush	NPN	2 m connection cable	1 N/O	Stainless steel	E59-M12C110C02-D1 136209		
			Non-flush	PNP	2 m connection cable	1 NC	Stainless steel	E59-M12C110C02-D2 136210		
			Non-flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E59-M12C110D01-D1 136211		
			Non-flush	PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M12C110D01-D2 136212		
M18 x 1										
	6 - 48 V DC	8	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E59-M18A108C02-D1 136213		1 off 
			Flush	PNP	2 m connection cable	1 NC	Stainless steel	E59-M18A108C02-D2 136214		
			Flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E59-M18A108D01-D1 136215		
			Flush	PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M18A108D01-D2 136216		
	18	Non-flush	NPN	2 m connection cable	1 N/O	Stainless steel	E59-M18C116C02-D1 136217			
		Non-flush	PNP	2 m connection cable	1 NC	Stainless steel	E59-M18C116C02-D2 136218			
		Non-flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E59-M18C116D01-D1 136219			
		Non-flush	PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M18C116D01-D2 136220			
M30 x 1.5										
	6 - 48 V DC	15	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E59-M30A115C02-D1 136221		1 off 
			Flush	PNP	2 m connection cable	1 NC	Stainless steel	E59-M30A115C02-D2 136222		
			Flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E59-M30A115D01-D1 136223		
			Flush	PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M30A115D01-D2 136224		
	29	Non-flush	NPN	2 m connection cable	1 N/O	Stainless steel	E59-M30C129C02-D1 136225			
		Non-flush	PNP	2 m connection cable	1 NC	Stainless steel	E59-M30C129C02-D2 136226			
		Non-flush	NPN	plug connector M12 x 1	1 N/O	Stainless steel	E59-M30C129D01-D1 136227			
		Non-flush	PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M30C129D01-D2 136228			
Programming cable RS232	–	–	–	–	–	–	E59RP1 136229		1 off	
Programming software CD	–	–	–	–	–	–	E59SW1 136230		1 off	

Information relevant for export to North America



Product Standards

UL 508; CSA-C22.2 No. 14;
IEC60947-5-2; CE marking
UL File No. E166051
UL CCN NRRKH, NRRKH7
CSA File No. UL report applies to both Canada and US

CSA Class No.
NA Certification

Max. Voltage Rating
Degree of Protection

–
UL Listed, certified by UL for use in Canada
48 V DC
IEC: IP67, IP69K; UL/CSA Type: 4, 4x, 6, 6P, 12, 13

Technical data

			E59-M12A105	E59-M18A108	E59-M12C110	E59-M30A115	E59-M18C116	E59-M30C129
General								
Standards			IEC/EN 60947-5-2					
Ambient temperature		°C	-40 - +70					
Protection type			IP67	IP69K	IP67	IP69K	IP69K	IP69K
Mechanical shock resistance			30 Shock duration 11 ms					
Characteristic values								
Rated switching distance								
Rated switching distance	S_n	mm	4	8	10	15	18	29
Repetition accuracy of S_n		%	1	1	3	1	3	3
Temperature drift of S_n		%	10	10	10	10	10	10
Switching hysteresis of S_n		%	15	15	15	15	15	15
Sensing range		mm	–	–	–	–	–	–
Rated operating voltage			6 - 48 V DC	6 - 48 V DC	6 - 48 V DC	6 - 48 V DC	6 - 48 V DC	6 - 48 V DC
Mains frequency								
Residual ripple of U_e		%	–	–	–	–	–	–
Operating current in the switched state at 24 V DC	I_b	mA	15	15	15	15	15	15
Rated operational current	I_e	mA	300	300	300	300	300	300
Voltage drop at I_e	U_d	V	2.5	2.5	2.5	2.5	2.5	2.5
Switching frequency		Hz	580	390	300	240	150	145
Min. load current	I_e	mA	1	1	1	1	1	1
Short-time current (10 ms, 5 Hz)		A	–	–	–	–	–	–
Residual current due to the load in locked state at 230 V AC or 24 V DC	I_r	mA	0.15	0.15	0.15	0.15	0.15	0.15
Switching state indication		LED	Red	Red	Red	Red	Red	Red
Operating voltage display		LED	Red	Red	Red	Red	Red	Red
Boundary gain			–	–	–	–	–	–
Protective functions			Short-circuit protection, protection against polarity reversal, wire breakage protection					
Function			3-wire	3-wire	3-wire	3-wire	3-wire	3-wire
Construction type								
Design (outer dimensions)			M12 x 1	M18 x 1	M12 x 1	M30 x 1.5	M18 x 1	M30 x 1.5
Material			Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel

Notes

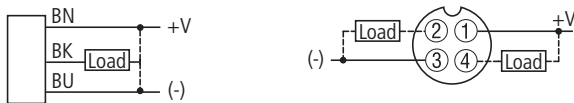
Further technical data can be found in the Online Catalogue at www.moeller.net

Engineering

Circuit diagram

59...C02-D1
E59...C02-D2

E59...D01-D1
E59...D01-D2



Pins 2 and 4 internally interconnected.

Dimensions

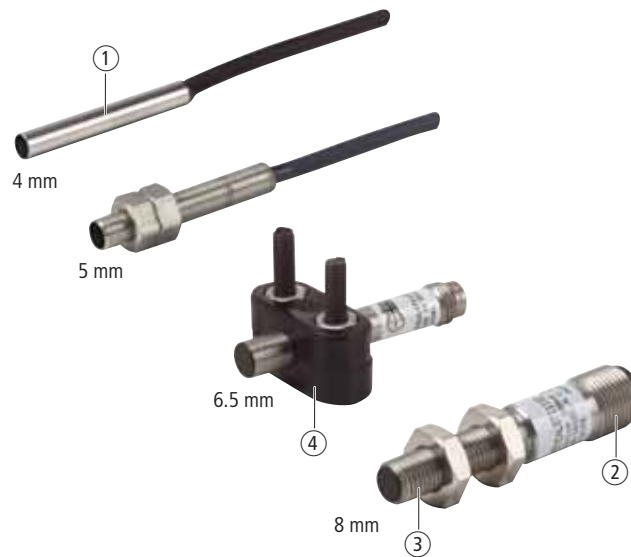
2 m connection cable

M12 plug connector



Construction type	Installation type	a	b	c	d	Construction type	Installation type	a	b	c	d
12 mm	Flush	62.4	50.3	0.5	17	12 mm	Flush	68.7	50.3	0.5	17
	Non-flush	62.4	41.6	9	17		Non-flush	68.7	41.6	9	17
18 mm	Flush	64.5	50.9	0.5	24	18 mm	Flush	69.3	50.9	0.5	24
	Non-flush	64.5	37.4	14	24		Non-flush	69.3	37.4	14	24
30 mm	Flush	69.6	54.1	0.75	36	30 mm	Flush	74.1	54.1	0.75	36
	Non-flush	69.6	35.8	19	36		Non-flush	74.1	35.8	19	36

Description



- ① High quality stainless steel enclosures.
- ② M12 plug connector available for sizes 6.5 and 8 mm.
- ③ Sizes 5 mm and 8 mm with thread; 4 mm and 6.5 mm without thread.
- ④ Size 6.5 mm supplied complete with mounting bracket.

Short description

Eaton's unique inductive proximity sensors have been developed specially for use in extremely small spaces. The wide range of available models with enclosure diameters from 8 mm down to 4 mm covers a multitude of application scenarios. The sensors feature three-wire connections with an input voltage of 10 to 30 V DC. Both shielded and unshielded versions are available.

Product features





- Small 4, 5, 6.5 and 8 mm diameters for use in applications with limited space for mounting sensors
- Stainless steel enclosure.
- All models have an output status display.
- Short-circuit and reverse polarity protection.
- High degree of protection IP67.

Approvals

HPL03063EN

Ordering



	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
E57 Miniature Series										
3-wire										
4 mm Ø										
	10 - 30 V DC	0.8	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57EAL4T110SP 136238		1 off
		0.8	Flush	PNP	2 m connection cable	1 N/O		E57EAL4T111SP 136239		
M5 x 1										
	10 - 30 V DC	0.8	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57EAL5T110SP 136240		1 off
		0.8	Flush	PNP	2 m connection cable	1 N/O		E57EAL5T111SP 136241		
6.5 mm Ø										
	10 - 30 V DC	1	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57EAL6T110SP 136243		1 off
		2	Non-flush	NPN	2 m connection cable	1 N/O		E57EAL6T110EP 136242		
		1	Flush	PNP	2 m connection cable	1 N/O		E57EAL6T111SP 136245		
		2	Non-flush	PNP	2 m connection cable	1 N/O		E57EAL6T111EP 136244		
M8 x 1										
	10 - 30 V DC	1	Flush	NPN	2 m connection cable	1 N/O	Stainless steel	E57EAL8T110SP 136249		1 off
		1	Flush	NPN	2 m connection cable	1 NC		E57EBL8T110SP 136257		
		1	Flush	NPN	plug connector M12 x 1	1 N/O		E57EAL8T110SD 136248		
		1	Flush	NPN	plug connector M12 x 1	1 NC		E57EBL8T110SD 136256		
		1	Flush	PNP	2 m connection cable	1 N/O		E57EAL8T111SP 136253		
		1	Flush	PNP	2 m connection cable	1 NC		E57EBL8T111SP 136261		
		1	Flush	PNP	plug connector M12 x 1	1 N/O		E57EAL8T111SD 136252		
		1	Flush	PNP	plug connector M12 x 1	1 NC		E57EBL8T111SD 136260		
		2	Non-flush	NPN	2 m connection cable	1 N/O		E57EAL8T110EP 136247		
		2	Non-flush	NPN	2 m connection cable	1 NC		E57EBL8T110EP 136255		
		2	Non-flush	NPN	plug connector M12 x 1	1 N/O		E57EAL8T110ED 136246		
		2	Non-flush	NPN	plug connector M12 x 1	1 NC		E57EBL8T110ED 136254		
		2	Non-flush	PNP	2 m connection cable	1 N/O		E57EAL8T111EP 136251		
		2	Non-flush	PNP	2 m connection cable	1 NC		E57EBL8T111EP 136259		
		2	Non-flush	PNP	plug connector M12 x 1	1 N/O		E57EAL8T111ED 136250		
		2	Non-flush	PNP	plug connector M12 x 1	1 NC		E57EBL8T111ED 136258		

Technical data

			E57-EAL..., E57-EBL...
General			
Standards			IEC/EN 60947-5
Ambient temperature		°C	-25 - +70
Protection type			IP67
Mechanical shock resistance		g	30 Shock duration 11 ms
Characteristic values			
Repetition accuracy of S_n		%	1
Temperature drift of S_n		%	10
Switching hysteresis of S_n		%	15
Rated operating voltage			10 - 30 V DC
Operating current in the switched state at 24 V DC	I_b	mA	10
Rated operational current	I_e	mA	200
Voltage drop at I_e	U_d	V	1.5
Switching frequency		Hz	2000
Residual current due to the load in locked state at 230 V AC or 24 V DC	I_r	mA	0.01
Switching state indication		LED	Red
Protective functions			Short-circuit protection
Function			3-wire
Material			Stainless steel

Notes

Further technical data can be found in the Online Catalogue at www.moeller.net

Engineering

Circuit diagram

Rated operating voltage

3-wire sensors

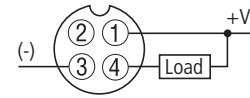
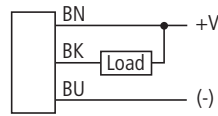
10 - 30 V DC

Contacts

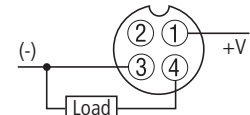
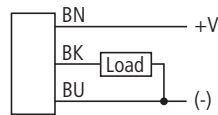
2 m connection cable

M12 plug connector (front view plug)

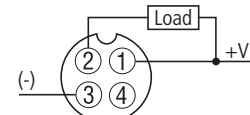
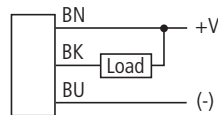
N/O (NPN)



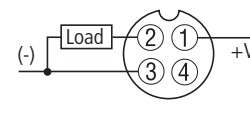
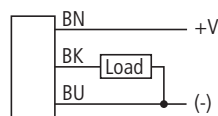
N/O (PNP)



NC (NPN)

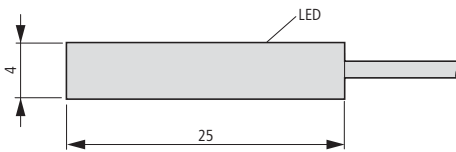


NC (PNP)

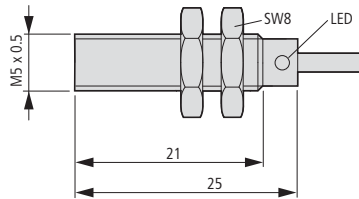


Dimensions

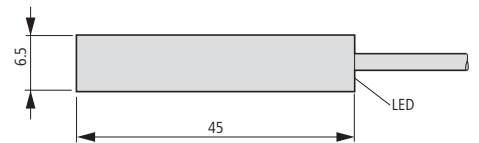
E57EAL4T...



E57EAL5T...

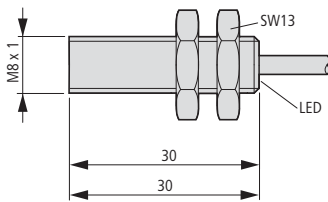


E57EAL6T...



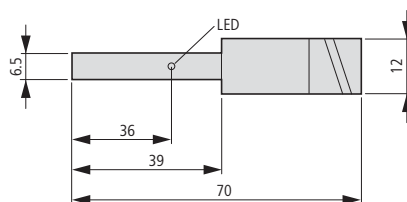
E57...8T...SP

E57...8T...EP

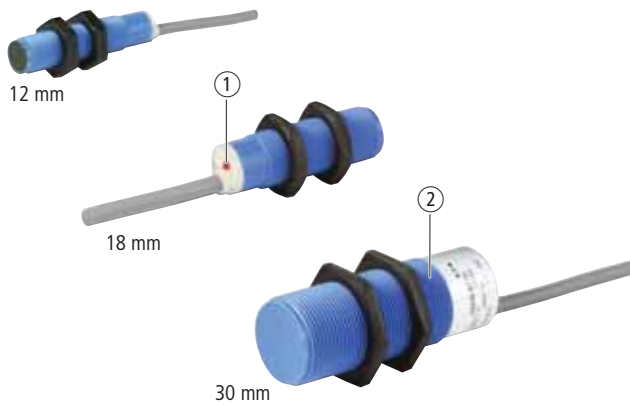


E57...8T...SD

E57...8T...ED



Description



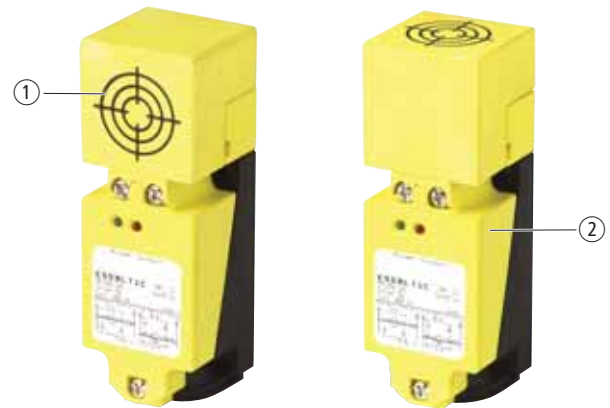
- ① LED for output status.
- ② Corrosion-resistant PBT enclosure

Short description**Cylinder design**

Tubular Inductive Proximity Sensors by Eaton's electrical business are constructed of corrosion resistant PBT plastic. They are ideally suited for wash down applications such as those found in food processing plants. They are available in 12 mm, 18 mm and 30 mm diameters. Shielded sensors can be embedded in metallic surfaces.

Approvals**Product features****Cylinder design**

- Versions for 2-wire AC voltage or 3-wire DC voltage.
- Threaded tubular enclosures in three diameters allow easy integration into new and existing applications
- Nonmetallic construction offers excellent resistance to corrosion
- All models feature an output signal indicator light.



- ① Sensor head fitted for lateral detection. Can be rotated 90°.
- ② Non-metal enclosure is corrosion-resistant.

Short description**Rectangular design**






These sensors from Eaton's electrical business feature PBT resin enclosures for high resistance to corrosion. The enclosure is sized to offer a direct replacement for standard limit switches. The unique sensing head is factory assembled for top sensing, but can be easily converted in the field to any one of four side sensing positions. Models are available with sensing ranges from 15 mm to 40 mm. The sensors can be configured for N/O or NC operation.

Product features**Rectangular design**


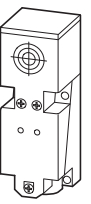
- Nonmetallic enclosure offers excellent resistance to corrosion.
- Same form factor and mounting as standard limit switches for easy retrofit.
- Sensor head features five sensing positions (top and all four sides) that can be easily changed in the field.
- Long sensing ranges up to 40 mm.

HPL03067EN



Design (outer dimensions)	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact P = Normally closed contact/ Normally open closed programmable	Material	Part no. Article no.	Price See price list	Std. pack
E55 Series										
2-wire										
	M12 x 1	20 - 250 V AC	2	Flush	–	2 m connection cable	plastic	E55CAL12A2 135816		1 off
			2	Flush	–			1 NC		
			4	Non-flush	–			1 N/O		
			4	Non-flush	–			1 NC		
	M18 x 1	20 - 250 V AC	5	Flush	–	1 N/O	E55CAL18A2 135822			
			5	Flush	–	1 NC	E55CBL18A2 135839			
			8	Non-flush	–	1 N/O	E55CAL18A2E 135823			
			8	Non-flush	–	1 NC	E55CBL18A2E 135840			
	M30 x 1.5	20 - 250 V AC	10	Flush	–	1 N/O	E55CAL30A2 135828			
			10	Flush	–	1 NC	E55CBL30A2 135844			
			15	Non-flush	–	1 N/O	E55CAL30A2E 135829			
			15	Non-flush	–	1 NC	E55CBL30A2E 135845			
3-wire										
	M12 x 1	10 - 30 V DC	2	Flush	NPN	2 m connection cable	plastic	E55CAL12T110 135818		1 off
			2	Flush	PNP			1 N/O		
			2	Flush	PNP			1 NC		
			4	Non-flush	NPN			1 N/O		
			4	Non-flush	PNP			1 N/O		
			4	Non-flush	NPN			1 NC		
			4	Non-flush	PNP			1 NC		
	M18 x 1	10 - 30 V DC	5	Flush	NPN	1 N/O	E55CAL18T110 135824			
			5	Flush	PNP	1 N/O	E55CAL18T111 135826			
			5	Flush	NPN	1 NC	E55CBL18T110 135841			
			8	Non-flush	NPN	1 N/O	E55CAL18T110E 135825			
			8	Non-flush	PNP	1 N/O	E55CAL18T111E 135827			
			8	Non-flush	NPN	1 NC	E55CBL18T110E 135842			
			8	Non-flush	PNP	1 NC	E55CBL18T111E 135843			



Design (outer dimensions)	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact P = Normally closed contact/ Normally open closed programmable	Material	Part no. Article no.	Price See price list	Std. pack	
3-wire											
	M30 x 1.5	10 - 30 V DC	10	Flush	NPN	2 m connection cable	plastic	E55CAL30T110 135830		1 off	
			10	Flush	PNP			1 N/O			E55CAL30T111 135832
			10	Flush	NPN			1 NC			E55CBL30T110 135846
			10	Flush	PNP			1 NC			E55CBL30T111 135848
			15	Non-flush	NPN			1 N/O			E55CAL30T110E 135831
			15	Non-flush	PNP			1 N/O			E55CAL30T111E 135833
			15	Non-flush	NPN			1 NC			E55CBL30T110E 135847
			15	Non-flush	PNP			1 NC			E55CBL30T111E 135849
			2-wire								
	40 x 40 x 118	20 - 250 V AC	15	Flush	–	Screwed terminal	plastic	E55BLT1C 135812		1 off	
			20	Non-flush	–			1 P			E55BLT1D 135813
			30	Non-flush	–			1 P			E55BLT1E 135814
			40	Non-flush	–			1 P			E55BLT1F 135815

Technical data



		E55C...L12A	E55C...L12T	E55C...L12T...E	E55C...L18A	E55C...L18T
General						
Standards		IEC/EN 60947-5-2				
Ambient temperature	°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type		IP66	IP66	IP66	IP66	IP66
Mechanical shock resistance	g	30 Shock duration 11 ms				
Characteristic values						
Repetition accuracy of S _n	%	10	10	10	10	10
Temperature drift of S _n	%	10	10	10	10	10
Switching hysteresis of S _n	%	20	20	20	20	20
Rated operating voltage		20 - 250 V AC	10 - 30 V DC	10 - 30 V DC	20 - 250 V AC	10 - 30 V DC
Residual ripple of U _e	%	10	10	10	10	10
Operating current in the switched state at 24 V DC	I _b mA	3	–	3	3	–
Rated operational current	I _e mA	150	200	200	150	200
Voltage drop at I _e	U _d V	10	8	8	10	8
Switching frequency	Hz	25	2000	1000	25	1000
Switching state indication	LED	Red	Red	Red	Red	Red
Protective functions			Short-circuit protection Protection against polarity reversal	Short-circuit protection Protection against polarity reversal		Short-circuit protection Protection against polarity reversal
Function		2-wire	3-wire	3-wire	2-wire	3-wire
Construction type						
Design outer dimensions)		M12 x 1	M12 x 1	M12 x 1	M18 x 1	M18 x 1
Connection options		Cable open 2 m connection cable				
Material		plastic				

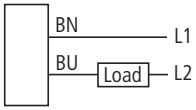
		E55C...L18T...E	E55C...L30T	E55C...L30A	E55C...L30T...E	E55BLT...
General						
Standards		IEC/EN 60947-5-2				
Ambient temperature	°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type		IP66	IP66	IP66	IP66	IP67
Mechanical shock resistance	g	30 Shock duration 11 ms				
Characteristic values						
Repetition accuracy of S _n	%	10	10	10	10	10
Temperature drift of S _n	%	10	10	10	10	10
Switching hysteresis of S _n	%	20	20	20	20	20
Rated operating voltage		10 - 30 V DC	10 - 30 V DC	20 - 250 V AC	10 - 30 V DC	20 - 264 V AC
Residual ripple of U _e	%	10	10	10	10	10
Operating current in the switched state at 24 V DC	I _b mA	3	–	3	3	3
Rated operational current	I _e mA	200	200	150	200	400
Voltage drop at I _e	U _d V	8	8	10	8	8
Switching frequency	Hz	500	300	25	150	25
Switching state indication	LED	Red	Red	Red	Red	Red
Protective functions		Short-circuit protection Protection against polarity reversal	Short-circuit protection Protection against polarity reversal		Short-circuit protection Protection against polarity reversal	Short-circuit protection Protection against polarity reversal Protection against wire breakage
Function		3-wire	3-wire	2-wire	3-wire	2-wire
Construction type						
Design (outer Dimensions)		M18 x 1	M30 x 1.5	M30 x 1.5	M30 x 1.5	40 x 40 x 118
Connection options						
Material						

Notes

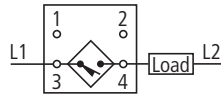
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Engineering

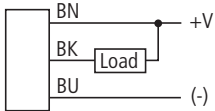
E55CAL...AZ, E55CBL...A2
E55CAL...A2E, E55CBL...A2E



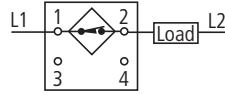
E55BL...



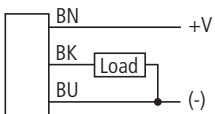
E55CAL...110, E55CBL...110
E55CAL...110E, E55CBL...110E



E55BL...



E55CAL...111, E55CBL...111E
E55CAL...111, E55CBL...111E

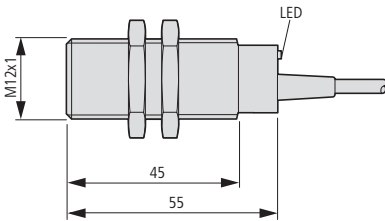


Note:

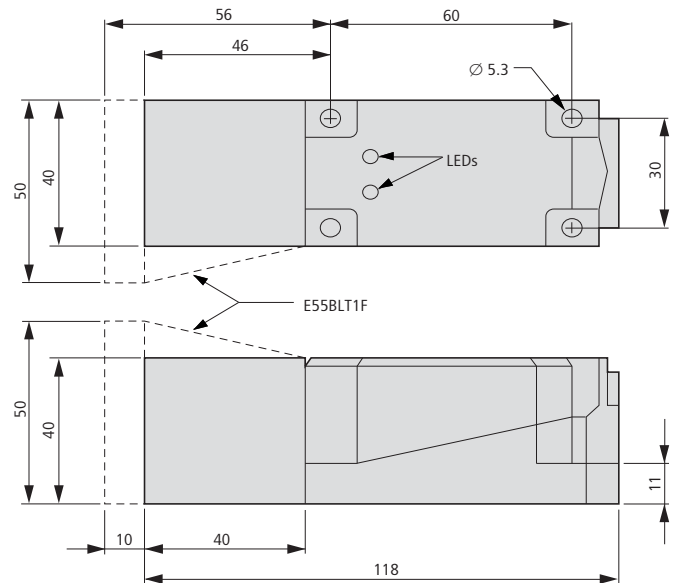
Switches are supplied configured as N/O. Can be switched internally to NC.

Dimensions

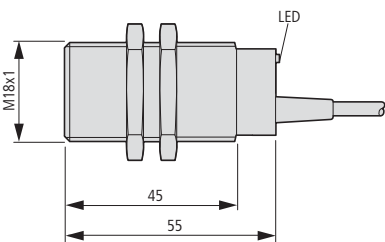
E55CAL12...
E55CBL12...



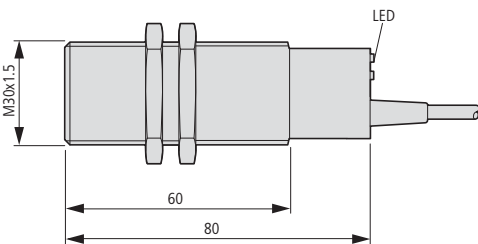
E55BL...

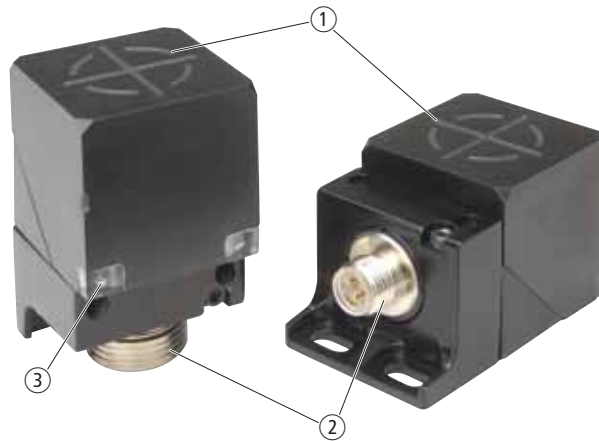


E55CAL18...
E55CBL18...



E55CAL30...
E55CBL30...



Description

- ① Adjustable sensing head for top- and side-sensing.
- ② M12 Plug connector.
- ③ Two LEDs status indication.

Short description

The E52 Cube sensor from Eaton is a powerful inductive proximity sensor. It provides a long sensing range in a compact, standard-conformant enclosure. The outputs of this series are self-configuring as PNP or NPN, without the need for user intervention. The E52 features additional outputs for various connection types to cover many applications with just a few models. Separate indicator lights for voltage and output signal simplify installation and troubleshooting. Five different mounting methods make these sensors exceptionally versatile. The E52 Cube has been developed specially for demanding applications, for example in car production, in bulk material plants and in metal-processing industries.

Product features

- Large measuring range up to 40 mm.
- Four-wire models feature additional outputs (1 × NC, 1 × N/O).
- Four-wire DC models feature an automatic configuration function for independent NPN/PNP selection.
- Robust design featuring vibration and impact-absorbing potting compound.
- Ideal for extreme temperatures or high pressure washdown environments.

Approvals

Ordering



Function	Design (outer dimensions)	Rated operational voltage	Rated switching distance S_n mm	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
E52-Serie											
	4-wire 40 x 40 x 40 Rectangular enclosure	6 - 48 V DC	15	Flush	NPN PNP	M12, "A"-coded plug connectors	1 NC/1 N/O	Zinc/plastic	E52Q-DL15SAD01 135804		1 off
		6 - 48 V DC	15	Non-flush			1 NC/1 N/O		E52Q-DL15UAD01 135805		
		6 - 48 V DC	20	Flush			1 NC/1 N/O		E52Q-DL20SAD01 135806		
		6 - 48 V DC	20	Non-flush			1 NC/1 N/O		E52Q-DL20UAD01 135807		
		6 - 48 V DC	25	Non-flush			1 NC/1 N/O		E52Q-DL25UAD01 135808		
		6 - 48 V DC	30	Non-flush			1 NC/1 N/O		E52Q-DL30UAD01 135809		
		6 - 48 V DC	35	Non-flush			1 NC/1 N/O		E52Q-DL35UAD01 135810		
		6 - 48 V DC	40	Non-flush			1 NC/1 N/O		E52Q-DL40UAD01 135811		

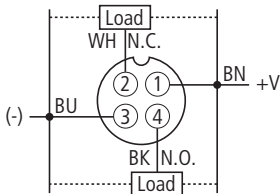
Information relevant for export to North America



Product Standards: UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
 UL File No.: E166051
 UL CCN: NRKH, NRKH7
 CSA File No.: UL report applies to both Canada and US
 CSA Class No.: -
 NA Certification: UL Listed, certified by UL for use in Canada
 Max. Voltage Rating: 48 V DC
 Degree of Protection: IEC: IP68; UL Type 4, 4X, 6, 6P, 12, 13

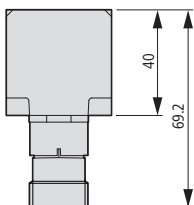
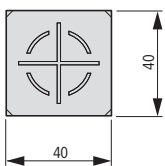
Engineering

E52...



Through autoconfiguration connectable to both +V or (-).

Dimensions



Technical data

			E52-Series
General			
Standards			IEC/EN 60947-5-2
Ambient temperature		°C	-40 - +70
Protection type			IP67
Mechanical shock resistance		g	30 Shock duration 11 ms
Characteristic values			
Repetition accuracy of S_n		%	2
Temperature drift of S_n		%	10
Switching hysteresis of S_n		%	15
Rated operating voltage			6 - 48 V DC
Operating current in the switched state at 24 V DC	I_b	mA	25
Rated operational current	I_e	mA	300
Voltage drop at I_e	U_d	V	2.5
Switching frequency		Hz	100
Residual current due to the load in locked state at 230 V AC or 24 V DC	I_r	mA	0.15
Switching state indication		LED	Red
Operating voltage display		LED	Green
Protective functions			Short-circuit protection Protection against polarity reversal Protection against wire breakage
Function			4-wire
Design (outer dimensions)			40 x 40 x 40 Rectangular enclosure
Connection options			M12, "A"-coded plug connectors
Material			plastic
Surface			Zinc alloy

Notes

Further technical data can be found in the Online-Catalogue at www.moeller.net



Description



① Indicator lights for current and output status.

Short description

Eaton's E56 sensors are powerful inductive proximity sensors. The E56 Pancake provides greater sensing ranges than other inductive sensor package types. They are easy to wire and feature self-configuring complementary outputs, which automatically detect an NPN or PNP connection and configure the sensor accordingly without the need for user intervention. Indicator lights for power and output state simplify troubleshooting compared to sensors with only an output indicator. These convenience features and their high performance make the E56 Pancake sensors ideal for applications in which a rugged design and a long range are required.

Product features



- Longest measuring range on the market – up to 100 mm.
- Three sizes for all application scenarios; max. range 50, 70 or 100 mm.
- Complementary outputs (1 × NC, 1 × N/O) on models with four-wire connection.
- Models with DC voltage four-wire connection feature an automatic configuration function for independent switchover between NPN and PNP.
- Robust design featuring vibration and impact-absorbing potting compound.
- Ideal for extreme temperatures or high pressure washdown environments.

Approvals



HPL03075EN

Ordering

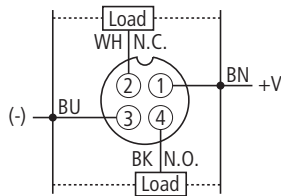
Function	Design (outer dimensions)	Rated operational voltage	Rated switching distance S_n mm	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack			
E56 Series														
	4-wire	79 x 79 x 39	6 - 48 V DC	40	Flush	plug connectors	1 NC/1 N/O	plastic	E56ADL40SAD01 136234		1 off			
		79 x 79 x 39		50	Non-flush		1 NC/1 N/O							
		109 x 110 x 41		70	Non-flush		1 NC/1 N/O					E56BDL70UAD01 136235		
		171.5 x 171.5 x 67.4		100	Non-flush		1 NC/1 N/O							

Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	UL report applies to both Canada and US
CSA Class No.	-
NA Certification	UL Listed, certified by UL for use in Canada
Max. Voltage Rating	48 V DC
Degree of Protection	IEC: IP67, IP69K; UL/CSA Type: 4, 4x, 6, 6P, 12, 13

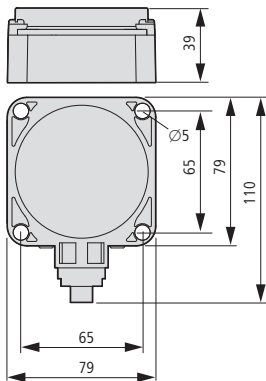
Engineering



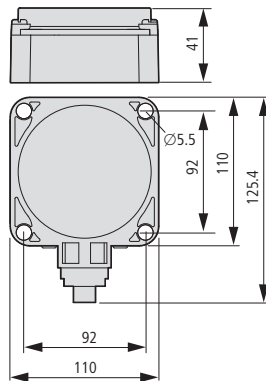
Through autoconfiguration connectable to both +V or (-).

Dimensions

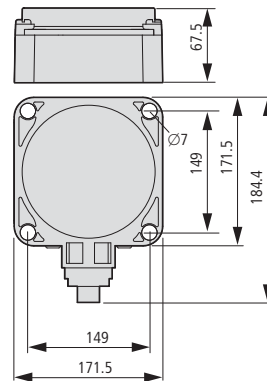
E56ADL40...



E56BDL70...



E56CDL100...



Technical data

			E56ADL40S	E56ADL40U	E56BDL70U	E56CDL100U
General						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type			IP67	IP67	IP67	IP67
Characteristic values						
Repetition accuracy of S_n		%	2	2	2	2
Temperature drift of S_n		%	10	10	10	10
Switching hysteresis of S_n		%	15	15	15	15
Rated operating voltage			6 - 48 V DC	6 - 48 V DC	6 - 48 V DC	6 - 48 V DC
Operating current in the switched state at 24 V DC	I_b	mA	25	25	25	25
Rated operational current	I_e	mA	300	300	300	300
Voltage drop at I_e	U_d	V	2.5	2.5	2.5	2.5
Switching frequency		Hz	100	100	20	20
Min. load current	I_e	mA	1	1	1	1
Residual current due to the load in locked state at 230 V AC or 24 V DC	I_r	mA	0.15	0.15	0.15	0.15
Switching state indication		LED	Red	Red	Red	Red
Operating voltage display		LED	Red	Red	Red	Red
Protective functions			Short-circuit protection Protection against polarity reversal			
Function			4-wire	4-wire	4-wire	4-wire
Construction type						
Design (outer dimensions)			79 x 79 x 39	79 x 79 x 39	109 x 110 x 41	171.5 x 171.5 x 67.4
Connection options			M12, "A"-coded plug connectors			
Material			plastic	plastic	plastic	plastic
Surface			PPS	PPS	PPS	PPS

Notes

Further technical data can be found in the Online Catalogue at www.moeller.net

Description



- ① Models with cable or plug connectors available.
- ② All models feature an output signal indicator light.

Short description

The capacitive proximity sensors from Eaton's electrical business are self-contained units designed to detect both metallic and nonmetallic targets. They are ideally suited for liquid level control and for sensing powdered or granulated material. For best operation, they should be used in an environment having relatively constant temperature and humidity.

Product features

- Detect liquids, powders and other materials that are difficult or impossible with other sensor types.
 - Corrosion-resistant insulated enclosure.
- Adjustable sensitivity.






- ① With mounting bracket.

Approvals







Ordering

	Rated operational voltage	Rated switching distance S_n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack		
E53 Series												
2-wire												
M18 x 1												
	20 - 250 V AC	8	Flush	–	2 m connection cable	1 N/O	plastic	E53KAL18A2 134517		1 off		
			Flush	–	plug connector M12 x 1	1 N/O		E53KAL18A2SA 134760				
			Flush	–	2 m connection cable	1 NC		E53KBL18A2 134791				
			Flush	–	plug connector M12 x 1	1 NC		E53KBL18A2SA 134794				
			Non-flush	–	2 m connection cable	1 N/O		E53KAL18A2E 134518				
								plug connector M12 x 1			1 N/O	E53KAL18A2EA 134519
								2 m connection cable			1 NC	E53KBL18A2E 134792
								plug connector M12 x 1			1 NC	E53KBL18A2EA 134793
M30 x 1.5												
	20 - 250 V AC	20	Flush	–	2 m connection cable	1 N/O	plastic	E53KAL30A2 134769		1 off		
			Flush	–	plug connector M12 x 1	1 N/O		E53KAL30A2SA 134772				
			Flush	–	2 m connection cable	1 NC		E53KBL30A2 134803				
			Flush	–	plug connector M12 x 1	1 NC		E53KBL30A2SA 134806				
			Non-flush	–	2 m connection cable	1 N/O		E53KAL30A2E 134770				
								plug connector M12 x 1			1 N/O	E53KAL30A2EA 134771
								2 m connection cable			1 NC	E53KBL30A2E 134804
								plug connector M12 x 1			1 NC	E53KBL30A2EA 134805
3-wire												
M18 x 1												
	10 - 30 V DC	8	Flush	NPN	2 m connection cable	1 N/O	plastic	E53KAL18T110 134761		1 off		
			Flush	NPN	plug connector M12 x 1	1 N/O		E53KAL18T110SD 134764				
			Flush	PNP	2 m connection cable	1 N/O		E53KAL18T111 134765				
			Flush	PNP	plug connector M12 x 1	1 N/O		E53KAL18T111SD 134768				
			Flush	NPN	2 m connection cable	1 NC		E53KBL18T110 134795				
			Flush	NPN	plug connector M12 x 1	1 NC		E53KBL18T110SD 134798				
			Flush	PNP	2 m connection cable	1 NC		E53KBL18T111 134799				
			Flush	PNP	plug connector M12 x 1	1 NC		E53KBL18T111SD 134802				

HPL03079EN



Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
3-wire									
M18 x 1									
	10 - 30 V DC	15	Non-flush	NPN	2 m connection cable	1 N/O	plastic	E53KAL18T110E 134762	1 off
			Non-flush	NPN	plug connector M12 x 1	1 N/O		E53KAL18T110ED 134763	
			Non-flush	PNP	2 m connection cable	1 N/O		E53KAL18T111E 134766	
			Non-flush	PNP	plug connector M12 x 1	1 N/O		E53KAL18T111ED 134767	
			Non-flush	NPN	2 m connection cable	1 NC		E53KBL18T110E 134796	
			Non-flush	NPN	plug connector M12 x 1	1 NC		E53KBL18T110ED 134797	
			Non-flush	PNP	2 m connection cable	1 NC		E53KBL18T111E 134800	
			Non-flush	PNP	plug connector M12 x 1	1 NC		E53KBL18T111ED 134801	
M30 x 1.5									
	10 - 30 V DC	20	Flush	NPN	2 m connection cable	1 N/O	plastic	E53KAL30T110 134773	1 off
			Flush	NPN	plug connector M12 x 1	1 N/O		E53KAL30T110SD 134776	
			Flush	PNP	2 m connection cable	1 N/O		E53KAL30T111 134777	
			Flush	PNP	plug connector M12 x 1	1 N/O		E53KAL30T111SD 134780	
			Flush	NPN	2 m connection cable	1 NC		E53KBL30T110 134807	
			Flush	NPN	plug connector M12 x 1	1 NC		E53KBL30T110SD 134810	
			Flush	PNP	2 m connection cable	1 NC		E53KBL30T111 134811	
			Flush	PNP	plug connector M12 x 1	1 NC		E53KBL30T111SD 134814	
	10 - 30 V DC	25	Non-flush	NPN	2 m connection cable	1 N/O	plastic	E53KAL30T110E 134774	1 off
			Non-flush	NPN	plug connector M12 x 1	1 N/O		E53KAL30T110ED 134775	
			Non-flush	PNP	2 m connection cable	1 N/O		E53KAL30T111E 134778	
			Non-flush	PNP	plug connector M12 x 1	1 N/O		E53KAL30T111ED 134779	
			Non-flush	NPN	2 m connection cable	1 NC		E53KBL30T110E 134808	
			Non-flush	NPN	plug connector M12 x 1	1 NC		E53KBL30T110ED 134809	
			Non-flush	PNP	2 m connection cable	1 NC		E53KBL30T111E 134812	
			Non-flush	PNP	plug connector M12 x 1	1 NC		E53KBL30T111ED 134813	

	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
2-wire										
34 										
	20 - 250 V AC	35	Non-flush	–	2 m connection cable	1 N/O	plastic	E53KAL34A2E 134781		1 off
		35	Non-flush	–	plug connector M12 x 1	1 N/O		E53KAL34A2EA 134782		
		35	Non-flush	–	2 m connection cable	1 NC		E53KBL34A2E 134815		
		35	Non-flush	–	plug connector M12 x 1	1 NC		E53KBL34A2EA 134816		
3-wire										
34 										
	10 - 30 V DC	25	Flush	NPN	2 m connection cable	1 N/O	plastic	E53KAL34T110 134783		1 off
		25	Flush	NPN	plug connector M12 x 1	1 N/O		E53KAL34T110SD 134786		
		25	Flush	PNP	2 m connection cable	1 N/O		E53KAL34T111 134787		
		25	Flush	PNP	plug connector M12 x 1	1 N/O		E53KAL34T111SD 134790		
		25	Flush	NPN	2 m connection cable	1 NC		E53KBL34T110 134817		
		25	Flush	NPN	plug connector M12 x 1	1 NC		E53KBL34T110SD 134820		
		25	Flush	PNP	2 m connection cable	1 NC		E53KBL34T111 134821		
		25	Flush	PNP	plug connector M12 x 1	1 NC		E53KBL34T111SD 134824		
		35	Non-flush	NPN	2 m connection cable	1 N/O		E53KAL34T110E 134784		
		35	Non-flush	NPN	plug connector M12 x 1	1 N/O		E53KAL34T110ED 134785		
		35	Non-flush	PNP	2 m connection cable	1 N/O		E53KAL34T111E 134788		
		35	Non-flush	PNP	plug connector M12 x 1	1 N/O		E53KAL34T111ED 134789		
		35	Non-flush	NPN	2 m connection cable	1 NC		E53KBL34T110E 134818		
		35	Non-flush	NPN	plug connector M12 x 1	1 NC		E53KBL34T110ED 134819		
		35	Non-flush	PNP	2 m connection cable	1 NC		E53KBL34T111E 134822		
		35	Non-flush	PNP	plug connector M12 x 1	1 NC		E53KBL34T111ED 134823		

Engineering



Circuit diagram Rated operating voltage	Contacts	2 m connection cable	M12 plug connector (front view plug)
2-wire sensors 20–250 V AC/DC	N/O and NC		
3-wire sensors 10–30 V DC	N/O (NPN)		
	N/O (PNP)		
	NC (NPN)		
	NC (PNP)		

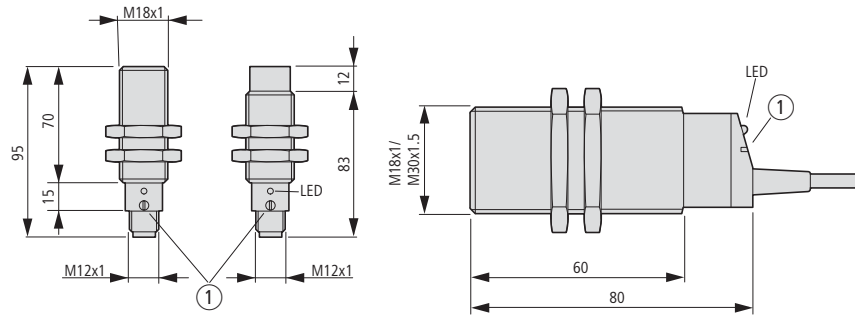
Technical data

	E53...A...	E53...T..
General		
Standards	IEC/EN 60947-5-2	
Ambient temperature	-25 - +70 °C	-25 - +70
Protection type	IP65	
Mechanical shock resistance	30 g Shock duration 11 ms	
Characteristic values		
Repetition accuracy of S_n	10 %	
Temperature drift of S_n	10 %	
Switching hysteresis of S_n	20 %	
Rated operating voltage	20 - 250 V AC	10 - 30 V DC
Residual ripple of U_e	10 %	
Rated operational current	I_e mA	300
Voltage drop at I_e	U_d V	9
Switching frequency	15 Hz	
Min. load current	I_e mA	5
Switching state indication	LED	
Function	Red	Red
Material	2-wire plastic	3-wire plastic

Notes Further technical data can be found in the Online Catalogue at www.moeller.net

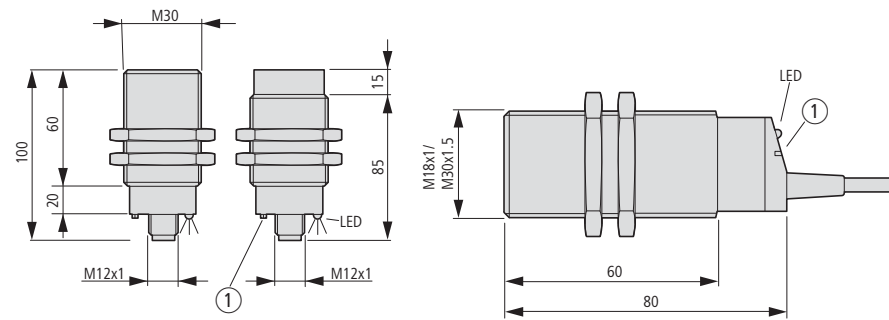
Dimensions

E53KAL18...
E53KBL18...



① Sensitivity setting

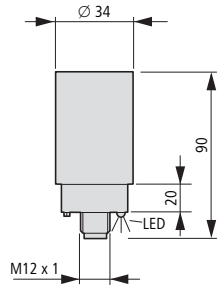
E53KAL30...
E53KBL30...



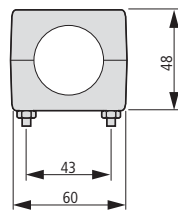
① Sensitivity setting

E53KAL34...
E53KBL34...

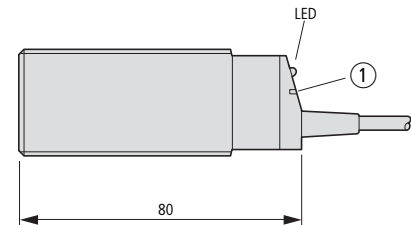
M12 plug connector



Fixing bracket (included as standard)

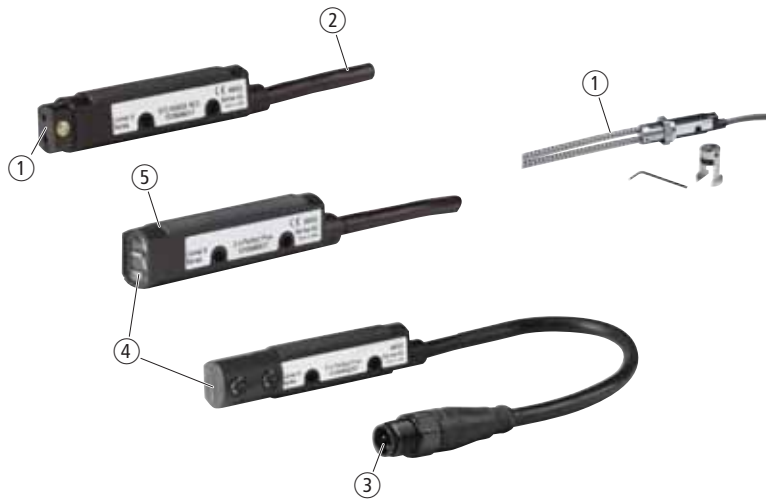


2 m connection cable



① Sensitivity setting

Description



- ① FO cable versions possible.
- ② Light/dark operation selector switch on all models.
- ③ Models with M12 plug connector.
- ④ Sensing beam 0° or 90°.
- ⑤ Solid polyurethane body for rugged use.

Short description

Eaton's high-performance photoelectric sensors feature a tubular enclosure with a diameter of 18 mm and are available in a range of versions to solve virtually any sensing problem. The sensors are available in thru-beam, reflex, polarized reflex, diffuse reflective, focused diffuse reflective, wide-angle diffuse reflective, Perfect Prox®, Fine Spot Perfect Prox® and fiber optic sensing versions. The Perfect Prox® sensors are among the most powerful on the market. These sensors reliably detect targets of different color, reflectance, contrast or surface shape at the same range, while ignoring background objects just a fraction of an inch away. The Comet Series includes AC/DC and DC-only models with 2-, 3- and 4-wire circuitry, and with cable or M 12 micro-connector. Each sensor features a Light/ Dark Operation switch and a gain control to provide for quick adjustment to peak optical performance. The unique threaded body with flat sides allows quick mounting in a 19 mm hole or against any flat surface. Internal components are rigidly sealed in a solid encapsulated package for excellent performance in high vibration and high-shock applications.






















Product features

- Industry standard 18 mm diameter threaded body has flat sides allowing it to be mounted like a tubular sensor or against any flat surface
- Models with a 90° measurement direction can be installed in holes with a depth of only 152 mm.
- Perfect Prox® technology provides exceptional background rejection and application problem-solving.
- Visible sensing beams let you see where the light barrier is aimed for quick flush mounting and alignment.
- Solid polyurethane enclosure completely encapsulates internal circuits for high resistance to shock and vibration.
- Adaptable modulation circuit provides immunity to cross talk from other closely mounted sensors.
- Models available with both AC and DC operation in a single unit – up to 264 volts AC.
- 4-wire DC sensors offer both NPN and PNP outputs.
- Output status indicator visible from a wide 270° angle.

Approvals



Ordering







	Rated operating voltage	Switching type	Rated switching distance S_n mm	Connection options	Description	Type of light	Part no. Article no.	Price See price list	Std. pack
Comet series									
M18 x 1, light switching, dark switching, programmable, plastic									
3-wire									
Thru-beam sensor (detector), forward viewing									
	20 - 264 V AC 15 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red	12100A6513 135566		1 off  
			6000	plug connector M12 x 1			12100AQD03 135568		
			24000	2 m connection cable			12102A6513 135574		
			24000	plug connector M12 x 1			12102AQD03 135576		
Thru-beam sensor (source), forward viewing									
	20 - 264 V AC 15 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red	11100A6513 135554		1 off  
			6000	plug connector M12 x 1			11100AQD03 135556		
			24000	2 m connection cable			11102A6513 135562		
			24000	plug connector M12 x 1			11102AQD03 135564		
Thru-beam sensor (detector), right-angle									
	20 - 264 V AC 15 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red	12100R6513 135570		1 off  
			6000	plug connector M12 x 1			12100RQD03 135572		
Thru-beam sensor (source), right-angle									
	20 - 264 V AC 15 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red	11100R6513 135558		1 off  
			6000	plug connector M12 x 1			11100RQD03 135560		
Diffuse reflective sensor, right-angle									
	20 - 264 V AC 15 - 30 V DC	NPN	3000	2 m connection cable	For combination with reflector with polarisation filter	Visible red	14101R6513 135650		1 off  
			3000	plug connector M12 x 1			14101RQD03 135652		
			4500	2 m connection cable	For combination with reflector	14102R6513 135658			
			4500	plug connector M12 x 1		14102RQD03 135660			
Diffuse reflective sensor, forward viewing									
	20 - 264 V AC 15 - 30 V DC	NPN	4500	2 m connection cable	For combination with reflector with polarisation filter	Visible red	14101A6513 135646		1 off  
			4500	plug connector M12 x 1			14101AQD03 135648		
			7600	2 m connection cable	For combination with reflector	Infrared	14100A6513 135642		
				plug connector M12 x 1			14100AQD03 135644		
			7600	2 m connection cable		Visible red	14102A6513 135654		
				plug connector M12 x 1			14102AQD03 135656		
Diffuse reflective sensor, focused, forward viewing									
	20 - 264 V AC 15 - 30 V DC	NPN	40	2 m connection cable	-	Visible red	13102A6513 135590		1 off  
			40	plug connector M12 x 1			13102AQD03 135592		

Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-07
NA Certification	UL Listed, CSA certified
Max. Voltage Rating	264 V AC, 30 V DC
Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: 1, 2, 3, 4, 4x, 6, 12, 13






















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Rated operating voltage	Switching type	Rated switching distance S _n mm	Connection options	Description	Type of light	Part no. Article no.	Price See price list	Std. pack
Diffuse reflective sensor, forward viewing								
	20 - 264 V AC 15 - 30 V DC	NPN	50	2 m connection cable	With background suppression (Perfect Prox)	Visible red	13104A6513 135602	1 off  
				plug connector M12 x 1			13104AQD03 135604	
			100	2 m connection cable	-	Infrared	13105A6513 135614	
				plug connector M12 x 1			13105AQD03 135616	
			100	2 m connection cable	-	Infrared	13101A6513 135586	
				plug connector M12 x 1			13101AQD03 135588	
			150	2 m connection cable	-	Infrared	13107AS6513 135626	
				plug connector M12 x 1			13107ASQD03 135628	
			200	2 m connection cable	-	Infrared	13108A6513 135634	
				plug connector M12 x 1			13108AQD03 135636	
			200	2 m connection cable	-	Infrared	13106A6513 135618	
				plug connector M12 x 1			13106AQD03 135620	
			225	2 m connection cable	-	Infrared	13103A6513 135594	
				plug connector M12 x 1			13103AQD03 135596	
			610	2 m connection cable	-	Infrared	13100A6513 135578	
				plug connector M12 x 1			13100AQD03 135580	
Diffuse reflective sensor, right-angle								
	20 - 264 V AC 15 - 30 V DC	NPN	50	2 m connection cable	With background suppression (Perfect Prox)	Visible red	13104R6513 135606	1 off  
				plug connector M12 x 1			13104RQD03 135608	
			100	plug connector M12 x 1	-	Infrared	13104RS5003 135610	
				2 m connection cable			13104RS5013 135612	
			150	2 m connection cable	-	Infrared	13107RS6513 135630	
				plug connector M12 x 1			13107RSQD03 135632	
			200	2 m connection cable	-	Infrared	13108R6513 135638	
				plug connector M12 x 1			13108RQD03 135640	
			200	2 m connection cable	-	Infrared	13106R6513 135622	
				plug connector M12 x 1			13106RQD03 135624	
			225	2 m connection cable	-	Infrared	13103R6513 135598	
				plug connector M12 x 1			13103RQD03 135600	
			610	2 m connection cable	-	Infrared	13100R6513 135582	
				plug connector M12 x 1			13100RQD03 135584	

Information relevant for export to North America



Product Standards UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
 UL File No. E166051
 UL CCN NRKH, NRKH7
 CSA File No. 50513
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Max. Voltage Rating 264 V AC, 30 V DC
 Degree of Protection IEC: IP68, IP69K; UL/CSA Type: -

Rated operating voltage	Switching type	Rated switching distance S _n mm	Connection options	Description	Type of light	Part no. Article no.	Price See price list	Std. pack
Comet series								
M18 x 1, light switching, dark switching, programmable, plastic								
4-wire								
Thru-beam sensor (detector), forward viewing								
	10 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red		1 off  
			PNP	6000				
		6000		2 m connection cable				
			24000	plug connector M12 x 1				
Thru-beam sensor (source), forward viewing								
	10 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red		1 off  
			PNP	6000				
		24000		2 m connection cable				
			24000	plug connector M12 x 1				
Thru-beam sensor (detector), right-angle								
	10 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red		1 off  
			PNP	6000				
Thru-beam sensor (source), right-angle								
	10 - 30 V DC	NPN	6000	2 m connection cable	-	Visible red		1 off  
			PNP	6000				
Diffuse reflective sensor, right-angle								
	10 - 30 V DC	NPN	3000	2 m connection cable	For combination with reflector with polarisation filter	Visible red		1 off  
			PNP	3000				
		4500		2 m connection cable	For combination with reflector			
			4500	plug connector M12 x 1				
Diffuse reflective sensor, forward viewing								
	10 - 30 V DC	NPN	4500	2 m connection cable	For combination with reflector with polarisation filter	Visible red		1 off  
			PNP	4500				
		7600		2 m connection cable	For combination with reflector	Infrared		
			7600	plug connector M12 x 1				
		7600		2 m connection cable	Visible red			
			7600	plug connector M12 x 1				
Diffuse reflective sensor, focused, forward viewing								
	10 - 30 V DC	NPN	40	2 m connection cable	-	Visible red		1 off  
			PNP	40				

¹⁾ Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	50513
CSA Class No.	3211-07
NA Certification	UL Listed, CSA certified
Max. Voltage Rating	30 V DC
Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: -

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Rated operating voltage	Switching type	Rated switching distance S _n mm	Connection options	Description	Type of light	Part no. Article no.	Price See price list	Std. pack
Comet series								
M18 x 1, light switching, dark switching, programmable, plastic								
Diffuse reflective sensor, forward viewing								
	10 - 30 V DC	NPN PNP	50	2 m connection cable	With background suppression (Perfect Prox)	Visible red	13104A6517 ¹⁾	1 off
				plug connector M12 x 1			135603	
			100	2 m connection cable	-	Infrared	13105A6517 ¹⁾	
				plug connector M12 x 1			135605	
			150	2 m connection cable	-	-	13105AQD07 ¹⁾	
				plug connector M12 x 1			135615	
			200	2 m connection cable	-	-	13107AS6517 ¹⁾	
				plug connector M12 x 1			135627	
			225	2 m connection cable	-	-	13107ASQD07 ¹⁾	
				plug connector M12 x 1			135629	
			610	2 m connection cable	-	-	13108A6517 ¹⁾	
				plug connector M12 x 1			135635	
			610	2 m connection cable	-	-	13108AQD07 ¹⁾	
				plug connector M12 x 1			135637	
			610	2 m connection cable	-	-	13106A6517 ¹⁾	
				plug connector M12 x 1			135619	
610	2 m connection cable	-	-	13106AQD07 ¹⁾				
	plug connector M12 x 1			135621				
610	2 m connection cable	-	-	13103A6517 ¹⁾				
	plug connector M12 x 1			135595				
610	2 m connection cable	-	-	13103AQD07 ¹⁾				
	plug connector M12 x 1			135597				
610	2 m connection cable	-	-	13100A6517 ¹⁾				
	plug connector M12 x 1			135579				
610	2 m connection cable	-	-	13100AQD07 ¹⁾				
	plug connector M12 x 1			135581				
Diffuse reflective sensor, right-angle								
	10 - 30 V DC	NPN PNP	50	2 m connection cable	With background suppression (Perfect Prox)	Visible red	13104R6517	1 off
				plug connector M12 x 1			135607	
			100	2 m connection cable	-	-	13104RQD07	
				plug connector M12 x 1			135609	
			150	2 m connection cable	-	-	13104RS5007	
				plug connector M12 x 1			135611	
			200	2 m connection cable	-	-	13104RS5020	
				plug connector M12 x 1			135613	
			225	2 m connection cable	-	-	13107RS6517	
				plug connector M12 x 1			135631	
			610	2 m connection cable	-	-	13107RSQD07	
				plug connector M12 x 1			135633	
			610	2 m connection cable	-	-	13108R6517	
				plug connector M12 x 1			135639	
			610	2 m connection cable	-	-	13108RQD07	
				plug connector M12 x 1			135641	
610	2 m connection cable	-	-	13106R6517				
	plug connector M12 x 1			135623				
610	2 m connection cable	-	-	13106RQD07				
	plug connector M12 x 1			135625				
610	2 m connection cable	-	-	13103R6517				
	plug connector M12 x 1			135599				
610	2 m connection cable	-	-	13103RQD07				
	plug connector M12 x 1			135601				
610	2 m connection cable	-	-	13100R6517				
	plug connector M12 x 1			135583				
610	2 m connection cable	-	-	13100RQD07				
	plug connector M12 x 1			135585				

¹⁾ Information relevant for export to North America



Product Standards UL 508; CSA-C22.2 No. 14;
IEC60947-5-2; CE marking

UL File No. E166051

UL CCN NRKH, NRKH7

CSA File No. 50513

CSA Class No. 3211-07












NA Certification UL Listed, CSA certified

Max. Voltage Rating 30 V DC





















Degree of Protection IEC: IP68, IP69K; UL/CSA Type: -

Ordering



Design (outer dimensions)	Material	Part no. Article no.	Price See price list	Std. pack
Glass fiber adapter				
In combination with reflex sensors 13106A... or 13100A... and E51KF fiber optic				
	—	Metal	G235A-6501 135759	1 off
Glass fiber duplex cable				
	2.4 Ø x 914	PVC	E51KF163 135761	1 off
	2.4 Ø x 914	Stainless steel	E51KF563 135783	1 off
	1.6 Ø x 914	PVC	E51KF183 135763	1 off
	1.6 Ø x 914	Stainless steel	E51KF583 135785	1 off
	0.5 x 3.9 Ø x 914	PVC	E51KF193 135764	1 off
	0.5 x 3.9 Ø x 914	Stainless steel	E51KF593 135786	1 off
	3.2 Ø x 914	PVC	E51KF323 135771	1 off
	3.2 Ø x 914	Stainless steel	E51KF723 135793	1 off
	3.2 Ø x 914	PVC	E51KF313 135770	1 off
	3.2 Ø x 914	Stainless steel	E51KF713 135792	1 off
	0.8 x 9.7 Ø x 914	PVC	E51KF343 135773	1 off
	0.8 x 9.7 Ø x 914	Stainless steel	E51KF743 135795	1 off
	0.5 x 3.9 Ø x 914	Stainless steel	E51KF553 135782	1 off
	0.5 x 3.9 Ø x 914	PVC	E51KF153 135760	1 off
	1.6 Ø x 914	Stainless steel	E51KF573 135784	1 off
	3.2 Ø x 914	Stainless steel	E51KF733 135794	1 off
	1.6 Ø x 914	PVC	E51KF173 135762	1 off
	3.2 Ø x 914	PVC	E51KF333 135772	1 off
	3.2 Ø x 914	Stainless steel	E51KF7A3 135796	1 off
	3.2 Ø x 914	PVC	E51KF3A3 135774	1 off
	3.2 Ø x 914	Stainless steel	E51KF7B3 135797	1 off
	3.2 Ø x 914	PVC	E51KF3B3 135775	1 off
Glass fiber simplex cable				
	2.4 Ø x 914	Stainless steel	E51KF663 135788	1 off
	2.4 Ø x 914	PVC	E51KF263 135766	1 off
	1.6 Ø x 914	Stainless steel	E51KF683 135790	1 off
	1.6 Ø x 914	PVC	E51KF283 135768	1 off
	0.5 x 3.9 Ø x 914	Stainless steel	E51KF693 135791	1 off

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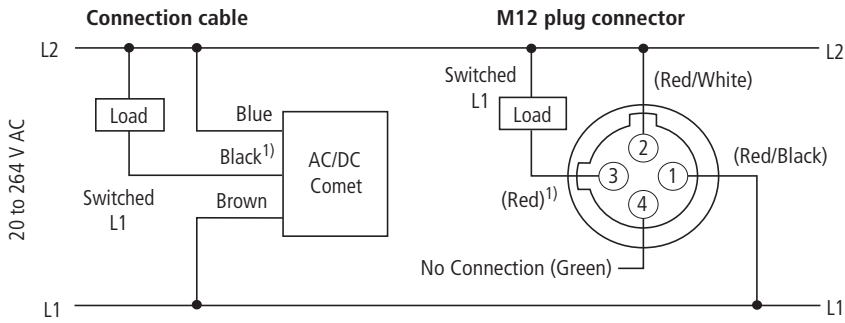
	Design (outer dimensions)	Material	Part no. Article no.	Price See price list	Std. pack
	3.2 Ø x 914	Stainless steel	E51KF823 135799		1 off
	3.2 Ø x 914	PVC	E51KF423 135777		1 off
	0.5 x 3.9 Ø x 914	PVC	E51KF293 135769		1 off
	3.2 Ø x 914	Stainless steel	E51KF813 135798		1 off
	3.2 Ø x 914	PVC	E51KF413 135776		1 off
	0.8 x 9.7 Ø x 914	Stainless steel	E51KF843 135801		1 off
	0.8 x 9.7 Ø x 914	PVC	E51KF443 135779		1 off
	0.5 x 3.9 Ø x 914	Stainless steel	E51KF653 135787		1 off
	0.5 x 3.9 Ø x 914	PVC	E51KF253 135765		1 off
	1.6 Ø x 914	Stainless steel	E51KF673 135789		1 off
	3.2 Ø x 914	Stainless steel	E51KF833 135800		1 off
	1.6 Ø x 914	PVC	E51KF273 135767		1 off
	3.2 Ø x 914	PVC	E51KF433 135778		1 off
	3.2 Ø x 914	Stainless steel	E51KF8A3 135802		1 off
	3.2 Ø x 914	PVC	E51KF4A3 135780		1 off
	3.2 Ø x 914	Stainless steel	E51KF8B3 135803		1 off
	3.2 Ø x 914	PVC	E51KF4B3 135781		1 off
Protective bracket	–	Metal	E58KS5200 135757		1 off
					
Fixing brackets					
	53 x 44	Stainless steel	6161AS5296 135738		1 off
	53 x 44	Stainless steel	6161AS5297 135739		1 off



Engineering

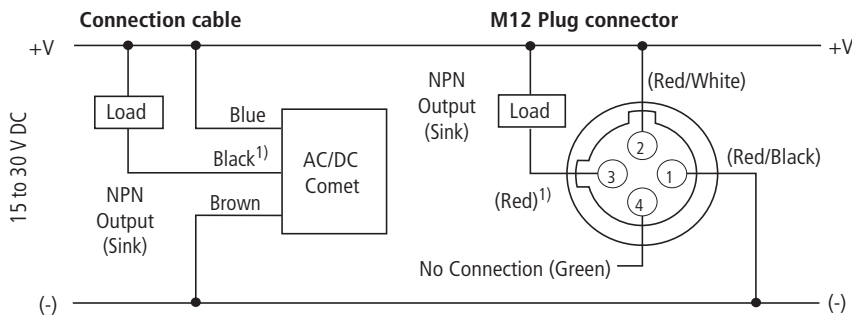
Circuit diagram

AC/DC connection (AC units)



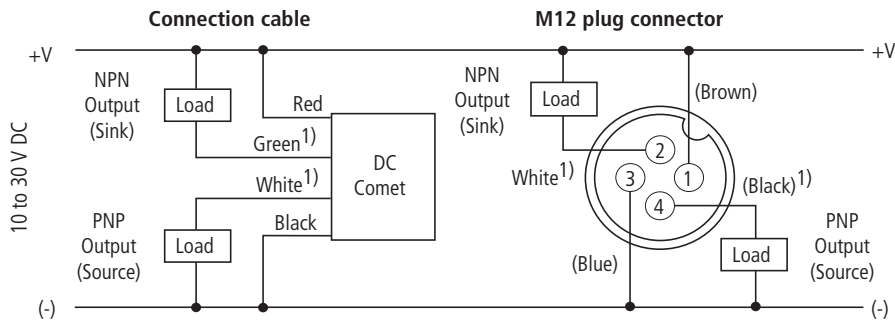
1) Note: Cable not connected on source of thru-beam sensors.

AC/DC connection (DC units)



1) Note: Cable not connected on source of thru-beam sensors.

DC connection (DC units)



1) Note: Cable not connected on source of thru-beam sensors.

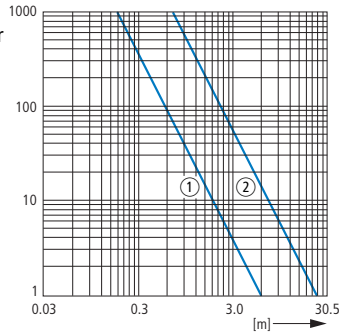
Note: AC/DC sensors have AC plug connectors. Take into account when using with DC voltage.



Excess gain chart

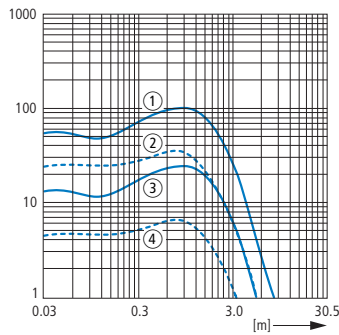
Thru-beam sensor

- ① Detector 12100A and 12100R with source 11100A or 11100R
- ② Detector 12102A with source 11102A



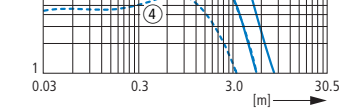
Reflex sensor

- (84 mm reflector)
- ① 14100A/14102A
- ② 14102R
- ③ 14101A
- ④ 14101R



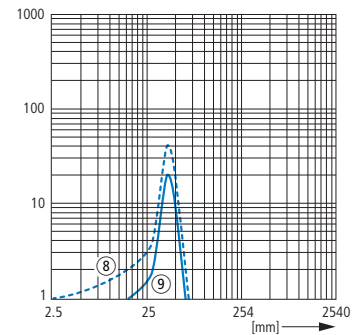
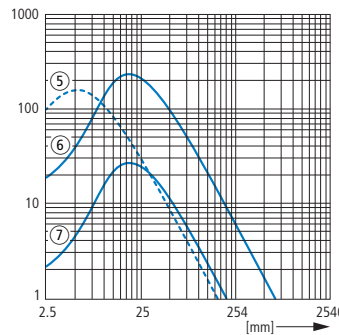
Diffuse reflective sensor

- (90 % reflective test card)
- ⑤ 13107
- ⑥ 13100
- ⑦ 13106



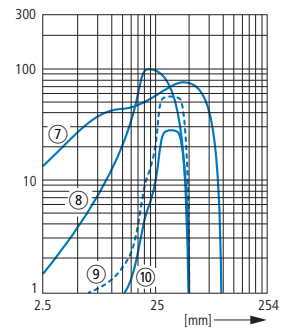
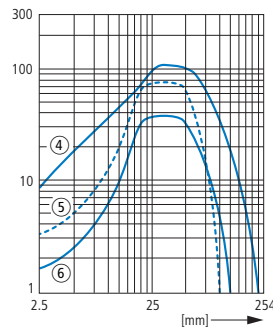
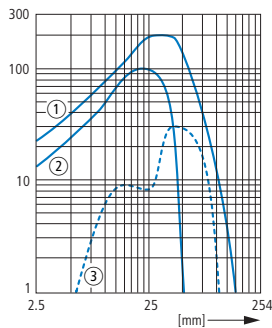
Focused diffuse reflective sensors

- (90 % reflective test card)
- ⑧ 13102A typ.
- ⑨ 13102A minimum



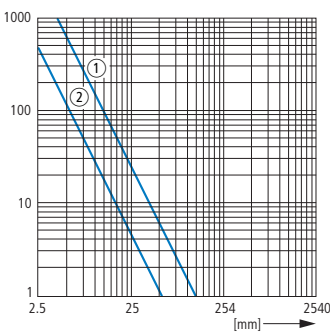
Perfect Prox®

- ① 13108A/13108R
- ② 13104A
- ③ 14104RS
- ④ 13103A/13103R
- ⑤ 13101A typ.
- ⑥ 13101A minimum
- ⑦ 13101AS
- ⑧ 13104R
- ⑨ 13105A typ.
- ⑩ 13105A minimum



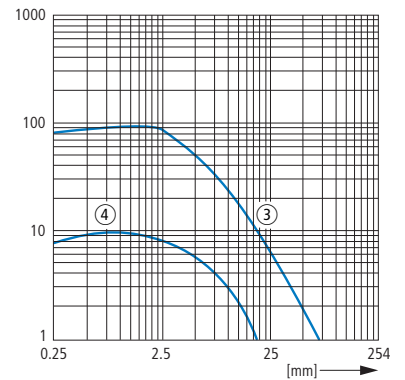
Thru-beam sensor

- With single FO cable E51KF823
- ① 13100A Comet
- ② 13106A Comet



Diffuse reflective sensors

- With duplex FO cable E51KF723
- ③ 13100A Comet
- ④ 13106A Comet



Technical data

			3-wire 111 Types	121 Types	131 Types	141 Types
General						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	-20 - +70	-40 - +70	-40 - +70	-40 - +70
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	100 Shock duration 3 ms			
Characteristic values						
Rated operating voltage			20 - 264 V AC 15 - 30 V DC	20 - 264 V AC 15 - 30 V DC	20 - 264 V AC 15 - 30 V DC	20 - 264 V AC 15 - 30 V DC
Operating current in the switched state at 24 V DC	I_b	mA	25	30	30	30
Rated operational current	I_e	mA	300	300	300	300
Switching frequency		Hz	–	50	50	50
Switching state indication		LED	–	Red	Red	Red
Operating voltage indication		LED	Red	–	–	–
Protective functions			Short-circuit protection Protection against polarity reversal Protection against wire breakage			
Function			3-wire	3-wire	3-wire	3-wire
Construction type						
Design (outer dimensions)			M18 x 1	M18 x 1	M18 x 1	M18 x 1
Connection options			Cable open 2 m connection cable			
Material			plastic			

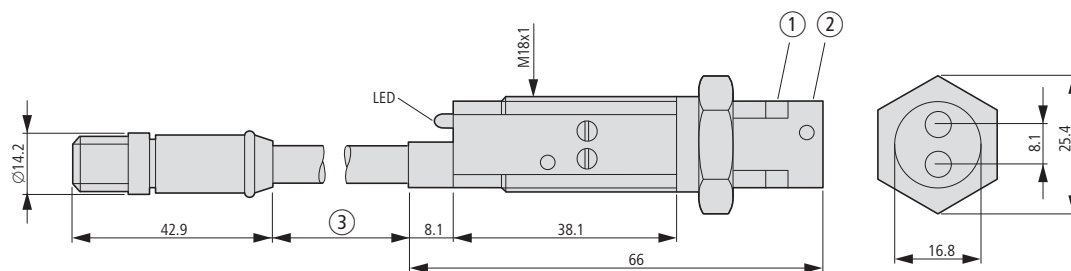
			4-wire 111 Types	121 Types	131 Types	141 Types
General						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	-20 - +70	-40 - +70	-40 - +70	-40 - +70
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	100 Shock duration 3 ms			
Characteristic values						
Rated operating voltage			10 - 30 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC
Operating current in the switched state at 24 V DC	I_b	mA	25	30	30	30
Rated operational current	I_e	mA	100	100	100	100
Switching frequency		Hz	–	142	500	500
Switching state indication		LED	–	Red	Red	Red
Operating voltage indication		LED	Red	–	–	–
Protective functions			Short-circuit protection Protection against polarity reversal Protection against wire breakage			
Function			4-wire	4-wire	4-wire	4-wire
Construction type						
Design (outer dimensions)			M18 x 1	M18 x 1	M18 x 1	M18 x 1
Connection options			Cable open 2 m connection cable			
Material			plastic			

Notes

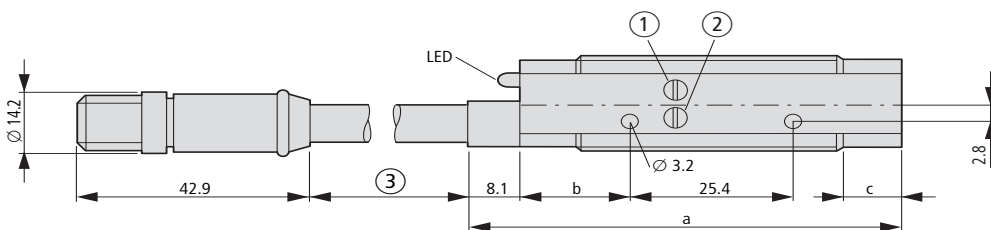
Further technical data can be found in the Online Catalogue at www.moeller.net

Dimensions

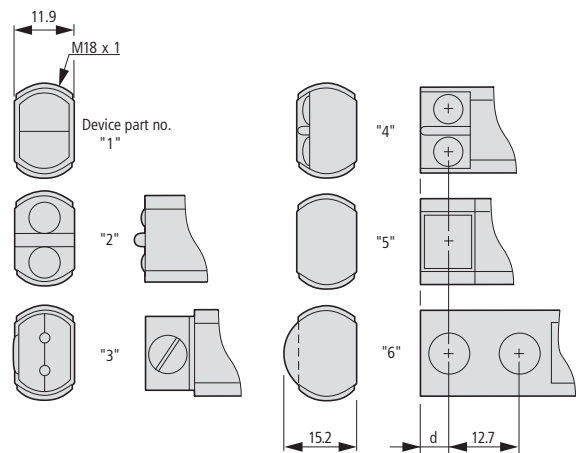
Sensor with installed adapter



- ① Seal
- ② Adapter
- ③ Cable length



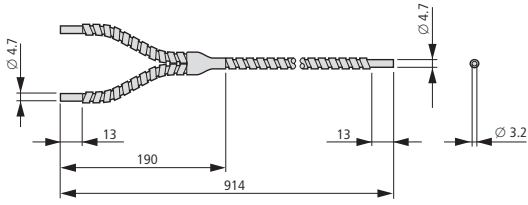
- ① Brightness setting
- ② Gain adjustment
- ③ Cable length



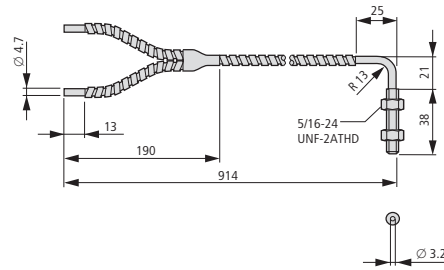
	Dimensions in (mm)				Settings		Housing type
	a	b	c	d	Light/dark	Gain	
11100A...	56	17	6	-	No	No	2
11100R...	65	17	15	5	No	No	4
11102A...	70	17	28	-	No	No	1
12100A...	56	17	6	-	Yes	Yes	2
12100R...	65	17	15	5	Yes	Yes	4
12102A...	66	15	7	-	Yes	Yes	1
13100A..., 13106A...	56	17	6	-	Yes	Yes	2
13100R..., 13106R...	65	17	15	5	Yes	Yes	4
13101A..., 13104A...	66	15	6	-	Yes	No	1
13102A..., 13103A..., 13105A..., 13108A...	66	15	6	-	Yes	Yes	1
13104R...	77	15	28	5	Yes	No	6
14100A..., 14102A...	66	15	7	-	Yes	Yes	1
14101R..., 14102R...	76	15	18	5	Yes	Yes	5
14101A...	67	15	7	-	Yes	Yes	1
15100A..., 15101A...	73	15	15	-	Yes	Yes	3

Glass fiber duplex cable

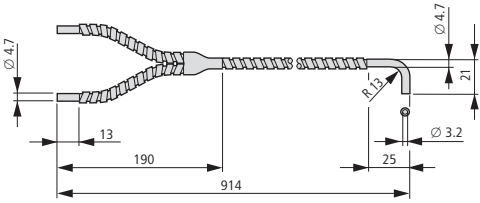
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E51KF713



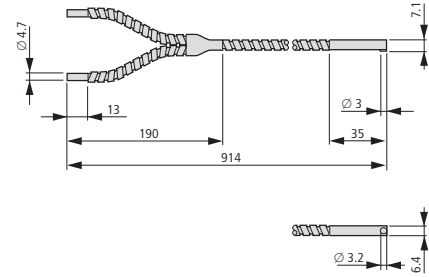
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E51KF7B3



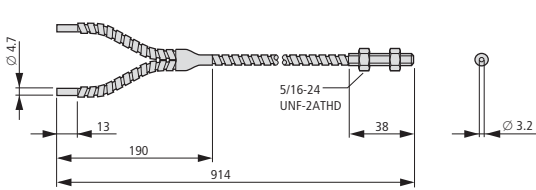
E51KF333
E51KF733



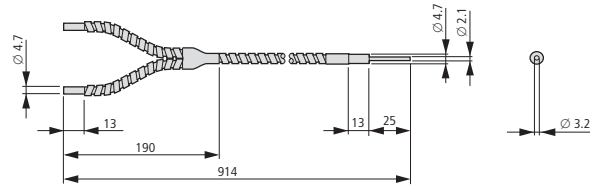
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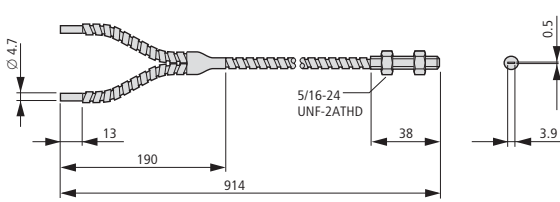
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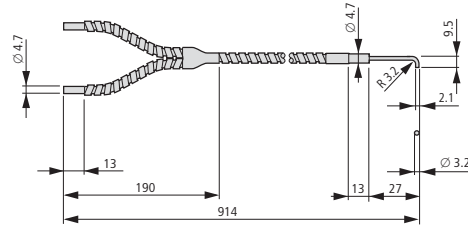
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E51KF583



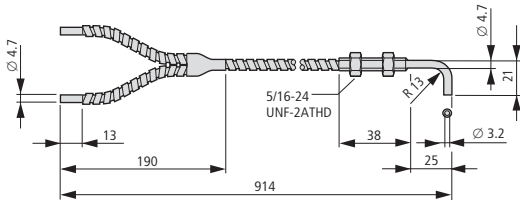
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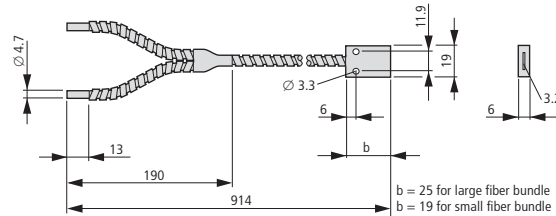
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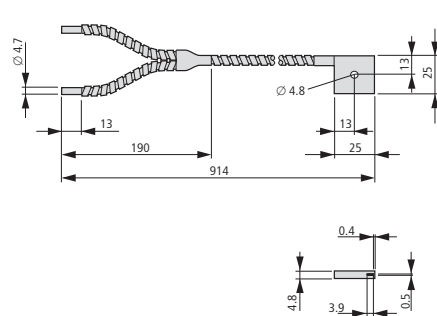
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E51KF7A3



E51KF343
E51KF743



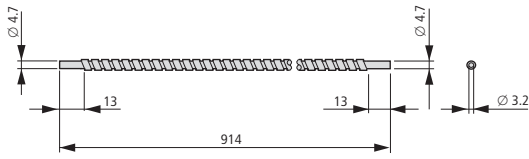
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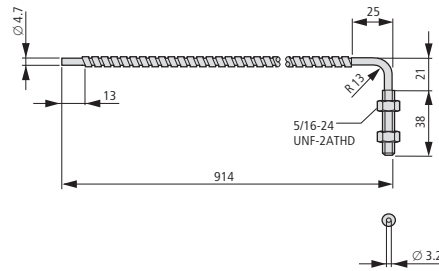


Glass fiber simplex cable

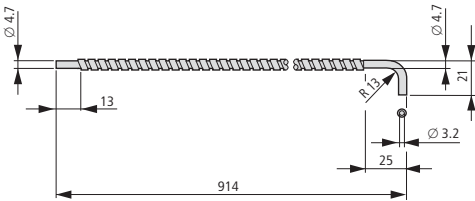
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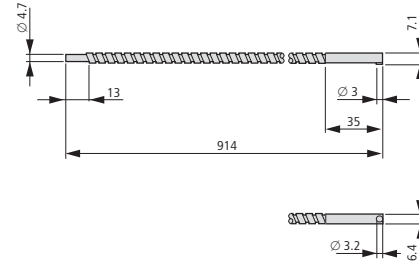
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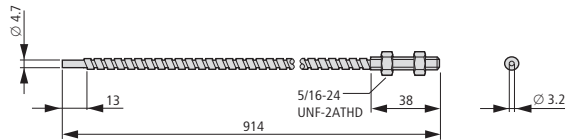
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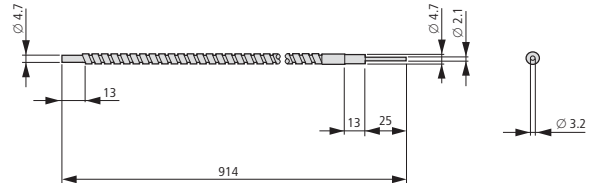
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E51KF663



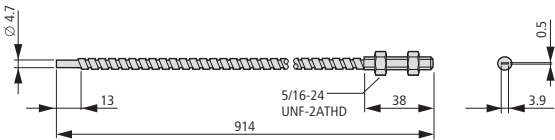
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E51KF823



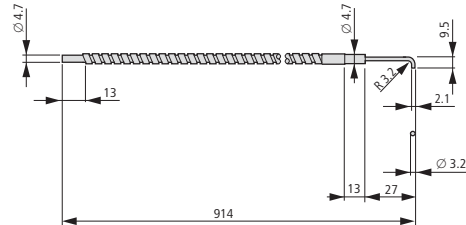
E51KF283
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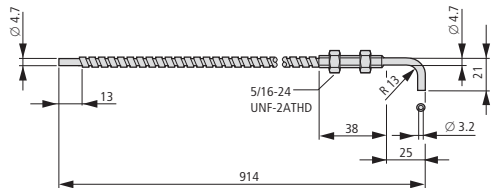
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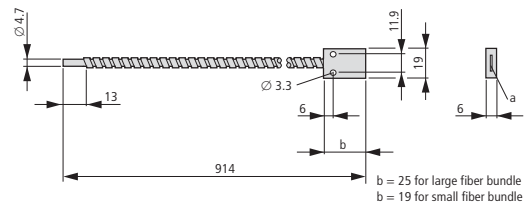
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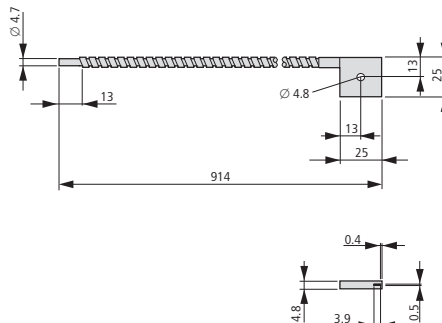
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E51KF443
E51KF843

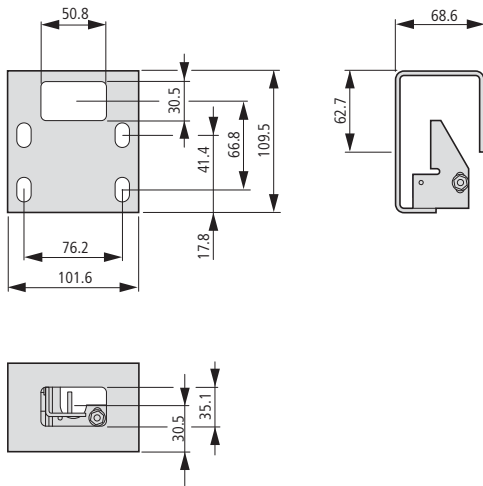


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E51KF653

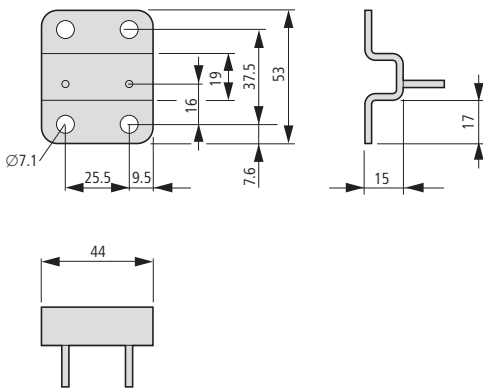


Dimensions

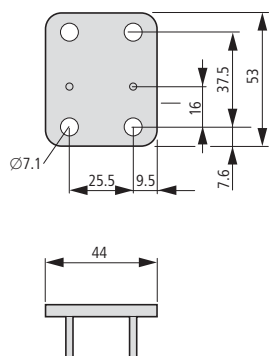
Protective bracket, adjustable



Clip-type fixing bracket, raised



Clip-type fixing bracket, flat



Description



- ① Tempered glass lens cover protects against abrasion.
- ② Bright 360° function indicator.
- ③ All models with Visible red light.
- ④ All models available in versions with M12 (micro) plug connector.

Short description

Eaton's E58 series was designed to withstand the harshest physical, chemical and optical environments. Stainless steel, PVDF and tempered glass components are mechanically assembled using Viton® seals to ensure complete sealing and resistance to industry chemicals. All adhesives and potting subject to failure from chemical attack have been eliminated from the design. The result is a sensor highly resistant to chemical attack and moisture intrusion, that can withstand heavy shock and vibration in almost any application. E58 Harsh Duty sensors feature unparalleled optical performance. They are ideal for automotive applications where exposure to lubricants, cutting fluids, coolants and glycols is common. For food processing applications, a smooth enclosure version simplifies high-pressure chemical washdowns, and withstands the use of sanitizers, surfactants, and cleaning agents including diluted bases and acids.

Product features

- Sensor with a diameter of 18 mm and 30 mm.
- Highly refined optics for long sensing ranges and to see through high levels of contamination – unmatched optical performance
- Perfect Prox® technology provides exceptional background rejection and extremely high excess gain.
- Resistant to the wide range of chemicals used in the automotive, food processing and forest products industries
- Suitable for high temperature, high pressure washdown (82 bar).
- Mechanical Viton seals hold up to extreme temperature variations.
- Visible sensing beam on all models lets you see where the beam is aimed for quick flush mounting and alignment.
- Output status indicator is the brightest available and is visible from any angle and in any illumination condition
- The industry's only background rejection sensors with a 2-wire circuit design
- Four-wire DC sensors feature an NPN and a PNP output

Approvals





Function	Design (outer dimensions)	Rated operational voltage	Rated switching distance S _n mm	Switching type	Connection option	Material	Type of light	Switching principle	Part no. Article no.	Price See price list	Std. pack	
E58 Series												
Reflex sensor With background suppression (Perfect Prox)												
	2-wire	M18 x 1	18 - 50 V DC	50	–	plug connector M12 x 1	Stainless steel	Visible red	Dark switching	E58-18DP50-DDP 135668	1 off	
				50	–				Light switching	E58-18DP50-DLP 135669		
				100	–				Dark switching	E58-18DP100-DDP 135662		
				100	–				Light switching	E58-18DP100-DLP 135663		
				M30 x 1.5	150				–	Dark switching		E58-30DP150-DDP 135674
					150				–	Light switching		E58-30DP150-DLP 135675

Information relevant for export to North America















Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14;
IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL report applies to both Canada and US
–
UL Listed, certified by UL for use in Canada
50 V DC
IEC: IP68, IP69K; UL/CSA Type: 1, 2, 3, 3R, 3S, 4, 4X, 6, 6P, 12, 12K, 13

Function	Design (outer dimensions)	Rated operational voltage	Rated switching distance S _n mm	Switching type	Connection option	Material	Type of light	Switching principle	Part no. Article no.	Price See price list	Std. pack			
E58 Series														
Reflex sensor With background suppression (Perfect Prox)														
	4-wire	M18 x 1	10 - 30 V DC	50	NPN	2m connection cable	Stainless steel	Visible red	Dark switching	E58-18DP50-HD 135670	1 off			
				50	PNP				Dark switching	E58-18DP50-HDP 135671				
				50	NPN				Light switching	E58-18DP50-HL 135672				
				50	PNP				Light switching	E58-18DP50-HLP 135673				
				100	NPN				Dark switching	E58-18DP100-HD 135664				
				100	PNP				Dark switching	E58-18DP100-HDP 135665				
				100	NPN				Light switching	E58-18DP100-HL 135666				
				100	PNP				Light switching	E58-18DP100-HLP 135667				
				M30 x 1.5	10 - 30 V DC				150	NPN		2m connection cable	Dark switching	E58-30DP150-HD 135676
									150	PNP			Dark switching	E58-30DP150-HDP 135677
									150	NPN			Light switching	E58-30DP150-HL 135678
									150	PNP			Light switching	E58-30DP150-HLP 135679
	280	NPN	Dark switching			E58-30DPS280-HD 135680								
	280	PNP	Dark switching			E58-30DPS280-HDP 135681								
	M30 x 1.5	10 - 30 V DC	280	NPN	2m connection cable	Light switching	E58-30DPS280-HL 135682							
			280	PNP		Light switching	E58-30DPS280-HLP 135683							

HPL03099EN

Function	Design (outer dimensions)	Rated operational voltage	Rated switching distance S_n mm	Switching type	Connection option	Material	Type of light	Switching principle	Part no. Article no.	Price See price list	Std. pack
E58 Series											
Polarized reflexsensor For combination with reflector											
	4-wire	M30 x 1.5	10 - 30 V DC	10000	NPN PNP	2m connection cable	Stainless steel	Visible red	Dark switching	E58-30RP10-HD 135684	1 off  
		M30 x 1.5	10 - 30 V DC	10000	NPN PNP	plug connector M12 x 1			Dark switching	E58-30RP10-HDP 135685	
		M30 x 1.5	10 - 30 V DC	10000	NPN PNP	2m connection cable			Light switching	E58-30RP10-HL 135686	
		M30 x 1.5	10 - 30 V DC	10000	NPN PNP	plug connector M12 x 1			Light switching	E58-30RP10-HLP 135687	
Reflex sensor For combination with reflector											
	4-wire	M30 x 1.5	10 - 30 V DC	18000	NPN PNP	2m connection cable	Stainless steel	Visible red	Dark switching	E58-30RS18-HD 135688	1 off  
		M30 x 1.5	10 - 30 V DC	18000	NPN PNP	plug connector M12 x 1			Dark switching	E58-30RS18-HDP 135689	
		M30 x 1.5	10 - 30 V DC	18000	NPN PNP	2m connection cable			Light switching	E58-30RS18-HL 135690	
		M30 x 1.5	10 - 30 V DC	18000	NPN PNP	plug connector M12 x 1			Light switching	E58-30RS18-HLP 135691	
Thru-beam sensor (detector), forward viewing											
	4-wire	M30 x 1.5	10 - 30 V DC	250000	NPN PNP	2m connection cable	Stainless steel	-	Dark switching	E58-30TD250-HD 135692	1 off  
		M30 x 1.5	10 - 30 V DC	250000	NPN PNP	plug connector M12 x 1			Dark switching	E58-30TD250-HDP 135693	
		M30 x 1.5	10 - 30 V DC	250000	NPN PNP	2m connection cable			Light switching	E58-30TD250-HL 135694	
		M30 x 1.5	10 - 30 V DC	250000	NPN PNP	plug connector M12 x 1			Light switching	E58-30TD250-HLP 135695	
Thru-beam sensor (source), forward viewing											
	4-wire	M30 x 1.5	10 - 30 V DC	250000	NPN PNP	2m connection cable	Stainless steel	Visible red	-	E58-30TS250-HA 135696	1 off  
		M30 x 1.5	10 - 30 V DC	250000	NPN PNP	plug connector M12 x 1			-	E58-30TS250-HAP 135697	

Information relevant for export to North America



Product Standards

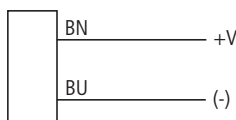
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14;
IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL report applies to both Canada and US
-
UL Listed, certified by UL for use in Canada
30 V DC
IEC: IP68, IP69K; UL/CSA Type: -

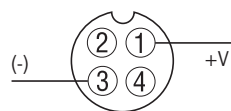
Engineering

Circuit diagram

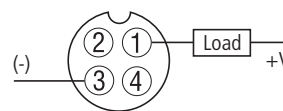
E58...HA



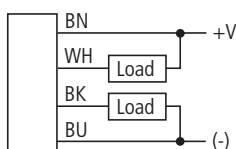
E58...HAP



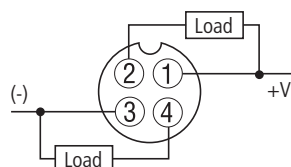
E58...DDP
E58...DLP



E58...HD
E58...HL

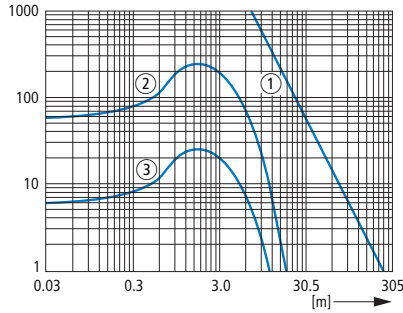


E58...HDP
E58...HLP

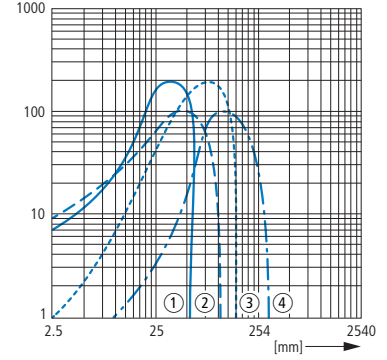


Excess gain chart

- Thru-beam**
① Thru-beam
Reflex
② 84 mm-reflector
Polarized reflex
③ 84 mm-reflector



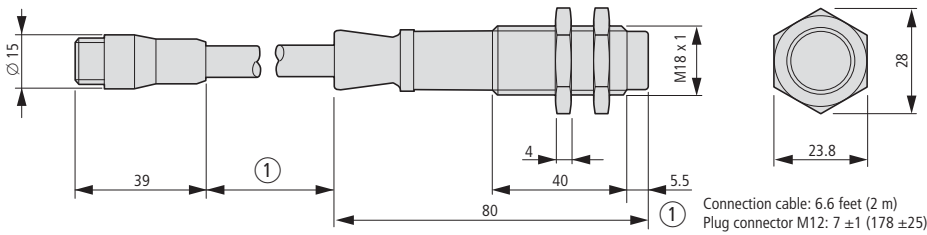
- Perfect Prox®**
① 18 mm diameter, 50 mm-designs
② 18 mm diameter, 100 mm-designs
③ 30 mm diameter, 150 mm-designs
④ 30 mm diameter, 280 mm-Design



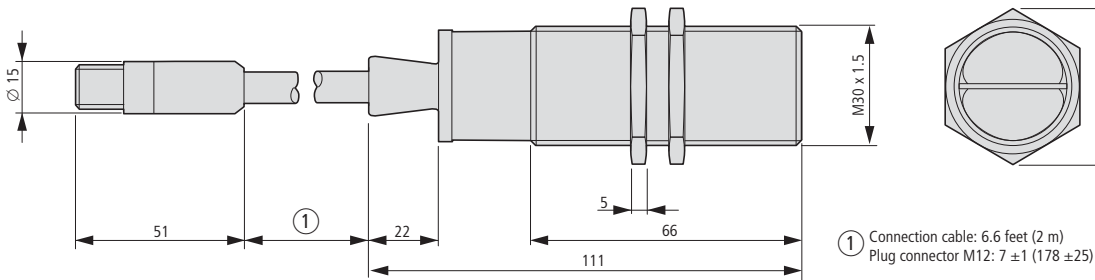
Dimensions

E58 Series

E58-18...



E58-30...



Technical data

	2-wire		4-wire	
	E58-18...	E58-30...	E58-18...	E58-30...
General				
Standards	IEC/EN 60947-5-2			
Ambient temperature	°C			
Protection type	IP67	IP67	IP67	IP67
Mechanical shock resistance	100 Shock duration 3 ms			
Characteristic values				
Rated operating voltage	18 - 50 V DC	18 - 50 V DC	10 - 30 V DC	10 - 30 V DC
Operating current in the switched state at 24 V DC	I_b mA 1.7	1.7	—	—
Rated operational current	I_e mA 100	100	100	100
Switching frequency	Hz 14	14	500	312
Switching state indication	LED Red	Red	Red	Red
Protective functions	Short-circuit protection Protection against polarity reversal Protection against wire breakage			
Function	2-wire	2-wire	4-wire	4-wire
Construction type				
Design (outer dimensions)	M18 x 1	M30 x 1.5	M18 x 1	M30 x 1.5
Material	Stainless steel	Stainless steel	Stainless steel	Stainless steel

Notes

Further technical data can be found in the Online Catalogue at www.moeller.net

Description



- ① 18 mm thread
- ② Power lamp (green)
- ③ Output lamp (red)
- ④ TargetLock™ lamp (orange)
- ⑤ Gain adjustment

Short description

Eaton's SM series photoelectric sensors offer a high performance and simple use in a compact, cost-effective design. Regardless how good a sensor's performance just a slight maladjustment or incorrectly positioned target will sooner or later impact reliability.

In addition to simplifying sensor setup, TargetLock™ provides visual confirmation of the correct mounting position for optimum reliability.

In addition TargetLock™ outputs diagnostic information during operation, which provides an early warning about potential problems to help prevent costly downtimes. No other sensor is easier to use.

The SM sensors offer numerous performance features that simplify their use. A visible sensing beam shows you exactly where the sensor is pointing. The durable enclosure features multiple fixing possibilities to easily fit on your equipment in the tightest of spaces. Full protection from overvoltage, reverse polarity and short circuits reduces the chance of damage. Bright 360° LED indicators clearly show sensor status.

Product features

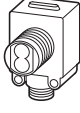

- Bright indicators for power, output, and TargetLock™.
- TargetLock™ simplifies setup and ensures a high operational reliability.
- The Perfect Prox® models detect targets with different colors at the same range while ignoring background objects.
- AC/DC models work with 18 – 264 V AC or 18 – 50 V DC.
- DC-only models feature PNP and NPN outputs.
- Visible sensing beam on all models lets you see where the beam is aimed for quick flush mounting and alignment.
- Compact design for space-saving flush mounting.
- Range of fixing possibilities, including standard 18 mm thread.
- Short-circuit, overload and protection against polarity reversal.
- Full family includes thru-beam, polarized reflex, diffuse reflective and Perfect Prox® background rejection.

Approvals



Ordering

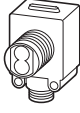



Rated operational voltage	Function	Switching principle	Rated switching distance S _n mm	Switching type	Connection options	Part no. Article no.	Price See price list	Std. pack	
E65 SM Series									
3-conductors, insulated material									
	18 - 264 V AC 18 - 50 V DC	Reflex sensor With background suppression (Perfect Prox)	Dark switching	50	NPN (DC)	2 m connection cable	E65-SMPP050-GD 135698	1 off 	
			Dark switching	50	NPN (DC)	plug connector M12 x 1	E65-SMPP050-GDD 135699		
			Light switching	50	NPN (DC)	2 m connection cable	E65-SMPP050-GL 135700		
			Light switching	50	NPN (DC)	plug connector M12 x 1	E65-SMPP050-GLD 135701		
			Dark switching	100	NPN (DC)	2 m connection cable	E65-SMPP100-GD 135706		
			Dark switching	100	NPN (DC)	plug connector M12 x 1	E65-SMPP100-GDD 135707		
			Light switching	100	NPN (DC)	2 m connection cable	E65-SMPP100-GL 135708		
			Light switching	100	NPN (DC)	plug connector M12 x 1	E65-SMPP100-GLD 135709		
			Diffuse reflective sensor	Dark switching	200	NPN (DC)	2 m connection cable		E65-SMSD200-GD 135722
				Dark switching	200	NPN (DC)	plug connector M12 x 1		E65-SMSD200-GDD 135723
				Light switching	200	NPN (DC)	2 m connection cable		E65-SMSD200-GL 135724
				Light switching	200	NPN (DC)	plug connector M12 x 1		E65-SMSD200-GLD 135725
		Polarized reflex For combination with reflector	Dark switching	3000	NPN (DC)	2 m connection cable	E65-SMPR3-GD 135714		
			Dark switching	3000	NPN (DC)	plug connector M12 x 1	E65-SMPR3-GDD 135715		
			Light switching	3000	NPN (DC)	2 m connection cable	E65-SMPR3-GL 135716		
			Light switching	3000	NPN (DC)	plug connector M12 x 1	E65-SMPR3-GLD 135717		

Information relevant for export to North America

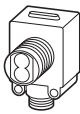







Product Standards	UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
UL File No.	E166051
UL CCN	NRKH, NRKH7
CSA File No.	UL report applies to both Canada and US
CSA Class No.	-
NA Certification	UL Listed, certified by UL for use in Canada
Max. Voltage Rating	132 V AC, 30 V DC
Degree of Protection	IEC: IP68, IP69K; UL/CSA Type: 1, 3, 4, 4X, 6, 6P, 12, 13

Rated operational voltage	Function	Switching principle	Rated switching distance S _n mm	Switching type	Connection options	Part no. Article no.	Price See price list	Std. pack
E65 SM Series								
4-conductors, insulated material								
	10 - 30 V DC	Reflex sensor With background suppression (Perfect Prox)	Dark switching	50	NPN PNP	2 m connection cable	E65-SMPP050-HD 135702	1 off 
			Dark switching	50	NPN PNP	plug connector M12 x 1	E65-SMPP050-HDD 135703	
			Light switching	50	NPN PNP	2 m connection cable	E65-SMPP050-HL 135704	
			Light switching	50	NPN PNP	plug connector M12 x 1	E65-SMPP050-HLD 135705	
			Dark switching	100	NPN PNP	2 m connection cable	E65-SMPP100-HD 135710	
			Dark switching	100	NPN PNP	plug connector M12 x 1	E65-SMPP100-HDD 135711	
			Light switching	100	NPN PNP	2 m connection cable	E65-SMPP100-HL 135712	
			Light switching	100	NPN PNP	plug connector M12 x 1	E65-SMPP100-HLD 135713	

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Rated operational voltage	Function	Switching principle	Rated switching distance S _n mm	Switching type	Connection options	Part no. Article no.	Price See price list	Std. pack
E65 SM Series								
4-conductors, insulated material								
	10 - 30 V DC	Diffuse reflective sensor	Dark switching	200	NPN PNP	2 m connection cable	E65-SMSD200-HD 135726	1 off  
			Dark switching	200	NPN PNP	plug connector M12 x 1	E65-SMSD200-HDD 135727	
			Light switching	200	NPN PNP	2 m connection cable	E65-SMSD200-HL 135728	
			Light switching	200	NPN PNP	plug connector M12 x 1	E65-SMSD200-HLD 135729	
	Polarized reflex photoelectric sensor For combination with reflector	Dark switching	3000	NPN PNP	2 m connection cable	E65-SMPR3-HD 135718		
		Dark switching	3000	NPN PNP	plug connector M12 x 1	E65-SMPR3-HDD 135719		
		Light switching	3000	NPN PNP	2 m connection cable	E65-SMPR3-HL 135720		
		Light switching	3000	NPN PNP	plug connector M12 x 1	E65-SMPR3-HLD 135721		
	10 - 30 V DC	Thru-beam sensor (detector) For combination with source	Dark switching	15000	NPN PNP	2 m connection cable	E65-SMTD15-HD 135730	1 off  
			Dark switching	15000	NPN PNP	plug connector M12 x 1	E65-SMTD15-HDD 135731	
			Light switching	15000	NPN PNP	2 m connection cable	E65-SMTD15-HL 135732	
			Light switching	15000	NPN PNP	plug connector M12 x 1	E65-SMTD15-HLD 135733	
	Thru-beam sensor (source) For combination with detector	-	15000	NPN PNP	2 m connection cable	E65-SMTS15-HA 135734		
		-	15000	NPN PNP	plug connector M12 x 1	E65-SMTS15-HAD 135735		

Information relevant for export to North America



Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; CSA-C22.2 No. 14; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL report applies to both Canada and US
-
UL Listed, certified by UL for use in Canada
30 V DC
IEC: IP68, IP69K; UL/CSA Type: -

Technical data

	E65...-G...	E65...-H...	E65...15-H...	E65...-HA...
General				
Standards	IEC/EN 60947-5-2			
Ambient temperature	-25 - +55 °C	-25 - +55	-25 - +55	-25 - +55
Protection type	IP67	IP67	IP67	IP67
Mechanical shock resistance	50 g Shock duration 10 ms			
Characteristic values				
Rated operating voltage	18 - 264 V AC 18 - 50 V DC	10 - 30 V DC	10 - 30 V DC	10 - 30 V DC
Operating current in the switched state at 24 V DC	I _b mA	20	20	40
Rated operational current	I _e mA	200	100	-
Switching frequency	Hz	31	500	-
Switching state indication	LED	Red	Red	Red
Operating voltage display	LED	Green	Green	Green
Boundary gain		Yellow	Yellow	Yellow
Protective functions	Short-circuit protection Protection against polarity reversal Protection against wire breakage			
Function	3-wire	4-wire	4-wire	4-wire
Construction type				
Design (outer dimensions)	33 x 41 x 43	33 x 41 x 37	33 x 41 x 37	33 x 41 x 37
Material	plastic	plastic	plastic	plastic

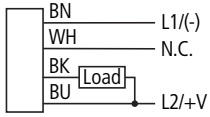
Notes

Further technical data can be found in the Online Catalogue at www.moeller.net

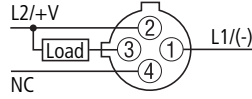
Engineering

Circuit diagram

E65...GD
E65...GL



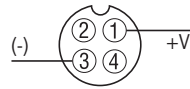
E65...GDD
E65...GLD



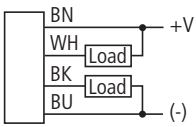
E65...HA



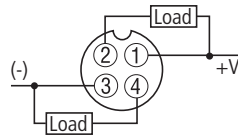
E65...HAD



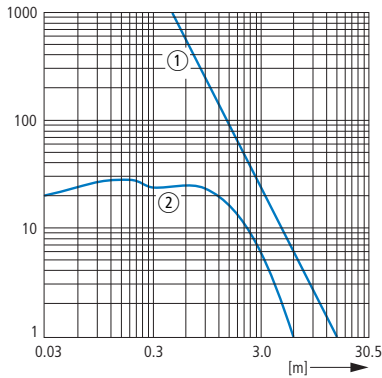
E65...HD
E65...HL



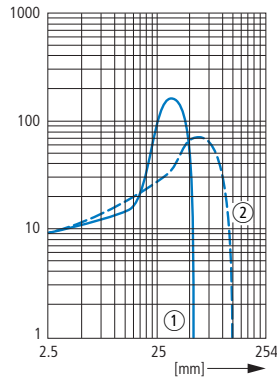
E65...HDD
E65...HLD



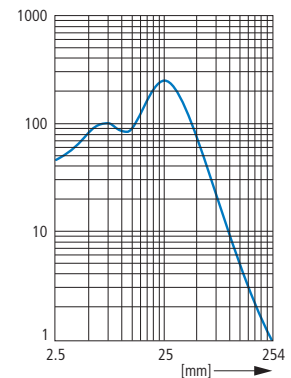
Excess gain chart



- ① Thru-beam sensor
- ② Reflex sensor with polarizing filter



- ① 50 mm Perfect Prox®
- ② 100 mm Perfect Prox®

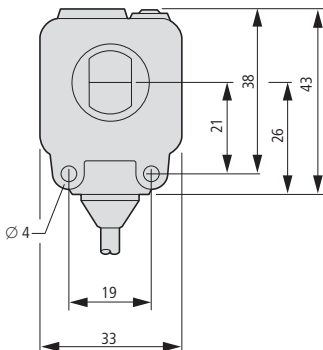


- Photoelectric sensors
(90 % reflective test card)

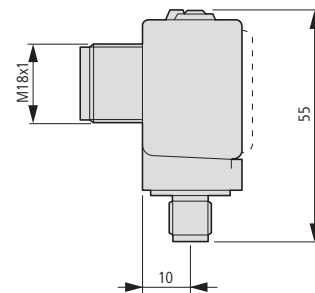
Dimensions

E65 SM Series

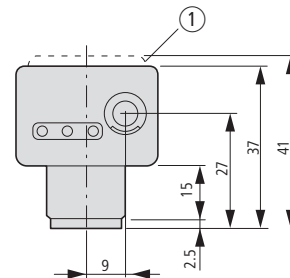
E65...-GD
E65...-GL
E65...-HD
E65...-HL
E65...-HA



E65...-HDD
E65...-HLD
E65...-HAD




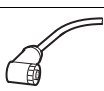


E65...-GDD
E65...-GLD



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










Design, input end	Design output end	Pole	Length mm	Part no. Article no.	Price See price list	Std. pack	
Connecting cables							
	Coupling, straight	Cable end open	AC	3-pole	2000	CSAS3F3CY2202 136265	1 off
					5000	CSAS3F3CY2205 136266	
					10000	CSAS3F3CY2210 136267	
				4-pole	2000	CSAS4A4CY2202 136268	
					5000	CSAS4A4CY2205 136269	
					10000	CSAS4A4CY2210 136312	
			DC	4-pole, 3-wire	2000	CSDS4A3CY2202 136287	
					5000	CSDS4A3CY2205 136288	
					10000	CSDS4A3CY2210 136289	
				4-pole	2000	CSDS4A4CY2202 136292	
					5000	CSDS4A4CY2205 136294	
					10000	CSDS4A4CY2210 136296	
	Coupling, straight	Plug, straight	DC	4-pole	1000	CSDS4A4CY2201-D 136291	
					3000	CSDS4A4CY2203-D 136293	
					5000	CSDS4A4CY2205-D 136295	
					1500	CSDS4A4CY2201.5-D 136316	
	Coupling, straight	Plug, angled	DC	4-pole	1000	CSDR4A4CY2201-D 136278	
					5000	CSDR4A4CY2205-D 136283	
					1500	CSDR4A4CY2201.5-D 136313	
					2000	CSDR4A4CY2202-D 136314	
					3000	CSDR4A4CY2203-D 136315	
	Coupling, angled	Cable end open	AC	3-pole	2000	CSAR3F3CY2202 136262	
					5000	CSAR3F3CY2205 136263	
					10000	CSAR3F3CY2210 136264	
				DC	2000	CSDR4A3CY2202 136272	
					5000	CSDR4A3CY2205 136273	
					5000	CSDR4A3CY2205-LN¹⁾ 136274	
			DC	5000	CSDR4A3CY2205-LP²⁾ 136275		
				10000	CSDR4A3CY2210 136276		
				4-pole	2000	CSDR4A4CY2202 136279	
					5000	CSDR4A4CY2205 136282	
			10000		CSDR4A4CY2210 136284		

Notes

¹⁾ With LED (NPN)








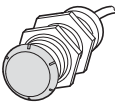
²⁾ With LED (PNP)



	Description	Length mm		Switching type	Pole	Part no. Article no.	Price See price list	Std. pack
Coupler								
	Angled	-	-	-	4-pole	CSDR4 136271		1 off
	Straight	-	-	-	4-pole	CSDS4 136286		1 off
Plug								
	Angled	-	-	-	4-pole	CSDRM4 136285		1 off
	Straight	-	-	-	4-pole	CSDSM4 136297		1 off
M12 (micro) multi-connector block								
	Cable	10000	DC	PNP	4-pole	CBDR4P10 136318		1 off
	Cable	5000		PNP		CBDR4P05 136301		
	Spring cage	-		NPN		CBDR4NSC 136300		
	Spring cage	-		PNP		CBDR4PSC 136303		
	Cable	10000		PNP	6-pole	CBDR6P10 136319		
	Cable	5000		PNP		CBDR6P05 136305		
	Spring cage	-		NPN		CBDR6NSC 136304		
	Spring cage	-		PNP		CBDR6PSC 136320		
	Cable	10000		PNP	8-pole	CBDR8P10 136322		
	Cable	5000		PNP		CBDR8P05 136309		
	Spring cage	-		NPN	CBDR8NSC 136321			
	Spring cage	-		PNP	CBDR8PSC 136311			
Protection cap								
	Plug	-	-	-	-	CBMCAP 136298		1 off
	Coupling	-	-	-	-	CBCAP 136317		
	M12 sensors	-	-	-	-	E57KP12 136202		1 off
	M18 sensors	-	-	-	-	E57KP18 136203		
	M30 sensors	-	-	-	-	E57KP30 136204		
Cable adapters								
	M12 sensors, metal	-	-	-	-	E57KC12 136184		1 off
	M18 sensors, metal	-	-	-	-	E57KC18 136185		
	M30 sensors, metal	-	-	-	-	E57KC30 136186		
	M8 sensors, metal	-	-	-	-	E57KC8 136187		
	M30 sensors, stainless steel	-	-	-	-	E58KC30 135754		

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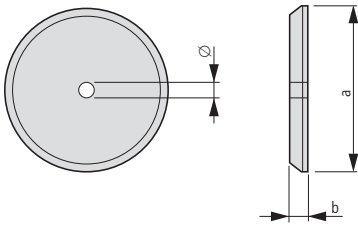
Description	For use with	Material	Part no. Article no.	Price See price list	Std. pack
Fixing brackets					
	M8 sensors	Stainless steel	E57KM8 136191		1 off
	M12 sensors		E57KM12 136188		
	M18 sensors		E57KM18 136189		
	M30 sensors		E57KM30 136190		
	M18 sensors	Aluminium	6161A-6501 135736		2 off
			6161AS5295 135737		1 off
			6161AS7050 135741		
			6167A-6501 135742		
			6167A-6501 135742		
	Adjustable, insulated	Stainless steel	E58KAM18 135749		
	Adjustable, not insulated		E58KAM18U 135751		
	Adjustable, insulated		E58KAM30 135752		
	Adjustable, not insulated		E58KAM30U 135753		
	with ball joint	Plastic	E58KAM18B 135750		
Spare nuts					
	M8 sensors	Metal	E57KNM8 136194		2 off
	M12 sensors		E57KNM12 136193		
	M12 sensors		E57KNS12 136195		
	M18 sensors	Plastic	E57KNC18 136192		
	M18 sensors	Metal	E57KNS18 136196		
	M30 sensors	Metal	E57KNS30 136197		
	M18 sensors	Stainless steel	E58KNS18 135755		1 off
	M30 sensors	Stainless steel	E58KNS30 135756		1 off
Sensor fixing					
	M8 sensors	-	E57KNZ8 136201		1 off
	M12 sensors	-	E57KNZ12 136198		1 off
	M18 sensors	-	E57KNZ18 136199		1 off
	M30 sensors	-	E57KNZ30 136200		1 off



Design (outer dimensions)	Material	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Retro-reflector					
	84 mm Ø	Plastic	6200A-6501 135743	2 off	
	61 mm Ø	Plastic	6200A-6502 135744	1 off	
	33 mm Ø	Plastic	6200A-6504 135745	1 off	
	61 mm Ø	Plastic	6200A-6505 135746	1 off	
	84 mm Ø	Plastic/metal	6200A-6506 135747	1 off	
	38 x 81	Plastic	6200A-6507 135748	1 off	
	63 mm Ø	Plastic	E65KR55 135758	1 off	

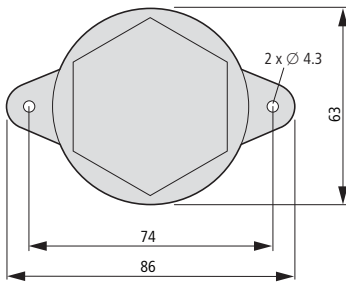
Dimensions

Retro-reflector



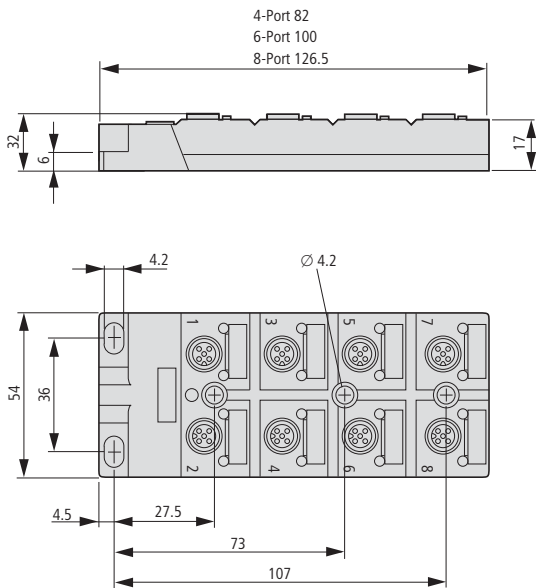
	a	b	Ø
6200A-6501	84	9	5
6200A-6502	61	7.5	-
6200A-6504	33	6	-
6200A-6505	61	7.5	6
6200A-6506	84	7.5	5

E65KR55

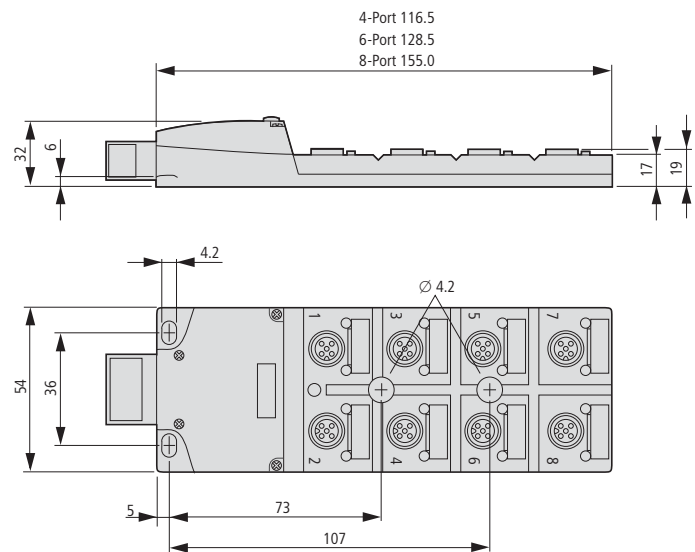


Multi-connection blocks

Cable



Spring cage

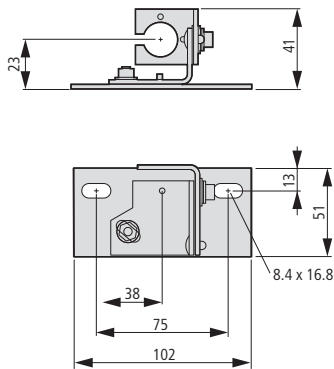


Dimensions

Fixing brackets

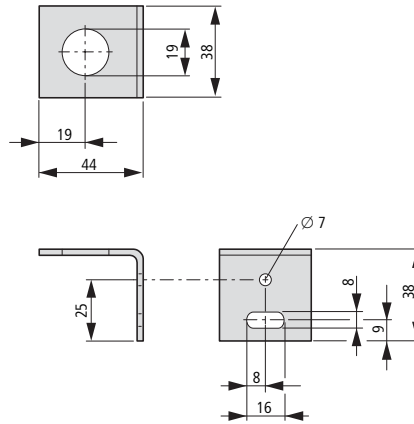
E58KAM18

E58KAM18U



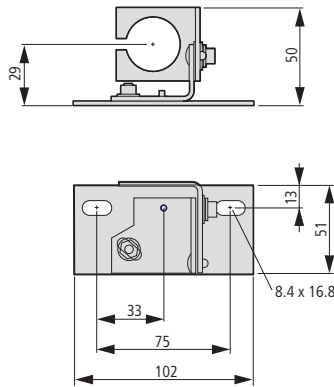
6161A-6501

6161AS-6501

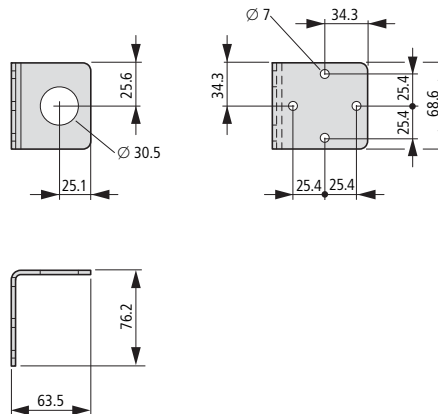


E58KAM30

E58KAM30U



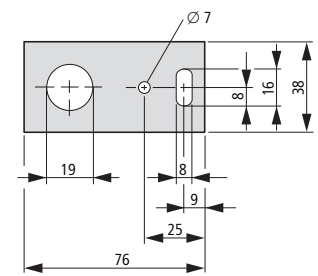
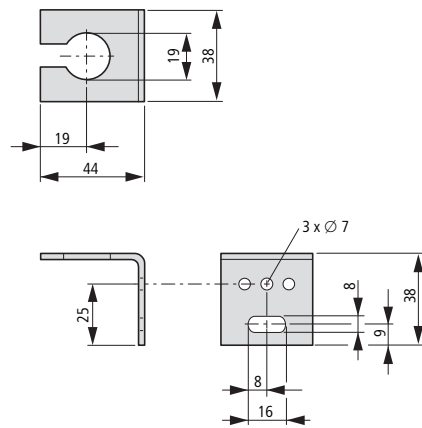
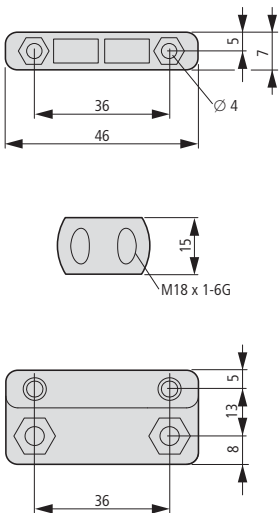
6167A-6501



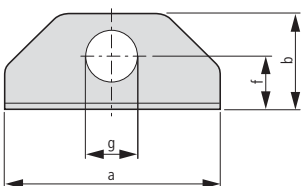
E58KAM18B

6161AS-7050

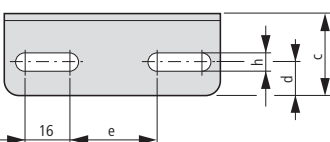
6161AS-5295



E57KM...

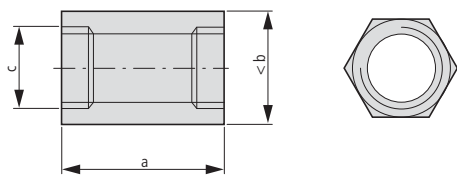


	a	b	c	d	e	f	g	h
8 mm	76	34	29	17	31	19	8	6
12 mm	76	34	29	17	31	19	12	6
18 mm	76	34	29	17	31	19	18	6
30 mm	108	55	45	25	51	29	30	7



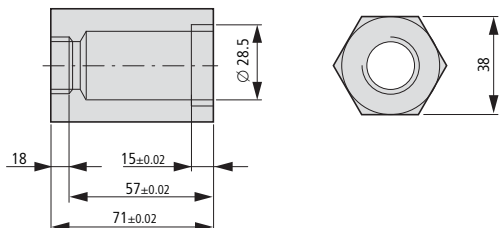
Cable adapters

E57KC...



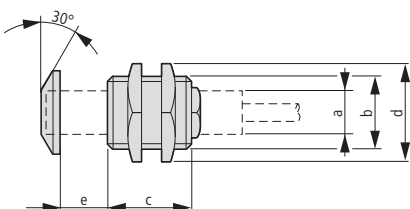
	a	b	c
8 mm	25	25	M8x1
12 mm	38	25	M12x1
18 mm	38	25	M18x1
30 mm	48	38	M30x1.5

E58KC30



Sensor fixing

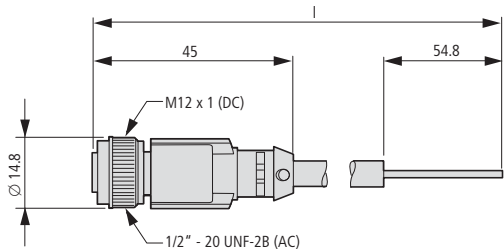
E57KNZ



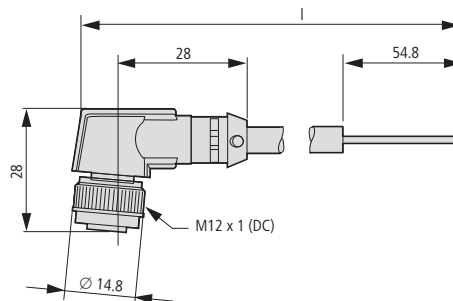
	a	b	c	d	e
8 mm	M8x1	M16x1.5	22	22	9
12 mm	M12x1	M22x1.5	22	29	10
18 mm	M18x1	M30x1.5	30	36	12
30 mm	M30x1.5	M47x1.5	37	51	15

Connecting cables

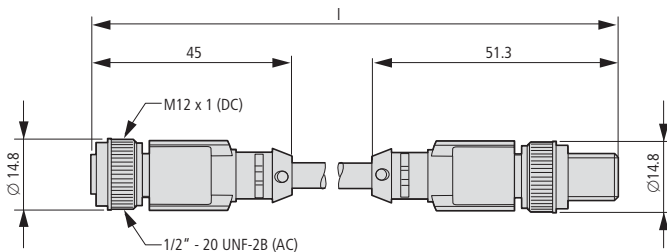
Coupling straight, cable end open



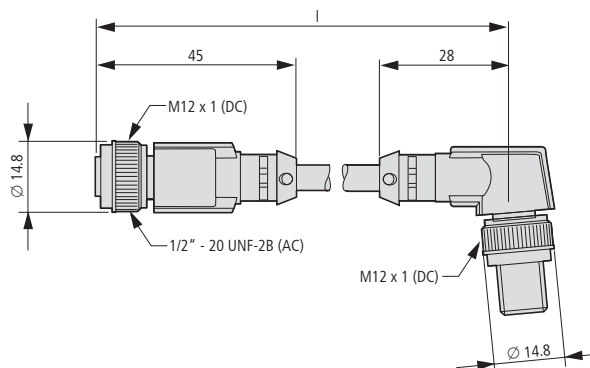
Coupling angled, cable end open



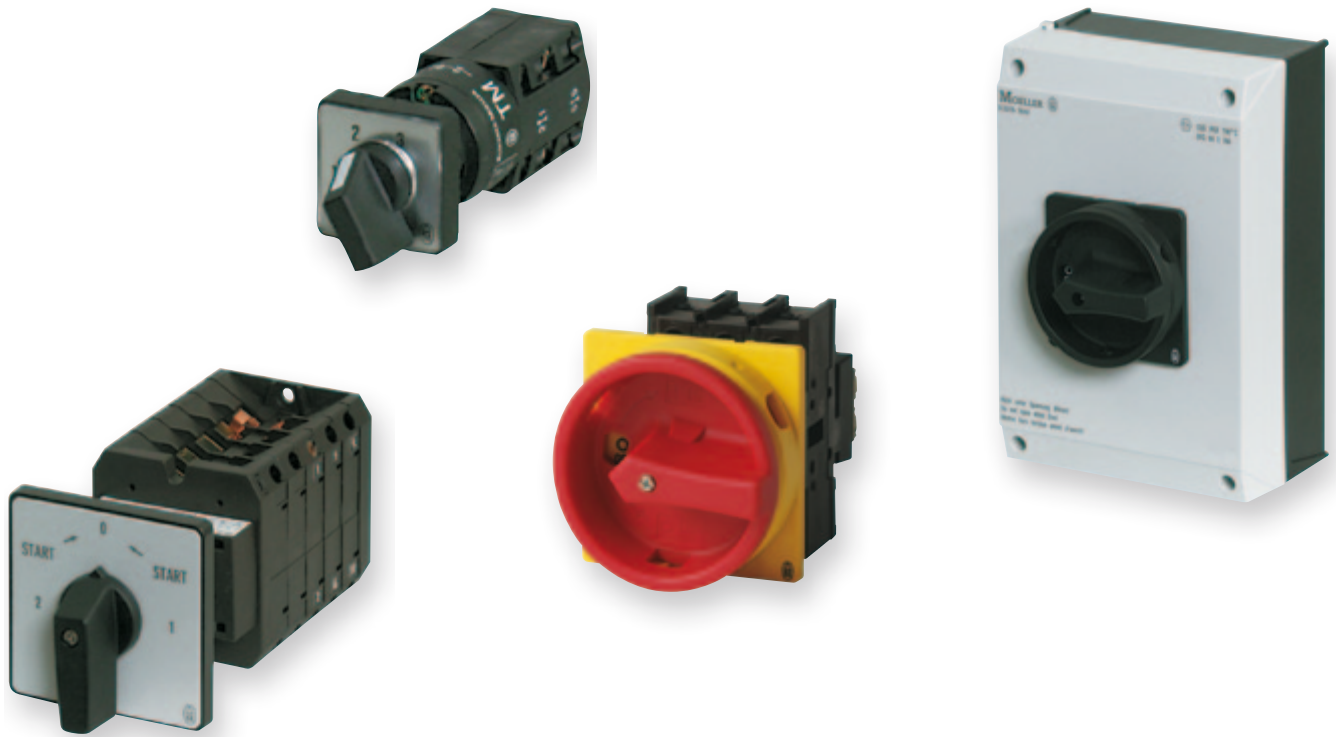
Straight coupling, straight plug



Coupling angled, angled







T Cam switches

P Switch-disconnectors up to 315 A

The high performance and robust cam switch and switch-disconnector are used in industry, manual applications and building services management. Ten basic switch types in four different construction types can be selected in a multitude of standard contact sequences and a wide performance range.



T/TM Cam switches

Performance up to 10/132 kW +++ Non-standard switches possible (see Online Catalog) +++ Several construction types

P switch-disconnectors

Performance up to 110 kW and 315 A +++ Switches up to 100 A (P1, P3) in housing IP65 +++ Four construction types

Switch for ATEX Zone 22

T Cam switches +++ Switch-disconnector up to 100 A (P1, P3) +++ IP65 Protection type

Cam switches, switch-disconnectors up to 315 A

Cam switches, switch-disconnectors

Technical overview

Cam switches, switch-disconnectors	4/2
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System overview

Cam switches	4/4
Switch-disconnectors	4/6

Description

Key to part numbers, modular system	4/8
-------------------------------------	-----

Ordering

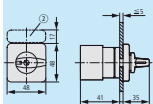
Switch-disconnectors, main switches maintenance/manual override switches	4/10
Switch-disconnectors – On-Off switches	4/22
Switch-disconnectors – safety switches	4/30
Switch-disconnectors – changeover switches	4/32
Switch-disconnectors – reversing switches	4/38
Switch-disconnector - (reversing) star-delta switches, reversing multi-speed switch	4/38
Switch-disconnectors – multi-speed switches	4/40
Control switches - step switches	4/42
Control switches - On-Off switches	4/46
Control switches - changeover switches, manual/automatic switches	4/48
Control switches – On switches	4/50
Universal control switches	4/52
Control switches - instrument switches	4/54
Switch with locking mechanism	4/56
Main switch assembly kits, thumb-grips, maintenance key	4/58
Front plates	4/59
Add-on front plates	4/60
Key operation, locking interlock	4/62
Neutral conductor, auxiliary contact, centre mounting accessories, service distribution board mounting accessories	4/64
Coupling drive, interlock parts, shaft extension	4/65
Shrouds, keys	4/66
Accessories	4/67
Non-standard switches	4/79

Technical data

Switch-disconnectors	4/89
Switch-disconnectors, auxiliary contacts	4/92
Cam switch	4/94

Dimensions

Cam switches, switch-disconnectors	4/100
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Mini rotary switches

Technical overview

Mini rotary switches	4/2
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Description

Key to part numbers, modular system	4/9
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System overview

Mini rotary switches	4/68
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Ordering

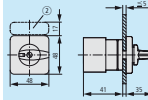
Control circuit isolator, ON/OFF switches	4/60
Changeover switches	4/71
Hand/Auto switches	4/72
Control switch - step switch	4/72
Control switches - group switches, ON/ OFF switches, reversing switches, coding switches	4/75
Locks, front plates	4/77
Non-standard switches	4/83

Technical data

Mini rotary switches	4/99
----------------------	------

Dimensions

Mini rotary switches	4/111
----------------------	-------



CI-K and CI basic enclosures and small enclosures	20/92
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T, P, TM



Switch, basic type		Part no.	TM	T0	T3	T5B	
Max. motor rating			3.0 kW	6.5 kW	13 kW	22 kW	
AC-23 A, 400/415 V, 50/60 Hz							
Max. rated operational current I _u			≤ 10 A	20 A	32 A	63 A	
Switch-disconnectors							
Main switches, maintenance/manual override switches			–	→ 4/10	→ 4/10	→ 4/10	
On-Off switches			→ 4/70	→ 4/22	→ 4/22	→ 4/22	
Safety switches with warning label			–	–	–	→ 4/30	
Changeover switches			–	→ 4/32	→ 4/32	→ 4/32	
Reversing switch with 0 position			–	→ 4/38	→ 4/38	→ 4/38	
Star-delta switches			–	→ 4/38	→ 4/38	→ 4/38	
Reversing star-delta switches			–	→ 4/38	→ 4/38	→ 4/38	
Multi-speed switch			–	→ 4/40	→ 4/40	→ 4/40	
Reversing multi-speed switches			–	→ 4/40	→ 4/40	→ 4/40	
Control switch							
Step switch			→ 4/72	→ 4/42	–	–	
On-Off switches			–	→ 4/46	–	–	
Changeover switches			→ 4/71	→ 4/48	–	–	
Manual/Auto switches			→ 4/72	→ 4/48	–	–	
Push button switch			–	→ 4/50	–	–	
Universal control switches			–	→ 4/52	–	–	
Coding switches			→ 4/76	→ 4/52	–	–	
Series switches			–	→ 4/52	–	–	
Instrument selector switches			–	→ 4/54	–	–	
Group switches			→ 4/75	–	–	–	
ON OFF button			→ 4/75	–	–	–	
Reversing switch			→ 4/76	–	–	–	
Switches with interlocks							
Panic switches without emergency switching off function			–	→ 4/56	–	–	
On-Off switches without Emergency-Stop function			–	→ 4/56	–	–	
Non-standard switches							
			→ 4/83	→ 4/79	→ 4/80	→ 4/81	
Mounting form							
		Surface mounting	.../I...	–	✓	✓	✓
			ATEX	–	✓	✓	✓
		Surface mounting main switches	.../I.../SVB...	–	✓	✓	✓
			ATEX	–	✓	✓	✓
		Mounting	.../E...	✓	✓	✓	✓
		Flush mounting main switch	.../E(A)/SVB...	✓	✓	✓	✓
		Center mounting	.../EZ...	✓	✓	✓	–
		Rear mounting	.../Z...	–	✓	✓	✓
		Rear mounting main switches	.../N/SVB...	–	✓	✓	✓
		Service distribution board mounting	.../IVS...	✓	✓	–	–

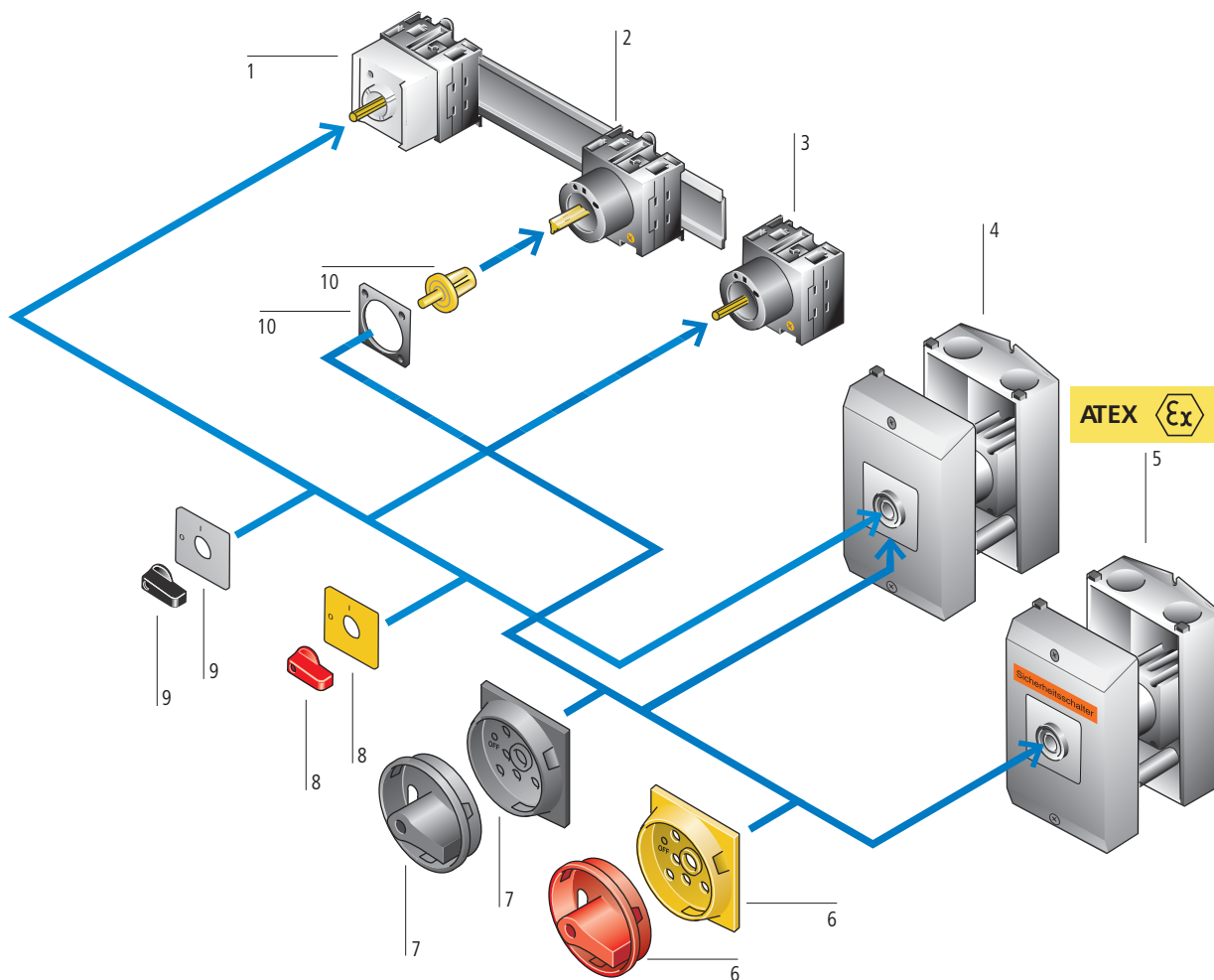
4/4 Cam switches, switch-disconnectors

Cam switches

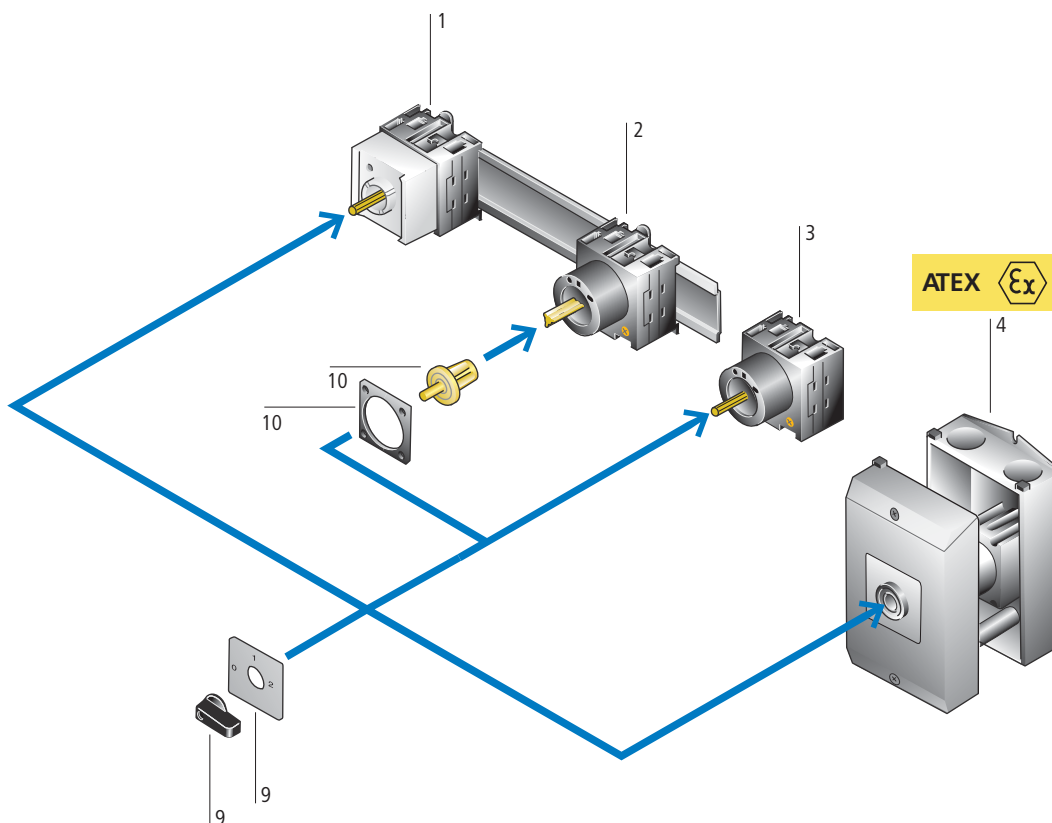
T



System overview

ON-OFF switches T0, T3, T5B, T5



Control switches T0, T3, T5B, T5



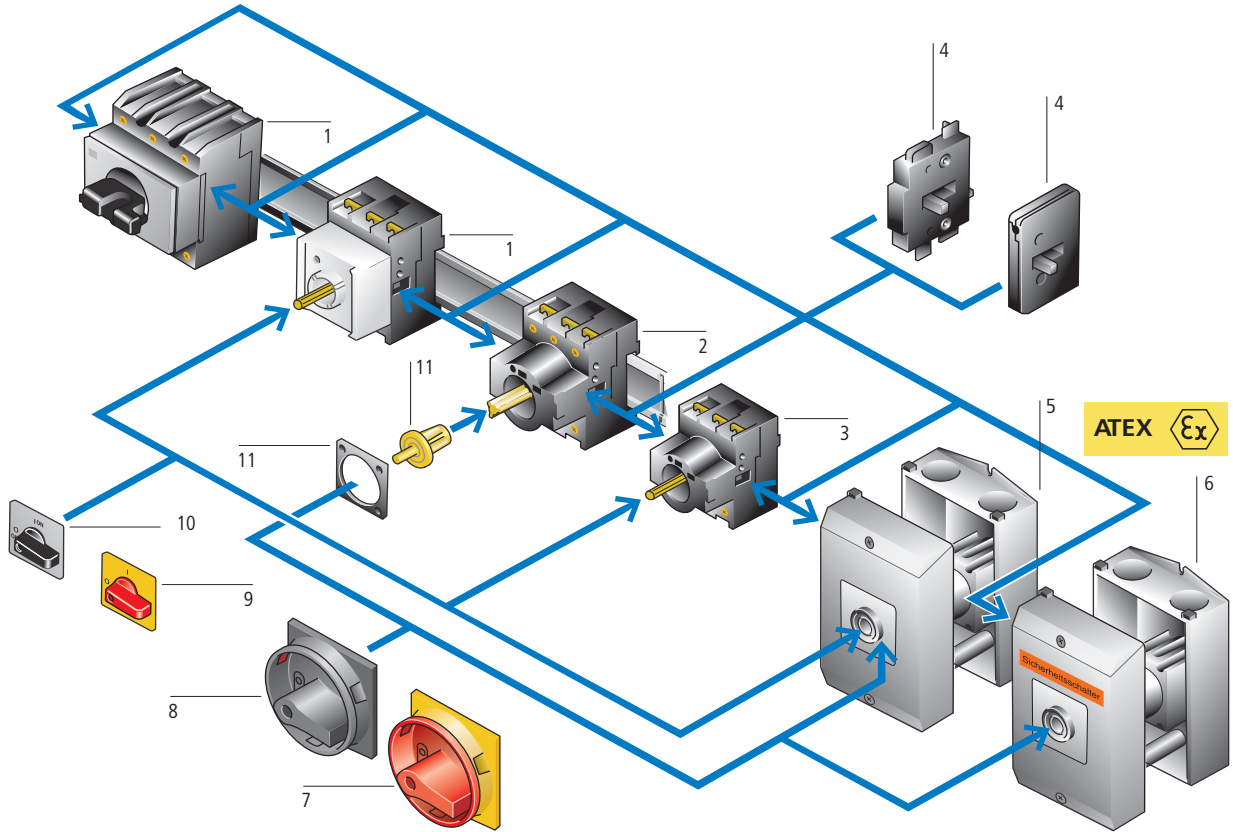
Service distribution board mounting (.../IVS) 1	Flush mounting main switch (.../EA/SVB) 3	Surface mounting main switch (.../L...) 4	Main switch (kit) for use as emergency switching off device 6
Front IP30	Front IP65	IP65	To IEC/EN 60204-1, VDE 0113 part 1
Can be snapped onto top-hat rail as per IEC/EN 60715 (only T0 and T3)	To IEC/EN 60204, VDE 0113 and IEC/EN 60947-3, For T0...: up to 8 contacts; For T3...: up to 12 contacts	totally insulated	With red rotary handle and yellow locking collar
Mounting	N and PE terminal	To IEC/EN 60204, VDE 0113 and IEC/EN 60947-3, For T0...: up to 8 contacts; For T3...: up to 10 contacts	Lockable in the 0 (Off) position
• In service distribution board up to 3 contact units (45 mm mounting depth)	→ Page 4/10	Position 0 lockable with 3 padlocks	→ Page 4/58
• In control panel up to 11 contact units	Center mounting (.../EZ) 3	Enclosures for metric cable glands to EN 50262	Main switch (kit) 7
→ Page 4/22	Front IP65	With an additional terminal	Black rotary handle and locking collar
Rear mounting (.../Z) 2	Mounted in \varnothing 22.3 fixing hole to IEC/EN 60947-5-1	→ Page 4/10	Lockable in the 0 position
Front IP65	"One man mounting" by center fixing	ATEX 	→ Page 4/58
Fixing: optionally with screw fixing or snap fitting, only T0 und T3	→ Page 4/22	→ Page 4/58	Thumb-grip, for use as emergency switching off device 8
For snap fitting to IEC/EN 60715 top-hat rail	Surface mounting (.../L...) 4	Safety switch (.../L...) 5	To IEC/EN 60204-1, VDE 0113 part 1
Drive coupling in door or cover	IP65	IP65	Red thumb-grip and yellow front plate
Connection from front	totally insulated	totally insulated	→ Page 4/58
→ Page 4/22	With an additional terminal	With an additional terminal	Thumb-grip 9
Rear mounting main switch (.../SVB) 2	Enclosures for metric cable glands to EN 50262	With cover fixing in 0 position	Black thumb-grip with front plate
Front IP65	→ Page 4/22	Position 0 lockable with 3 padlocks	→ Page 4/58
To IEC/EN 60204, VDE 0113 and IEC/EN 60947-3		Enclosures for metric cable glands to EN 50262	Coupling drive 10
For T0...: up to 8 contacts; For T3...: up to 12 contacts		"Safety Switch" label; color: orange	Including push-fit shaft
With door interlock in "I" position		→ Page 4/30	For the retrofitting of switch T0(T3)-.../XZ as rear mounting, spare part for T0(T3)/(P1)-.../Z
→ Page 4/10		ATEX 	For the conversion of T5(B)-.../E flush mounting switch to rear mounting, spare part for T5(B)/(P3)-...Z
Flush mounting (.../E) 3		→ Page 4/58	→ Page 4/65
Front IP65			Note:
Flush mounting and connection from rear			Cam switches T5 and T5B are only available with screw connections for fixing on a mounting plate.
Terminals:			
Crosshead screwdriver Pozidrive			
T8 always with extension terminals			
→ Page 4/22			



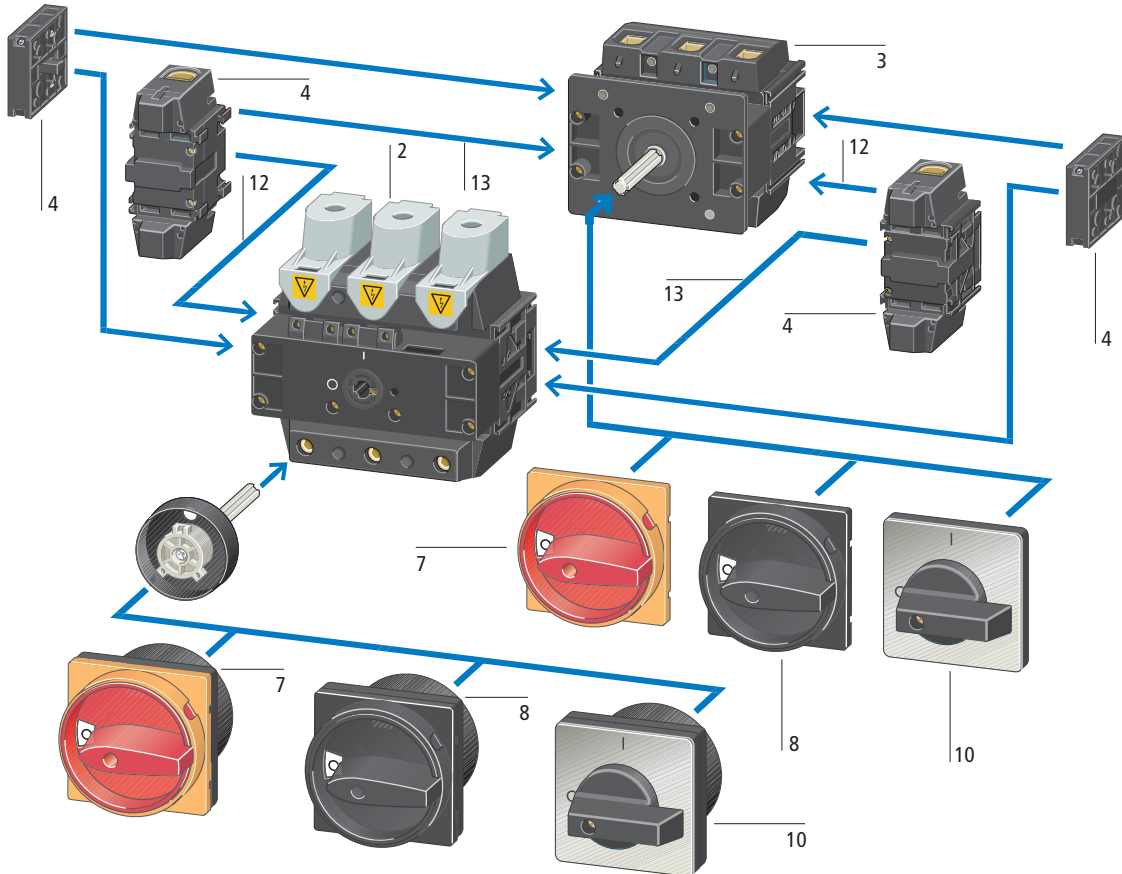
Switch-disconnectors

P

ON-OFF switches P1, P3



ON OFF switches P5





Service distribution board mounting (.../IVS) 1

Front IP30

Fitting dimensions according to DIN 43880

For snap fitting to top-hat rail according to IEC/EN 60715

Space requirement

P1, 3 pole: 3 space units

P3, 3 pole: 4 space units

P3-.../IVS lockable with padlock in "0" position

→ Page 4/22

Rear mounting (.../Z) 2

Front IP65

Fixing either by snap-on or screw fixing

For snap fitting to top-hat rail according to IEC/EN 60715

Drive coupling in door or cover

Connection from front

2 add-on modules can be retrofitted

→ Page 4/22

Rear mounting main switch (...V/SVB) 2

Front IP65

To IEC/EN 60204, VDE 0113 and IEC/EN 60947-3

With door interlock in "I" position

Maintenance key for commissioning or fault-finding

Position 0 lockable with 3 padlocks

2 add-on modules can be retrofitted

→ Page 4/10

Flush mounting (.../E) 3

Front IP65

Flush mounting and connection from rear

Terminals: Crosshead screwdriver Pozidrive

Back-of-hand proof

2 add-on modules can be retrofitted

→ Page 4/22

Flush mounting main switch (.../EA/SVB) 3

Front IP65

To IEC/EN 60204, VDE 0113 and IEC/EN 60947-3

N and PE terminal

Position 0 lockable with 3 padlocks

2 add-on modules can be retrofitted

→ Page 4/10

Center mounting (.../EZ) 3

Front IP65

Mounted in Ø 22.3 fixing hole to IEC/EN 60947-5-1

"One man mounting" by center fixing

→ Page 4/22

Add-on modules 4

Switchable N conductor (early-make N/O contact)

Auxiliary contacts

Finger proof

Auxiliary N/O contact: Always connected as a load-shedding contact (late-make on, late-break off)

→ Page 4/64

Surface mounting (.../I...) 5

IP65

totally insulated

With an additional terminal

Installable add-on modules:

P1: HI 11-P1/P3 or N-P1..., P3: HI 11-P1/P3 and/or N-P5

Enclosures for metric cable glands to EN 50262

→ Page 4/22

Surface mounting main switch (.../I...) 5

IP65

totally insulated

With an additional terminal

To IEC/EN 60204, VDE 0113 and IEC/EN 60947-3

Position 0 lockable with 3 padlocks

Installable add-on modules:

P1: HI 11-P1/P3 or N-P1..., P3: HI 11-P1/P3 and/or N-P5

Enclosures for metric cable glands to EN 50262

→ Page 4/10



→ Page 4/58

Safety switch (.../I...-SI) 6

IP65

totally insulated

With an additional terminal

With cover fixing in 0 position

Position 0 lockable with 3 padlocks

"Safety Switch" label; color: orange

Enclosures for metric cable glands to EN 50262

→ Page 4/30



→ Page 4/58

Main switch (kit) for use as emergency switching off device 7

To IEC/EN 60204-1, VDE 0113 Part 1

With red rotary handle and yellow locking collar

Lockable in the 0 (Off) position

→ Page 4/58

Main switch (kit) 8

Black rotary handle and locking collar

Lockable in the 0 position

→ Page 4/58

Thumb-grip, for use as emergency switching off device 9

To IEC/EN 60204-1, VDE 0113 Part 1

Red thumb-grip and yellow front plate

→ Page 4/58

Thumb-grip 10

Black thumb-grip with front plate

→ Page 4/58

Coupling drive 11

Including push-fit shaft

For retrofitting mounting switches T0(T3)-.../XZ as rear mounting design spare part for T0(T3)/(P1)-.../Z

For converting flush mounting switches T5(B)-.../E into rear mounting switch spare part for T5(B)/(P3)-.../Z

→ Page 4/65

Ground terminal 12

Front mounting, right

Service distribution board mounting, left

Neutral terminal 13

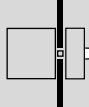









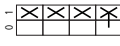

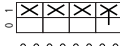
Front mounting, left

Service distribution board mounting, right

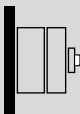
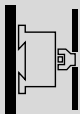
































→ Page 4/64

Ordering



Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O 	N/O  N/C 	400 V P kW	I_u A				
Main switch as emergency switching off/emergency stop device									
With red rotary handle and yellow locking collar To IEC/EN 60204-1, VDE 0113 Part 1 Lockable in the 0 (Off) position									
Without auxiliary contacts									
		1	0	0	6.5	20	T0-1-8200/EA/SVB 053110		1 Off 
					13	32	T3-1-8200/EA/SVB¹⁾ 066576		
					22	63	T5B-1-8200/EA/SVB³⁾ 094279		
		2	0	0	6.5	20	T0-1-102/EA/SVB¹⁾ 091078		
					13	32	T3-1-102/EA/SVB¹⁾ 014374		
					22	63	T5B-1-102/EA/SVB³⁾ 094469		
					30	100	T5-1-102/EA/SVB 098808		1 Off
		3	0	0	6.5	20	T0-2-1/EA/SVB¹⁾ 038873		1 Off 
					13	25	P1-25/EA/SVB¹⁾ 041097		
					13	25			
					15	32	P1-32/EA/SVB¹⁾ 081438		
					37	63	P3-63/EA/SVB¹⁾ 031607		
					45	125	P5-125/EA/SVB⁴⁾ 280898		
					50	100	P3-100/EA/SVB¹⁾ 074320		
					55	160	P5-160/EA/SVB⁴⁾ 280922		
					90	250	P5-250/EA/SVB⁴⁾ 280936		
					110	315	P5-315/EA/SVB⁴⁾ 280950		
		3 + N	0	0	6.5	20	T0-2-8900/EA/SVB¹⁾ 207400		1 Off 
		3 + N	0	0	13	25	P1-25/EA/SVB/N¹⁾ 081587		
					13	25			
					15	32	P1-32/EA/SVB/N¹⁾ 091079		
					15	32			
					37	63	P3-63/EA/SVB/N¹⁾ 010398		
					45	125	P5-125/EA/SVB/N⁴⁾ 280910		
					50	100	P3-100/EA/SVB/N¹⁾ 019890		
					55	160	P5-160/EA/SVB/N⁴⁾ 280924		



Surface mounting IP65		Rear mounting Front IP65		Information relevant for export to North America	
	Totally insulated			 	
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
T0-1-8200/11/SVB 207145		1 Off	T0-1-8200/V/SVB 057856		1 Off  
T3-1-8200/12/SVB²⁾ 207200		1 Off  	T3-1-8200/V/SVB¹⁾ 007255		
T5B-1-8200/14/SVB³⁾ 207240		1 Off  	T5B-1-8200/V/SVB³⁾ 094273		
T0-1-102/11/SVB 207143		1 Off	T0-1-102/V/SVB¹⁾ 095824		
T3-1-102/12/SVB²⁾ 207198		1 Off  	T3-1-102/V/SVB¹⁾ 019120		
T5B-1-102/14/SVB³⁾ 207238		1 Off  	T5B-1-102/V/SVB³⁾ 094463		
T5-1-102/15/SVB 207273		1 Off			
T0-2-1/11/SVB 207147		1 Off	T0-2-1/V/SVB¹⁾ 043619		1 Off  
P1-25/12/SVB²⁾ 207293		1 Off  	P1-25/V/SVB²⁾ 055335		
P1-25/12H/SVB 226900		1 Off			
P1-32/12/SVB²⁾ 207314		1 Off  	P1-32/V/SVB¹⁾ 095676		
P3-63/14/SVB¹⁾ 207343		1 Off  	P3-63/V/SVB¹⁾ 048218		
			P5-125/V/SVB⁴⁾ 280914		
P3-100/15/SVB¹⁾ 207373		1 Off  	P3-100/V/SVB¹⁾ 088558		
			P5-160/V/SVB⁴⁾ 280928		
			P5-250/V/SVB⁴⁾ 280942		
			P5-315/V/SVB⁴⁾ 280956		
T0-2-8900/11/SVB 207151		1 Off	T0-2-8900/V/SVB¹⁾ 207405		1 Off  
P1-25/12/SVB/N²⁾ 207298		1 Off  	P1-25/V/SVB/N²⁾ 086333		
P1-25/12H/SVB/N 227860		1 Off			
P1-32/12/SVB/N²⁾ 207319		1 Off  	P1-32/V/SVB/N¹⁾ 095825		
P1-32/12H/SVB/N 227871		1 Off			
P3-63/14/SVB/N¹⁾ 207349		1 Off  	P3-63/V/SVB/N¹⁾ 015144		
			P5-125/V/SVB/N⁴⁾ 280916		
P3-100/15/SVB/N¹⁾ 207379		1 Off  	P3-100/V/SVB/N¹⁾ 024636		
			P5-160/V/SVB/N⁴⁾ 280930		


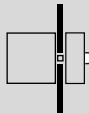
1)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

2)
Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

3)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV7
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 12, 13

4)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV, NLRV7
CSA File No. 223805
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

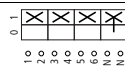
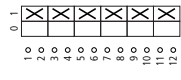
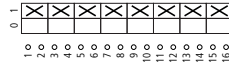


Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O	N/O N/C	400 V P kW	I _u A				

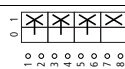
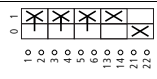
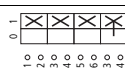
Main switch as emergency switching off/emergency stop device

With red rotary handle and yellow locking collar
To IEC/EN 60204-1, VDE 0113 Part 1
Lockable in the 0 (Off) position

Without auxiliary contacts

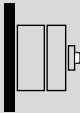
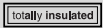
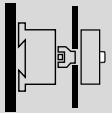













	3 + N	0	0	90	250	P5-250/EA/SVB/N⁽⁴⁾ 280938	1 Off
	3 + N	0	0	110	315	P5-315/EA/SVB/N⁽⁴⁾ 280952	
	6	0	0	6.5	20	T0-3-8342/EA/SVB⁽¹⁾ 029382	
				13	32	T3-3-8342/EA/SVB⁽¹⁾ 071326	
				22	63	T5B-3-8342/EA/SVB⁽³⁾ 092308	
				30	100	T5-3-8342/EA/SVB 096383	1 Off
	8	0	0	6.5	20	T0-4-8344/EA/SVB⁽¹⁾ 008267	1 Off
				13	32	T3-4-8344/EA/SVB⁽¹⁾ 008964	
				22	63	T5B-4-8344/EA/SVB⁽³⁾ 092062	
				30	95		
				30	100	T5-4-8344/EA/SVB 095961	1 Off

With auxiliary contacts

	3	1	0	6.5	20	T0-2-15679/EA/SVB⁽¹⁾ 081588	1 Off
	3	1	1	13	25	P1-25/EA/SVB/HI11⁽¹⁾ 091080	
				13	25		
				15	32	P1-32/EA/SVB/HI11⁽¹⁾ 072567	
				15	32		
				37	63	P3-63/EA/SVB/HI11⁽¹⁾ 019891	
				50	100	P3-100/EA/SVB/HI11⁽¹⁾ 029383	
	3	1	0	45	125	P5-125/EA/SVB/HI10⁽⁴⁾ 280899	1 Off
				55	160	P5-160/EA/SVB/HI10⁽⁴⁾ 280923	
				90	250	P5-250/EA/SVB/HI10⁽⁴⁾ 280937	
				110	315	P5-315/EA/SVB/HI10⁽⁴⁾ 280951	


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T, P

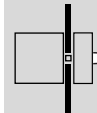
Surface mounting IP65			Rear mounting Front IP65			
						
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
						
			P5-250/V/SVB/N⁴⁾ 280944		1 Off 	1) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 3R, 12
			P5-315/V/SVB/N⁴⁾ 280958			
T0-3-8342/11/SVB 207159		1 Off	T0-3-8342/V/SVB¹⁾ 034128			
T3-3-8342/12/SVB²⁾ 207208		1 Off 	T3-3-8342/V/SVB¹⁾ 076072			
T5B-3-8342/14/SVB³⁾ 207242		1 Off 	T5B-3-8342/V/SVB³⁾ 092300			
T5-3-8342/15/SVB 207279		1 Off	T5-3-8342/V/SVB 096381		1 Off	
T0-4-8344/11/SVB 207163		1 Off	T0-4-8344/V/SVB¹⁾ 014007		1 Off 	
T3-4-8344/12/SVB²⁾ 207212		1 Off 	T3-4-8344/V/SVB¹⁾ 020598			2) Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 3R, 12
T5B-4-8344/14/SVB³⁾ 207248		1 Off 	T5B-4-8344/V/SVB³⁾ 092056			
T5-4-8344/15/SVB 207283		1 Off	T5-4-8344/V/SVB 095959		1 Off	
T0-2-15679/11/SVB 207149		1 Off	T0-2-15679/V/SVB¹⁾ 086334		1 Off 	
P1-25/12/SVB/HI11²⁾ 207297		1 Off 	P1-25/V/SVB/HI11¹⁾ 095826			3) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV7 CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 12, 13
P1-25/12H/SVB/HI11 226902		1 Off				
P1-32/12/SVB/HI11¹⁾ 207318		1 Off 	P1-32/V/SVB/HI11¹⁾ 015145			
P1-32/12H/SVB/HI11 227870		1 Off				
P3-63/14/SVB/HI11¹⁾ 207348		1 Off 	P3-63/V/SVB/HI11¹⁾ 024637			
P3-100/15/SVB/HI11¹⁾ 207378		1 Off 	P3-100/V/SVB/HI11¹⁾ 034129			
			P5-125/V/SVB/HI10⁴⁾ 280915		1 Off 	4) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV, NLRV7 CSA File No. 223805 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 3R, 12
			P5-160/V/SVB/HI10⁴⁾ 280929			
			P5-250/V/SVB/HI10⁴⁾ 280943			
			P5-315/V/SVB/HI10⁴⁾ 280957			





Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current
	 FS 908	Pole N/O	N/O N/C	400 V P kW	I _u A

Flush mounting
Front IP65



Part no.
Article no.

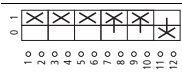
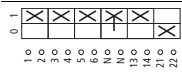

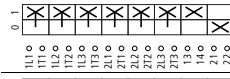
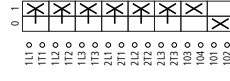
Price
See price
list

Std. pack

Main switch as emergency switching off/emergency stop device

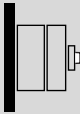
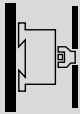
























With red rotary handle and yellow locking collar
To IEC/EN 60204-1, VDE 0113 Part 1
Lockable in the 0 (Off) position

With auxiliary contacts

	3	2	1	6.5	20	T0-3-15683/EA/SVB¹⁾ 015571	1 Off 
	3	2	1	13	32	T3-3-15683/EA/SVB¹⁾ 040478	
	3 + N	1	1	6.5	20	T0-3-15680/EA/SVB¹⁾ 038875	1 Off 
				13	32	P1-25/EA/SVB/N/HI11¹⁾ 048367	
				13	32	T3-3-15680/EA/SVB¹⁾ 012002	
	3 + N	1	1	15	32	P1-32/EA/SVB/N/HI11¹⁾ 057859	1 Off 
	3 + N	1	1	6.5	20	T0-3-8901/EA/SVB¹⁾ 231932	
				13	32	T3-3-8901/EA/SVB¹⁾ 231945	
				22	63	T5B-3-8901/EA/SVB³⁾ 207420	
	3 + N	1	1	37	63	T5-3-8901/EA/SVB 207408	1 Off 
	3 + N	1	1	50	100	P3-63/EA/SVB/N/HI11¹⁾ 067351	
						P3-100/EA/SVB/N/HI11¹⁾ 076843	1 Off 
	6	1	1	6.5	20	T0-4-15682/EA/SVB¹⁾ 019892	
				13	32	T3-4-15682/EA/SVB¹⁾ 054716	
				22	63	T5B-4-15682/EA/SVB³⁾ 207425	
				30	100	T5-4-15682/EA/SVB 207413	
	6	1	1	55	160		
	6	1	1	132	275		

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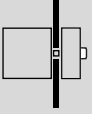

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Surface mounting IP65			Rear mounting Front IP65			
	totally insulated					
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
						 
T0-3-15683/I1/SVB 207157		1 Off	T0-3-15683/V/SVB¹⁾ 015634		1 Off  	<p>1)</p> <p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 3R, 12</p>
T3-3-15683/I2/SVB²⁾ 207206		1 Off  	T3-3-15683/V/SVB¹⁾ 045224			
T0-3-15680/I1/SVB 207153		1 Off	T0-3-15680/V/SVB¹⁾ 043621			
T3-3-15680/I2/SVB²⁾ 207202		1 Off  	P1-25/V/SVB/N/HI11¹⁾ 053113			
			T3-3-15680/V/SVB¹⁾ 016748			
			P1-32/V/SVB/N/HI11¹⁾ 062605			
T0-3-8901/I1/SVB 231934		1 Off				
T3-3-8901/I2/SVB²⁾ 218987		1 Off  				
T5B-3-8901/I4/SVB³⁾ 207244		1 Off  	T5B-3-8901/V/SVB³⁾ 207422		1 Off  	
T5-3-8901/I5/SVB 207277		1 Off				
P3-63/I4/SVB/N/HI11¹⁾ 207350		1 Off  	P3-63/V/SVB/N/HI11¹⁾ 072097		1 Off  	
P3-100/I5/SVB/N/HI11¹⁾ 207380		1 Off  	P3-100/V/SVB/N/HI11¹⁾ 081589			
T0-4-15682/I1/SVB 207161		1 Off	T0-4-15682/V/SVB¹⁾ 024638			
T3-4-15682/I2/SVB²⁾ 207210		1 Off  	T3-4-15682/V/SVB¹⁾ 059462			
T5B-4-15682/I4/SVB³⁾ 207246		1 Off  	T5B-4-15682/V/SVB³⁾ 207427			
T5-4-15682/I5/SVB 207281		1 Off	T5-4-15682/V/SVB 207415		1 Off	<p>3)</p> <p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV7</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 12, 13</p>
T6-160-6/I45/SVB/HI11⁵⁾ 201448			T6-160-6/V/SVB/HI11 200619			
T8-3-8342/I48/SVB/HI11⁶⁾ 201450			T8-3-8342/V/SVB/HI11 200620			



Notes
⁵⁾ Enclosure without flanges with K95/1N/BR
⁶⁾ With KS4-CI and K150/1/BR: Ingress protection IP64





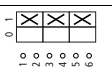

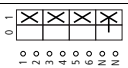





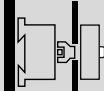
















Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O	N/O N/C	400 V P kW	I _u A				

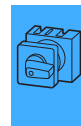
Main switch without emergency switching off/emergency stop function

With black rotary handle and locking collar
Lockable in the 0 (Off) position

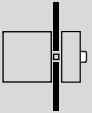

Without auxiliary contacts

	1	0	0	6.5	20	T0-1-8200/EA/SVB-SW⁽¹⁾ 055483	1 Off 
				13	32	T3-1-8200/EA/SVB-SW⁽¹⁾ 068949	
				22	63	T5B-1-8200/EA/SVB-SW⁽³⁾ 094278	
	2	0	0	6.5	20	T0-1-102/EA/SVB-SW⁽¹⁾ 093451	1 Off 
				13	32	T3-1-102/EA/SVB-SW⁽¹⁾ 016747	
				22	63	T5B-1-102/EA/SVB-SW⁽³⁾ 094468	
				30	100	T5-1-102/EA/SVB-SW 098807	
	3	0	0	6.5	20	T0-2-1/EA/SVB-SW⁽¹⁾ 041246	1 Off 
				13	25	P1-25/EA/SVB-SW⁽¹⁾ 048365	
				13	25		
				15	32	P1-32/EA/SVB-SW⁽¹⁾ 053111	
				15	32		
				37	63	P3-63/EA/SVB-SW⁽¹⁾ 057857	
				50	100	P3-100/EA/SVB-SW⁽¹⁾ 062603	
				45	125	P5-125/EA/SVB-SW⁽⁴⁾ 280911	
				55	160	P5-160/EA/SVB-SW⁽⁴⁾ 280925	
				90	250	P5-250/EA/SVB-SW⁽⁴⁾ 280939	
110	315	P5-315/EA/SVB-SW⁽⁴⁾ 280953					
	3 + N	0	0	6.5	20	T0-2-8900/EA/SVB-SW⁽¹⁾ 207401	1 Off 
				13	25	P1-25/EA/SVB-SW/N⁽¹⁾ 083960	
				13	25		
				15	32	P1-32/EA/SVB-SW/N⁽¹⁾ 093452	
				15	32		
				15	32		
				37	63	P3-63/EA/SVB-SW/N⁽¹⁾ 012771	
				50	100	P3-100/EA/SVB-SW/N⁽¹⁾ 022263	

Surface mounting IP65			Rear mounting Front IP65			Information relevant for export to North America
						
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	
T0-1-8200/11/SVB-SW 207146		1 Off	T0-1-8200/V/SVB-SW¹⁾ 060229		1 Off 	1) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 3R, 12
T3-1-8200/12/SVB-SW²⁾ 207201		1 Off 	T3-1-8200/V/SVB-SW¹⁾ 004882			
T5B-1-8200/14/SVB-SW³⁾ 207241		1 Off 				
T0-1-102/11/SVB-SW 207144		1 Off	T0-1-102/V/SVB-SW¹⁾ 022330			
T3-1-102/12/SVB-SW²⁾ 207199		1 Off 	T3-1-102/V/SVB-SW¹⁾ 021493			
T5B-1-102/14/SVB-SW³⁾ 207239		1 Off 	T5B-1-102/V/SVB-SW³⁾ 094462			
T0-2-1/11/SVB-SW 207148		1 Off	T0-2-1/V/SVB-SW¹⁾ 045992		1 Off 	2) Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 3R, 12
P1-25/12/SVB-SW²⁾ 207294		1 Off 	P1-25/V/SVB-SW²⁾ 050738			
P1-25/12H/SVB-SW 227861		1 Off				
P1-32/12/SVB-SW²⁾ 207315		1 Off 	P1-32/V/SVB-SW¹⁾ 055484			
P1-32/12H/SVB-SW 227872		1 Off				
P3-63/14/SVB-SW¹⁾ 207344		1 Off 	P3-63/V/SVB-SW¹⁾ 060230			
P3-100/15/SVB-SW¹⁾ 207374		1 Off 	P3-100/V/SVB-SW¹⁾ 064976			
			P5-125/V/SVB-SW⁴⁾ 280917			3) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV7 CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 12, 13
			P5-160/V/SVB-SW⁴⁾ 280931			
			P5-250/V/SVB-SW⁴⁾ 280945			
			P5-315/V/SVB-SW⁴⁾ 280959			
T0-2-8900/11/SVB-SW 207152		1 Off	T0-2-8900/V/SVB-SW¹⁾ 207406		1 Off 	
P1-25/12/SVB-SW/N²⁾ 207296		1 Off 	P1-25/V/SVB-SW/N¹⁾ 088706			
P1-25/12H/SVB-SW/N 227863		1 Off				
P1-32/12/SVB-SW/N²⁾ 207317		1 Off 	P1-32/V/SVB-SW/N¹⁾ 098198			4) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV, NLRV7 CSA File No. 223805 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified Suitable for Branch circuits, suitable as motor disconnect Degree of Protection IEC: IP65; UL/CSA Type 3R, 12
P1-32/12H/SVB-SW/N 227874		1 Off				
P1-32/12H/N 227869		1 Off				
P3-63/14/SVB-SW/N¹⁾ 207346		1 Off 	P3-63/V/SVB-SW/N¹⁾ 017517			
P3-100/15/SVB-SW/N¹⁾ 207376		1 Off 	P3-100/V/SVB-SW/N¹⁾ 027009			



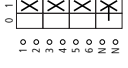

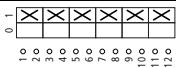

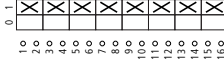



Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O	N/O N/C	400 V P kW	I _u A				

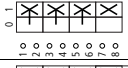

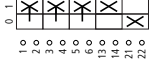

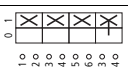

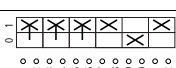



Main switch without emergency switching off/emergency stop function

With black rotary handle and locking collar
Lockable in the 0 (Off) position

Without auxiliary contacts

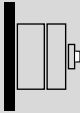

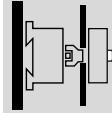
































	3 + N	0	0	45 55 90 110	125 160 250 315	P5-125/EA/SVB-SW/N⁽⁴⁾ 280913 P5-160/EA/SVB-SW/N⁽⁴⁾ 280927 P5-250/EA/SVB-SW/N⁽⁴⁾ 280941 P5-315/EA/SVB-SW/N⁽⁴⁾ 280955	1 Off 
	6	0	0	6.5 13 22 30	20 32 63 100	T0-3-8342/EA/SVB-SW⁽¹⁾ 031755 T3-3-8342/EA/SVB-SW⁽¹⁾ 073699 T5B-3-8342/EA/SVB-SW⁽³⁾ 092307 T5-3-8342/EA/SVB-SW 096382	1 Off 
	8	0	0	6.5 13 22 30 30	20 32 63 95 100	T0-4-8344/EA/SVB-SW⁽¹⁾ 008268 T3-4-8344/EA/SVB-SW⁽¹⁾ 008965 T5B-4-8344/EA/SVB-SW⁽³⁾ 092061 T5-4-8344/EA/SVB-SW 095960	1 Off 

With auxiliary contacts

	3	1	0	6.5	20	T0-2-15679/EA/SVB-SW⁽¹⁾ 083961	1 Off 
	3	1	1 1 1 1 1 1	13 13 13 15 15 37 50	25 25 25 32 32 63 100	P1-25/EA/SVB-SW/HI11⁽¹⁾ 070194 P1-32/EA/SVB-SW/HI11⁽¹⁾ 012772 P3-63/EA/SVB-SW/HI11⁽¹⁾ 022264 P3-100/EA/SVB-SW/HI11⁽¹⁾ 031756	1 Off 
	3	1	0 0 0	45 55 90 110	125 160 250 315	P5-125/EA/SVB-SW/HI10⁽⁴⁾ 280912 P5-160/EA/SVB-SW/HI10⁽⁴⁾ 280926 P5-250/EA/SVB-SW/HI10⁽⁴⁾ 280940 P5-315/EA/SVB-SW/HI10⁽⁴⁾ 280954	1 Off 
	3	2	1	6.5	20	T0-3-15683/EA/SVB-SW⁽¹⁾ 015600	1 Off 
	3	2	1	13	32	T3-3-15683/EA/SVB-SW⁽¹⁾ 042851	1 Off 

HPL04019EN

T, P

Surface mounting IP65		Rear mounting Front IP65		Information relevant for export to North America	
				 	
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
			P5-125/V/SVB-SW/N⁽⁴⁾ 280919		1 Off  
			P5-160/V/SVB-SW/N⁽⁴⁾ 280933		
			P5-250/V/SVB-SW/N⁽⁴⁾ 280947		
			P5-315/V/SVB-SW/N⁽⁴⁾ 280961		
T0-3-8342/11/SVB-SW 207160		1 Off	T0-3-8342/V/SVB-SW⁽¹⁾ 036501		1 Off  
T3-3-8342/12/SVB-SW⁽²⁾ 207209		1 Off  	T3-3-8342/V/SVB-SW⁽¹⁾ 078445		
T5B-3-8342/14/SVB-SW⁽³⁾ 207243		1 Off  	T5B-3-8342/V/SVB-SW⁽³⁾ 092299		
T5-3-8342/15/SVB-SW 207280		1 Off	T5-3-8342/V/SVB-SW 096380		1 Off
T0-4-8344/11/SVB-SW 207164		1 Off	T0-4-8344/V/SVB-SW⁽¹⁾ 008272		1 Off  
T3-4-8344/12/SVB-SW⁽²⁾ 207213		1 Off  	T3-4-8344/V/SVB-SW⁽¹⁾ 008967		
T5B-4-8344/14/SVB-SW⁽³⁾ 207249		1 Off  	T5B-4-8344/V/SVB-SW⁽³⁾ 092055		
T5-4-8344/15/SVB-SW 207284		1 Off	T5-4-8344/V/SVB-SW 095958		1 Off
T0-2-15679/11/SVB-SW 207150		1 Off	T0-2-15679/V/SVB-SW⁽¹⁾ 088707		1 Off  
P1-25/12/SVB-SW/HI11⁽²⁾ 207295		1 Off  	P1-25/V/SVB-SW/HI11⁽¹⁾ 098199		
P1-25/12H/SVB-SW/HI11 227862		1 Off			
P1-25/12H/SVB/HI11 226902		1 Off			
P1-32/12/SVB-SW/HI11⁽¹⁾ 207316		1 Off  	P1-32/V/SVB-SW/HI11⁽¹⁾ 017518		
P1-32/12H/SVB-SW/HI11 227873		1 Off			
P3-63/14/SVB-SW/HI11⁽¹⁾ 207345		1 Off  	P3-63/V/SVB-SW/HI11⁽¹⁾ 027010		
P3-100/15/SVB-SW/HI11⁽¹⁾ 207375		1 Off  	P3-100/V/SVB-SW/HI11⁽¹⁾ 036502		
			P5-125/V/SVB-SW/HI10⁽⁴⁾ 280918		1 Off  
			P5-160/V/SVB-SW/HI10⁽⁴⁾ 280932		
			P5-250/V/SVB-SW/HI10⁽⁴⁾ 280946		
			P5-315/V/SVB-SW/HI10⁽⁴⁾ 280960		
T0-3-15683/11/SVB-SW 207158		1 Off	T0-3-15683/V/SVB-SW⁽¹⁾ 015664		1 Off  
T3-3-15683/12/SVB-SW⁽²⁾ 207207		1 Off  			




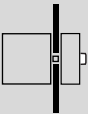
1)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

2)
Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

3)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV7
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 12, 13

4)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV, NLRV7
CSA File No. 223805
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12



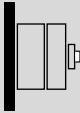
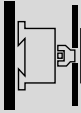
Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O	N/O N/C	400 V P kW	I _u A				

Main switch without emergency switching off/emergency stop function



With black rotary handle and locking collar
Lockable in the 0 (Off) position

With auxiliary contacts

	3 + N	1	1	6.5	20	T0-3-15680/EA/SVB-SW ⁽¹⁾ 041248	1 Off
				13	32	P1-25/EA/SVB-SW/N/Hi11 ⁽¹⁾ 050740	
				13	32	T3-3-8901/EA/SVB-SW ⁽¹⁾ 231946	
				15	32	P1-32/EA/SVB-SW/N/Hi11 ⁽¹⁾ 060232	
	3 + N	1	1	6.5	20	T0-3-8901/EA/SVB-SW ⁽¹⁾ 231933	1 Off
				13	32	T3-3-15680/EA/SVB-SW ⁽¹⁾ 014375	
				22	63	T5B-3-8901/EA/SVB-SW ⁽³⁾ 207421	
				30	100	T5-3-8901/EA/SVB-SW 207409	1 Off
	3 + N	1	1	37	63	P3-63/EA/SVB-SW/N/Hi11 ⁽¹⁾ 069724	1 Off
	3 + N	1	1	50	100	P3-100/EA/SVB-SW/N/Hi11 ⁽¹⁾ 079216	1 Off
	6	1	1	6.5	20	T0-4-15682/EA/SVB-SW ⁽¹⁾ 022265	1 Off
				13	32	T3-4-15682/EA/SVB-SW ⁽¹⁾ 057089	
				22	63	T5B-4-15682/EA/SVB-SW ⁽³⁾ 207426	
				30	100	T5-4-15682/EA/SVB-SW 207414	1 Off
	6	1	1	55	160		
				132	275		
				132	315		

Surface mounting IP65			Rear mounting Front IP65		
	totally insulated				
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
T0-3-15680/11/SVB-SW 207154		1 Off	T0-3-15680/V/SVB-SW¹⁾ 045994		1 Off
T3-3-15680/12/SVB-SW⁴⁾ 207203		1 Off	T3-3-15680/V/SVB-SW¹⁾ 019121		1 Off
			P1-32/V/SVB-SW/N/HI11¹⁾ 064978		
T0-3-8901/11/SVB-SW 231935		1 Off			
T3-3-8901/12/SVB-SW²⁾ 218988		1 Off	P1-25/V/SVB-SW/N/HI11¹⁾ 055486		
T5B-3-8901/14/SVB-SW³⁾ 207245		1 Off	T5B-3-8901/V/SVB-SW³⁾ 207423		
T5-3-8901/15/SVB-SW 207278		1 Off			
P3-63/14/SVB-SW/N/HI11¹⁾ 207347		1 Off	P3-63/V/SVB-SW/N/HI11¹⁾ 074470		
P3-100/15/SVB-SW/N/HI11¹⁾ 207377		1 Off	P3-100/V/SVB-SW/N/HI11¹⁾ 083962		
T0-4-15682/11/SVB-SW 207162		1 Off	T0-4-15682/V/SVB-SW¹⁾ 027011		
T3-4-15682/12/SVB-SW²⁾ 207211		1 Off	T3-4-15682/V/SVB-SW¹⁾ 061835		
T5B-4-15682/14/SVB-SW³⁾ 207247		1 Off	T5B-4-15682/V/SVB-SW³⁾ 207428		
T5-4-15682/15/SVB-SW 207282		1 Off	T5-4-15682/V/SVB-SW 207416		
T6-160-6/145/SVB-SW/HI11⁵⁾ 201447		1 Off	T6-160-6/V/SVB-SW/HI11 200127		
T8-3-8342/148/SVB-SW/HI11⁶⁾ 201449		1 Off			
			T8-3-8342/V/SVB-SW/HI11 200128		

Information relevant for export to North America

1) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12


2) Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

3) Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV7
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 12, 13

Notes
⁵⁾ Enclosure without flanges with K95/1N/BR
⁶⁾ With KS4-CI and K150/1/BR: Ingress protection IP64





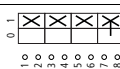
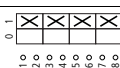




Contact sequence	Front plate no.  FS 908	Main contacts Pole	Auxiliary contacts			Max. motor rating: AC-23A 400/415 V 50/60 Hz	Rated uninter- rupted current	Flush mounting Front IP65		Center mounting Front IP65		Std. pack
								Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	
		N/O	N/O	N/C	P kW	I _u A						




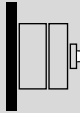
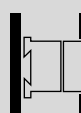
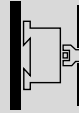


























On-Off switches

Without auxiliary contacts
With black thumb-grip and front plate

	1	0	0	6.5	20	T0-1-8200/E¹⁾ 067352	T0-1-8200/EZ²⁾ 069725	1 Off 
	1	0	0	6.5	20			
	1	0	0	13	32	T3-1-8200/E⁴⁾ 064208	T3-1-8200/EZ⁴⁾ 066581	
	1	0	0	22	63	T5B-1-8200/E⁶⁾ 094281		
	2	0	0	6.5	20	T0-1-102/E¹⁾ 088709	T0-1-102/EZ²⁾ 091082	
	2	0	0	6.5	20			
	2	0	0	13	32	T3-1-102/E¹⁾ 076073	T3-1-102/EZ¹⁾ 078446	
	2	0	0	22	63	T5B-1-102/E⁶⁾ 094471		
	3	0	0	6.5	20	T0-2-1/E¹⁾ 024639	T0-2-1/EZ¹⁾ 027012	
	3	0	0	6.5	20			
	3	0	0	13	25	P1-25/E¹⁾ 038724	P1-25/EZ¹⁾ 041250	
	3	0	0	13	25			
	3	0	0	15	32	P1-32/E¹⁾ 079065	P1-32/EZ¹⁾ 048369	
	3	0	0	15	32			
	3	0	0	37	63	P3-63/E⁸⁾ 026861		
	3	0	0	45	125	P5-125/E⁹⁾ 280897		
	3	0	0	50	100	P3-100/E⁸⁾ 067201		
	3	0	0	55	160	P5-160/E⁹⁾ 280921		
	3	0	0	90	250	P5-250/E⁹⁾ 280935		
	3	0	0	110	315	P5-315/E⁹⁾ 280949		
		3 + N	0	0	6.5	20	T0-2-8900/E¹⁾ 207398	
3 + N		0	0	13	25	P1-25/E/N¹⁾ 076845	P1-25/EZ/N¹⁾ 079218	
3 + N		0	0	13	25			
3 + N		0	0	15	32	P1-32/E/N¹⁾ 093456	P1-32/EZ/N¹⁾ 095829	
3 + N		0	0	15	32			
3 + N		0	0	37	63	P3-63/E/N⁸⁾ 019894		
3 + N		0	0	50	100	P3-100/E/N⁸⁾ 031759		
	4	0	0	6.5	20			

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T, P

Surface mounting IP65 			Distribution board - mounting Front IP30		Rear mounting Front IP65		Std. pack	Information relevant for export to North America  
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Part no. Article no.	Price See price list		
								
T0-1-8200/11 207074		1 Off	T0-1-8200/IVS³⁾ 074471		T0-1-8200/Z¹⁾ 076844		1 Off  	1) → Page 4/24 2) → Page 4/24 3) → Page 4/24 4) → Page 4/24 5) → Page 4/24 6) → Page 4/24 7) → Page 4/24 8) → Page 4/24 9) → Page 4/24
					T0-1-15401/Z¹⁾ 048346			
T3-1-8200/12⁴⁾ 207167		1 Off  			T3-1-8200/Z⁴⁾ 071327			
T5B-1-8200/14⁵⁾ 207218		1 Off  			T5B-1-8200/Z⁶⁾ 094270			
T0-1-102/11 207061		1 Off	T0-1-102/IVS³⁾ 015147		T0-1-102/Z¹⁾ 095828			
					T0-1-15402/Z¹⁾ 062584			
T3-1-102/12⁴⁾ 207165		1 Off  			T3-1-102/Z⁴⁾ 083192			
T5B-1-102/14⁵⁾ 207215		1 Off  			T5B-1-102/Z⁶⁾ 094460			
T0-2-1/11 207081		1 Off	T0-2-1/IVS³⁾ 031758		T0-2-1/Z¹⁾ 036504			
T0-2-15403/11 207088		1 Off			T0-2-15403/Z¹⁾ 076822			
P1-25/12⁸⁾ 207299		1 Off  	P1-25/IVS⁷⁾ 052962		P1-25/Z⁸⁾ 057708			
P1-25/12H 226898		1 Off						
P1-32/12²⁾ 207320		1 Off  	P1-32/IVS⁷⁾ 093303		P1-32/Z⁸⁾ 098049			
P1-32/12H 227866		1 Off						
P3-63/14⁸⁾ 207356		1 Off  	P3-63/IVS⁷⁾ 041099		P3-63/Z⁸⁾ 050591			
					P5-125/Z³⁾ 280920			
P3-100/15⁸⁾ 207381		1 Off  	P3-100/IVS⁷⁾ 081439		P3-100/Z³⁾ 090931			
					P5-160/Z³⁾ 280934			
					P5-250/Z³⁾ 280948			
					P5-315/Z³⁾ 280962			
T0-2-8900/11 207109		1 Off	T0-2-8900/IVS³⁾ 207403		T0-2-8900/Z¹⁾ 207407			
P1-25/12/N⁸⁾ 207303		1 Off  	P1-25/IVS/N⁷⁾ 083964		P1-25/Z/N⁸⁾ 088710			
P1-25/12H/N 226901		1 Off						
P1-32/12/N⁸⁾ 207324		1 Off  	P1-32/IVS/N⁷⁾ 010402		P1-32/Z/N⁸⁾ 015148			
P1-32/12H/N 227869		1 Off						
P3-63/14/N⁸⁾ 207360		1 Off  	P3-63/IVS/N⁷⁾ 022267		P3-63/Z/N⁸⁾ 027013			
P3-100/15/N⁸⁾ 207385		1 Off  	P3-100/IVS/N⁷⁾ 034132		P3-100/Z/N⁸⁾ 038878			
T0-2-15404/11 207089		1 Off	T0-2-15404/IVS³⁾ 088687		T0-2-15404/Z¹⁾ 091060			






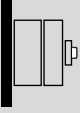

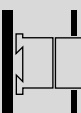
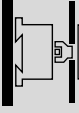





Contact sequence	Front plate no.	Main contacts Pole	Auxiliary contacts	Max. motor rating: AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65		Center mounting Front IP65		Std. pack
						Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	
	FS 908	N/O	N/O	N/C	P kW	I _u A				
On-Off switches										
Without auxiliary contacts With black thumb-grip and front plate										
		6	0	0	6.5	20	T0-3-8342/E¹⁾ 043624	T0-3-8342/EZ¹⁾ 045997	1 Off	
		6	0	0	13	32	T3-3-8342/E⁴⁾ 045225			
		6	0	0	22	63	T5B-3-8342/E⁶⁾ 092310			
		8	0	0	6.5	20	T0-4-8344/E¹⁾ 014000	T0-4-8344/EZ¹⁾ 014002		
		8	0	0	13	32	T3-4-8344/E⁴⁾ 020593	T3-4-8344/EZ⁴⁾ 020595		
		8	0	0	22	63	T5B-4-8344/E⁶⁾ 092064			

Information relevant for export to North America



1)	<p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 3R, 12</p>	2)	<p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type: –</p>	3)	<p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP30; UL/CSA Type: –</p>
6)	<p>Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-07</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 1</p>	7)	<p>Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type: –</p>	8)	<p>Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 3R, 12</p>

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Surface mounting IP65			Distribution board - mounting Front IP30		Rear mounting Front IP65			Std. pack	Information relevant for export to North America 
Part no. Article no.	Price See price list		Part no. Article no.	Price See price list	Part no. Article no.	Price See price list			
									
T0-3-8342/11 207131		1 Off	T0-3-8342/IVS³⁾ 050743		T0-3-8342/Z¹⁾ 055489		1 Off 		
T3-3-8342/12⁴⁾ 207187		1 Off 			T3-3-8342/Z⁴⁾ 052344				
T5B-3-8342/14⁵⁾ 207226		1 Off 			T5B-3-8342/Z⁶⁾ 092297				
T0-4-8344/11 207139		1 Off	T0-4-8344/IVS³⁾ 014006		T0-4-8344/Z¹⁾ 014009				
T3-4-8344/12⁴⁾ 207194		1 Off 			T3-4-8344/Z⁴⁾ 020600				
T5B-4-8344/14⁵⁾ 207233		1 Off 							


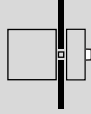


4)
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 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

5)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type: –

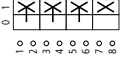

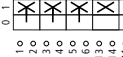


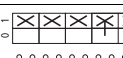
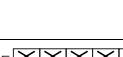
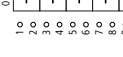

9)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 223805
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12



Contact sequence	Front plate no.  FS 908	Main contacts Pole	Auxiliary contacts	Max. motor rating: AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack

On-Off switches without emergency switching off/emergency stop function

With auxiliary contacts With black thumb-grip and front plate

	3	1	0	6.5	20	T0-2-15679/E¹⁾ 029387	1 Off 
	3	1	1	13	25		
	3	1	1	15	32		
	3	2	1	6.5	20	T0-3-15683/E¹⁾ 016619	
	3	2	1	13	32	T3-3-15683/E³⁾ 014377	
	3 + N	1	1	6.5	20	T0-3-8901/E¹⁾ 231938	
	3 + N	1	1	13	32	T3-3-8901/E³⁾ 231949	
	6	1	1	6.5	20	T0-4-15682/E¹⁾ 010405	
13				32	T3-4-15682/E³⁾ 023869		
22				63	T5B-4-15682/E⁴⁾ 207424		
30				100	T5-4-15682/E 207412		

Information relevant for export to North America



1)	Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
	UL File No.	E36332
	UL CCN	NLRV
	CSA File No.	12528
	CSA Class No.	3211-05
	NA Certification	UL Listed, CSA certified
	Suitable for	Branch circuits, suitable as motor disconnect
	Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

2)	Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
	UL File No.	E36332
	UL CCN	NLRV
	CSA File No.	12528
	CSA Class No.	3211-05
	NA Certification	UL Listed, CSA certified
	Suitable for	Branch circuits, suitable as motor disconnect
	Degree of Protection	IEC: IP30; UL/CSA Type: –

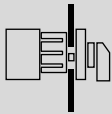
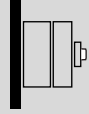
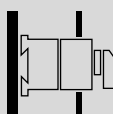
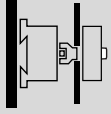






6)	Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
	UL File No.	E36332
	UL CCN	NLRV
	CSA File No.	12528
	CSA Class No.	3211-05
	NA Certification	UL Listed, CSA certified
	Suitable for	Branch circuits, suitable as motor disconnect
	Degree of Protection	IEC: IP65; UL/CSA Type: –

7)	Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
	UL File No.	E36332
	UL CCN	NLRV
	CSA File No.	12528
	CSA Class No.	3211-05
	NA Certification	UL Listed, CSA certified
	Suitable for	Branch circuits, suitable as motor disconnect
	Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

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
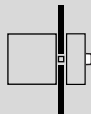
Center mounting Front IP65		Surface mounting IP65		Distribution board - mounting Front IP30		Rear mounting Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
				totally insulated				
T0-2-15679/EZ¹⁾ 031760		1 Off 	T0-2-15679/I1 207094		1 Off	T0-2-15679/IVS²⁾ 036506		1 Off 
			P1-25/I2H/HI11 226899					
			P1-32/I2H/HI11 227867					
T0-3-15683/EZ¹⁾ 016658			T0-3-15683/I1 207118			T0-3-15683/IVS²⁾ 016722		
			T3-3-15683/I2³⁾ 207182		1 Off 			
T0-3-8901/EZ¹⁾ 231939			T0-3-8901/I1 231941		1 Off	T0-3-8901/IVS²⁾ 231940		
T3-3-8901/EZ³⁾ 231950			T3-3-8901/I2³⁾ 231951		1 Off 		T3-3-8901/Z³⁾ 231952	
T0-4-15682/EZ¹⁾ 012778			T0-4-15682/I1 207135		1 Off	T0-4-15682/IVS²⁾ 017524		T0-4-15682/Z¹⁾ 022270
			T3-4-15682/I2³⁾ 207190		1 Off 		T3-4-15682/Z³⁾ 030988	
			T5B-4-15682/I4⁵⁾ 207229		1 Off 		T5B-4-15682/Z⁴⁾ 207429	
			T5-4-15682/I5 207269		1 Off		T5-4-15682/Z 207417	

3)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 1








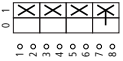
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 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type: –



Contact sequence	Front plate no.  FS 908	Main contacts Pole	Auxiliary contacts	Max. motor rating: AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack

On-Off switches as an emergency switching off/emergency stop device

With red thumb-grip and yellow front plate
To IEC/EN 60204-1, VDE 113 Part 1

 1 2 0	1	0	0	6.5	20	T0-1-8200/E-RT¹⁾ 009474	  1 Off
				13	32	T3-1-8200/E-RT³⁾ 017025	
				22	63	T5B-1-8200/E-RT⁴⁾ 094280	
				30	100	T5-1-8200/E-RT 097225	
 1 2 0 3 0 4 0	2	0	0	6.5	20	T0-1-102/E-RT¹⁾ 009046	  1 Off
				13	32	T3-1-102/E-RT¹⁾ 016318	
				22	63	T5B-1-102/E-RT⁴⁾ 094470	
 1 2 0 3 0 4 0 5 0 6 0	3	0	0	6.5	20	T0-2-1/E-RT¹⁾ 011082	
				13	25	P1-25/E-RT¹⁾ 002388	
				15	32	P1-32/E-RT¹⁾ 003197	
				37	63	P3-63/E-RT⁷⁾ 005743	
				50	100	P3-100/E-RT⁷⁾ 007189	
 1 2 0 3 0 4 0 5 0 6 0 7 0 8 0	3 + N	0	0	6.5	20	T0-2-8900/E-RT¹⁾ 207399	

Information relevant for export to North America



<p>1)</p> <p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 3R, 12</p>	<p>2)</p> <p>Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP30; UL/CSA Type: –</p>
<p>6)</p> <p>Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type: –</p>	<p>7)</p> <p>Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking</p> <p>UL File No. E36332</p> <p>UL CCN NLRV</p> <p>CSA File No. 12528</p> <p>CSA Class No. 3211-05</p> <p>NA Certification UL Listed, CSA certified</p> <p>Suitable for Branch circuits, suitable as motor disconnect</p> <p>Degree of Protection IEC: IP65; UL/CSA Type 3R, 12</p>

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

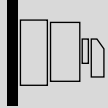

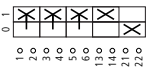
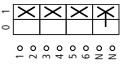
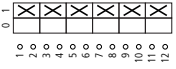
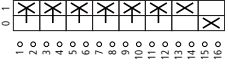
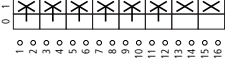
Center mounting Front IP65			Surface mounting IP65 totally insulated			Distribution board - mounting Front IP30			Rear mounting Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
			T0-1-8200/11-RT 207075		1 Off	T0-1-8200/IVS-RT²⁾ 081956		1 Off			
			T0-1-102/11-RT 207062		1 Off	T0-1-102/IVS-RT²⁾ 079583					
			T3-1-102/12-RT³⁾ 207166		1 Off						
			T0-2-1/11-RT 207082		1 Off	T0-2-1/IVS-RT²⁾ 084329					
			P1-25/12-RT⁷⁾ 207300		1 Off	P1-25/IVS-RT⁶⁾ 013140					
			P1-32/12-RT⁷⁾ 207321		1 Off	P1-32/IVS-RT⁶⁾ 022632					
			P3-63/14-RT⁷⁾ 207357		1 Off	P3-63/IVS-RT⁶⁾ 045845					
			P3-100/15-RT⁷⁾ 207382		1 Off	P3-100/IVS-RT⁶⁾ 086185					
			T0-2-8900/11-RT 207110		1 Off	T0-2-8900/IVS-RT²⁾ 207404					

3)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 1

5)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-07
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts Pole	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	As an emergency switching off/emergency stop device ¹⁾ Surface mounting IP65	Part no. Article no.	Price See price list	Std. pack
	 FS 908	N/O	N/O N/C	400 V P kW	I _u A	 			
Safety switches with warning label									
		3	0 0	13 15 37 50	25 32 63 100		P1-25/I2-SI³⁾ 207308 P1-32/I2-SI³⁾ 207329 P3-63/I4-SI³⁾ 207361 P3-100/I5-SI³⁾ 207386		1 Off
		3	1 1	13 15 37 50	25 32 63 100		P1-25/I2-SI/HI11³⁾ 207310 P1-32/I2-SI/HI11³⁾ 207331 P3-63/I4-SI/HI11³⁾ 207363 P3-100/I5-SI/HI11³⁾ 207388		
		3 + N	0 0	13 15 37 50	25 32 63 100		P1-25/I2-SI/N³⁾ 207312 P1-32/I2-SI/N³⁾ 207333 P3-63/I4-SI/N³⁾ 207365 P3-100/I5-SI/N³⁾ 207390		
		6	0 0	22 30	63 100		T5B-3-8342/I4-SI⁴⁾ 207250 T5-3-8342/I5-SI⁴⁾ 207447		
		6	1 1	22 30	63 100		T5B-4-15682/I4-SI⁴⁾ 207254 T5-4-15682/I5-SI⁴⁾ 207285		
		6	2 0	22 30	63 100		T5B-4-8903/I4-SI⁴⁾ 207258 T5-4-8903/I5-SI⁴⁾ 207289		

Notes
 1) Surface mounting IP65 : With red rotary handle and yellow locking collar with auxiliary contacts , lockable in position 0 with cover interlock, according to IEC/EN 60204-1, VDE 0113 Part 1
 2) Surface mounting IP65 : With black rotary handle and locking collar with auxiliary contacts Lockable in position 0 with cover interlock

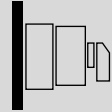


Without emergency switching off/
emergency stop function²⁾

Surface mounting

IP65

Totally insulated



Part no.
Article no.

Price
See price
list

Std. pack **Notes**

P1-25/12-SI-SW³⁾ 207309	
P1-32/12-SI-SW³⁾ 207330	
P3-63/14-SI-SW³⁾ 207362	
P3-100/15-SI-SW³⁾ 207387	
P1-25/12-SI/HI11-SW³⁾ 207311	
P1-32/12-SI/HI11-SW³⁾ 207332	
P3-63/14-SI/HI11-SW³⁾ 207364	
P3-100/15-SI/HI11-SW³⁾ 207389	
P1-25/12-SI/N-SW³⁾ 207313	
P1-32/12-SI/N-SW³⁾ 207334	
P3-63/14-SI/N-SW³⁾ 207366	
P3-100/15-SI/N-SW³⁾ 207391	
T5B-3-8342/14-SI-SW⁴⁾ 207251	
T5-3-8342/15-SI-SW⁴⁾ 207448	
T5B-4-15682/14-SI-SW⁴⁾ 207255	
T5-4-15682/15-SI-SW⁴⁾ 207286	
T5B-4-8903/14-SI-SW⁴⁾ 207259	
T5-4-8903/15-SI-SW⁴⁾ 207290	

1 Off

Engineering

Maintenance, repair and safety switches all have the same electrical function. They are designed to safely isolate electrical installations (loads) from mains power during maintenance and repair work and to ensure that a hazard does not arise which endangers personnel, machinery and production materials.

A safety switch is an additional enclosed main switch = isolator dedicated to an individual electrical load and mounted in the immediate vicinity of the motor or the electrical load. This is particularly important if there is any danger of the main switch being inadvertently operated.

Application

By using his padlock (up to 3), each fitter/electrician involved can protect themselves by preventing unauthorized personnel from switching the unit on. Maintenance/manual override switches are simply additional enclosed main switches with a padlocking feature. Enclosed main switch with padlocking facility

Features

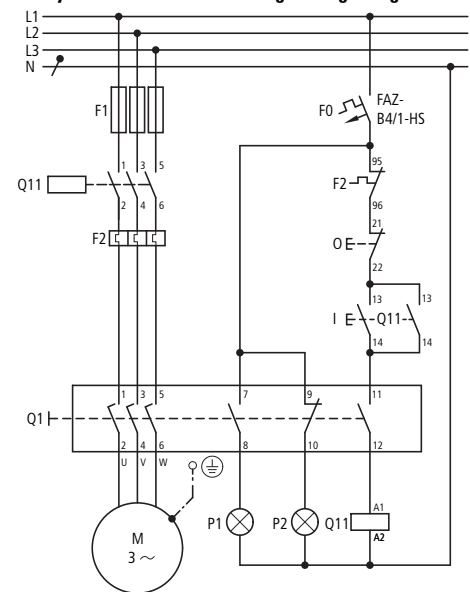
- Safety switches are always housed in insulated enclosures and have an inscription saying "Safety Switch" on a bright orange label.
- Switches to be used for emergency stop switching have a red handle and yellow locking collar in accordance with STOP category O (as per IEC/EN 60204/VDE 0113).
- If the switch is not approved for emergency stop switching, both parts will be black ("SW" part no. suffix).
- The cover and handle are interlocked by fitting a padlock.

Selection

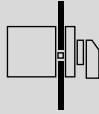
The switches must be selected according to the following performance specifications:

- 1) According to motor switching capacity, when the switch is fitted in such a way that the operator may use it for operational ON and OFF switching.
 - 2) The rating data always applies to 3 poles. When the motor rating is divided between 6 poles, such as for star-delta switching, a 6 pole switch can be used to control 1.73 times the rated power.
 - 3) If the switch has a load-shedding Contact (LA), you can select the appropriate switch according to the uninterrupted current. The load-shedding contact is an auxiliary contact, which is closed in the ON position and opens early when switching off, so that a contactor located in the circuit takes over the switching duty and the maintenance/safety switch operates at zero load. When switching on, the load-shedding contact closes later than or at the same time as the main contacts. With P and T switches this is the N/O auxiliary contact. 4) The "ON" position can be locked with a padlock (by altering the handle).
- This is not permissible for switches with a red/yellow handle.

Safety switch with load shedding and signaling






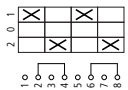

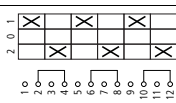
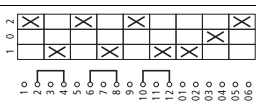





Contact sequence	Front plate no.	Main contacts Pole	Max. operating power AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
		N/O	400 V P kW	I_u A				

Changeover switches

With black thumb-grip and front plate without emergency switching off/emergency stop function

	 FS 684	1	6.5 13 22	20 32 63	T0-1-8210/E¹⁾ 012742 T3-1-8210/E¹⁾ 054718 T5B-1-8210/E⁵⁾ 094261	1 Off 	
	 FS 4011	1	6.5	20			
	 FS 684	2	6.5 13 22	20 32 63	T0-2-8211/E¹⁾ 022234 T3-2-8211/E¹⁾ 061837 T5B-2-8211/E⁵⁾ 093094		
		3	6.5 13 22	20 32 63	T0-3-8212/E¹⁾ 029353 T3-3-8212/E¹⁾ 068956 T5B-3-8212/E⁵⁾ 092386		
		3	55	160	T6-3-8212/E/HI12 214781		1 Off
		3	132	315	T8-3-8212/E/HI12 214782		1 Off

Information relevant for export to North America

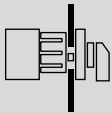
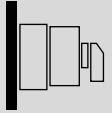
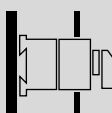
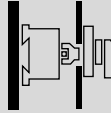










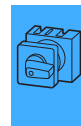
1)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

2)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP30; UL/CSA Type: –

HPL04033EN

T, P

Center mounting		Surface mounting		Distribution board mounting		Rear mounting		
Front IP65		IP65 totally insulated		Front IP30		Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
T0-1-8210/EZ¹⁾ 048337		1 Off 	T0-1-8210/I1 207076		1 Off	T0-1-8210/IVS²⁾ 074440		1 Off 
T3-1-8210/EZ¹⁾ 003072			T3-1-8210/I2³⁾ 207169		1 Off 			T3-1-8210/Z¹⁾ 057091
			T5B-1-8210/I4⁴⁾ 207432		1 Off 			T5B-1-8210/Z⁵⁾ 094258
T0-1-8214/EZ¹⁾ 076815								T0-1-8214/Z¹⁾ 050720
T0-2-8211/EZ¹⁾ 053083			T0-2-8211/I1 207102		1 Off	T0-2-8211/IVS²⁾ 076813		T0-2-8211/Z¹⁾ 029354
T3-2-8211/EZ¹⁾ 003075			T3-2-8211/I2³⁾ 207178		1 Off 			T3-2-8211/Z¹⁾ 064210
			T5B-2-8211/I4⁴⁾ 207220		1 Off 			T5B-2-8211/Z⁵⁾ 093082
T0-3-8212/EZ¹⁾ 057829			T0-3-8212/I1 207123		1 Off	T0-3-8212/IVS²⁾ 079186		T0-3-8212/Z¹⁾ 036473
T3-3-8212/EZ¹⁾ 003080			T3-3-8212/I2³⁾ 207183		1 Off 			T3-3-8212/Z¹⁾ 071329
			T5B-3-8212/I4⁴⁾ 207223		1 Off 			T5B-3-8212/Z⁵⁾ 092383
			T5-3-8212/I5 207266		1 Off			T5-3-8212/Z 096464

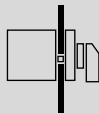



3)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type: –

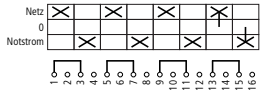


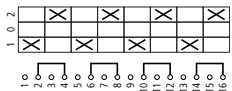

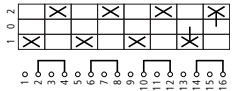

5)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 1



Contact sequence	Front plate no.	Main contacts Pole	Max. operating power AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
		N/O 	400 V P kW	I_u A				

Changeover switches

With black thumb-grip and front plate
Without emergency switching off/emergency stop function

 FS 161629	 FS 161629	4	13	32	T3-4-8902/E¹⁾ 215222	1 Off 
			22	63	T5B-4-8902/E⁵⁾ 207430	
			30	100	T5-4-8902/E 207418	
 FS 684	 FS 684	4	6.5	20	T0-4-8213/E¹⁾ 031726	
			13	32	T3-4-8213/E¹⁾ 076075	
			22	63	T5B-4-8213/E⁵⁾ 092112	
			30	100	T5-4-8213/E 096014	
 FS 953	 FS 953	4	6.5	20	T0-4-8294/E¹⁾ 010371	
			13	32	T3-4-8294/E¹⁾ 002513	
			22	63	T5B-4-8294/E⁵⁾ 092084	
			30	100	T5-4-8294/E 095986	

Information relevant for export to North America

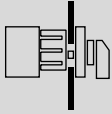
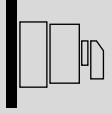
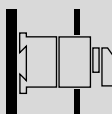
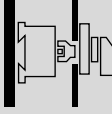



















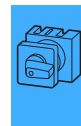
1)	
Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

2)	
Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP30; UL/CSA Type: –

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Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 totally insulated			Front IP30			Front IP65		
											
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
T3-4-8902/EZ¹⁾ 215223		1 Off 	T3-4-8902/I2³⁾ 215224		1 Off 				T3-4-8902/Z¹⁾ 215225		1 Off 
			T5B-4-8902/I4⁴⁾ 207237		1 Off 				T5B-4-8902/Z⁵⁾ 207431		1 Off 
			T5-4-8902/I5 207214		1 Off				T5-4-8902/Z 207419		1 Off
T0-4-8213/EZ¹⁾ 062575		1 Off 	T0-4-8213/I1 207136		1 Off	T0-4-8213/IVS²⁾ 081559		1 Off 	T0-4-8213/Z¹⁾ 043592		1 Off 
T3-4-8213/EZ¹⁾ 003079		1 Off 	T3-4-8213/I2³⁾ 207191		1 Off 				T3-4-8213/Z¹⁾ 078448		1 Off
			T5B-4-8213/I4⁴⁾ 207230		1 Off 				T5B-4-8213/Z⁵⁾ 092109		1 Off
			T5-4-8213/I5 207270		1 Off				T5-4-8213/Z 096012		1 Off
T0-4-8294/EZ¹⁾ 072069		1 Off 	T0-4-8294/I1 207138		1 Off	T0-4-8294/IVS²⁾ 043594		1 Off 			
			T3-4-8294/I2³⁾ 207193		1 Off 				T3-4-8294/Z¹⁾ 004886		1 Off 
			T5B-4-8294/I4⁴⁾ 207232		1 Off 				T5B-4-8294/Z⁵⁾ 092081		1 Off 
			T5-4-8294/I5 207433		1 Off				T5-4-8294/Z 095984		1 Off

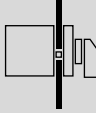


3)
 Product Standards UL 508; CSA-C22.2 No. 14-05;
 CSA-C22.2 No. 94;
 IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05;
 IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type: –




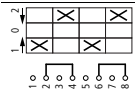

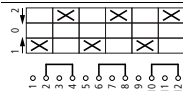

5)
 Product Standards UL 508; CSA-C22.2 No. 14-05;
 IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 1



Contact sequence	Front plate no.	Main contacts Pole	Max. motor rating AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack

Changeover switches with 0 position




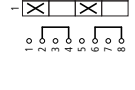

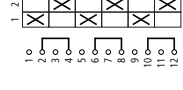

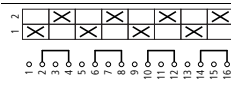

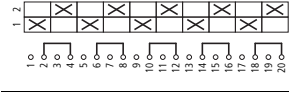

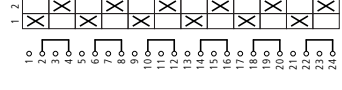

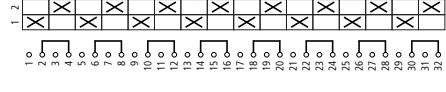

With black thumb-grip and front plate
Without emergency switching off/emergency stop function
with momentary from both directions to 0

	 FS 4011	1	6.5	20	T0-1-8214/E²⁾ 019863	1 Off 
		1	13	32	T3-1-8214/E²⁾ 009632	
	 FS 4011	2	6.5	20	T0-2-8215/E²⁾ 022236	
		2	13	32	T3-2-8215/E²⁾ 016751	
	 FS 4011	3	6.5	20	T0-3-8216/E²⁾ 024609	
		3	13	32	T3-3-8216/E²⁾ 023870	

Changeover switches without 0 position

With black thumb-grip and front plate
Without emergency switching off/emergency stop function

Two-way switch

	 FS 943	1	6.5	20	T0-1-8220/E²⁾ 031728	1 Off 
			 FS 943	2	6.5	
13	32			T3-2-8221/E²⁾ 045227		
22	63			T5B-2-8221/E⁴⁾ 093047		
	 FS 943	3	6.5	20	T0-3-8222/E²⁾ 048339	
			13	32	T3-3-8222/E²⁾ 052346	
			22	63	T5B-3-8222/E⁴⁾ 092378	
	 FS 943	4	6.5	20	T0-4-8223/E²⁾ 050712	
			13	32	T3-4-8223/E²⁾ 059465	
			22	63	T5B-4-8223/E⁴⁾ 092108	
	 FS 943	5	6.5	20	T0-5-8369/E²⁾ 060204	
			13	32	T3-5-8369/E²⁾ 066584	
	 FS 943	6	6.5	20	T0-6-8370/E²⁾ 062577	
			13	32	T3-6-8370/E²⁾ 073703	
	 FS 943	8	6.5	20	T0-8-8372/E²⁾ 064950	
			13	32	T3-8-8372/E²⁾ 080822	

Information relevant for export to North America



1)

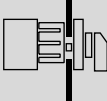
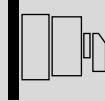
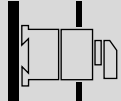
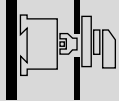














































Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP30; UL/CSA Type: –

2)

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

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T, P

Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 totally insulated			Front IP30			Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
											
T0-1-8214/EZ 076815			T0-1-8214/I1 207077		1 Off	T0-1-8214/IVS¹⁾ 045967		1 Off 	T0-1-8214/Z 050720		
T0-2-8215/EZ²⁾ 081561		1 Off 	T0-2-8215/I1 207103		1 Off	T0-2-8215/IVS¹⁾ 048340		1 Off 			
			T3-2-8215/I2³⁾ 207179		1 Off 						
T0-3-8216/EZ²⁾ 086307		1 Off 	T0-3-8216/I1 207434		1 Off	T0-3-8216/IVS¹⁾ 050713		1 Off 	T0-3-8216/Z²⁾ 055466		1 Off 
			T3-3-8216/I2³⁾ 207184		1 Off 						
T0-1-8220/EZ²⁾ 095799		1 Off 	T0-1-8220/I1 207078		1 Off	T0-1-8220/IVS¹⁾ 055459		1 Off 	T0-1-8220/Z²⁾ 086312		1 Off 
T0-2-8221/EZ²⁾ 010372		1 Off 	T0-2-8221/I1 207104		1 Off	T0-2-8221/IVS¹⁾ 057832		1 Off 	T0-2-8221/Z²⁾ 074450		1 Off 
T3-2-8221/EZ²⁾ 001025		1 Off 	T3-2-8221/I2³⁾ 207180		1 Off 				T3-2-8221/Z²⁾ 047600		1 Off 
			T5B-2-8221/I4⁵⁾ 207221		1 Off 				T5B-2-8221/Z⁴⁾ 093044		1 Off 
T0-3-8222/EZ²⁾ 015118		1 Off 	T0-3-8222/I1 207124		1 Off	T0-3-8222/IVS¹⁾ 060205		1 Off 	T0-3-8222/Z²⁾ 088686		1 Off 
T3-3-8222/EZ²⁾ 001069		1 Off 	T3-3-8222/I2³⁾ 207185		1 Off 				T3-3-8222/Z²⁾ 057092		1 Off 
			T5B-3-8222/I4⁵⁾ 207224		1 Off 				T5B-3-8222/Z⁴⁾ 092375		1 Off 
T0-4-8223/EZ²⁾ 019864		1 Off 	T0-4-8223/I1 207137		1 Off	T0-4-8223/IVS¹⁾ 062578		1 Off 	T0-4-8223/Z²⁾ 086315		1 Off 
			T3-4-8223/I2³⁾ 207192		1 Off 				T3-4-8223/Z²⁾ 061838		1 Off 
			T5B-4-8223/I4⁵⁾ 207231		1 Off 				T5B-4-8223/Z⁴⁾ 092105		1 Off 
T0-5-8369/EZ²⁾ 024610		1 Off 				T0-5-8369/IVS¹⁾ 064951		1 Off 			
			T3-5-8369/I2³⁾ 207536		1 Off 				T3-5-8369/Z²⁾ 068957		1 Off 
T0-6-8370/EZ²⁾ 029356		1 Off 				T0-6-8370/IVS¹⁾ 067324		1 Off 	T0-6-8370/Z²⁾ 010380		1 Off 
T3-6-8370/EZ²⁾ 004506		1 Off 									
T0-8-8372/EZ²⁾ 034102		1 Off 				T0-8-8372/IVS¹⁾ 069697		1 Off 	T0-8-8372/Z²⁾ 012753		1 Off 
									T3-8-8372/Z²⁾ 083195		1 Off 

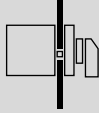

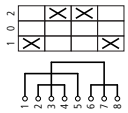

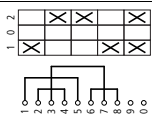

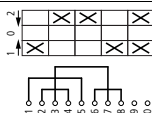

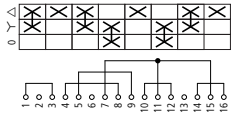

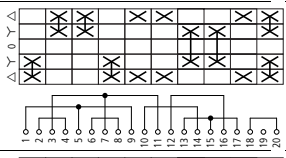

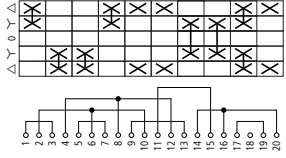


3)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type 1

5)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP65; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts Pole	Max. operating power AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
		S 	400 V kW	I_u A				
Reversing switch with 0 (Off) position								
With black thumb-grip and front plate Without emergency switching off/emergency stop function								
Without momentary								
 FS 684		2	6.5	20		T0-2-8400/E¹⁾ 053079		1 Off 
			13	32		T3-2-8400/E¹⁾ 073695		
			22	63		T5B-2-8400/E²⁾ 092918		
 FS 684		3	6.5	20		T0-3-8401/E¹⁾ 091047		1 Off 
			13	32		T3-3-8401/E¹⁾ 030992		
			22	63		T5B-3-8401/E²⁾ 092296		
With momentary from both directions to 0								
 FS 4011		3	6.5	20		T0-3-8228/E¹⁾ 015112		1 Off 
			13	32		T3-3-8228/E¹⁾ 002538		
			22	63		T5B-3-8228/E²⁾ 092374		
Star-delta switches								
With black thumb-grip and front plate Without emergency switching off/emergency stop function								
 FS 635		3	6.5	20		T0-4-8410/E¹⁾ 024604		1 Off 
			13	32		T3-4-8410/E¹⁾ 009657		
			22	63		T5B-4-8410/E¹⁾ 092052		
Reversing star-delta switches								
With black thumb-grip and front plate Without emergency switching off/emergency stop function								
Two-way operating direction								
 FS 638		3	6.5	20		T0-5-15876/E¹⁾ 000893		1 Off 
			13	32		T3-5-15876/E¹⁾ 016776		
 FS 4017			22	63		T5B-5-15876/E²⁾ 214785		

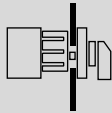
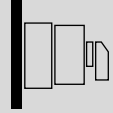
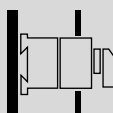
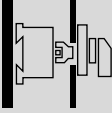


























Information relevant for export to North America

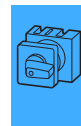


1)		2)	
Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking	Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332	UL File No.	E36332
UL CCN	NLRV	UL CCN	NLRV7
CSA File No.	12528	CSA File No.	12528
CSA Class No.	3211-05	CSA Class No.	3211-05
NA Certification Suitable for	UL Listed, CSA certified Branch circuits, suitable as motor disconnect	NA Certification Suitable for	UL Listed, CSA certified Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12	Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

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Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 totally insulated			Front IP30			Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
											
T0-2-8400/EZ¹⁾ 055452		1 Off 	T0-2-8400/11 207111		1 Off	T0-2-8400/IVS⁴⁾ 060198		1 Off 	T0-2-8400/Z¹⁾ 062571		1 Off 
T3-2-8400/EZ¹⁾ 000687			T3-2-8400/I2³⁾ 207181		1 Off 				T3-2-8400/Z¹⁾ 095060		
			T5B-2-8400/I4²⁾ 207222		1 Off 						
T0-3-8401/EZ¹⁾ 093420			T0-3-8401/11 207132		1 Off	T0-3-8401/IVS⁴⁾ 098166		1 Off 	T0-3-8401/Z¹⁾ 010366		
T3-3-8401/EZ¹⁾ 000694			T3-3-8401/I2³⁾ 207188		1 Off 				T3-3-8401/Z¹⁾ 035739		
			T5B-3-8401/I4²⁾ 207227		1 Off 				T5B-3-8401/Z²⁾ 092293		
T0-3-8228/EZ¹⁾ 048334		1 Off 	T0-3-8228/11 207125		1 Off	T0-3-8228/IVS⁴⁾ 062572		1 Off 	T0-3-8228/Z¹⁾ 074437		
T3-3-8228/EZ¹⁾ 000695		1 Off 	T3-3-8228/I2³⁾ 207186		1 Off 				T3-3-8228/Z¹⁾ 004911		
			T5B-3-8228/I4²⁾ 207225		1 Off 						
T0-4-8410/EZ¹⁾ 053080		1 Off 	T0-4-8410/11 207140		1 Off	T0-4-8410/IVS⁵⁾ 064945		1 Off 	T0-4-8410/Z¹⁾ 083929		1 Off 
T3-4-8410/EZ¹⁾ 000721		1 Off 	T3-4-8410/I2³⁾ 207195		1 Off 				T3-4-8410/Z¹⁾ 012030		
			T5B-4-8410/I4¹⁾ 207234		1 Off 				T5B-4-8410/Z¹⁾ 092049		
T0-5-15876/EZ¹⁾ 000900		1 Off 				T0-5-15876/IVS⁴⁾ 000902		1 Off 	T0-5-15876/Z¹⁾ 000942		1 Off 
T3-5-15876/EZ¹⁾ 000797		1 Off 	T3-5-15876/I2³⁾ 207537		1 Off 				T3-5-15876/Z¹⁾ 019149		1 Off 
									T5B-5-15876/Z²⁾ 214786		1 Off 

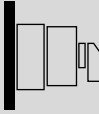



3)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP30; UL/CSA Type: –

5)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type: –

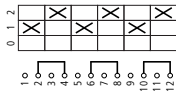




Contact sequence	Front plate no.	Main contacts Pole	Max. motor rating: AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 		
		N/O 	400 V P kW	I_u A	Part no. Article no.	Price See price list	Std. pack

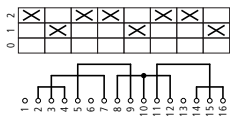


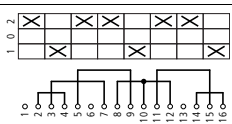

Multi-speed switches

With black thumb-grip and front plate
Without emergency switching off/emergency stop function

Two-speed, non reversing, for 2 separate windings

	 FS 644	6	6.5 13 22	20 32 63	T0-3-8451/E²⁾ 038849 T3-3-8451/E²⁾ 028641 T5B-3-8451/E⁴⁾ 092288	1 Off 
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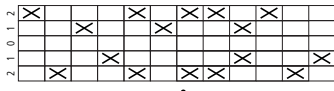


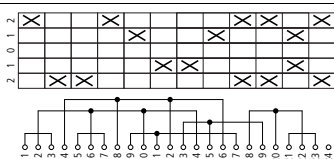

2-speed, 2 directions, for one tapped winding

	 FS 644	3	6.5 13 22	20 32 63	T0-4-8440/E²⁾ 041222 T3-4-8440/E²⁾ 035760 T5B-4-8440/E⁴⁾ 092032	1 Off 
	 FS 684	3	6.5 13 22	20 32 63	T0-4-8441/E²⁾ 043595 T3-4-8441/E²⁾ 042879 T5B-4-8441/E⁴⁾ 092028	

Reversing multi-speed switches

With black thumb-grip and front plate
Without emergency switching off/emergency stop function

2-speed, 2 directions, for one tapped winding

	 FS 629	-	6.5 13	20 32	T0-6-15866/E²⁾ 055460 T3-6-15866/E²⁾ 054744	1 Off 
	 FS 441	-	22	63	T5B-7-15866/E⁴⁾ 214788	

Information relevant for export to North America

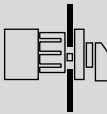
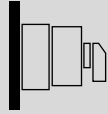
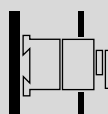
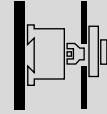





















1)	Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
	UL File No.	E36332
	UL CCN	NLRV
	CSA File No.	12528
	CSA Class No.	3211-05
	NA Certification	UL Listed, CSA certified
	Suitable for	Branch circuits, suitable as motor disconnect
	Degree of Protection	IEC: IP30; UL/CSA Type: –

2)	Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
	UL File No.	E36332
	UL CCN	NLRV7
	CSA File No.	12528
	CSA Class No.	3211-05
	NA Certification	UL Listed, CSA certified
	Suitable for	Branch circuits, suitable as motor disconnect
	Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

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Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 totally insulated			Front IP30			Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
											
T0-3-8451/EZ²⁾ 083936		1 Off 	T0-3-8451/I1 207133		1 Off	T0-3-8451/IVS¹⁾ 026985		1 Off 	T0-3-8451/Z²⁾ 043596		1 Off 
T3-3-8451/EZ²⁾ 000956		1 Off 	T3-3-8451/I2³⁾ 207189		1 Off 				T3-3-8451/Z²⁾ 031014		1 Off 
			T5B-3-8451/I4⁴⁾ 207228		1 Off 						
T0-4-8440/EZ²⁾ 088682		1 Off 	T0-4-8440/I1 207141		1 Off	T0-4-8440/IVS¹⁾ 029358		1 Off 	T0-4-8440/Z²⁾ 048342		1 Off 
T3-4-8440/EZ²⁾ 000959			T3-4-8440/I2³⁾ 207196		1 Off 				T3-4-8440/Z²⁾ 038133		
			T5B-4-8440/I4⁴⁾ 207235		1 Off 				T5B-4-8440/Z⁴⁾ 092029		
T0-4-8441/EZ²⁾ 093428			T0-4-8441/I1 207142		1 Off	T0-4-8441/IVS¹⁾ 031731		1 Off 	T0-4-8441/Z²⁾ 053088		
			T3-4-8441/I2³⁾ 207197		1 Off 				T3-4-8441/Z²⁾ 045252		
			T5B-4-8441/I4⁴⁾ 207236		1 Off 				T5B-4-8441/Z⁴⁾ 092025		
T0-6-15866/EZ²⁾ 012747		1 Off 				T0-6-15866/IVS¹⁾ 036477		1 Off 	T0-6-15866/Z²⁾ 067326		1 Off 
									T3-6-15866/Z²⁾ 057117		1 Off 



3)
 Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

4)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV7
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12



Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾ Front IP65		Std. pack	Center mounting ¹⁾ Front IP65		Std. pack
			Part no. Article no.	Price See price list		Part no. Article no.	Price See price list	
Step switches With black thumb-grip and front plate One contact closed per step Without overlap With 0 (Off) position								
		1	T0-1-8240/E 034105		1 Off 	T0-1-8240/EZ 043597		1 Off
		1	T0-2-8241/E 050716			T0-2-8241/EZ 053089		
		1	T0-2-8242/E 067327			T0-2-8242/EZ 069700		
		1	T0-3-8243/E 081565			T0-3-8243/EZ 083938		
		1	T0-3-8244/E 095803			T0-3-8244/EZ 098176		
		3	T0-3-8280/E 034106			T0-3-8280/EZ 036479		
		3	T0-5-8281/E 048344			T0-5-8281/EZ 050717		
		3	T0-6-8282/E 062582			T0-6-8282/EZ 064955		

Information relevant for export to North America

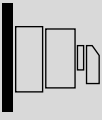
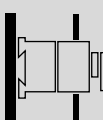
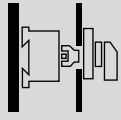






1)
 Product Standards
 UL File No.
 UL CCN
 CSA File No.
 CSA Class No.
 NA Certification
 Suitable for
 Degree of Protection

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 E36332
 NLRV
 12528
 3211-05
 UL Listed, CSA certified
 Branch circuits
 IEC: IP65; UL/CSA Type 3R, 12

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Surface mounting IP65 totally insulated			Distribution board mounting ²⁾ Front IP30			Rear mounting ²⁾ Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
T0-1-8240/11 207079		1 Off	T0-1-8240/IVS 027076		1 Off  	T0-1-8240/Z 060208		1 Off  
T0-2-8241/11 207107			T0-2-8241/IVS 057835			T0-2-8241/Z 062581		
T0-2-8242/11 207108			T0-2-8242/IVS 074446			T0-2-8242/Z 076819		
T0-3-8243/11 207128			T0-3-8243/IVS 088684			T0-3-8243/Z 091057		
T0-3-8244/11 207129			T0-3-8244/IVS 012749			T0-3-8244/Z 015122		
T0-3-8280/11 207130			T0-3-8280/IVS 041225			T0-3-8280/Z 043598		
			T0-5-8281/IVS 055463			T0-5-8281/Z 057836		
			T0-6-8282/IVS 069701			T0-6-8282/Z 072074		

2)

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP30; UL/CSA Type: –





Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾ Front IP65		Std. pack	Center mounting ¹⁾ Front IP65		Std. pack
			Part no. Article no.	Price See price list		Part no. Article no.	Price See price list	
		Pole N/O						
Step switches								
With black thumb-grip and front plate One contact closed per step Without overlap								
without 0 (Off) position								
			1	T0-1-8220/E 031728	1 Off 	T0-1-8220/EZ 095799	1 Off 	
			1	T0-2-8230/E 088685		T0-2-8230/EZ 091058		
			1	T0-2-8231/E 012750		T0-2-8231/EZ 015123		
			1	T0-3-8232/E 026988		T0-3-8232/EZ 029361		
			1	T0-3-8233/E 041226		T0-3-8233/EZ 043599		
			2	T0-4-8251/E 013971		T0-4-8251/EZ 013972		
			3	T0-3-8222/E 048339		T0-3-8222/EZ 015118		
			3	T0-5-8270/E 091059		T0-5-8270/EZ 093432		
			3	T0-6-8271/E 015124	T0-6-8271/EZ 017497			

Information relevant for export to North America



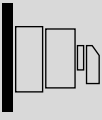
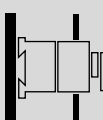
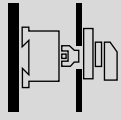




1)

Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Suitable for
Degree of Protection

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
E36332
NLRV
12528
3211-05
UL Listed, CSA certified
Branch circuits
IEC: IP65; UL/CSA Type 3R, 12

HPL04045EN

T, P

Surface mounting IP65 totally insulated			Distribution board mounting ²⁾ Front IP30			Rear mounting ¹⁾ Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
T0-1-8220/11 207078		1 Off	T0-1-8220/IVS 055459		1 Off  	T0-1-8220/Z 086312		1 Off  
T0-2-8230/11 207105			T0-2-8230/IVS 095804			T0-2-8230/Z 098177		
T0-2-8231/11 207106			T0-2-8231/IVS 019869			T0-2-8231/Z 022242		
T0-3-8232/11 207126			T0-3-8232/IVS 034107			T0-3-8232/Z 036480		
T0-3-8233/11 207127			T0-3-8233/IVS 048345			T0-3-8233/Z 050718		
T0-4-8251/11 218984			T0-4-8251/IVS 013974			T0-4-8251/Z 013976		
T0-3-8222/11 207124			T0-3-8222/IVS 060205					
			T0-5-8270/IVS 098178			T0-5-8270/Z 010378		
			T0-6-8271/IVS 022243			T0-6-8271/Z 024616		



2)

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP30; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾			Center mounting ²⁾		
			Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
		Pole N/O 1						
On-Off switches								
With black thumb-grip and front plate								
		1	T0-1-15401/E 038854		1 Off 	T0-1-15401/EZ 041227	1 Off 	
		2	T0-1-15402/E 053092			T0-1-15402/EZ 055465		
		3	T0-2-15403/E 067330			T0-2-15403/EZ 069703		
		4	T0-2-15404/E 081568			T0-2-15404/EZ 083941		


Information relevant for export to North America



1)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3;
 CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits, suitable as motor disconnect
 Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

HPL04047EN

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Surface mounting			Distribution board mounting ³⁾			Rear mounting		
IP65 totally insulated			Front IP30			Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
T0-1-15401/11 207067		1 Off	T0-1-15401/ IVS 045973		1 Off 			
T0-1-15402/11 207068		1 Off	T0-1-15402/ IVS 060211					
			T0-2-15403/ IVS 074449					



2)
Product Standards UL 508; CSA-C22.2 No. 14-05;
IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as
motor disconnect
Degree of Protection IEC: IP65; UL/CSA Type: –

3)
Product Standards UL 508; CSA-C22.2 No. 14-05;
IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits, suitable as
motor disconnect
Degree of Protection IEC: IP30; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾ Front IP65			Center mounting ¹⁾ Front IP65		
			Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Changeover switches								
With black thumb-grip and front plate								
	 FS 429	1	T0-1-15421/E 095806		1 Off 	T0-1-15421/EZ 098179		1 Off
		2	T0-2-15422/E 019871			T0-2-15422/EZ 022244		
		3	T0-3-15423/E 034109			T0-3-15423/EZ 036482		
Manual/Auto switches								
With 0 (Off) position								
	 FS 1401	1	T0-1-15431/E 019872		1 Off 	T0-1-15431/EZ 022245		1 Off
		2	T0-2-15432/E 034110			T0-2-15432/EZ 036483		
		3	T0-3-15433/E 048348			T0-3-15433/EZ 050721		
With momentary from HAND								
	 FS 1414000	1	T0-1-15434/E 062586		1 Off 	T0-1-15434/EZ 018053		1 Off
		2	T0-2-15435/E 003191		1 Off 	T0-2-15435/EZ 003192		1 Off
With momentary from START								
	 FS 1413890	2	T0-2-15907/E 066931		1 Off 	T0-2-15907/EZ 069304		1 Off
Without 0 (Off) position								
	 FS 19334	1	T0-1-15451/E 076824		1 Off 	T0-1-15451/EZ 079197		1 Off
		2	T0-2-15452/E 091062			T0-2-15452/EZ 093435		
		3	T0-3-15453/E 015127			T0-3-15453/EZ 017500		

Information relevant for export to North America




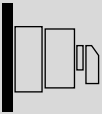
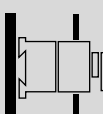
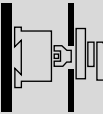
























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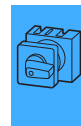
Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Suitable for
Degree of Protection

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
E36332
NLRV
12528
3211-05
UL Listed, CSA certified
Branch circuits
IEC: IP65; UL/CSA Type 3R, 12

HPL04049EN

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Surface mounting IP65 			Distribution board mounting ²⁾ Front IP30			Rear mounting ¹⁾ Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
T0-1-15421/I1 207069		1 Off	T0-1-15421/IVS 012752		1 Off  	T0-1-15421/Z 015125		1 Off  
T0-2-15422/I1 207090			T0-2-15422/IVS 026990			T0-2-15422/Z 029363		
T0-3-15423/I1 207114			T0-3-15423/IVS 041228			T0-3-15423/Z 043601		
T0-1-15431/I1 207070		1 Off	T0-1-15431/IVS 026991		1 Off  	T0-1-15431/Z 029364		1 Off  
T0-2-15432/I1 207091			T0-2-15432/IVS 041229			T0-2-15432/Z 043602		
T0-3-15433/I1 207115			T0-3-15433/IVS 055467			T0-3-15433/Z 057840		
T0-1-15434/I1 207071		1 Off	T0-1-15434/IVS 069705		1 Off  	T0-1-15434/Z 072078		1 Off  
T0-2-15435/I1 218971		1 Off	T0-2-15435/IVS 003195		1 Off  	T0-2-15435/Z 003196		1 Off  
T0-2-15907/I1 207095		1 Off	T0-2-15907/IVS 076423		1 Off  	T0-2-15907/Z 078796		1 Off  
T0-1-15451/I1 207072		1 Off	T0-1-15451/IVS 083943		1 Off  	T0-1-15451/Z 086316		1 Off  
T0-2-15452/I1 207092			T0-2-15452/IVS 098181			T0-2-15452/Z 010381		
T0-3-15453/I1 207116			T0-3-15453/IVS 022246			T0-3-15453/Z 024619		



2)

Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP30; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts	Flush mounting Front IP65	Center mounting Front IP65	Std. pack
		Pole N/O	Part no. Article no.	Price See price list	Part no. Article no.
					Price See price list
					Std. pack
On switch (N/O)					
With black thumb-grip and front plate Momentary from position 1					
		1	T0-1-15321/E 086317		1 Off
	FS 4721	2	T0-1-15322/E 010382		T0-1-15321/EZ 088690
		3	T0-2-15323/E 024620		T0-1-15322/EZ 012755
			T0-1-15366/E 081572		T0-2-15323/EZ 026993
	FS 456				T0-1-15366/EZ 083945
ON-OFF momentary switches					
With black thumb-grip and front plate Momentary from START position					
		1	T0-1-15511/E 019875		1 Off
	FS 147767	2	T0-2-15512/E 034113		T0-1-15511/EZ 022248
		3	T0-3-15513/E 048351		T0-2-15512/EZ 036486
		see K 115	T0-2-8177/E 015130		T0-3-15513/EZ 050724
	FS 140660				T0-2-8177/EZ 017503

Information relevant for export to North America



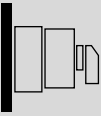

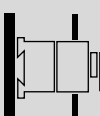
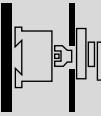














1)

Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Suitable for
Degree of Protection

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
E36332
NLRV
12528
3211-05
UL Listed, CSA certified
Branch circuits
IEC: IP65; UL/CSA Type 3R, 12

HPL04051EN

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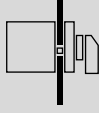
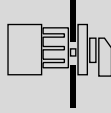
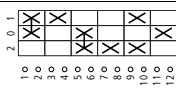



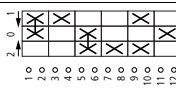



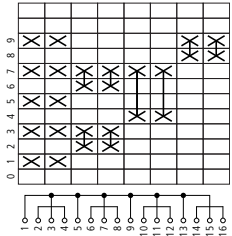







Surface mounting IP65			Distribution board mounting Front IP30			Rear mounting Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
T0-1-15321/I1 207064		1 Off	T0-1-15321/IVS 093436		1 Off  	T0-1-15321/Z 095809		1 Off  
T0-1-15322/I1 207065			T0-1-15322/IVS 017501					
T0-2-15323/I1 207087			T0-2-15323/IVS 031739					
T0-1-15511/I1 207073		1 Off	T0-1-15511/IVS 026994		1 Off  	T0-1-15511/Z 029367		1 Off  
T0-2-15512/I1 207093						T0-2-15512/Z 043605		1 Off  
T0-3-15513/I1 207117								
T0-2-8177/I1 207101			T0-2-8177/IVS 022249		1 Off  	T0-2-8177/Z 024622		1 Off  



2)

Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP30; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾ Front IP65			Center mounting ¹⁾ Front IP65		
			Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
Pole N/O								
Universal control switches								
With black thumb-grip and front plate								
Maintained switches with 3 positions 1 contact closed in each position								
<ul style="list-style-type: none"> • Additionally 1 contact closed in position 0 and 1 • Additionally 1 contact closed in position 0 and 2 • Additionally 1 contact closed in position 0 and 3 								
 FS 429	 FS 429		T0-3-15391/E 029365	1 Off 	T0-3-15391/EZ 031738	1 Off 		
Momentary from positions 1 and 2 With black thumb-grip and front plate								
 FS 458	 FS 458		T0-3-15394/E 072079	1 Off 	T0-3-15394/EZ 074452	1 Off 		
Coding switches								
With black thumb-grip and front plate With complete rotation in both directions.								
 FS 312	 FS 312	Binary BCD code	T0-4-15602/E 029368	1 Off 	T0-4-15602/EZ 031741	1 Off 		
Series switches								
With black thumb-grip and front plate With 0 (Off) position (heater switches)								
 FS 614	 FS 614	1	T0-1-91/E 072082	1 Off 	T0-1-91/EZ 074455	1 Off 		

Information relevant for export to North America




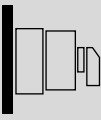
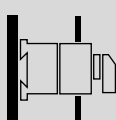
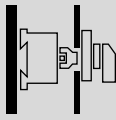







1)

Product Standards
 UL File No.
 UL CCN
 CSA File No.
 CSA Class No.
 NA Certification
 Suitable for
 Degree of Protection

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 E36332
 NLRV
 12528
 3211-05
 UL Listed, CSA certified
 Branch circuits
 IEC: IP65; UL/CSA Type 3R, 12

HPL04053EN

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Surface mounting IP65 		Distribution board mounting ²⁾ Front IP30			Rear mounting ¹⁾ Front IP65			
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
								
T0-3-15391/I1 207112		1 Off	T0-3-15391/IVS 036484		1 Off 			
T0-3-15394/I1 207113		1 Off	T0-3-15394/IVS 079198		1 Off 	T0-3-15394/Z 081571		1 Off 
T0-4-15602/I1 207134		1 Off	T0-4-15602/IVS 036487		1 Off 	T0-4-15602/Z 038860		1 Off 
T0-1-91/I1 207080		1 Off	T0-1-91/IVS 079201		1 Off 	T0-1-91/Z 081574		1 Off 



2)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3;
 CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP30; UL/CSA Type: –



Contact sequence	Front plate no.	Pole	Main contacts	Flush mounting ¹⁾		Center mounting ¹⁾		Std. pack	Std. pack
				Front IP65	Price	Front IP65	Price		
			Pole N/O	Part no. Article no.	Price See price list	Part no. Article no.	Price See price list		
Voltmeter selector switch									
With black thumb-grip and front plate									
	<p>FS 1410757</p>	3 x phase-N with 0 position	3 + N	T0-2-15921/E 067337		<p>FS 1410757</p>		1 Off 	1 Off
	<p>FS 1410759</p>	3 x phase-phase 3 x phase-N with 0 position	3 + N	T0-3-8007/E 095813		<p>FS 1410759</p>			
	<p>FS 164721</p>	3 x phase-phase 3 x phase-N without 0 position with complete rotation in both directions	3 + N	T0-3-15924/E 019878		<p>FS 164721</p>			
	<p>FS 1410755</p>	3 x phase-phase with 0 position	3	T0-2-15920/E 038861		<p>FS 1410755</p>			
	<p>FS 164854</p>	3 x phase-phase without 0 position	3	T0-2-15922/E 053099		<p>FS 164854</p>			
Ammeter selector switch									
With black thumb-grip and front plate With complete rotation in both directions. Measurement via current transformer With 0 (Off) position									
	<p>FS 9440</p>			T0-3-8048/E 034116		<p>FS 9440</p>		1 Off 	1 Off

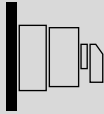
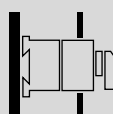
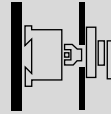
Information relevant for export to North America



1)	
Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

HPL04055EN

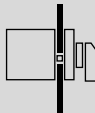
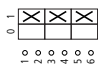

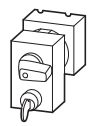
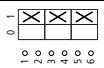

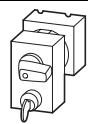
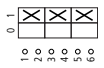

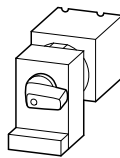
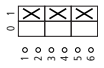

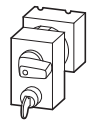
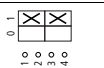


T

Surface mounting			Distribution board mounting ²⁾ Front IP30			Rear mounting ¹⁾ Front IP65		
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
IP65 totally insulated								
								
			T0-2-15921/IVS 074456			T0-2-15921/Z 076829		
			T0-3-8007/IVS 012759			T0-3-8007/Z 015132		
T0-3-8007/I1 207120			1 Off			1 Off		
			T0-3-15924/IVS 026997			T0-3-15924/Z 029370		
T0-3-15924/I1 207119			1 Off					
			T0-2-15920/IVS 029452			T0-2-15920/Z 048353		
			T0-2-15922/IVS 060218			T0-2-15922/Z 062591		
			T0-3-8048/IVS 041235			T0-3-8048/Z 043608		
			1 Off			1 Off		

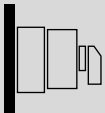
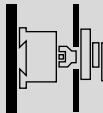

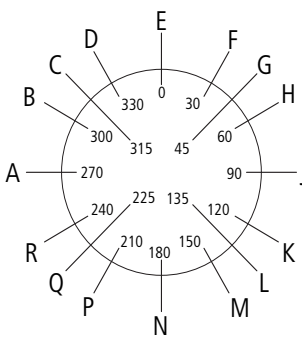



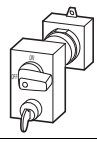




2)
 Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. 12528
 CSA Class No. 3211-05
 NA Certification UL Listed, CSA certified
 Suitable for Branch circuits
 Degree of Protection IEC: IP30; UL/CSA Type: –









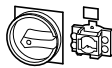


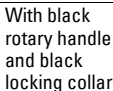












Contact sequence	Front plate no.	Main contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting IP65	Part no. Article no.	Price See price list	Std. pack
		Pole N/O	400 V P kW	I_u A				
Panic switch								
Cylinder lock SVA Without emergency switching off/emergency stop function, with two keys With black thumb-grip and front plate If the key is withdrawn in position 1 the switch can be switched off but not on again without the key.								
	 FS 908	3	6.5	20		T0-2-1/E/SVA(S) 050977		1 Off
		3	13	25		P1-25/E/SVA(S) 050966		
		3	15	32		P1-32/E/SVA(S) 044977		
As an emergency switching off/emergency stop device To IEC/EN 60204-1, VDE 0113 Part 1 With two keys With red thumb-grip and yellow front plate								
	 FS 908 GE	3	6.5	20		T0-2-1/E/SVA(S)-RT 228291		1 Off
		3	13	25		P1-25/E/SVA(S)-RT 050967		
		3	15	32		P1-32/E/SVA(S)-RT 050971		
Padlocking feature SVC As an emergency switching off/emergency stop device To IEC/EN 60204-1, VDE 0113 Part 1, with two keys With red thumb-grip and yellow front plate If the locking slide is padlocked in position 1 the switch can be switched off but not on again without removing the padlock. Lockable with max. 3 padlocks.								
	 FS 908 GE	3	6.5	20		T0-2-1/E/SVC(S)-RT 044973		1 Off
		3	13	25		P1-25/E/SVC(S)-RT 044974		
		3	15	32		P1-32/E/SVC(S)-RT 044975		
On-Off switches								
Without emergency switching off/emergency stop function With black thumb-grip and front plate Key can only be withdrawn in position 0 (Pos A)								
	 FS 908	3	6.5	20		T0-2-1/E/SVA(A) 050976		1 Off
		3	13	25		P1-25/E/SVA(A) 050965		
		3	15	32		P1-32/E/SVA(A) 050970		
Key operation lock mechanism ST-0 Without emergency switching off/emergency stop function With black thumb-grip and front plate Key can only be withdrawn in position 0 (Pos A)								
	 FS 908	2	6.5	20		T0-1-102/EZ/S 014933		1 Off



Surface mounting IP65		Rear mounting IP65							
	Part no. Article no.	Price See price list	Std. pack		Part no. Article no.	Price See price list	Std. pack	Notes	
	T0-2-1/I1/SVA(S) 207084 P1-25/I2/SVA(S) 207305 P1-32/I2/SVA(S) 207326		1 Off					 <p>Code letters for lockable switch positions Letter S for panic lock with FS908GE</p>	
	T0-2-1/I1/SVA(S)-RT 207085 P1-25/I2/SVA(S)-RT 207306		1 Off						
	T0-2-1/I1/SVC(S)-RT 207086 P1-25/I2/SVC(S)-RT 207307 P1-32/I2/SVC(S)RT 207328		1 Off						
	T0-2-1/I1/SVA(A) 207083 P1-25/I2/SVA(A) 207304 P1-32/I2/SVA(A) 207325		1 Off		T0-2-1/Z/SVA(A) 050978 P1-25/Z/SVA(A) 050969		1 Off		1 Off
	T0-1-102/I1/S 207063		1 Off		T0-1-102/Z/S 014971		1 Off		1 Off

SVB-...-T0(P3), KNB-...-T0(P3)

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	Emergency switching off/emergency stop	For use with	Part no. Article no.	Price See price list	Std. pack	Notes
Main switch assembly kits						
Padlocking feature only for main switch Permissible with T0 with up to max. 4 contact units Permissible with T3 with up to max. 6 contact units						
	With red rotary handle and yellow locking collar	As an emergency switching off/emergency stop device To IEC/EN 60204-1, VDE 0113 Part 1	T0-.../E, .../Z, .../I1 T3-.../E, .../Z, .../I2 P1-.../E, .../Z, .../I2	SVB-T0 057892	1 off 	<ul style="list-style-type: none"> For locking the 0 position For switches with positions 0-I at 90° Switching angle as front plate FS908 Lockable with max. 3 padlocks
			T5B-.../E, .../Z, .../I4 T5-.../E, .../Z, .../I5 P3-63/E, .../Z, .../I4 P3-100/E, .../Z, .../I5	SVB-P3 052999	1 off 	
	With black rotary handle and black locking collar	Without emergency switching off/emergency stop function	T0-.../E, .../Z, .../I1 T3-.../E, .../Z, .../I2 P1-.../E, .../Z, .../I2	SVB-SW-T0 060265	1 off 	<ul style="list-style-type: none"> For locking the 0 position For locking the I position when required Lockable with max. 3 padlocks
			T5B-.../E, .../Z, .../I4 T5-.../E, .../Z, .../I5 P3-63/E, .../Z, .../I4 P3-100/E, .../Z, .../I5	SVB-SW-P3 062491	1 off 	
Main switch assembly kits with PE terminal and N terminal						
Padlocking feature only for main switch Permissible with T0 with up to max. 4 contact units Permissible with T3 with up to max. 6 contact units						
	With red rotary handle and yellow locking collar	As an emergency switching off/emergency stop device To IEC/EN 60204-1, VDE 0113 Part 1	T0-.../E, .../Z T3-.../E, .../Z	V/EA/SVB-T0 062638	1 off 	<ul style="list-style-type: none"> For converting flush mounting switch T.../E into flush mounting main switch T.../EA/SVB... For converting rear mounting switch T.../Z (with FS908 front plate) into interlocked rear mounting main switch T.../V/SVB
			T5(B)-.../E, .../Z	V/EA/SVB-T5 045065	1 off 	
	With black rotary handle and black locking collar	Without emergency switching off/emergency stop function	T0-.../E, .../Z T3-.../E, .../Z	V/EA/SVB-SW-T0 065011	1 off 	
			T5(B)-.../E, .../Z	V/EA/SVB-SW-T5 045064	1 off 	
Thumb-grips						
	Black	–	T0-.../E, .../EZ, .../IVS, .../Z, .../I1 T3-.../E, .../EZ, .../IVS, .../Z, .../I2 P1-.../E, .../EZ, .../IVS, .../Z, .../I2	KNB-T0 038909	10 off 	–
	Red	Only for emergency switching off/emergency stop switches To IEC/EN 60204-1, VDE 0113 Part 1	T0-.../E, .../IVS, .../Z, .../I1 T3-.../E, .../IVS, .../Z, .../I2 P1-.../E, .../IVS, .../Z, .../I2	KNB-RT-T0 043655	10 off 	<ul style="list-style-type: none"> Order yellow FS908GE-T0 front plate additionally
	Black	–	T5(B)-.../E, .../Z, .../I4 P3-63/E, .../Z, .../I4 P3-100/E, .../Z, .../I5	KNB-P3 041282	10 off 	–
	Red	Only for emergency switching off/emergency stop switches To IEC/EN 60204-1, VDE 0113 Part 1	T5(B)-.../E, .../Z, .../I4 P3-63/E, .../Z, .../I4 P3-100/E, .../Z, .../I5	KNB-RT-P3 046028	10 off 	<ul style="list-style-type: none"> Order additional yellow front plate FS908GE-P3
Maintenance key for interlocked main switches						
			T0...	KNK-T0 000650	5 off 	Special devices for electricians: interlocked main switches can be switched on and off for repairs with the maintenance key while the door is open (as per IEC/EN 60204-1, Section 5.1.1.1)
			P1...	KNK-P3 000649	5 off 	
			P3...			
ATEX type						
According to 94/9EG Test Certificate BVS04E106X						
	With metric knock-outs M20		T0-.../I1	+ATEX-I1 237513	1 off	Only available together with basic unit
	With solid side walls		T3-.../I2 P1-.../I2	+ATEX-I2 237514		
			T5B-.../I4 P3-.../I4	+ATEX-I4 237516		
			T5-.../I5 P3-.../I5	+ATEX-I5 237517		

Information relevant for export to North America



UL/CSA certification not required

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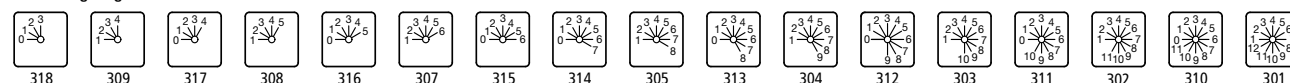
Switch size	Dimensions (W x H x D) mm	For use with	Blank plate Can be engraved Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Standard front plate						
Suitable for laser inscription						
T0, T3, P1	45 x 45	(for frame 48 x 48)	FS(*)-T0 231893		10 off 	UL/CSA certification not required
P3, T5, T5B	84 x 84	(for frame 88 x 88)	FS(*)-P3 231895		10 off 	
Emergency switching off/emergency stop front plates						
T0, T3, P1	45 x 45	(for frame 48 x 48)	FS908GE-T0 003198		5 off 	
P3, T5, T5B	84 x 84	(for frame 88 x 88)	FS908GE-P3 031475		5 off 	
Blank plate						
Can be engraved						
P3, T5, T5B	84 x 84	(for frame 88 x 88)	FS-ALU980-P3 266906		10 off 	
T0, T3, P1	45 x 45	(for frame 48 x 48)	FS-ALU980-T0 266905		50 off 	

Notes

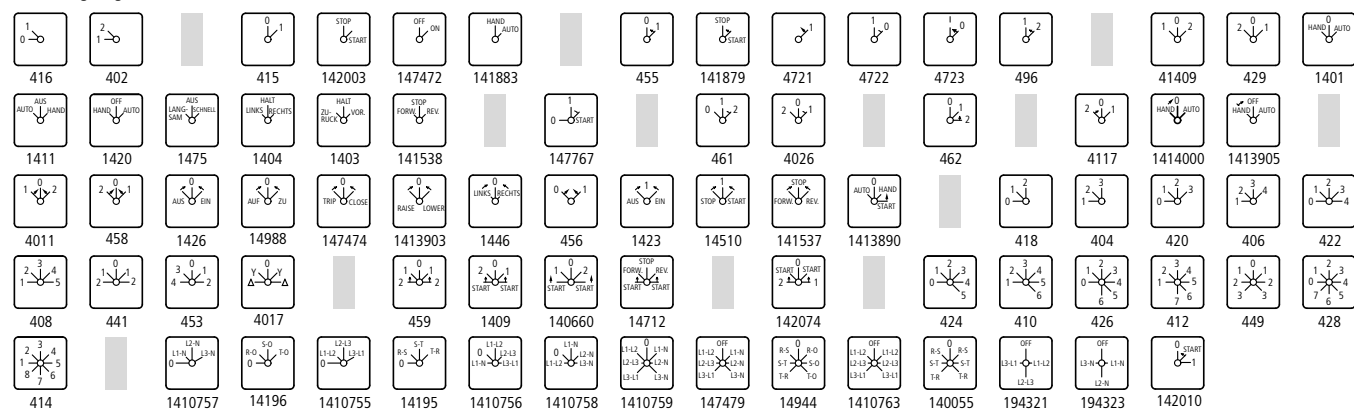
Standard front plate

For standard switches the normal front plate can be replaced if required with the front plate shown here (not with T6, T8 and TM). This is provided the switching angle, number of positions and the position of the 0 position are the same.

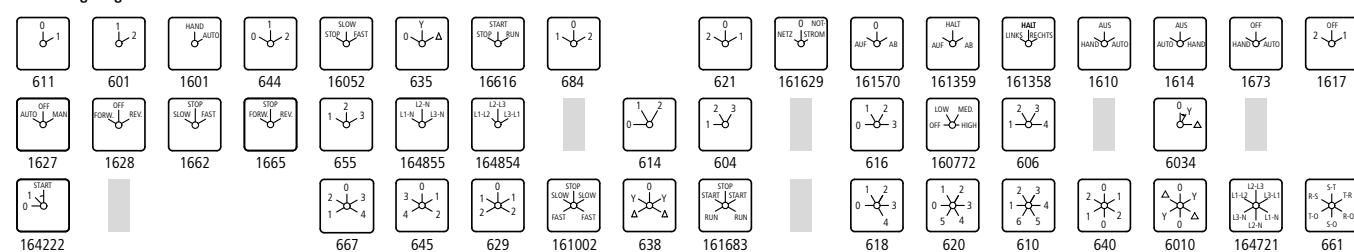
Switching angle 30°



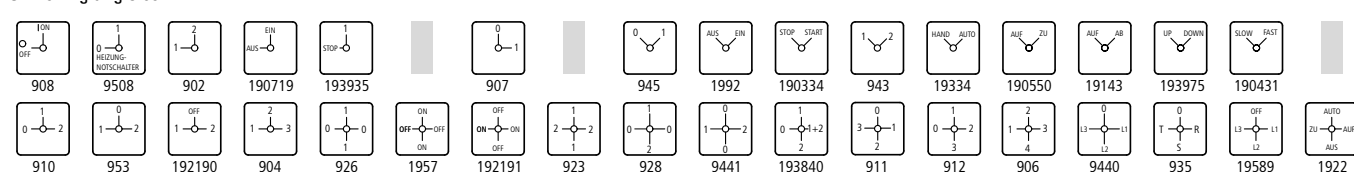
Switching angle 45°



Switching angle 60°



Switching angle 90°





Language	Cam switches T0, T3, P1 Part no. Article no.	Price See price list	Std. pack	Switch-disconnectors T5(B), P3 Part no. Article no.	Price See price list	Std. pack
Add-on front plate, clip-on, complete						
For padlocking features consisting of label mount and insert label						
<ul style="list-style-type: none"> Inscribed with standard text "Main switch - Open only in 0 position" in various languages Front plates are already included as a standard with: T.../EA/SVB, P.../EA/SVB main switches for flush mounting T.../V/SVB, P.../V/SVB main switches for rear mounting 						
Inscribed with standard text	German/English	ZFS61/62-T0 030170				
	French	ZFS63-T0 047424				
	Italian	ZFS68-T0 065751				
	Portuguese	ZFS72-T0 205541				
	Swedish	ZFS75-T0 205544				
	Spanish	ZFS77-T0 065752				
	Hungarian	ZFS80-T0 205548				
Blank, can be engraved	none	ZFS60-T0 019924				
			25 off 	ZFS61/62-P3 065739		25 off
				ZFS63-P3 047423		25 off
				ZFS77-P3 047422		25 off
				ZFS80-P3 205565		
				ZFS60-P3 022297		
Label mounts, black, clip-on						
		ZFSX-T0 024670				
			25 off 	ZFSX-P3 027043		25 off
Insert label						
		BS45X14-T0 029416				
			25 off 	BS84X24-P3 031789		25 off
P5 switch-disconnector add-on front plate						
Clip-on Enter country reference when ordering: D = German GB = English F = French I = Italian E = Spanish						
	P5-.../EA/SVB P5-.../V/SVB	ZFS(*)-P5 105225				
			1 off 			

Information relevant for export to North America

UL/CSA certification not required



For use with

Withdrawability

S-T0 key operated lock mechanism, front IP53

With two keys



KMS 1 lock mechanism: individual lock mechanism, not suitable for master key systems
Key withdrawable in all positions

KMS 2-10, KMS 201-400 lock mechanisms: individual lock mechanisms, not suitable for master key systems
Key withdrawable in all positions

Lock KMS1: Switches with FS908 are possible as main switch.

Key can be withdrawn in positions as specified

SA(...) = master key system (master-key facility) with security certificate. Ordering only with lock plan filled out with the **full configuration of the envisaged lock system**. When reordering state item number from the lock plan, e.g (A 6294-1.2).

Key can be withdrawn in positions as specified

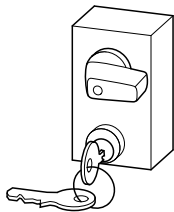
T0-1.../11 to T0-4.../11
T0-1.../E to T0-6.../E
T0-1.../Z to T0-6.../Z
T3-1.../E to T3-5.../E
T3-1.../Z to T3-5.../Z
T3-1.../12 to T3-4.../12
P1-.../E
P1-.../12
P1-.../Z

Withdrawable positions can be programmed by user

Withdrawable positions programmed at factory as ordered

SVA-T3 cylinder lock, front IP65

With two keys



KMS 1 lock mechanism: individual lock mechanism, not suitable for master key systems
Key withdrawable in all positions

KMS 2-10, KMS 201-400 lock mechanisms: individual lock mechanisms, not suitable for master key systems
Key withdrawable in all positions

Lock KMS1: Switches with FS908 are possible as main switch.

Key can be withdrawn in positions as specified

SA(...) = master key system (master-key facility) with security certificate. Ordering only with lock plan filled out with the **full configuration of the envisaged lock system**. When reordering state item number from the lock plan, e.g (A 6294-1.2).

Key can be withdrawn in positions as specified

T0-.../E, T0-.../11, T0-.../Z
T3-.../E, T3-.../12, T3-.../Z
P1-.../E, P1-.../12, P1-.../Z

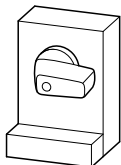
Withdrawable positions can be programmed by user

T0-1-... to T0-4-.../11
T0-1-.../E to T0-4-.../E
T3-1-... to T3-5-.../12
T3-1-... to T3-6-.../E
P1-.../12, P1-.../E

Withdrawable positions programmed at factory as ordered

SVC-T3 padlocking feature, front IP65

The locking slide can be locked with a max. of 3 padlocks when in its pressed, interlocked position



All positions can be locked

Specific positions or ranges can be locked

T0-.../E, T0-.../11, T0-.../Z
T3-.../E, T3-.../12, T3-.../Z
P1-.../E, P1-.../12, P1-.../Z

Switches with FS908 can be used as main switches for:

T0-1-... to T0-4-.../11, .../E
T3-1-... to T3-5-.../12
T3-1-... to T3-6-.../E
P1-.../12, P1-.../E



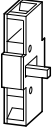











The positions that can be locked can be programmed by the user










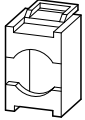







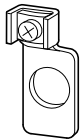

The positions that can be locked are programmable at the factory as ordered

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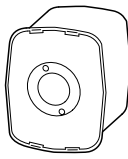


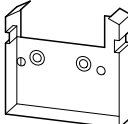




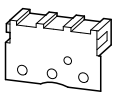


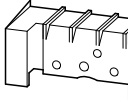





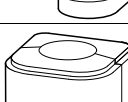


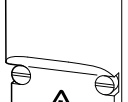


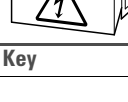









Part no. Article no.	Price See price list	Std. pack	Notes
S-T0 086709		1 off	<p>The key replaces the thumb-grip, cannot be switched without key. The switch position indication is on the lock. Normally the key is withdrawable in every position.</p> <p>On cam switches ordered with front plate FS908 together with key operation, the key is only withdrawable in the 0 position.</p> <p>The key withdraw can be changed (also retrospectively) with the locking cam "VR-T0".</p> <p>When retrofitting the key operation, the existing front plate of the cam switch must be used.</p> <p>Keys → Page 4/66</p>
S-SOND-KMS(*)-T0 231957		1 off	
S(*)-T0 231959		1 off	
S(*)-SOND-SA(*)-T0 231965		1 off	
SVA-T3 050974		1 off	
SVA-SOND-KMS(*)-T3 231967		1 off	
SVA(*)-T3 907745		1 off	
SVA(*)-SOND-SA(*)-T3 231971		1 off	
SVC-T3 050975		1 off	
SVC(*)-T3 907748		1 off	



	For use with	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Neutral conductor					
Early-make on switching, late-break off switching The N contact always behaves as an early-make contact when switching on and as a late-break contact when switching off. N-P1(P3)... switching capacity same as for contacts P1(P3)-...					
	For left or right side mounting	P1-.../E, .../EA, .../EZ	N-P1E 000651	5 off  	Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. CSA report applies to both Canada and US UL CCN - CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified
	For P1-.../I2: optionally, N-P1Z or HI11-P1/P3Z, can only be fitted on the left	P1-.../Z, .../N, .../I2, .../IVS P3-.../E, .../EA...	N-P1Z 000652 N-P3E 062432		Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified
		P3-.../Z, .../N, .../IVS P3-63.../Z, .../I4 P3-100.../Z, .../I5	N-P3Z 064805		
Neutral terminal					
Front mounting, left Service distribution board mounting, right					
		P5-125(160)/E(EA)	N-P5-125/160E 280969	1 off	
		P5-125(160)/Z(V)	N-P5-125/160Z 280970		
		P5-250(315)/E(EA)	N-P5-250/315E 280971		
		P5-250(315)/Z(V)	N-P5-250/315Z 280972		
Ground terminal					
Front mounting, right Service distribution board mounting, left					
		P5-125(160)/E(EA)	PE-P5-125/160E 280973	1 off	
		P5-125(160)/Z(V)	PE-P5-125/160Z 280974		
		P5-250(315)/E(EA)	PE-P5-250/315E 280975		
		P5-250(315)/Z(V)	PE-P5-250/315Z 280976		
Auxiliary contacts					
1 normally open (N/O), 1 normally close contact (N/C) Late-break on switching, early-make off switching. The N/O is always connected as a load-shedding contact.					
	For left and/or right side mounting	P1-.../E, .../EA..., .../EZ P3-.../E, .../EA	HI11-P1/P3E 061813	5 off  	Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-5; CE marking
	For P1-.../I2: optionally, HI11-P1/P3Z or N-P1Z, can only be fitted on the left	P1-.../Z, .../N, .../I2, .../IVS P3-63/Z, .../N, .../I4, .../IVS P3-100/Z, .../N, .../I5, .../IVS	HI11-P1/P3Z 062031	5 off  	UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified
2 normally open (N/O), 1 normally close contact (N/C)					
	For left and/or right side mounting	P5-125(160)/E(EA)	HI21-P5-125/160E 280963	1 off	
		P5-125(160)/Z(V)	HI21-P5-125/160Z 280964		
		P5-250(315)/E(EA)	HI21-P5-250/315E 280965		
		P5-250(315)/Z(V)	HI21-P5-250/315Z 280966		
Center mounting accessories					
For single-hole fitting 22.3 mm					
	For cam switches with existing front plate - quick installation with snap fitting system	T0-.../E T3-.../E	EZ-T0 081622	1 off  	UL/CSA certification not required
	Mounting diameter 22.3 mm, one man mounting with screw fixing	T0-.../E T3-.../E P1-.../E	EZ-P1 091455	1 off  	

	For use with	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America 
Service distribution board mounting accessories						
Including push-fit shaft						
	For retrofitting in service distribution board mounting T0-.../IVS design. Use the basic switch's front plate.	T0-.../XZ	IVS-T0 091114	1 off 		UL/CSA certification not required
Coupling drive						
Including push-fit shaft						
	For the retrofitting of switch T0(T3)-.../XZ as rear mounting, spare part for T0(T3)/(P1)-.../Z	–	DE-T0 093487	1 off 		UL/CSA certification not required
	For the conversion of T5(B)-.../E flush mounting switch to rear mounting, spare part for T5(B)/(P3)-...Z	–	DE-P3 093972	3 off 		
Interlock sections						
With PE and neutral conductor connection Mounting on the back of flush mounting switch, with interlock function in rear mounting switches.						
		T0-.../E, ...EZ, ...Z T3-.../E, ...EZ, ...Z P1-.../E, ...EZ, ...Z	UV-T0 019925	1 off 	Mounting on the back of flush mounting switch	UL/CSA certification not required
		T5(B)-.../E, ...Z P3-.../E, ...Z	UV-P3 048289	1 off 	With interlock function for rear mounting switches	
Interlock extensions						
A max. of 4 units can be plugged on the interlock section every 25 mm (an equal number of shaft extensions is required for this)						
	Use only with T0/T3-... and P3-.../Z designs	UV-T0	ZVV-T0 022298	10 off 	–	UL/CSA certification not required
	Use only with T5(B)-.../Z and P3-.../Z designs	UV-P3	ZVV-P3 024671	10 off 	–	
Shaft extensions						
A max. of 4 units can be put on the switch shaft every 25 mm						
		T0-.../Z, T0-.../V T3-.../Z, T3-.../V P1-.../Z, P1-.../V	ZAV-T0 027044	10 off 	–	UL/CSA certification not required
		T5(B)-.../Z P3-.../Z P3-.../V	ZAV-P3 029417	10 off 	–	
Shaft						
	Aluminum, length: 480 mm	P5-.../V... P5-.../Z	ZAV-P5 280979	1 off 		UL/CSA certification not required
Interlock extensions und shaft extensions, complete						
	Extension to 25 mm When ordering with basic unit		+ZAV(X1)+ZVV(X1)-T0/P3 254546	1 off 		UL/CSA certification not required
Control cable terminal						
		P5-250/315	ST-P5-250/315 280978	1 off 	Terminal capacity: • Solid or stranded: 4 mm ² • Flexible with ferrules to DIN 46228: 4 mm ²	UL/CSA certification not required



		For use with	Part no. Article no.	Price See price list	Std. pack	Notes
Shrouds¹⁾						
	For flush mounting switches with up to 4 contact units	T0-.../E T3-.../E	H3-T0 093828		1 off  	Cable entries Quantity: 2 x Ø 20 mm + 2 x Ø 15 mm Cross-section: 5 x 6 mm ² 5 x 2.5 mm ²
	For covering the connection terminals of up to 2 contact units Extension for H1-T5 protective shroud on 3 - 8 contact units	T5(B)-.../E, .../Z H1-T5	H1-T5 045062 HZ-T5 045063		1 off   10 off  	Can be optionally used for input wiring and/or outgoer One HZ-T5 required per contact unit
	For covering the connection terminals on 3 pole switch-disconnectors	P1-.../E, .../EZ, .../Z, .../EA, .../V	H-P1 017253		5 off  	Can be optionally used for input wiring and/or outgoer
	For covering the connection terminals on 4 pole switch-disconnectors	P1-...N, ...HI11, ...N...HI11	H-P14 019626		5 off  	Can be optionally used for input wiring and/or outgoer
	For covering the connection terminals on 3 pole open switch-disconnectors with N neutral conductor and/or HI11 auxiliary contact	P3-.../E, .../Z, .../EA, .../V P3-...N, ...HI11, ...N...HI11	H-P3 021999		5 off  	The protective shroud is designed for mounting on the switch-disconnector on both sides; non-required parts can be broken off.
	For covering the terminals	P5	H-P5-125/160 293977		1 off  	
	For covering the terminals	P5	H-P5-250/315 293978		1 off  	
	Set (6 units) for covering the connection terminals	T8-3-8342/...	H-T8 200184		6 off  	
Key						
	For KMS 1 individual lock mechanism	-	ES-KMS1-T0 231972		10 off	
	For KMS 2 - 10 or KMS 201 - 400 individual lock mechanism	-	ES-KMS(*)-T0 231973		1 off	
	Individual key, stainless, for master key system and stored individual lock mechanisms, state lock plan no. and key.	-	HS-SA(*)-T0 256151		1 off	Master key must be ordered additionally. The security certificate must be sent when reordering. Ordering example: HS-SA(A6294-1.2)-T0
Locking cams (2 cams per set)						
	For later change of key withdrawability in the engagement positions	S-T0 for all switching angles	VR-T0 089082		1 off  	
	For changing the blocked positions/ranges	SVA-T3 SVC-T3	VR-T3 050987		1 off  	
Mounting plate shield²⁾						
To connect the shielding	CI-K2		MBS-I2 290191		1 off	
To connect the shielding	CI-K4		MBS-I4 118742		1 off	

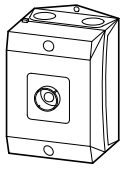



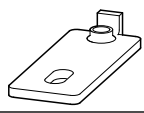

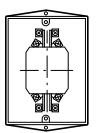


Information relevant for export to North America

1)
UL/CSA certification not required

2)
Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
E36332
NLRV
12528
3211-07
UL Listed, CSA certified

HPL04067EN

		For use with	Part no. Article no.	Price See price list	Std. pack	Notes
IP65 insulated enclosures						
	1 - 2 contact units	With push-through cable entry diaphragm.	T0-.../Z	CI-K1-T0-2 207435	1 off	The diaphragm can be pierced with the cable Main current/control current: 12 mm/- 16 mm/8 mm 1 contact unit = 2 contacts
	3 - 4 contact units		T0-.../Z	CI-K1-T0-4 207436	1 off	
	1 - 2 contact units		T3-.../Z	CI-K2-T3-2¹⁾ 207437	1 off 	
	3 - 4 contact units		T3-.../Z	CI-K2-T3-4¹⁾ 225325		
	5 contact units	T3-.../Z	CI-K2-T3-5¹⁾ 207438			
	1 - 2 contact units	With metric knockouts	T0-.../Z	CI-K1H-T0-2 105854	1 off	
	3 - 4 contact units		T0-.../Z	CI-K1H-T0-4 105855		
	1 - 2 contact units		T3-.../Z	CI-K2H-T3-2 269462		
	3 - 4 contact units		T3-.../Z	CI-K2H-T3-4 105859		
	5 contact units		T3-.../Z	CI-K2H-T3-5 105860		
	1 - 2 contact units		T5B-.../E	CI-K4-T5B-2 207439	1 off 	For converting T5-.../Z into T5-.../I5 and T5B-.../E into T5B-.../I4: Order AW-T5-... extension terminal additionally 1 contact unit = 2 contacts
	3 - 4 contact units	T5B-.../Z	CI-K4-T5B-4 207440			
	1 - 2 contact units	T5-.../Z	CI-K5-T5-2 207441			
	3 - 4 contact units	T5-.../Z	CI-K5-T5-4 207442			
Only available together with basic unit		T0-.../I1	+I1H 105870	1 off		
Only available together with basic unit		T3-.../I2 P1-.../I2	+I2H 105871	1 off		
Neutral terminals						
For connection of a 5th conductor		CI-K2-PKZ0-...	K-CI-K1²⁾ 207451		20 off 	
		T5B-.../I4, CI-K4-T5B-...	K-CI-K4²⁾ 206916			
		P3-.../I4, CI-K4				
		T5-.../I5, CI-K5-T5-...	K-CI-K5²⁾ 218488			
		P3-.../I5, CI-K5				
Set of external fixing brackets						
		T5B-.../I4, T5-.../I5, P3-63/I4, P3-100/I5	AB-CI-K4/5²⁾ 206914		1 off 	For fixing CI-K4 and CI-K5 directly on walls. One set contains 4 brackets.
Set of extension terminals						
For retrofitting for connection inside enclosure						
		For the bottom contact unit	T5B-.../I4 T5-.../I5	AW-T5-1/2²⁾ 032601	10 off 	Already included in equipment supplied with T5B-.../I4 and T5-.../I5.
		For the second contact unit from the bottom	T5-.../I5	AW-T5-3/4²⁾ 032602	1 off 	Already included in equipment supplied with T5B-.../I4 and T5-.../I5.

Notes

Information relevant for export to North America

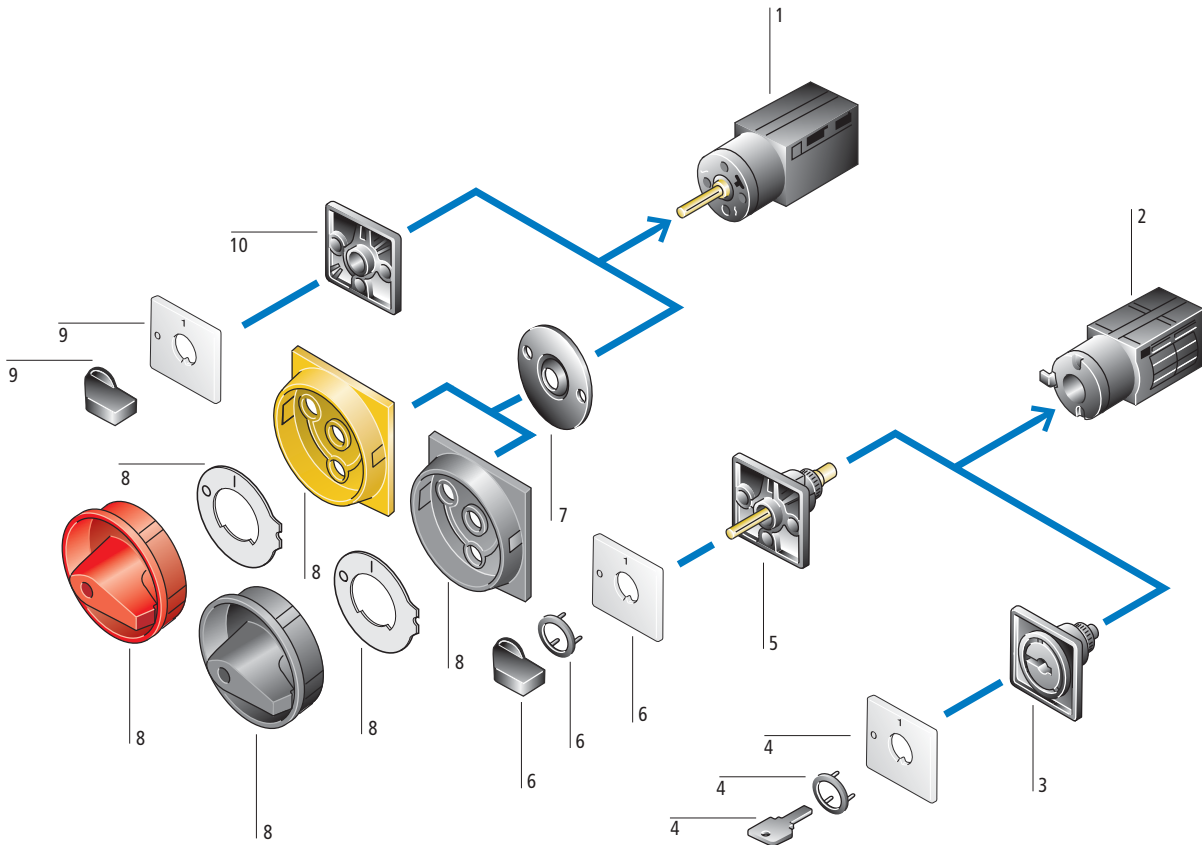


- ¹⁾ Product Standards UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94;
IEC/EN 60947-3; CE marking
- UL File No. E54120
UL CCN MITW2
CSA File No. 12528
CSA Class No. 3211-07
NA Certification UL Listed, CSA certified
Degree of Protection IEC: IP65; UL/CSA Type 1, 3R, 4X, 12, 13 – indoor and outdoor use

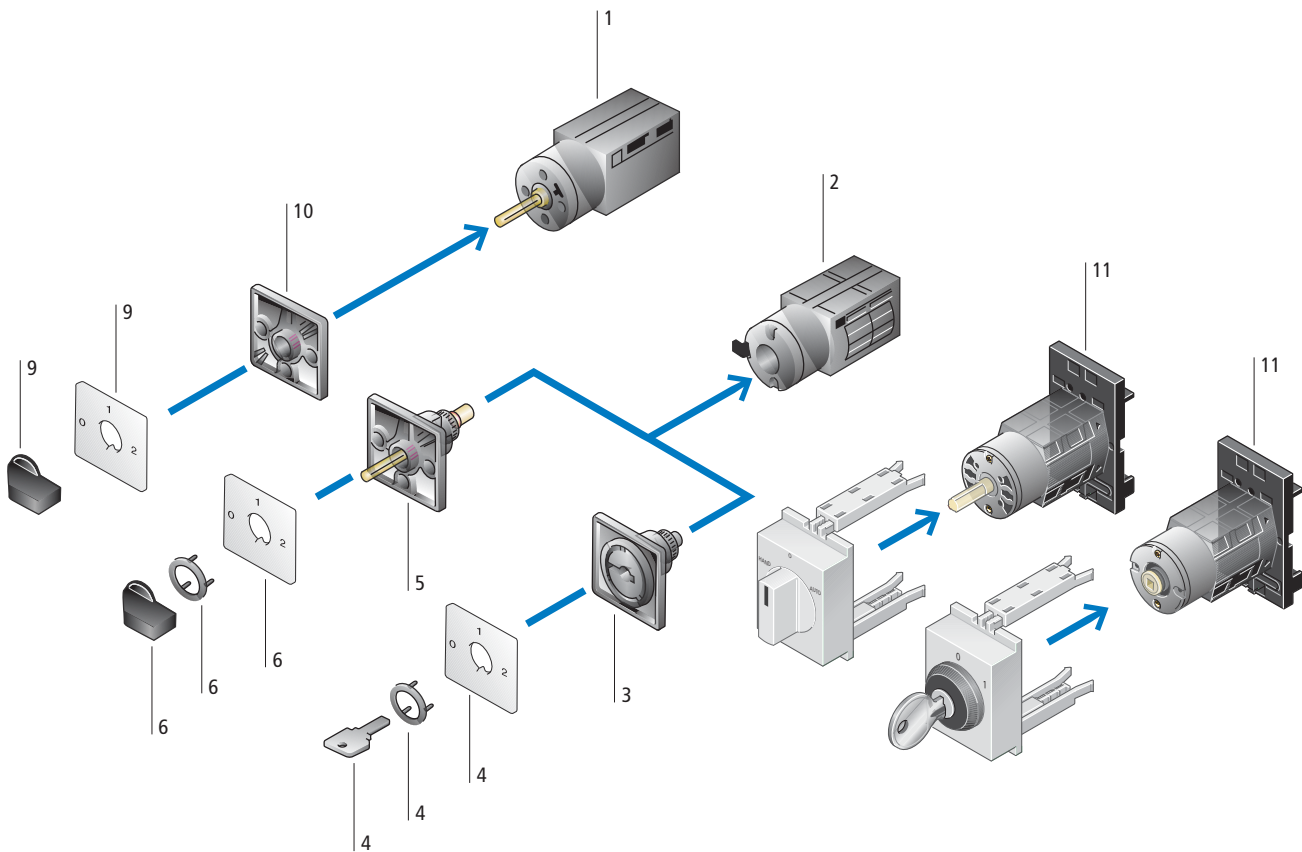
²⁾ UL/CSA certification not required

System overview

TM ON-OFF switches



TM control switch





Flush mounting (.../E)	1
Front IP65	
Mounting from rear in panel sides, plates or doors	
Terminals	
Crosshead screwdriver Pozidriv	
Finger proof	
→ Page 4/70	

Flush mounting control circuit isolator (.../E/SVB)	1
Front IP65	
TO IEC/EN 60 947-5, VDE 0660	
0 position lockable with 2 padlocks 4 mm Ø or 1 padlock 6 mm Ø	
Can be used with up to 250 V AC per contact	
Maximum 6 contacts permissible	
→ Page 4/70	

Center mounting (.../EZ)	2
Front IP65	
Mounted in 16.2 Ø or 22.3 Ø fixing hole, as specified in IEC/EN 60 947-5-1, after the included adapter is removed	
→ Page 4/70	

Key operation for center mounting	3, 4
2 keys are supplied	
Key withdrawable 90°	
Key withdrawable 60° with RONIS lock cylinder.	
→ Page 4/77	

Standard switches for center mounting	5, 6
Black thumb-grip	
→ Page 4/70	

Control circuit isolators	7, 8
Red rotary handle and yellow locking collar	
Black rotary handle and black locking collar	
Lockable in the 0 position	
→ Page 4/70	

Standard switches for flush mounting	9, 10
Black thumb-grip	
→ Page 4/71	

Standard switches for IVS distribution board mounting	11
Mounting in installation distribution board	
Overall width: 2 space units (45 mm mounting depth)	
Up to 2 contact units	

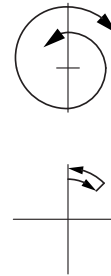
Product features

Contact chamber

- Rated uninterrupted current 10 A
- Positively opening contacts
- 1 – 2 contacts per contact chamber, up to 16 contacts per switch
- For switching unequal potentials
- Control circuit reliability

Switch position

- Safety due to indexing
- Switching angles 30°, 45°, 60°, 90°
- Spring action with automatic return with max. 6 contacts, switching angle ≥ 60°
- Complete rotation
- If the total switching angle is 360°, complete rotation possible in both operating directions





		Flush mounting Front IP65		Center mounting Front IP65				
Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Control circuit isolators, 90°								
with padlocking feature Lockable in the 0 (Off) position Up to 250 V AC per contact								
		1	TM-1-8290/E/SVB 045477		1 off 			
		1	TM-1-8290/E/SVB-SW 215351					
		2	TM-1-8291/E/SVB 045478					
		2	TM-1-8291/E/SVB-SW 215352					
		3	TM-2-8292/E/SVB 045484					
		3	TM-2-8292/E/SVB-SW 210955					
		3 + N	TM-2-8293/E/SVB 045485					
		6	TM-3-8326/E/SVB 045498					
On-Off switches, 90°								
		1	TM-1-8290/E 070131		1 off 	TM-1-8290/EZ 000693		1 off
	F 056	2	TM-1-8291/E 072504			TM-1-8291/EZ 015073		
		3	TM-2-8292/E 074877			TM-2-8292/EZ 015096		
		3 + N	TM-2-8293/E 077250			TM-2-8293/EZ 045486		
		6	TM-3-8326/E 079623					

Information relevant for export to North America



Product Standards

UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3;
CE marking
E36332
NLRV
UL report applies to both US and Canada
-
UL Listed, certified by UL for use in Canada

HPL04071EN

TM



Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	
			Flush mounting Front IP65				Center mounting Front IP65		
Changeover switches without 0 (Off) position 60°									
		1	TM-1-8220/E 081996		1 off 	TM-1-8220/EZ 000692		1 off 	
		2	TM-2-8221/E 084369			TM-2-8221/EZ 015197			
		3	TM-3-8222/E 086742			TM-3-8222/EZ 045493			
		4	TM-4-8223/E 089115			TM-4-8223/EZ 046119			
		5	TM-5-8369/E 091488			TM-5-8369/EZ 046126			
		6	TM-6-8370/E 093861						
Changeover switches with 0 (Off) position 60°									
		1	TM-1-8210/E 096234		1 off 	TM-1-8210/EZ 015137		1 off 	
		2	TM-2-8211/E 098607			TM-2-8211/EZ 015166			
		3	TM-3-8212/E 010807			TM-3-8212/EZ 045491			
		4	TM-4-8213/E 013180			TM-4-8213/EZ 045847			
Changeover switches with 0 (Off) position 90°									
		2	TM-2-8219/E 017926		1 off 				
		3	TM-3-8299/E 020299		1 off 				

Information relevant for export to North America



Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 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



Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	Std. pack	
Manual/auto switch 60°			Flush mounting Front IP65			Center mounting Front IP65			Distribution board - mounting Front IP30	
		1							1 off 	
	F 288				TM-1-8220F288/EZ 016925					
		1	TM-1-15431/E 025045		TM-1-15431/EZ 000691		TM-1-15431/IVS 225342		1 off 	
	F 085									
		2	TM-2-15432/E 027418		TM-2-15432/EZ 016878				1 off 	
		3	TM-3-15433/E 029791		TM-3-15433/EZ 045490				1 off 	
Changeover switches with spring-return from both directions, 30°										
		1	TM-1-8214/E 032164						1 off 	
	F 025									
		2	TM-2-8215/E 034537						1 off 	
Step switches without 0 (Off) position										
3 steps, 60°										
		1	TM-2-8230/E 039283		TM-2-8230/EZ 000701				1 off 	
	F 076									
		3	TM-5-8270/E 041656		TM-5-8270/EZ 046124				1 off 	
4 steps, 60°										
		1	TM-2-8231/E 044029		TM-2-8231/EZ 000700				1 off 	
	F 077									
		3	TM-6-8271/E 046402		TM-6-8271/EZ 046128				1 off 	

Information relevant for export to North America

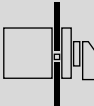
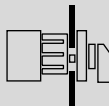
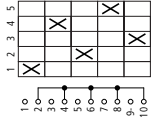



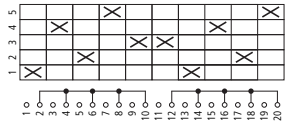


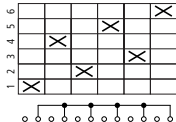



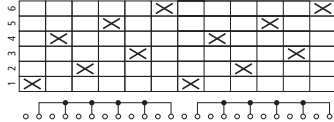


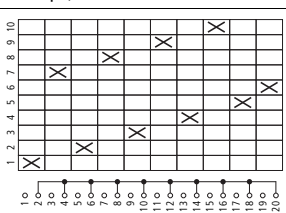





Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
E36332
NLRV
UL report applies to both US and Canada
-
UL Listed, certified by UL for use in Canada

HPL04073EN

TM

Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
			Flush mounting Front IP65 			Center mounting Front IP65 		
Step switches without 0 (Off) position								
5 steps, 60°								
		1	TM-3-8232/E 039298		1 off 	TM-3-8232/EZ 015592		1 off 
		2	TM-5-8252/E 041671		1 off 	TM-5-8252/EZ 046123		1 off 
6 steps 60°, no full rotation								
		1	TM-3-8233/E 053521		1 off 	TM-3-8233/EZ 015630		1 off 
		2	TM-6-8253/E 055894		1 off 	TM-6-8253/EZ 046127		1 off 
10 steps, 30°								
		1	TM-5-8237/E 069150		1 off 	TM-5-8237/EZ 015661		1 off 


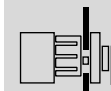




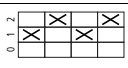

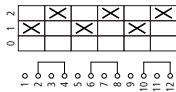




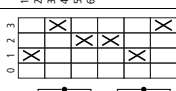
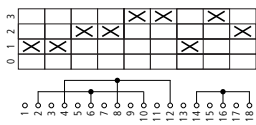
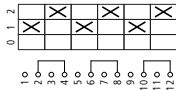


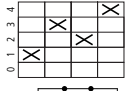



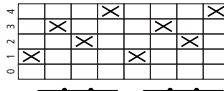

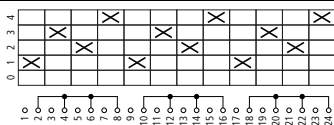
Information relevant for export to North America



Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
 UL File No. E36332
 UL CCN NLRV
 CSA File No. UL report applies to both US and Canada
 CSA Class No. -
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
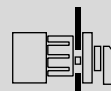
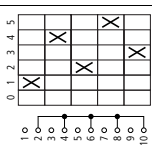



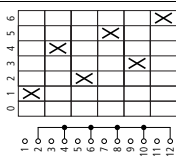



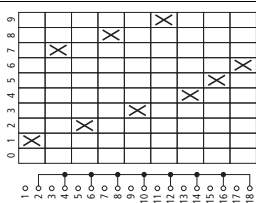



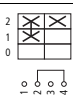



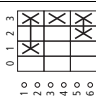









Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Flush mounting Front IP65 	Center mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
Step switches										
With 0 (Off) position										
2 steps, 60°										
		1	TM-1-8240/E 058267		1 off 			TM-1-8240/EZ 015226		1 off 
		2	TM-2-8260/E 060640		1 off 			TM-2-8260/EZ 045483		
		3						TM-3-8280/EZ 045496		
3 steps, 45°										
		1	TM-2-8241/E 065386		1 off 			TM-2-8241/EZ 015256		1 off 
		2	TM-3-8261/E 067759					TM-3-8261/EZ 000698		
		3	TM-5-8281/E 070132					TM-5-8281/EZ 046125		
3 steps, 60°										
		3	TM-3-8280/E 063013		1 off 					
4 steps, 30°										
		1	TM-2-8242/E 072505		1 off 			TM-2-8242/EZ 015506		1 off 
		2	TM-4-8262/E 074878					TM-4-8262/EZ 046120		1 off 
		3	TM-6-8282/E 077251							

Information relevant for export to North America



Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
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



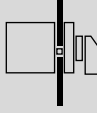
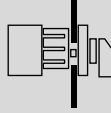
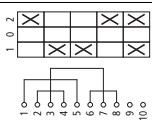


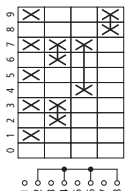



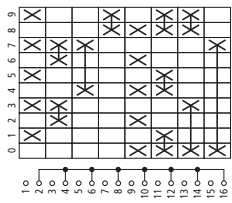


Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
			Flush mounting Front IP65 			Center mounting Front IP65 		
Step switches								
With 0 (Off) position								
5 steps, 30°								
	 F 003	1	TM-3-8243/E 079624		1 off 	TM-3-8243/EZ 015537		1 off 
6 steps, 30°								
	 F 004	1	TM-3-8244/E 081997		1 off 	TM-3-8244/EZ 045495		1 off 
9 steps, 30°								
	 F 007	1	TM-5-8247/E 009741		1 off 	TM-5-8247/EZ 015565		1 off 
Group switches								
2 groups, 60°								
	 F 075	1	TM-1-8310/E 084370		1 off 	TM-1-8310/EZ 045479		1 off 
3 groups, 30°								
	 F 001	1				TM-2-8311/EZ 045487		1 off 
ON OFF switches								
ON switch 30°								
	 F 023	1				TM-1-8175/EZ 015690		1 off 
ON OFF switches 90°/30°								
With spring-return from start to 1								
	 F 119	1	TM-1-8178/E 098608		1 off 	TM-1-8178/EZ 016786		1 off 

Information relevant for export to North America



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Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
			Flush mounting Front IP65				Center mounting Front IP65	
								
Reversing switches, 60°								
	 F 071	3	TM-3-8401/E 015554		1 off 			
Coding switches								
BCD code 0-9, 30°								
	 F 007	1	TM-2-8550/E 020300		1 off 	TM-2-8550/EZ 000699		1 off 
BCD code 0-9 + complement, 30°								
	 F 007	1	TM-4-8552/E 025046		1 off 			

Information relevant for export to North America

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
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HPL04077EN



	For mounting form EZ With two keys When ordering with basic unit			
	Part no. Article no.	Price See price list	Std. pack	Notes
Key operated lock mechanism				
KABA lock 90° switch angle				
Protection type IP65 With two keys When ordering with basic unit				
0°	+EZ/S-A 045458		1 off	Key operation lock mechanism, incl. 2 keys. The key can only be removed in certain positions; see diagram below. The KABA lock for 90° can be used for other switching angles as well if the key withdrawability characteristics match the type of switch. Example: +EZ/S-B can be used with a step switch with a switching angle of 30° if the key is only to be withdrawable in the 0 position at 270°.
270°	+EZ/S-B 045459			
270 + 0°	+EZ/S-F 045463			
RONIS lock 60° switching angle				
Protection type IP55 With two keys When ordering with basic unit				
270 + 90°	+EZ/S-D 045461		1 off	Options for key withdrawal Position marking as in example
300 + 0 + 60 + 120 + 180 + 240°	+EZ/S-H 045465			
270 + 330 + 30 + 90 + 150 + 210°	+EZ/S-J 045466			
270 + 330 + 90 + 150°	+EZ/S-N 045468			





Size	Dimensions (W x H x D) mm	For use with	Part no. Article no.	Price See price list	Std. pack	Notes
Front plates						
Blank plate Can be engraved						
TM	29 x 29	(for frame 30 x 30)	FS980-TM-E 071438		10 off 	Standard front plates for separate order For standard switches the normal front plate can be replaced if required with the front plate shown here. This is provided the switching angle, number of positions and the position of the 0 position are the same.
TM	29 x 29	(for frame 30 x 30)	FS980-TM-EZ 073811		50 off 	
Standard front plates						
TM.../E	29 x 29	(for frame 30 x 30)	TM/E-FRONTSCILD-NR(*) 239021		1 off 	Switching angles 30°
TM.../EZ	29 x 29	(for frame 30 x 30)	TM/EZ-FRONTSCILD-NR(*) 239022		1 off 	
Switching angle 45° 						
Switching angle 60° 						
Switching angle 90° 						

Information relevant for export to North America



UL/CSA certification not required

Part no.	Article no.	Price See price list	Part no.	Article no.	Price See price list	Std. pack
T0 cam switches						
T0-1-SOND*/E ¹⁾	907765		T0-5-SOND*/E ¹⁾	907769		1 off  
T0-1-SOND*/EA/SVB ²⁾	907776		T0-5-SOND*/EZ ³⁾	907791		
T0-1-SOND*/EA/SVB-SW ²⁾	908043		T0-5-SOND*/IVS ⁴⁾	907810		
T0-1-SOND*/EZ ³⁾	907787		T0-5-SOND*/Z ²⁾	907843		
T0-1-SOND*/I1	207480					
T0-1-SOND*/I1/SVB	207481		T0-6-SOND*/E ¹⁾	907770		
T0-1-SOND*/I1/SVB-SW	207482		T0-6-SOND*/EZ ³⁾	907792		
T0-1-SOND*/IVS ⁴⁾	907806		T0-6-SOND*/IVS ⁴⁾	907811		
T0-1-SOND*/N/SVB ²⁾	907817		T0-6-SOND*/Z ²⁾	907844		
T0-1-SOND*/N/SVB-SW ²⁾	908054					
T0-1-SOND*/Z ²⁾	907839		T0-7-SOND*/E ¹⁾	907771		
			T0-7-SOND*/EZ ³⁾	907793		
T0-2-SOND*/E ¹⁾	907766		T0-7-SOND*/IVS ⁴⁾	907812		
T0-2-SOND*/EA/SVB ²⁾	907777		T0-7-SOND*/Z ²⁾	907845		
T0-2-SOND*/EA/SVB-SW ²⁾	908044					
T0-2-SOND*/EZ ³⁾	907788		T0-8-SOND*/E ¹⁾	907772		
T0-2-SOND*/I1	207483		T0-8-SOND*/EZ ³⁾	907794		
T0-2-SOND*/I1/SVB	207484		T0-8-SOND*/IVS ⁴⁾	907813		
T0-2-SOND*/I1/SVB-SW	207485		T0-8-SOND*/Z ²⁾	907846		
T0-2-SOND*/IVS ⁴⁾	907807					
T0-2-SOND*/N/SVB ²⁾	907818		T0-9-SOND*/E ¹⁾	907773		
T0-2-SOND*/N/SVB-SW ²⁾	908055		T0-9-SOND*/EZ ³⁾	907795		
T0-2-SOND*/Z ²⁾	907840		T0-9-SOND*/IVS ⁴⁾	907814		
			T0-9-SOND*/Z ²⁾	907847		
T0-3-SOND*/E ¹⁾	907767					
T0-3-SOND*/EA/SVB ²⁾	907778		T0-10-SOND*/E ¹⁾	907774		
T0-3-SOND*/EA/SVB-SW ²⁾	908045		T0-10-SOND*/EZ ³⁾	907796		
T0-3-SOND*/EZ ³⁾	907789		T0-10-SOND*/IVS ⁴⁾	907815		
T0-3-SOND*/I1	207486		T0-10-SOND*/Z ²⁾	907848		
T0-3-SOND*/I1/SVB	207487					
T0-3-SOND*/I1/SVB-SW	207488		T0-11-SOND*/E ¹⁾	907775		
T0-3-SOND*/IVS ⁴⁾	907808		T0-11-SOND*/EZ ³⁾	907797		
T0-3-SOND*/N/SVB ²⁾	907819		T0-11-SOND*/IVS ⁴⁾	907816		
T0-3-SOND*/N/SVB-SW ²⁾	908056		T0-11-SOND*/Z ²⁾	907849		
T0-3-SOND*/Z ²⁾	907841					
T0-4-SOND*/E ¹⁾	907768					
T0-4-SOND*/EA/SVB ²⁾	907779					
T0-4-SOND*/EA/SVB-SW ²⁾	908046					
T0-4-SOND*/EZ ³⁾	907790					
T0-4-SOND*/I1	207489					
T0-4-SOND*/I1/SVB	207490					
T0-4-SOND*/I1/SVB-SW	207491					
T0-4-SOND*/IVS ⁴⁾	907809					
T0-4-SOND*/N/SVB ²⁾	907820					
T0-4-SOND*/N/SVB-SW ²⁾	908057					
T0-4-SOND*/Z ²⁾	907842					



Notes

The prices apply to T cam switches with non-standard contact sequences.
Please use the "Ordering Non-Standard Contact Sequences" order form when ordering for the first time.
When placing repeat orders, specify the contact sequence number together with the country identifier (e.g. 4711D).

Information relevant for export to North America





1)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

3)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Degree of Protection IEC: IP65; UL/CSA Type: -

2)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified

4)
Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Degree of Protection IEC: IP30; UL/CSA Type: -



Part no.	Article no.	Price See price list	Part no.	Article no.	Price See price list	Std. pack
T3 cam switches						
T3-1-SOND*/E ¹⁾	907850		T3-5-SOND*/E ¹⁾	907854		1 off  
T3-1-SOND*/EA/SVB ¹⁾	907861		T3-5-SOND*/EA/SVB ¹⁾	907865		
T3-1-SOND*/EA/SVB-SW ¹⁾	908080		T3-5-SOND*/EA/SVB-SW ¹⁾	908084		
T3-1-SOND*/EZ ¹⁾	907872		T3-5-SOND*/EZ ¹⁾	907876		
T3-1-SOND*/I2 ²⁾	207492		T3-5-SOND*/I2 ²⁾	207504		
T3-1-SOND*/I2/SVB ²⁾	207493		T3-5-SOND*/I2/SVB ²⁾	207506		
T3-1-SOND*/I2/SVB-SW ²⁾	207494		T3-5-SOND*/I2/SVB-SW ²⁾	207507		
T3-1-SOND*/N/SVB ¹⁾	907891		T3-5-SOND*/N/SVB ¹⁾	907895		
T3-1-SOND*/N/SVB-SW ¹⁾	908091		T3-5-SOND*/N/SVB-SW ¹⁾	908095		
T3-1-SOND*/Z ¹⁾	907913		T3-5-SOND*/Z ¹⁾	907917		
T3-2-SOND*/E ¹⁾	907851		T3-6-SOND*/E ¹⁾	907855		
T3-2-SOND*/EA/SVB ¹⁾	907862		T3-6-SOND*/EA/SVB ¹⁾	907866		
T3-2-SOND*/EA/SVB-SW ¹⁾	908081		T3-6-SOND*/EA/SVB-SW ¹⁾	908085		
T3-2-SOND*/EZ ¹⁾	907873		T3-6-SOND*/EZ ¹⁾	907877		
T3-2-SOND*/I2 ²⁾	207495		T3-6-SOND*/N/SVB ¹⁾	907896		
T3-2-SOND*/I2/SVB ²⁾	207496		T3-6-SOND*/N/SVB-SW ¹⁾	908096		
T3-2-SOND*/I2/SVB-SW ²⁾	207497		T3-6-SOND*/Z ¹⁾	907918		
T3-2-SOND*/N/SVB ¹⁾	907892		T3-7-SOND*/E ¹⁾	907856		
T3-2-SOND*/N/SVB-SW ¹⁾	908092		T3-7-SOND*/EZ ¹⁾	907878		
T3-2-SOND*/Z ¹⁾	907914		T3-7-SOND*/Z ¹⁾	907919		
T3-3-SOND*/E ¹⁾	907852		T3-8-SOND*/E ¹⁾	907857		
T3-3-SOND*/EA/SVB ¹⁾	907863		T3-8-SOND*/EZ ¹⁾	907879		
T3-3-SOND*/EA/SVB-SW ¹⁾	908082		T3-8-SOND*/Z ¹⁾	907920		
T3-3-SOND*/EZ ¹⁾	907874		T3-9-SOND*/E ¹⁾	907858		
T3-3-SOND*/I2 ²⁾	207498		T3-9-SOND*/EZ ¹⁾	907880		
T3-3-SOND*/I2/SVB ²⁾	207499		T3-9-SOND*/Z ¹⁾	907921		
T3-3-SOND*/I2/SVB-SW ²⁾	207500		T3-10-SOND*/E ¹⁾	907859		
T3-3-SOND*/N/SVB ¹⁾	907893		T3-10-SOND*/EZ ¹⁾	907881		
T3-3-SOND*/N/SVB-SW ¹⁾	908093		T3-10-SOND*/Z ¹⁾	907922		
T3-3-SOND*/Z ¹⁾	907915		T3-11-SOND*/E ¹⁾	907860		
T3-4-SOND*/E ¹⁾	907853		T3-11-SOND*/EZ ¹⁾	907882		
T3-4-SOND*/EA/SVB ¹⁾	907864		T3-11-SOND*/Z ¹⁾	907923		
T3-4-SOND*/EA/SVB-SW ¹⁾	908083					
T3-4-SOND*/EZ ¹⁾	907875					
T3-4-SOND*/I2 ²⁾	207501					
T3-4-SOND*/I2/SVB ²⁾	207502					
T3-4-SOND*/I2/SVB-SW ²⁾	207503					
T3-4-SOND*/N/SVB ¹⁾	907894					
T3-4-SOND*/N/SVB-SW ¹⁾	908094					
T3-4-SOND*/Z ¹⁾	907916					

Notes

The prices apply to T cam switches with non-standard contact sequences.

Please use the "Ordering Non-Standard Contact Sequences" order form when ordering for the first time.

When placing repeat orders, specify the contact sequence number together with the country identifier (e.g. 4711D).



Information relevant for export to North America

1)

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified

2)

Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

Part no.	Article no.	Price See price list	Part no.	Article no.	Price See price list	Std. pack
T5B cam switches						
T5B-1-SOND*/E	907924		T5B-5-SOND*/E	907928		1 off  
T5B-1-SOND*/EA/SVB	907934		T5B-5-SOND*/EA/SVB	907938		
T5B-1-SOND*/EA/SVB-SW	908106		T5B-5-SOND*/EA/SVB-SW	908110		
T5B-1-SOND*/I4	207510		T5B-5-SOND*/V/SVB	907954		
T5B-1-SOND*/I4/SVB	207511		T5B-5-SOND*/V/SVB-SW	908118		
T5B-1-SOND*/I4/SVB-SW	207512		T5B-5-SOND*/Z	907972		
T5B-1-SOND*/V/SVB	907950					
T5B-1-SOND*/V/SVB-SW	908114		T5B-6-SOND*/E	907929		
T5B-1-SOND*/Z	907968		T5B-6-SOND*/EA/SVB	907939		
			T5B-6-SOND*/EA/SVB-SW	908111		
T5B-2-SOND*/E	907925		T5B-6-SOND*/V/SVB	907955		
T5B-2-SOND*/EA/SVB	907935		T5B-6-SOND*/V/SVB-SW	908119		
T5B-2-SOND*/EA/SVB-SW	908107		T5B-6-SOND*/Z	907973		
T5B-2-SOND*/I4	207514					
T5B-2-SOND*/I4/SVB	207515		T5B-7-SOND*/E	907930		
T5B-2-SOND*/I4/SVB-SW	207516		T5B-7-SOND*/EA/SVB	907940		
T5B-2-SOND*/V/SVB	907951		T5B-7-SOND*/EA/SVB-SW	908112		
T5B-2-SOND*/V/SVB-SW	908115		T5B-7-SOND*/V/SVB	907956		
T5B-2-SOND*/Z	907969		T5B-7-SOND*/V/SVB-SW	908120		
			T5B-7-SOND*/Z	907974		
T5B-3-SOND*/E	907926					
T5B-3-SOND*/EA/SVB	907936		T5B-8-SOND*/E	907931		
T5B-3-SOND*/EA/SVB-SW	908108		T5B-8-SOND*/EA/SVB	907941		
T5B-3-SOND*/I4	207518		T5B-8-SOND*/EA/SVB-SW	908113		
T5B-3-SOND*/I4/SVB	207519		T5B-8-SOND*/V/SVB	907957		
T5B-3-SOND*/I4/SVB-SW	207520		T5B-8-SOND*/V/SVB-SW	908121		
T5B-3-SOND*/V/SVB	907952		T5B-8-SOND*/Z	907975		
T5B-3-SOND*/V/SVB-SW	908116					
T5B-3-SOND*/Z	907970		T5B-9-SOND*/E	907932		
			T5B-9-SOND*/Z	907976		
T5B-4-SOND*/E	907927					
T5B-4-SOND*/EA/SVB	907937		T5B-10-SOND*/E	907933		
T5B-4-SOND*/EA/SVB-SW	908109		T5B-10-SOND*/Z	907977		
T5B-4-SOND*/I4	207521					
T5B-4-SOND*/I4/SVB	207522					
T5B-4-SOND*/I4/SVB-SW	207523					
T5B-4-SOND*/V/SVB	907953					
T5B-4-SOND*/V/SVB-SW	908117					
T5B-4-SOND*/Z	907971					

Notes

The prices apply to T cam switches with non-standard contact sequences.
Please use the "Ordering Non-Standard Contact Sequences" order form when ordering for the first time.
When placing repeat orders, specify the contact sequence number together with the country identifier (e.g. 4711D).

Information relevant for export to North America

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV7
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified




	Part no.	Article no.	Price See price list	Part no.	Article no.	Price See price list	Std. pack
T5 cam switches							
	T5-1-SOND*/E	907978		T5-5-SOND*/E	907982		1 off
	T5-1-SOND*/EA/SVB	908031		T5-5-SOND*/EA/SVB	907991		
	T5-1-SOND*/EA/SVB-SW	908126		T5-5-SOND*/EA/SVB-SW	908130		
	T5-1-SOND*/I5	207524		T5-5-SOND*/I/SVB	908007		
	T5-1-SOND*/I5/SVB	207525		T5-5-SOND*/I/SVB-SW	908138		
	T5-1-SOND*/I5/SVB-SW	207526		T5-5-SOND*/Z	908025		
	T5-1-SOND*/N/SVB	908003					
	T5-1-SOND*/N/SVB-SW	908134		T5-6-SOND*/E	907983		
	T5-1-SOND*/Z	908021		T5-6-SOND*/EA/SVB	907992		
				T5-6-SOND*/EA/SVB-SW	908131		
	T5-2-SOND*/E	907979		T5-6-SOND*/I/SVB	908008		
	T5-2-SOND*/EA/SVB	907988		T5-6-SOND*/I/SVB-SW	908139		
	T5-2-SOND*/EA/SVB-SW	908127		T5-6-SOND*/Z	908026		
	T5-2-SOND*/I5	207527					
	T5-2-SOND*/I5/SVB	207528		T5-7-SOND*/E	907984		
	T5-2-SOND*/I5/SVB-SW	207529		T5-7-SOND*/EA/SVB	907993		
	T5-2-SOND*/N/SVB	908004		T5-7-SOND*/EA/SVB-SW	908132		
	T5-2-SOND*/N/SVB-SW	908135		T5-7-SOND*/I/SVB	908009		
	T5-2-SOND*/Z	908022		T5-7-SOND*/I/SVB-SW	908140		
				T5-7-SOND*/Z	908027		
	T5-3-SOND*/E	907980					
	T5-3-SOND*/EA/SVB	907989		T5-8-SOND*/E	907985		
	T5-3-SOND*/EA/SVB-SW	908128		T5-8-SOND*/EA/SVB	907994		
	T5-3-SOND*/I5	207530		T5-8-SOND*/EA/SVB-SW	908133		
	T5-3-SOND*/I5/SVB	207531		T5-8-SOND*/I/SVB	908010		
	T5-3-SOND*/I5/SVB-SW	207532		T5-8-SOND*/I/SVB-SW	908141		
	T5-3-SOND*/N/SVB	908005		T5-8-SOND*/Z	908028		
	T5-3-SOND*/N/SVB-SW	908136					
	T5-3-SOND*/Z	908023		T5-9-SOND*/E	907986		
				T5-9-SOND*/Z	908029		
	T5-4-SOND*/E	907981		T5-10-SOND*/E	907987		
	T5-4-SOND*/EA/SVB	907990		T5-10-SOND*/Z	908030		
	T5-4-SOND*/EA/SVB-SW	908129					
	T5-4-SOND*/I5	207533					
	T5-4-SOND*/I5/SVB	207534					
	T5-4-SOND*/I5/SVB-SW	207535					
	T5-4-SOND*/N/SVB	908006					
	T5-4-SOND*/N/SVB-SW	908137					

Notes

The prices apply to T cam switches with non-standard contact sequences.
Please use the "Ordering Non-Standard Contact Sequences" order form when ordering for the first time.
When placing repeat orders, specify the contact sequence number together with the country identifier (e.g. 4711D).

Information relevant for export to North America

Product Standards UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV7
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch Circuits

	Part no. ¹⁾	Article no.	Price See price list	Part no. ²⁾	Article no.	Price See price list	Std. pack
TM non-standard switches	TM-1-SOND*/E	907749		TM-1-SOND-ERSTBESTELLUNG/E	208261		1 off 
	TM-3-SOND*/E	907750		TM-1-SOND-ERSTBESTELLUNG/EZ	208262		
	TM-2-SOND*/E	907763		TM-1-SOND-ERSTBESTELLUNG/IVS	225347		
	TM-4-SOND*/E	907751		TM-2-SOND-ERSTBESTELLUNG/E	208263		
	TM-6-SOND*/E	907752		TM-2-SOND-ERSTBESTELLUNG/EZ	208264		
	TM-5-SOND*/E	907764		TM-2-SOND-ERSTBESTELLUNG/IVS	225349		
	TM-7-SOND*/E	907753		TM-3-SOND-ERSTBESTELLUNG/E	208265		
	TM-8-SOND*/E	907754		TM-3-SOND-ERSTBESTELLUNG/EZ	208266		
	TM-1-SOND*/EZ	907755		TM-4-SOND-ERSTBESTELLUNG/E	208267		
	TM-2-SOND*/EZ	907756		TM-4-SOND-ERSTBESTELLUNG/EZ	208268		
	TM-3-SOND*/EZ	907757		TM-5-SOND-ERSTBESTELLUNG/E	208269		
	TM-4-SOND*/EZ	907758		TM-5-SOND-ERSTBESTELLUNG/EZ	208270		
	TM-5-SOND*/EZ	907759		TM-6-SOND-ERSTBESTELLUNG/E	208271		
	TM-6-SOND*/EZ	907760		TM-6-SOND-ERSTBESTELLUNG/EZ	208272		
	TM-7-SOND*/EZ	907761		TM-7-SOND-ERSTBESTELLUNG/E	208273		
	TM-8-SOND*/EZ	907762		TM-7-SOND-ERSTBESTELLUNG/EZ	208274		
	TM-1-SOND*/IVS	225346		TM-8-SOND-ERSTBESTELLUNG/E	208275		
	TM-2-SOND*/IVS	225348		TM-8-SOND-ERSTBESTELLUNG/EZ	208276		

Notes

1)

TM-...-SOND.../...:

For repeat orders for which the design number is already known. Form F02 is **not** required for this purpose.

The design number is a six-digit number and must always be greater than 200000.

2)

TM-...-SOND-ERSTBESTELLUNG/...:

For new orders with a completed form.

Information relevant for export to North America

Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV, NLRV7
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
Degree of Protection	IEC: IP65; UL/CSA Type: -

T, TM

Ordering of non-standard contact sequences

Switch size	Number of contact units (2 contacts per contact unit)		Contact sequence number	Mounting form	Accessories
	Max. units	Contacts max.			
T0	11	22	With country ID corresponding to the country of manufacture. Send completed form (as shown on the right) if ordering for the first time. The contact sequence number is specified by the supplying factory. Specifying the part no. is enough when placing repeat orders.	<ul style="list-style-type: none"> • Mounting form /E • Center mounting /EZ (for T0, T3) • Surface mounting /I...¹⁾ • Service distribution board mounting /IVS (for T0) • Rear mounting /Z • Flush mounting main switch /EA/SVB²⁾ • Surface mounting main switch /I.../SVB • Rear mounting main switch /V/SVB²⁾ • Designs for TM: /E, /EZ, or /IVS 	Always specify completely for every order! For TM.../EZ: only +EZ/S... possible
T3	11	22			
T5B	10	20			
T5	10	20			
TM	8	16			

Engineering notes for non-standard contact sequences

Contact sequence

The adjacent form makes it easier to specify the contact sequence.
Master copy

Switching angle

30, 45, 60, 90°

Preferred angle: 60°

For On-Off switches: 90°

For main switches: 90° as FS 908

Changeover with interruption between

2 positions (ON-OFF-ON) not permissible for T0; T3, and TM = 30°, 45°; for T5(T5B) = 30°

Star-delta switch only with switching angle $\geq 60^\circ$

Terminal marking

TM switches have consecutive terminal markings starting with 1.

Spring-return

The switching action is limited by a stop. The switch returns under spring pressure to the last position. Where a switch has spring-return from both directions, a maximum of max. 3 positions can be traversed.

The spring-return angle is $< \frac{1}{2}$ switching angle.

A max. of 6 contacts can be returned at the same time.

The switching angle of spring-return TM mini rotary switch must be $\geq 60^\circ$.

Fleeting contacts

The duration of the fleeting contact depends primarily on the actuation speed. In order to actuate a contactor with a fleeting pulse, the switching angle of the cam switch must not be less than 60°, since the pulse time can be too short if the switching angle is smaller. Fleeting contact elements always operate in **both** operating directions.

Complete rotation

Only possible with a total switching angle of 360°. The direction of switching can be in either operating direction. The number of switch positions multiplied by the switching angle must be 360°. TM with 12 positions (one every 30°) only available with complete rotation, not with stop.

Front plates

Front plates are part of the equipment supplied with a "first order of rotary switch" and therefore do **not** need to be ordered separately.

Number of contact units

Number of contacts = Round up to nearest whole number
2

The contact chamber = contact unit (BE) has 1 or 2 contacts, each of which is actuated by a cam. In T5(B), there is a common cam for both contacts. Because of this, the following applies for T5(B): If the total switching angle is **less than 180°**, the contacts can be switched **independently** of each other. With switching angles greater than or equal to 180°, there can only be 2 contacts in the same chamber if their switching sequences are the same but are offset by 180° (e.g. T5B-4-8235 step switch).

Standard features

Same as cam switch with standard contact sequence.

Notes

It is possible that the order of the contacts is altered due to technical reasons.

For special switches bridges are only possible between a even or uneven number. Other connections must be made by the user at installation.

¹⁾ For T0-.../11: max. 4 contact units
For T3-.../12: max. 5 contact units

²⁾ For T0: up to a max. of 8 contacts = 4 BE,
For T3: up to a max. of 12 contacts = 6 BE

Non-standard contact sequence ordering example



Binding document for ordering T cam switch combinations for the first time

Order No.: 123456 Item: 7 Office: Cologne Author: HWS

Customer: Sample Company Customer no.: A4711/2004 Date: 29.2.2004

Quantity: 3 Switching angle: Part no.: Number of contacts: Mounting form:

Euros/unit: 30 TM 1 12 E EA/SVB EA/SVB-SW

45 T0 2 13 EZ

60 T3 3 14 I...

90 T5B 4 15 I../SVB I../SVB-SW

 T5 5 16 IVS

 6 17 V/SVB V/SVB-SW

 7 18 Z

 8 19 + ST-0

 9 20 + _____

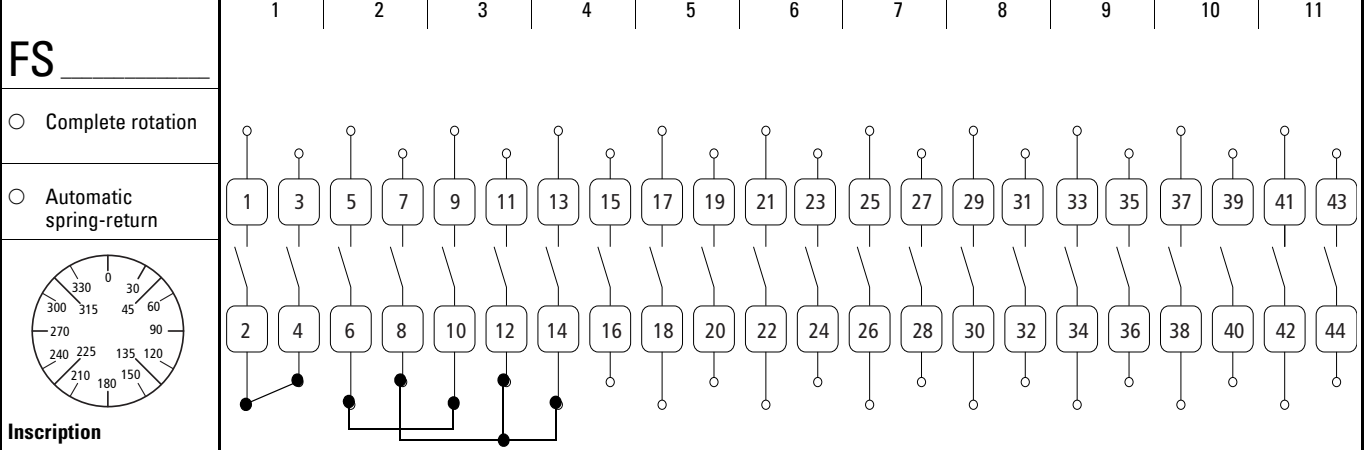
 10 21

 11 22

Max. characters per position

Degrees	TM-E	TM-EZ	TM-IVS	T0(3)	T5(B)
0.18	5	5	6	13	13
30, 210, 330	8	7	4	8	8
45, 135, 225, 315	6	5	4	6	7
60, 120, 240, 300	5	5	3	5	7
90, 270	5	4	1	4	7
150	4	4	4	8	8

Front plate no. Contact units



Degrees	1 2	3 4	5 6	7 8	9 10	11 12	13 14	15 16	17 18	19 20	21 22	23 24	25 26	27 28	29 30	31 32	33 34	35 36	37 38	39 40	41 42	43 44
270	1	X	X	X	X	X	X															
300																						
315																						
330	2	X	X	X				X														
0						X																
30	3	X			X	X																
45																						
60	4								X													
90																						
120																						
135																						
150																						
180																						
210																						
225																						
240																						

Key withdrawability for ..S-T0 and SVA-T3:

Pos. 1: Key withdrawable
Pos. 2: Key withdrawable
Pos. 3: Key withdrawable
Pos. 4: Key not withdrawable

In the case of SVA-T3, the unit can still be switched between positions 1 and 2 if the key has been removed..

Key withdrawable Part no. for repeat orders (to be filled in by factory) T _____

T, TM



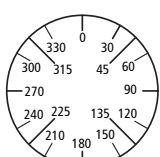
Binding document for ordering T cam switch combinations for the first time

Order No.:	Item:	Office:	Name:
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Customer:	Customer no.:	Date:
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Notes: The number of possible contacts, as well as the possible combinations with mounting forms are shown in the Main Catalogue.	Quantity: Euros/unit:	Switching angle: <input type="checkbox"/> 30 <input type="checkbox"/> 45 <input type="checkbox"/> 60 <input type="checkbox"/> 90	Part no.: <input type="checkbox"/> TM <input type="checkbox"/> T0 <input type="checkbox"/> T3 <input type="checkbox"/> T5B <input type="checkbox"/> T5	Number of contacts: <input type="checkbox"/> 1 <input type="checkbox"/> 12 <input type="checkbox"/> 2 <input type="checkbox"/> 13 <input type="checkbox"/> 3 <input type="checkbox"/> 14 <input type="checkbox"/> 4 <input type="checkbox"/> 15 <input type="checkbox"/> 5 <input type="checkbox"/> 16 <input type="checkbox"/> 6 <input type="checkbox"/> 17 <input type="checkbox"/> 7 <input type="checkbox"/> 18 <input type="checkbox"/> 8 <input type="checkbox"/> 19 <input type="checkbox"/> 9 <input type="checkbox"/> 20 <input type="checkbox"/> 10 <input type="checkbox"/> 21 <input type="checkbox"/> 11 <input type="checkbox"/> 22	Mounting form: <input type="checkbox"/> E <input type="checkbox"/> EA/SVB <input type="checkbox"/> EA/SVB-SW <input type="checkbox"/> EZ <input type="checkbox"/> I... <input type="checkbox"/> I.../SVB <input type="checkbox"/> I.../SVB-SW <input type="checkbox"/> IVS <input type="checkbox"/> V/SVB <input type="checkbox"/> V/SVB-SW <input type="checkbox"/> Z <input type="checkbox"/> + _____ <input type="checkbox"/> + _____
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Max. characters per position					
Degrees	TM-E	TM-EZ	TM-IVS	T0(3)	T5(B)
0.18	5	5	6	13	13
30, 210, 330	8	7	4	8	8
45, 135, 225, 315	6	5	4	6	7
60, 120, 240, 300	5	5	3	5	7
90, 270	5	4	1	4	7
150	4	4	4	8	8

Front plate no. FS _____ <input type="radio"/> Complete rotation <input type="radio"/> Automatic Spring-return  Inscription	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">Contact units</th> <th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th><th>11</th> </tr> <tr> <td></td> <td></td> <td>1</td><td>3</td><td>5</td><td>7</td><td>9</td><td>11</td><td>13</td><td>15</td><td>17</td><td>19</td><td>21</td><td>23</td><td>25</td><td>27</td><td>29</td><td>31</td><td>33</td><td>35</td><td>37</td><td>39</td><td>41</td><td>43</td> </tr> <tr> <td></td> <td></td> <td>2</td><td>4</td><td>6</td><td>8</td><td>10</td><td>12</td><td>14</td><td>16</td><td>18</td><td>20</td><td>22</td><td>24</td><td>26</td><td>28</td><td>30</td><td>32</td><td>34</td><td>36</td><td>38</td><td>40</td><td>42</td><td>44</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <tr> <th>Degrees</th> <th>1</th><th>3</th><th>5</th><th>7</th><th>9</th><th>11</th><th>13</th><th>15</th><th>17</th><th>19</th><th>21</th><th>23</th><th>25</th><th>27</th><th>29</th><th>31</th><th>33</th><th>35</th><th>37</th><th>39</th><th>41</th><th>43</th> </tr> <tr> <td></td> <td>2</td><td>4</td><td>6</td><td>8</td><td>10</td><td>12</td><td>14</td><td>16</td><td>18</td><td>20</td><td>22</td><td>24</td><td>26</td><td>28</td><td>30</td><td>32</td><td>34</td><td>36</td><td>38</td><td>40</td><td>42</td><td>44</td> </tr> <tr><td>270</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>300</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> 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units		1	2	3	4	5	6	7	8	9	10	11			1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43			2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	Degrees	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	270																								300																								315																								330																								0																								30																								45																								60																								90																								120																								135																								150																								180																								210																								225																								240																							
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Key withdrawable	X	Part no. for repeat orders (to be filled in by factory)	T _____
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Ordering non-standard front plates



Binding document for ordering non-standard front plates for the first time

Order No.:		Item:	
Office:		Name:	
Customer:		Customer no.:	
Quantity:	Euros/unit:	Date:	

The text is always centered in the text block



Non-standard front plates

Inscription:
Front plate with black lettering

Insert text

Note the maximum number of characters allowed outside the marked areas!

Part no.

FS-SOND-T0 (T3, P1)

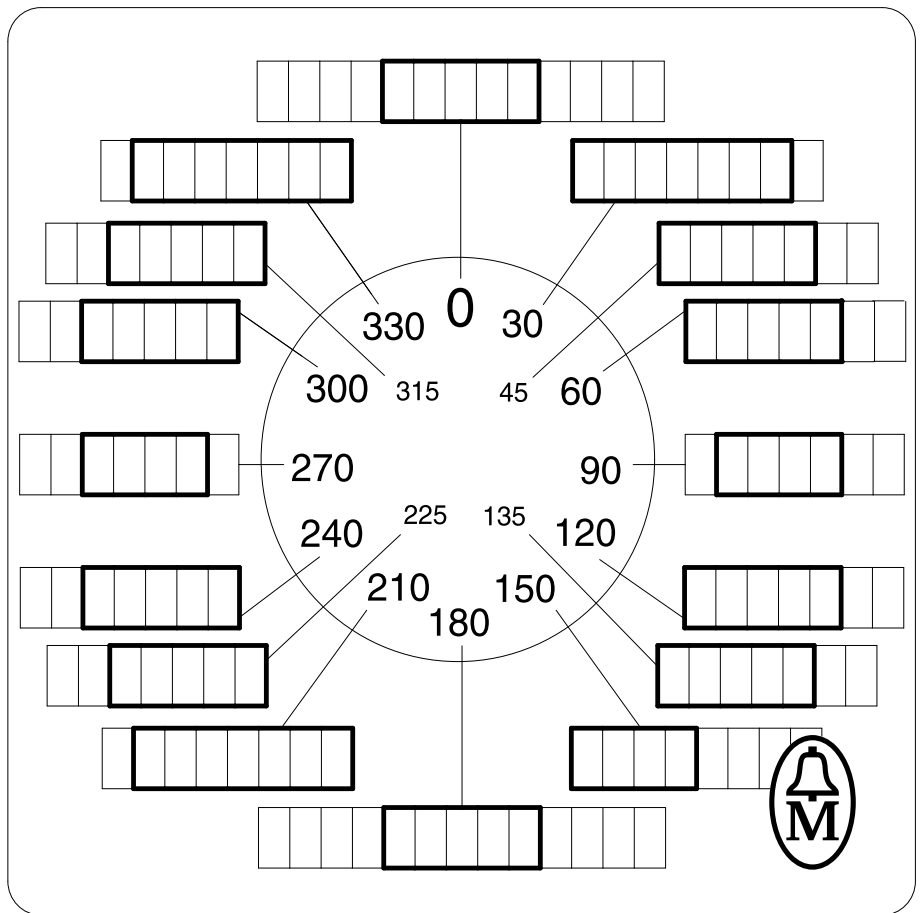
Letter height
 ≤ 2 Characters 4 mm
 ≥ 2 Characters 3 mm

FS-SOND-P3 (T5B, T5)

Letter height
 ≤ 2 Characters 8 mm
 ≥ 2 Characters 5 mm

FS-SOND-TM-E
 FS-SOND-TM-EZ

≤ 2 Characters approx. 3.5 mm
 ≥ 2 Characters 3 mm



For P1 and P3, fill out positions 270° and 0° only

Max. possible number of characters

Position	TM-E	TM-EZ	T0/P1	T5/P3
0, 180	5	5	13	13
30, 210, 330	8	7	8	8
45, 135, 225, 315	6	5	6	7
60, 120, 240, 300	5	5	5	7
90, 270	5	4	4	7
150	4	4	8	8

Dimensions

Part no.	Front plate size
TM-.../E	29 x 29 mm (for frame 30 x 30)
TM-.../EZ(-...)	29 x 29 mm (for frame 30 x 30)
T0, T3, P1	45 x 45 mm (for frame 48 x 48)
P3, T5, T5B	84 x 84 mm (for frame 88 x 88)

Part no. for repeat orders (to be filled in by factory)

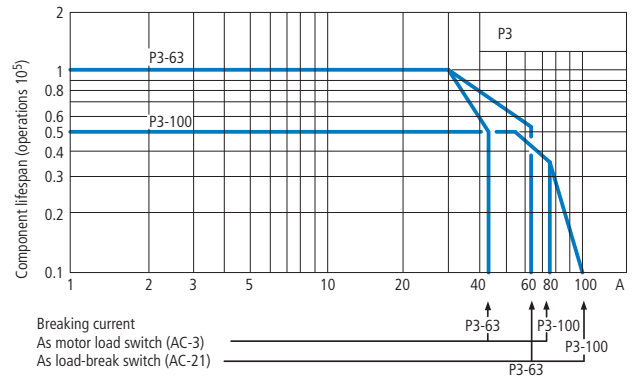
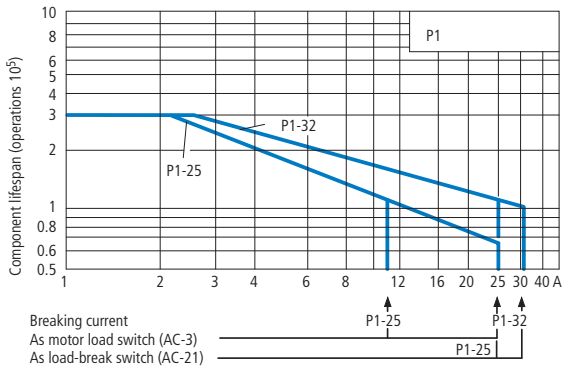
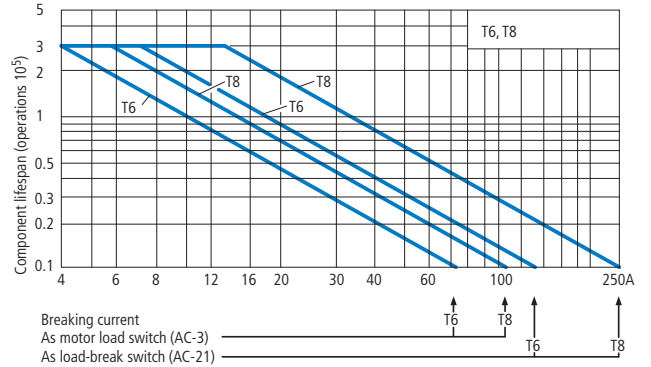
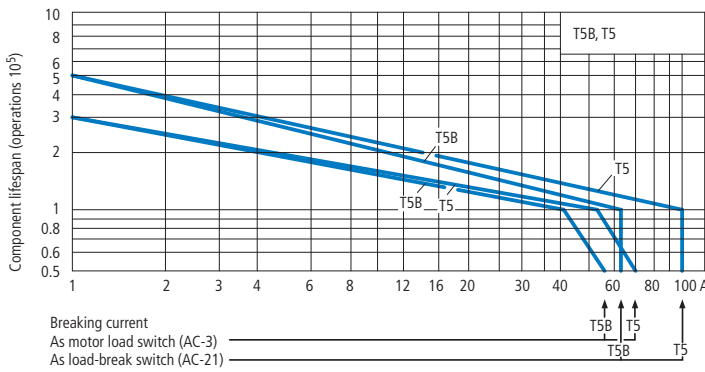
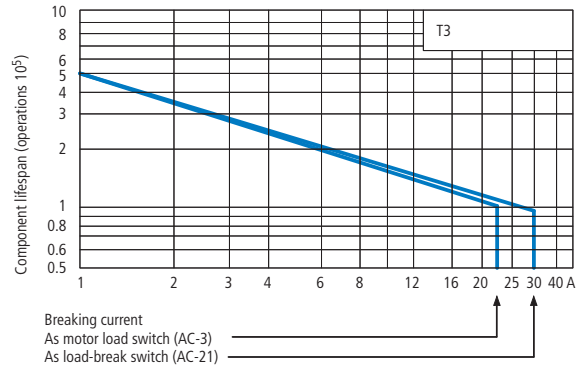
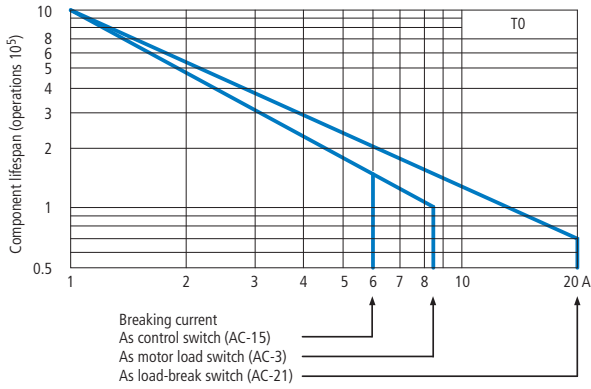
FS.....

T, P

Characteristic curves

Component lifespan based on breaking current and utilization category ¹⁾

To ensure a reasonable service life in utilization category AC-4 (extreme load: 100 % inching, reversing, or plug braking), the motor's standstill current must not exceed the rated operational current of the switch for AC-21A.



Notes

¹⁾ AC-3 and AC-21 at 400 V, AC-15 at 230 V

Technical data

				P1-25	P1-32	P3-63	P3-100
General							
Standards				IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL switch-disconnector to IEC/EN 60947-3			
Lifespan, mechanical		Operations	x 10 ⁶	0.3	0.3	0.1	0.1
Maximum operating frequency		Operations/h		50	50	50	50
Climatic proofing				Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30			
Ambient temperature		Open	°C	-25 - 50	-25 - 50	-25 - 50	-25 - 50
			°C	-25 - 40	-25 - 40	-25 - 40	-25 - 40
Mounting position				Any	Any	Any	Any
Mechanical shock resistance (IEC/EN60068-2-27)		Half-sinusoidal shock 20 ms	g	15	15	15	15
Contacts							
Rated operational voltage		U _e	V AC	690	690	690	690
Rated impulse withstand voltage		U _{imp}	V AC	6000	6000	6000	6000
Overvoltage category/pollution degree				III/3	III/3	III/3	III/3
Rated uninterrupted current		I _u	A	25	32	63	100
Load rating with intermittent operation, class 12		AB 60 % DF	x I _e	1.3	1.3	1.3	1.3
			AB 40 % DF	x I _e	1.6	1.6	1.6
			AB 25 % DF	x I _e	2	2	2
Short-circuit rating		Fuse	A gG/gL	25	50	80	100
Rated short-time withstand current (1 s current)		I _{cw}	A _{rms}	640	640	1260	2000
Isolating characteristics to IEC/EN 60947				≤ 690	≤ 690	≤ 690	≤ 690
Safe isolation according to EN 61140							
Safe isolation to VDE 0106 Part 101 and Part 101 A1 between the auxiliary contacts and main circuits				V AC	440	440	440
Switching angle				°	90	90	90
Contacts				Number	Max. 3 (+N)	Max. 3 (+N)	Max. 3 (+N)
Current heat loss per contact at I _e				W	1.1	1.8	4.5
Terminal capacity							
Solid or stranded				mm ²	1 x (1.5 - 6) 2 x (1.5 - 6)	1 x (1.5 - 6) 2 x (1.5 - 6)	1 x (2.5 - 35) 2 x (2.5 - 10)
Flexible with ferrule to DIN 46228				mm ²	1 x (1 - 4) 2 x (1 - 4)	1 x (1 - 4) 2 x (1 - 4)	1 x (1.5 - 25) 2 x (1.5 - 6)
Terminal screw					M4	M4	M5
Tightening torque				Nm	1.6	1.6	3
Switching capacity							
AC voltage							
Rated making capacity cos φ = 0.35				A	240	320	800
Rated breaking capacity, motor load switch cos φ = 0.35		230 V		A	190	260	640
		400/415 V		A	150	300	600
		500 V		A	170	290	590
		690 V		A	150	250	340
Rated operational current 440 V, load-break switch AC-21A		I _e	A	25	32	63	100
AC-3 motor load switch motor rating		230 V	P	kW	5.5	7.5	15
		400/415 V	P	kW	7.5	13	30
		500 V	P	kW	7.5	18.5	30
AC-23A motor load switch motor rating		690 V	P	kW	7.5	15	30
		230 V	P	kW	7	8.5	18.5
		400/415 V	P	kW	13	15	30
		500 V	P	kW	11	18.5	37
		690 V	P	kW	11	18.5	30
DC voltage							
DC-1, load switch L/R = 1 ms		Rated operational current		I _e	A	25	32
		Voltage per contact connected in series			V	60	60
DC-23A, motor load switch L/R = 15 ms		Rated operational current		I _e	A	25	25
		Contacts			Number	1	1
48 V		Rated operational current		I _e	A	25	25
		Contacts			Number	2	2
60 V		Rated operational current		I _e	A	25	25
		Contacts			Number	3	3
120 V		Rated operational current		I _e	A	12	12
		Contacts			Number	3	3

Notes

Main switch characteristics to IEC/EN 60204; positive opening of contacts, operator element positively located on shaft.

Rated uninterrupted current I_u is specified for max. cross-section.

For terminal capacity solid, stranded and flexible: Max. 2 cross-section sizes difference admissible when using 2 conductors.





Rating data for approved types ¹⁾				P1-25	P1-32	P3-63	P3-100
UL File No. E36332							
Contacts							
Rated operational voltage U _e		V AC		600	600	600	600
Rated uninterrupted current I _u							
Current rating		A		20	30	60	100
Pilot Duty				A 600P 600	A 600P 600	–	–
Switching capacity							
AC-3; max. rated power 40 – 60 Hz AC motors							
3-phase	200 V AC	HP		5	7½	15	20
	230 V AC	HP		5	10	15	25
	460 V AC	HP		10	20	40	60
	575 V AC	HP		15	25	50	75
Single-phase	120 V AC	HP		1½	2	3	5
	200 V AC	HP		3	3	7½	10
	230 V AC	HP		3	5	10	15
Short-circuit rating							
Standard		600 V AC	kA	5	5	10	10
With back-up fuse			A	110	110	150	150
With circuit-breakers			Part no.	NZMH6	NZMH6	NZMH6	NZMH9
Current setting			A	125	125	125	125
Disconnect in motor circuits		600 V AC	kA	10	10	10	–
With back-up fuse			Class	50 A/J	50 A/J	100 A	100 A
Terminal capacity							
Terminal capacity							
Cu cable	Min./	AWG		14	14	14	14
	Max.	AWG		8	8	2	2
Tightening torque		Max.	in-lb	14.1	14.1	26.5	26.5
				HI 11			
Auxiliary contacts (1 N/O + 1 N/C)							
Pilot Duty				P 600			
Heavy Pilot Duty				A 600			
General Use				10 A – 600 V AC			

Notes ¹⁾ Devices for world markets IEC ≙ UL/CSA

UL File No:	UL approved protection types		
	UL/NEMA 3R ¹⁾	UL/NEMA 12	UL/NEMA 13
E36332			
Switch-disconnectors			
P1-.../EA/SVB	•	•	–
P1-.../V/SVB	•	•	–
P3-.../EA/SVB	•	•	•
P3-.../V/SVB	•	•	•

Notes Details of protection types
¹⁾ NEMA recommendation

Part no.:	P1	P3-63	P3-100
Mounting form			
/E; /EA; /EZ /Z; /V; /IVS			
/I2	+NA-I2 105866		
/I4		+NA-I4 105868	
/I5			+NA-I5 105869

			P5-125	P5-160	P5-250	P5-315
General						
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL Switch-disconnectors to IEC/EN 60947-3			
Lifespan, mechanical	Operations	x 10 ⁶	0.1	0.1	0.08	0.08
Maximum operating frequency	Operations/h		50	50	50	50
Climatic proofing			Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30			
Ambient temperature	Open	°C	-25 - 50	-25 - 50	-25 - 50	-25 - 50
	Enclosed	°C	-25 - 40	-25 - 40	-25 - 40	-25 - 40
Mounting position			Any	Any	Any	Any
Contacts						
Rated operational voltage	U _e	V AC	690	690	690	690
Rated impulse withstand voltage	U _{imp}	V AC	8000	8000	8000	8000
Overvoltage category/pollution degree			III/3	III/3	III/3	III/3
Rated uninterrupted current	I _u	A	125	160	250	315
Load rating with intermittent operation, class 12	AB 60 % DF	x I _e	1.3	1.3	1.3	1.3
	AB 40 % DF	x I _e	1.6	1.6	1.6	1.6
	AB 25 % DF	x I _e	2	2	2	2
Short-circuit rating	Fuse	A gG/gL	125	160	250	315
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	2500	3000	4600	5800
Isolating characteristics to IEC/EN 60947		V AC	≤ 690	≤ 690	≤ 690	≤ 690
Safe isolation according to EN 61140						
	Safe isolation to VDE 0106 Part 101 and Part 101 A1 between the auxiliary contacts and main circuits	V AC	440	440	440	440
Switching angle		°	90	90	90	90
Contacts		Number	Max. 3 (+N)	Max. 3 (+N)	Max. 3 (+N)	Max. 3 (+N)
Current heat loss per contact at I _e		W	8	10	13	16
Terminal capacity						
Solid or stranded		mm ²	1 x (10 - 95) 2 x (10 - 35)	1 x (10 - 95) 2 x (10 - 35)	1 x (16 - 185) 2 x (16 - 70)	1 x (16 - 185) 2 x (16 - 70)
Copper strip, 1 flat conductor	Number of layers x width x thickness	mm	6 x 9 x 0.8	–	6 x 20 x 1	–
Copper strip, 2 flat conductors		mm	–	6 x 9 x 0.8	–	6 x 20 x 1
Flexible with ferrule to DIN 46228		mm ²	1 x (16 - 70) 2 x (16 - 25)	1 x (16 - 70) 2 x (16 - 25)	1 x (25 - 120) 2 x (25 - 50)	1 x (25 - 120) 2 x (25 - 50)
Terminal screw			Hexagon screw 5	Hexagon screw 5	Hexagon screw 6	Hexagon screw 6
Tightening torque		Nm	14	14	16	16

Notes Main switch characteristics to IEC/EN 60204; positive opening of contacts, operator element positively located on shaft
Rated uninterrupted current I_u is specified for max. cross-section.
For terminal capacity solid, stranded, and flexible:
Max. 2 cross-section sizes difference admissible when using 2 conductors.





				P5-125	P5-160	P5-250	P5-315
Switching capacity							
AC voltage							
Rated making capacity $\cos \varphi = 0.35$			A	850	1050	1700	2050
Rated breaking capacity, motor load switch $\cos \varphi = 0.35$	230 V		A	800	900	1600	1800
	400 V		A	750	850	1380	1650
	500 V		A	650	850	1250	1550
	690 V		A	340	340	400	400
Rated operational current 440 V, load-break switch AC-21A		I_e	A	125	160	250	315
Motor rating motor load switch AC-3	230 V	P	kW	22	30	37	45
	400 V	P	kW	37	45	55	75
	690 V	P	kW	30	37	45	45
Motor rating motor load switch AC-23 A	230 V	P	kW	30	30	37	55
	400 V	P	kW	45	55	90	110
	690 V	P	kW	37	37	45	45
DC voltage							
DC-1, load switch L/R = 1 ms	Rated operational current	I_e	A	125	160	250	315
DC-1, load switch L/R = 1 ms	Voltage per contact connected in series		V	42	42	42	42
DC-23A, motor load switch L/R = 15 ms	24 V	Rated operational current	I_e	125	160	250	315
		Contacts	Number	3	3	3	3
	48 V	Rated operational current	I_e	125	160	250	315
		Contacts	Number	3	3	3	3
	60 V	Rated operational current	I_e	125	160	250	315
		Contacts	Number	3	3	3	3
	120 V	Rated operational current	I_e	40	50	80	100
		Contacts	Number	3	3	3	3

Notes Main switch characteristics to IEC/EN 60204; positive opening of contacts, operator element positively located on shaft
Rated uninterrupted current I_u is specified for max. cross-section.
For terminal capacity solid, stranded, and flexible:
Max. 2 cross-section sizes difference admissible when using 2 conductores.

				HI...-P1(P3)...	HI...-P5...		
Auxiliary contacts							
Standards				Control circuit isolator to IEC/EN 60947-5			
Rated insulation voltage		U_i	V AC	500	500		
Rated uninterrupted current		I_u	A	10	10		
Rated operational current							
AC-15 at 230 V				I_e	A	6	6
400 V/415 V				I_e	A	–	3
DC-13							
125 V				I_e	A	1.1	0.23
250 V				I_e	A	0.55	0.1
Short-circuit rating							
Max. fuse					A gG/gL	10	10
Terminal capacity							
Solid					mm ²	1 × 0.75 - 2.5 2 × 0.75 - 1.5	1 × 0.75 - 2.5 2 × 0.75 - 1.5
Flexible with ferrule to DIN 46228					mm ²	1 × 0.5 - 1.5 2 × 0.5 - 1.5	1 × 0.5 - 1.5 2 × 0.5 - 1.5
Tightening torque					Nm	0.6	0.8
Control circuit reliability at 24 V DC, 10 mA				Fault probability	H_F	< 10 ⁻⁵ , < 1 failure for 100 000 switching operations	

P5

Rating data for approved types UL File No. E36332				P5-125	P5-160	P5-250	P5-315
Contacts							
Rated operational voltage	U_e	V		600	600	600	600
Rated impulse withstand voltage ¹⁾	U_{imp}	V AC		8000	8000	8000	8000
Rated uninterrupted current ²⁾	I_u	A		125	160	250	300
Rated operational current							
Ampere rating	Off switch	I_e	A	125 ²⁾	160 ²⁾	250 ²⁾	300 ²⁾
	Changeover switches	I_e	A	125 ²⁾	160 ²⁾	–	–
Non inductive and slightly inductive loads							
Rated switching duty							
DOL rating (similar to AC-3)							
3-phase, 3 pole							
	120 V		HP	15	20	30	40
	240 V		HP	30	40	60	75
	480 V		HP	60	60	75	100
	600 V		HP	60	60	75	100
Short-circuit rating							
Max. back-up fuse, gL characteristic			A	125	160	250	315
Rated short-time withstand current (1 s current)			A	2500	3000	4600	5800
Terminal capacity							
Cu cable							
Solid or stranded for box terminal			AWG	3/0	3/0	–	–
			MCM	–	–	350	350
Flexible without ferrule			AWG	2/0	2/0	–	–
			MCM	–	–	300	300
Connection with cable lug or busbar				M10 x	M10 x	M12 x	M12 x
Terminal screw			mm	20	20	20	20
Max. width			mm	20	20	25	25
Max. width with terminal cover			mm	25	25	34	34
Ambient temperature		Open on 100 % I_u/I_{th}		50 °C over 24 hours with peaks up to 55 °C			
		Enclosed on 100% I_{the}		35 °C over 24 hours with peaks up to 40 °C			

Notes ¹⁾ Valid for mains with grounded star point, overvoltage category III, pollution degree 3
²⁾ Valid for connection with cables for 75 °C

				HI11	HI21-P5-125(160)	HI21-P5-250(315)
Auxiliary contacts						
Standards						
Rated insulation voltage	U_i	V AC			600	600
Rated uninterrupted current	I_u	A			10	10
Rated operational current	I_e					
Pilot Duty				P600	P600	P600
Heavy Pilot Duty				A600	A600	A600
General Use				10 A – 600 V AC	–	–
Ampere rating						
Non inductive and slightly inductive loads				–	10	10
Short-circuit rating						
Max. fuse			gL characteristic	A	–	16
Terminal capacity						
Solid or stranded			AWG	–	12	12
Flexible without ferrule			AWG	–	14	14

Notes ¹⁾ Devices for world markets IEC Δ UL/CSA





			T0-...	T3-...
General				
Standards			IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL, Switch-disconnectors to IEC/EN 60947-3 Load-break switch according to IEC/EN 60947-3	
Lifespan, mechanical	Operations	x 10 ⁶	0.5	0.5
Maximum operating frequency	Operations/h		3000	3000
Climatic proofing			Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclic to IEC 60068-2-30	
Ambient temperature				
Open		°C	-25 - 50	-25 - 50
Enclosed		°C	-25 - 40	-25 - 40
Mounting position			Any	Any
Mechanical shock resistance to IEC 60068-2-27	Half-sinusoidal shock 20 ms	g	> 15	> 15
Contacts				
Rated operational voltage	U _e	V AC	690	690
Rated impulse withstand voltage	U _{imp}	V AC	6000	6000
Overvoltage category/pollution degree			III/3	III/3
Rated uninterrupted current				
Open	I _u	A	20	32
Enclosed	I _u	A	20	32
Load rating with intermittent operation, class 12				
AB 25 % DF		x I _e	2	2
AB 40 % DF		x I _e	1.6	1.6
AB 60 % DF		x I _e	1.3	1.3
Short-circuit rating				
Fuse		A gG/gL	20	35
Rated short-time withstand current (1 s current)	I _{cw}	A _{rms}	320	650
Safe isolation according to EN 61140				
Between the contacts		V AC	440	440
Switching angle				
		°	90	90
			60	60
			45	45
			30	30
Contact units			Max. 11	Max. 11
Contacts with double-break			Max. 22	Max. 22
Current heat loss per contact at I _e		W	0.6	1.1
Terminal capacity				
Solid or stranded				
		mm ²	1 x (1 - 2.5) 2 x (1 - 2.5)	1 x (1 - 6) 2 x (1 - 6)
Flexible with ferrule to DIN 46228				
		mm ²	1 x (0.75 - 1.5) 2 x (0.75 - 1.5)	1 x (0.75 - 4) 2 x (0.75 - 4)
Flat terminal for rails				
		mm ²		
Terminal screw				
			M3.5	M4
Tightening torque				
		Nm	1	2

Notes The following applies for mechanical shock resistance: T3-.../I... >12g
Applies to T0(3).../SVB: isolating characteristics to IEC/EN 60947 for rated operational voltage U_e up to 500 VAC
The following applies to rated uninterrupted current I_u of contacts: max. 95 A with T5-4-8344/15
The following applies for solid, stranded and flexible terminal capacities:
T0(3), (6), (8)...: if 2 conductors are used, a max. difference of 2 cross-section sizes is permissible
T5(B)-...: if 2 conductors are used, a max. difference of one cross-section sizes is permissible
The following applies for part no. T8-3-8342/...: switching angle = 90° and flat conductor connection = 1 flat conductor, 25 x 5, or 2 flat conductors, 20 x 3

T5B-...	T5-...	T6-3-8212/E/HI12	T6-160-...	T8-...
IEC/EN 60947, VDE 0660, IEC/EN 60204, CSA, UL, Switch-disconnectors to IEC/EN 60947-3 Load-break switch according to IEC/EN 60947-3				
0.5	0.5	0.1	0.1	0.1
3000	3000	50	50	50
Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclic, to IEC 60068-2-30				
-25 - 50	-25 - 50	-25 - 50	-25 - 50	-25 - 50
-25 - 40	-25 - 40	-25 - 40	-25 - 40	-25 - 40
Any	Any	Any	Any	Any
> 15	> 15			
690	690	690	690	690
6000	6000	6000	8000	8000
III/3	III/3	III/3	III/3	III/3
63	100	125	160	315
63	100	125	160	275
2	2	2	2	2
1.6	1.6	1.6	1.6	1.6
1.3	1.3	1.3	1.3	1.3
80	100	200	160	315
1300	1850	2000	3000	4200
440	440			
90	90	90	90	90
60	60	60	60	60
45	45			
30	30			
Max. 10	Max. 10	Max. 3	Max. 3	Max. 3
Max. 20	Max. 20	Max. 6	Max. 6	Max. 6
4.5	7.5	11	11	11
1 x (2.5 - 35)	1 x (2.5 - 35)	1 x 70	1 x 95	150
2 x (2.5 - 16)	2 x (2.5 - 16)	2 x 25	2 x 25	
1 x (1.5 - 25)	1 x (1.5 - 25)	1 x 50	1 x 50	120
2 x (1.5 - 10)	2 x (1.5 - 10)	2 x 16	2 x 16	
				1 x (25 x 5) 2 x (20 x 3)
M6	M6	M6	M5, hexagon screw	M12
4	4	5.6	14	25





				T0...	T3...	
Switching capacity						
AC voltage						
Rated making capacity $\cos \varphi = 0.35$			A	130	320	
Rated breaking capacity, Motor load switch $\cos \varphi = 0.35$	230 V		A	100	260	
	400 V		A	110	260	
	500 V		A	80	240	
	690 V		A	60	170	
Rated operational current load break switch AC-21A	440 V	I_e	A	20	32	
Motor rating Motor load switch AC-3	230 V	P	kW	3	6.5	
	230 V star-delta	P	kW	4	11	
	400/415 V	P	kW	4	12	
	400 V star-delta	P	kW	5.5	18.5	
	500 V	P	kW	5.5	15	
	500 V star-delta	P	kW	7.5	22	
	690 V	P	kW	4	15	
	690 V star-delta	P	kW	5.5	22	
Motor rating Motor load switch AC-23A	230 V	P	kW	3.5	7.5	
	400/415 V	P	kW	6.5	13	
	500 V	P	kW	7.5	15	
	690 V	P	kW	6.5	15	
Rated operational current Control switch AC-15	230 V	I_e	A	6	10	
	400/415 V	I_e	A	4	6	
	500 V	I_e	A	2	4	
DC voltage						
DC-1, load switch L/R = 1 ms	Rated operational current	I_e	A	10	25	
	Voltage per contact connected in series		V	60	60	
DC-21A	Rated operational current 240 V	I_e	A	1	1	
	240 V contacts		Number	1	1	
DC-23A, motor load switch L/R = 15 ms	24 V	Rated operational current	I_e	A	10	25
		Contacts		Number	1	1
	48 V	Rated operational current	I_e	A	10	25
		Contacts		Number	2	2
	60 V	Rated operational current	I_e	A	10	25
		Contacts		Number	3	3
	120 V	Rated operational current	I_e	A	5	12
		Contacts		Number	3	3
	240 V	Rated operational current	I_e	A	5	5
		Contacts		Number	5	5
	DC-13, control switch L/R = 50 ms	Rated operational current	I_e	A	10	20
		Voltage per contact connected in series		V	32	32
Control circuit reliability at 24 V DC, 10 mA		Fault probability	H_F	< 10^{-5} , < 1 failure for 100000 switching operations		
Auxiliary contacts						
Standards						
Rated insulation voltage		U_i	V AC	–	–	
Rated uninterrupted current		I_u	A	–	–	
Rated operational current						
AC-15 at 230 V		I_e	A	–	–	
400 V/415 V		I_e	A	–	–	
Short-circuit rating						
Max. fuse			A gG/gL	–	–	
Terminal capacity						
Solid			mm ²	–	–	
Flexible with ferrule to DIN 46228			mm ²	–	–	
Tightening torque			Nm	–	–	
Control circuit reliability at 24 V DC, 10 mA		Fault probability	H_F	–	–	

T5B...	T5...	T6-3-8212/E/HI12	T6-160...	T8...
800	950	1600	1600	2390
520	760	1280	1280	1910
600	740	900	900	1800
480	590	880	880	1200
340	420	340	340	420
63	100	125	160	315
15	22	22	22	22
22	30	22	22	37
22	30	37	45	55
37	45	37	45	55
22	37	37	37	37
37	55	37	37	37
22	30	22	22	37
37	45	22	22	37
15	18.5	37	37	75
22	30	45	55	132
22	37	55	75	132
22	30	30	30	37
16	16	–	–	–
6	6	–	–	–
4	4	–	–	–
63	80	125	125	315
60	60	42	42	42
50	–	125	125	250
1	–	1	1	1
50	–	125	125	250
2	–	2	2	2
50	–	125	125	125
3	–	3	3	3
25	–	50	50	50
3	–	3	3	3
20	–	–	–	–
6	–	–	–	–
25	–	125	125	250
24	–	24	24	–
$< 10^{-5}$, < 1 failure for 100000 switching operations				
		Control circuit isolator to IEC/EN 60947-5 f	Control circuit isolator to IEC/EN 60947-5 f	
–	–	500	500	–
–	–	10	10	–
–	–	6	6	–
–	–	4	4	–
–	–	10	10	–
–	–	0.75 - 2.5	0.75 - 2.5	–
–	–	0.5 - 1.5	0.5 - 1.5	–
–	–	0.35	0.35	–
–	–	$< 10^{-5}$, < 1 failure for 100 000 switching operations		



Approvals for North America



Rating data for approved types ¹⁾ UL File No. E36332				T0-...	T3-...	T5B-...
Contacts						
Rated operational voltage U_e		V AC		600	600	600
Rated uninterrupted current I_u						
Current rating		A		16	25	65
Pilot Duty				A 600 P 600	A 600	
Switching capacity						
AC-3; max. rated power 40 – 60 Hz AC motors						
3-phase		200 V AC	HP	3	5	15
		230 V AC	HP	3	7½	15
		460 V AC	HP	10	15	40
		575 V AC	HP	10	15	50
Single-phase		115 V AC	HP	1	1½	3
		200 V AC	HP	2	3	7½
		230 V AC	HP	2	3	10
Short-circuit rating						
Standard		600 V AC	kA	5	5	5
With back-up fuse			A	50	80	CLASS J
With circuit-breakers			Part no.	NZMH6	NZMH6	–
Current setting			A	50	125	–
Disconnect in motor circuits		600 V AC	kA	10	10	–
With back-up fuse			Class	20 A/J	40 A/J	–
Terminal capacity						
Terminal capacity						
Cu cable		Min.	AWG	18	14	12
		Max.	AWG	14	10	4
Tightening torque		Max.	in-lb	8.8	17.6	35.3

Notes

¹⁾ Devices for world markets IEC \triangle UL/CSA.

Accessories → Cam switches for the German market.

If required, order English language front plate from the German market product range.

Do not use AW extension terminals where UL/CSA approval is required.

	UL approved protection types		
	UL/NEMA 1	UL/NEMA 3R	UL/NEMA 12
Cam switches			
T0-.../E; /Z; /SVB	•	•	•
T3-.../E; /Z; /SVB	•	•	•
T5B-.../E; /Z; /SVB	•	•	•

Notes

Protection type explanations → Chapter 23, Enclosure protection types as defined in NEC (NFPA 70), UL, CSA, NEMA

T cam switches in NA version

In its NA version, the cam switch features a terminal inscription in English and/or a terminal inscription deviating from the IEC standard. Switches in mounting types I2 to I4 feature an additional inscription on the enclosure's front (e.g. part no. and protection type). Not possible in combination with key operation lock mechanism S-T0; SVA-T3, and SVC-T3.

An overview of these cam switches can be found in the instructional leaflet AWA 1150-2327.

Catalog No.:	T0	T3	T5B
Mounting type			
/E; /EA; /EZ /Z; /N; /IVS	+NA 105864	+NA 105864	
/I2		+NA-I2 105866	
/I4			
/I5			+NA-I5 105869

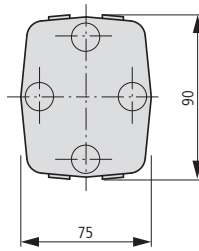
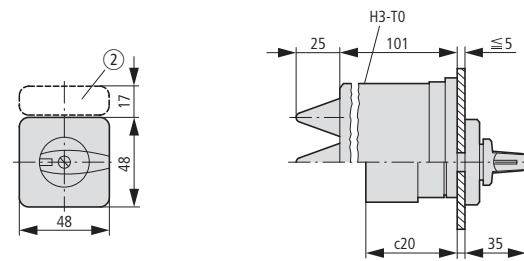
				TM
General				
Standards				IEC/EN 60947, VDE 0660 UL, CSA Control switch to IEC/EN 60947-5-1 Control circuit isolators to IEC/EN 60947-5-1
Control circuit isolator (IEC/EN 60947-5-1)				Max. 6 contacts; switching angle: 90°
Lifespan, mechanical	Operations	x 10 ⁶		> 1
Maximum operating frequency	Operations/h			3000
Climatic proofing				Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30
Ambient temperature				
Open		°C		-25...50
Enclosed		°C		-25...40
Mounting position				Any
Terminal capacity				
Solid		mm ²		1 x 1.5 2 x 1.5
Flexible without ferrule		mm ²		1 x 1.5 2 x 1.5
Solid or stranded		AWG		1 x 14 2 x 14
Flexible		AWG		1 x 16 2 x 16
Terminal screw				M2.5
Tightening torque		Nm		0.35
Contacts				
Mechanical data				
Contacts		Number		Max. 16
Contact units (BE)				Max. 8
Switching angle		°		90 60 45 30
Smallest switching angle for ON-OFF-ON		°		60
Max. switch position				≤ 12
Electrical characteristics				
Rated operational voltage	U _e	V AC		500
Rated impulse withstand voltage	U _{imp}	V AC		4000
Overvoltage category/pollution degree				III/3
Rated insulation voltage	U _i	V AC		500
Rated insulation voltage to UL/CSA		V AC		300
Rated uninterrupted current	I _u	A		10
Switching capacity				
AC-23 motor load switch	230 V AC, 3 pole		kW	1.8
	440 V AC, 3 pole		kW	3
	230 V AC, 1 pole		kW	0.75
	440 V AC, 1 pole		kW	1.1
AC-15 control switch	230 V AC, 1 pole		A	2.5
	400 V AC, 1 pole		A	1.5
	440 V AC, 1 pole		A	1
DC-13, control switch L/R = 50 ms	Rated operational current	I _e	A	3
	Voltage per contact connected in series		V	32
Switching capacity (UL489, CSA 22.2 No. 5.1)	240 V AC, 3 pole		HP	1
	277 V AC, 1 pole		HP	¾
	300 V AC Heavy duty		A	10
Max. short-circuit protective device				
Fuse			A gG/gL	10
Control circuit reliability at 24 V DC, 10 mA	Fault probability	H _f		< 10 ⁻⁵ , < 1 failure for 100000 switching cycles



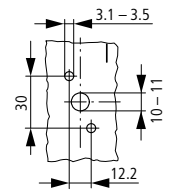
Dimensions

Flush mounting

T0.../E (+ H3-T0)
T3.../E (+ H3-T0)

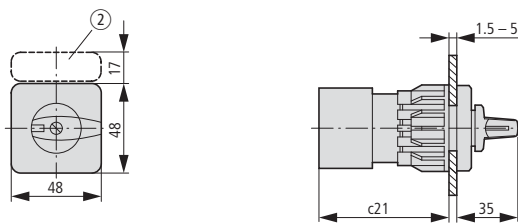


Drilling dimensions

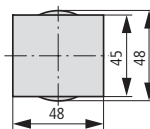


Center mounting

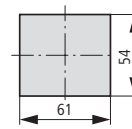
T0.../EZ
T3.../EZ



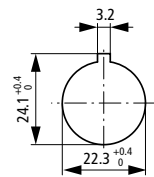
T0



T3



Drilling dimensions



Part no.	c20	c21
T0-1...	41	61
T0-2...	50	70
T0-3...	60	80
T0-4...	69	89
T0-5...	79	99
T0-6...	88	108
T0-7...	98	118
T0-8...	107	127
T0-9...	117	137
T0-10...	126	146
T0-11...	136	156

Depth of one contact unit: 9.5 mm

Part no.	c20	c21
T3-1...	44	64
T3-2...	56	76
T3-3...	67	87
T3-4...	79	99
T3-5...	90	110
T3-6...	102	122
T3-7...	113	133
T3-8...	125	145
T3-9...	136	156
T3-10...	148	168
T3-11...	159	179

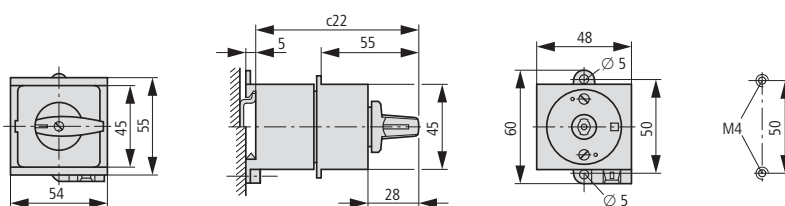
Depth of one contact unit: 11.5 mm

② Not included as standard

Service distribution board mounting

T0.../IVS

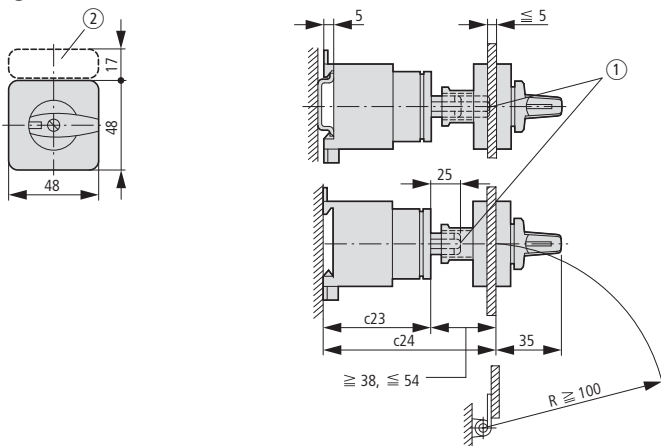
Drilling dimensions
base



Rear mounting

T0.../Z
T3.../Z

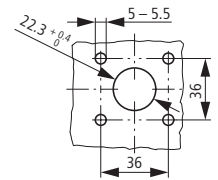
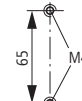
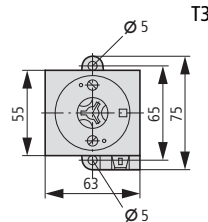
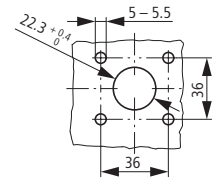
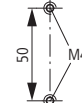
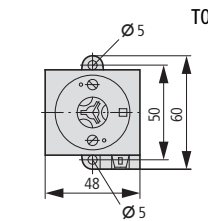
① Extension with



ZAV-T0 possible,
≤ 4 x 25 = 100 mm

Drilling
dimensions
base

Drilling
dimensions
door



Part no.	c20	c21	c22	c23	c24 ≥/≤	c24 with ≤ 4 ZAV	c25
T0-1...	41	61	77	48	86 – 102	202	72
T0-2...	50	70	87	57	96 – 112	212	72
T0-3...	60	80	96	67	105 – 121	221	91
T0-4...	69	89	106	76	115 – 131	231	91
T0-5...	79	99	115	86	124 – 140	240	–
T0-6...	88	108	125	95	134 – 150	250	–
T0-7...	98	118	134	105	143 – 159	259	–
T0-8...	107	127	144	114	153 – 169	269	–
T0-9...	117	137	154	124	162 – 178	278	–
T0-10...	126	146	163	133	172 – 188	288	–
T0-11...	136	156	173	143	181 – 197	297	–

Depth of one contact unit: 9.5 mm

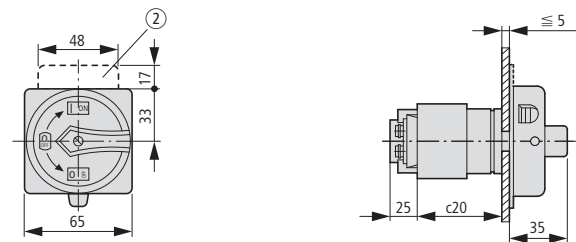
② Not included as standard

Part no.	c20	c21	c22	c23	c24 ≥/≤	c24 with ≤ 4 ZAV	c25
T3-1...	44	64	80	51	86 – 105	205	79
T3-2...	56	76	92	63	101 – 115	216	79
T3-3...	67	87	103	74	112 – 128	228	101
T3-4...	79	99	115	86	124 – 139	239	101
T3-5...	90	110	126	97	135 – 151	251	–
T3-6...	102	122	138	109	147 – 162	262	–
T3-7...	113	133	149	120	158 – 174	274	–
T3-8...	125	145	161	132	170 – 185	285	–
T3-9...	136	156	172	143	181 – 196	296	–
T3-10...	148	168	184	155	193 – 208	308	–
T3-11...	159	179	195	166	204 – 219	319	–

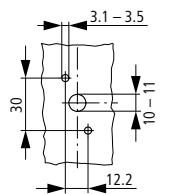
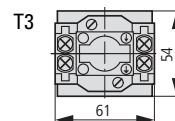
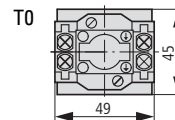
Depth of one contact unit: 11.5 mm

Flush mounting main switch

T0.../EA/SVB
T3.../EA/SVB

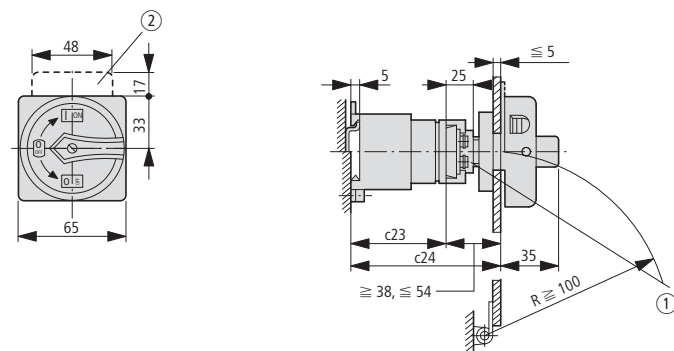


Drilling
dimensions
door



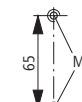
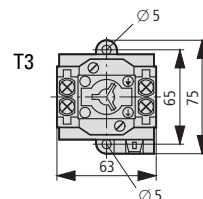
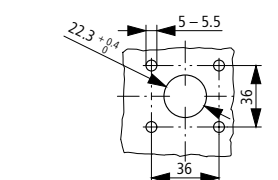
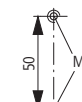
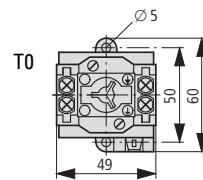
Rear mounting main switches

T0.../V/SVB
T3.../V/SVB



Drilling
dimensions
base

Drilling
dimensions
door



① Interlock extension possible with ZVV-T0 + ZAV-T0, F 4 x 25 = 100 mm

② Not included as standard

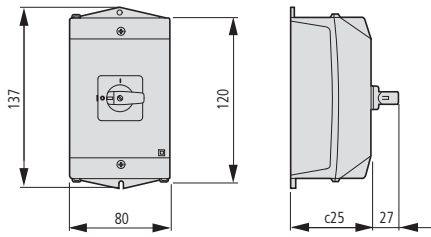
4/102 Cam switches, switch-disconnectors

Cam switches

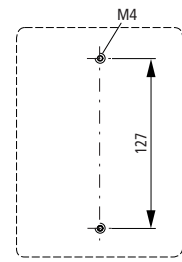
T0, T3

Surface mounting

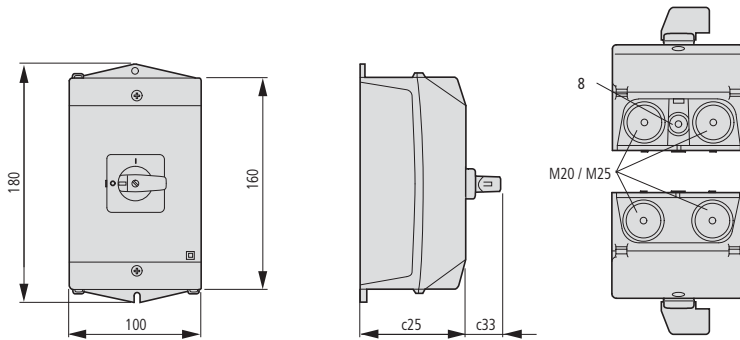
T0.../11



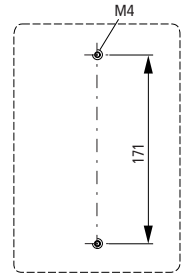
Drilling dimensions base



T3.../12

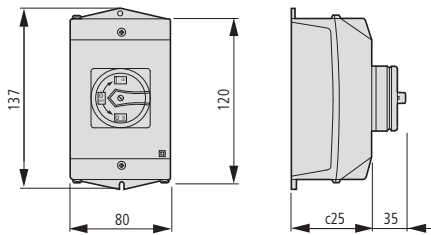


Drilling dimensions base

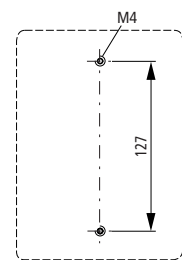


Surface mounting main switches

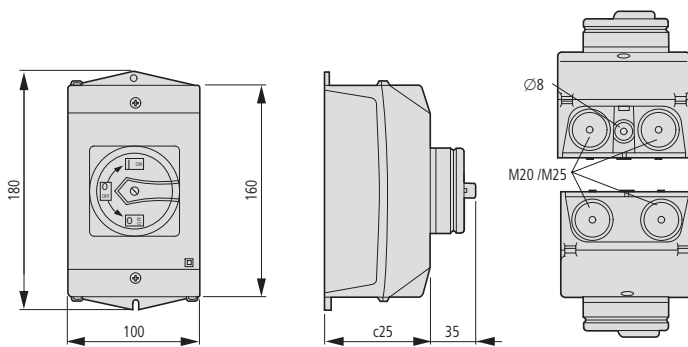
T0.../11/padlock facility



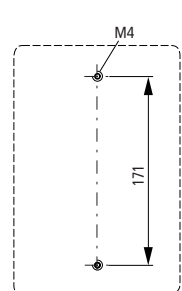
Drilling dimensions base



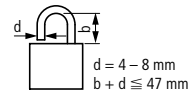
T3.../12/SVB



Drilling dimensions base



≅ 3 padlocks

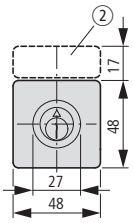


Part no.	c25
T0-1...	75
T0-2...	75
T0-3...	95
T0-4...	95

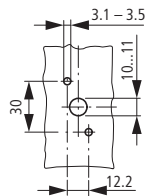
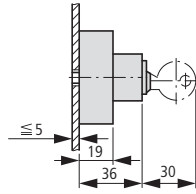
Part no.	c25	c33
T3-1...	80	27
T3-2...	80	27
T3-3...	100	35
T3-4...	100	35
T3-5...	145	35

Key operated lock mechanism

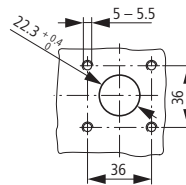
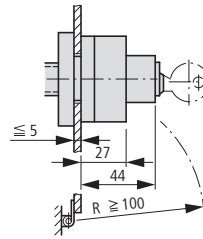
S-T0
S-SOND...-T0



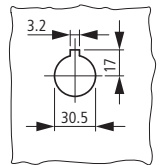
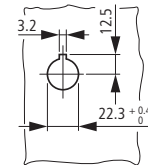
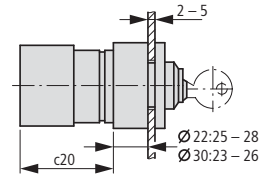
T0.../E(I1) + S-(SOND-)T0
T3.../E(I2) + S-(SOND-)T0



T0.../Z + S-(SOND-)T0
T3.../Z + S-(SOND-)T0

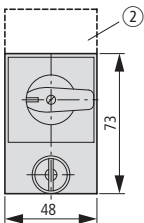


T0.../EZ = T0.../E + EZ-T0 + S-(SOND-)T0
T3.../EZ = T3.../E + EZ-T0 + S-(SOND-)T0

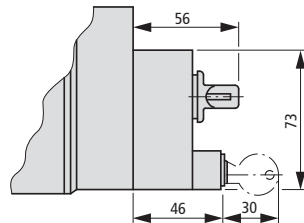


Cylinder lock

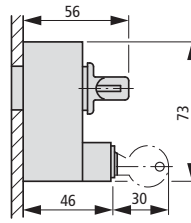
SVA-T3



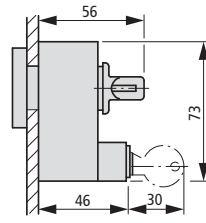
T0.../I1/SVA
T3.../I2/SVA
P1.../I2/SVA



T0.../E/SVA...
T3.../E/SVA...
P1.../E/SVA

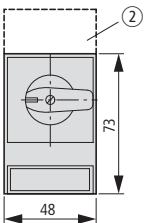


T0.../Z/SVA...
T3.../Z/SVA...
P1.../Z/SVA

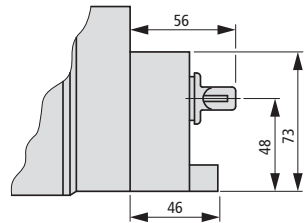


Padlocking feature

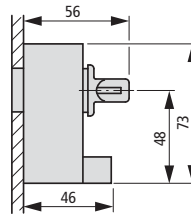
SVC-T3



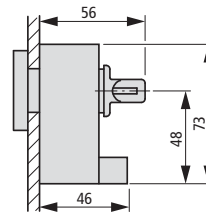
T0.../I1/SVC
T3.../I2/SVC
P1.../I2/SVC



T0.../E/SVC...
T3.../E/SVC...
P1.../E/SVC

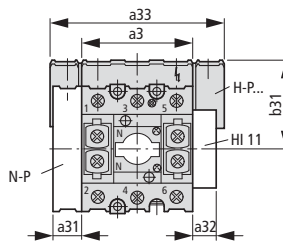
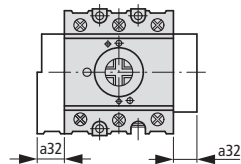
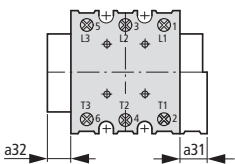


T0.../Z/SVC...
T3.../Z/SVC...
P1.../Z/SVC

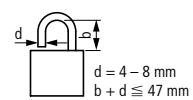


Modules

Switched neutral conductor N-P...
Auxiliary contacts HI 11-P1/P3



≤ 3 padlocks



Part no.	a3	a31	a32	a33	b31
P1-...	49	15	15	83	49
P3-..	72	18	15	114	60

② Not included as standard

4/104 Cam switches, switch-disconnectors

Cam switches

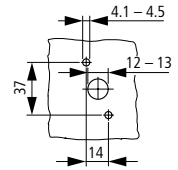
T5B, T5

Flush mounting

T5(B).../E

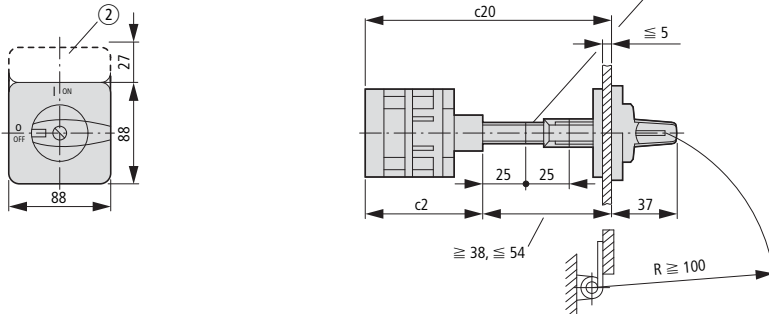


Drilling dimensions door

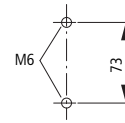


Rear mounting

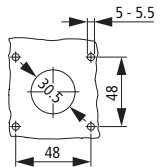
T5(B).../Z



Drilling dimensions base



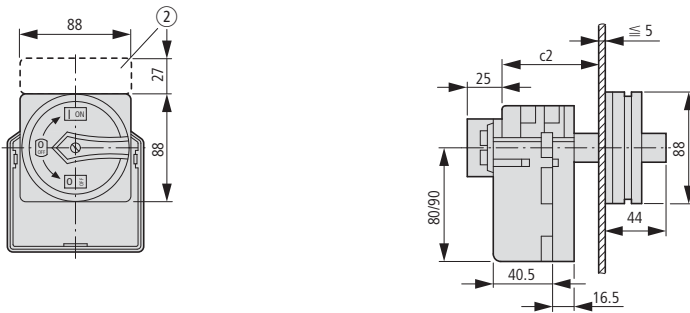
Drilling dimensions door



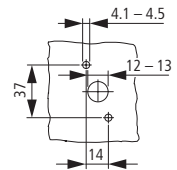
① Shaft extension possible with ZAV-P3 F 4 x 25 = 100 mm

Flush mounting main switches

T5(B).../EA/SVB

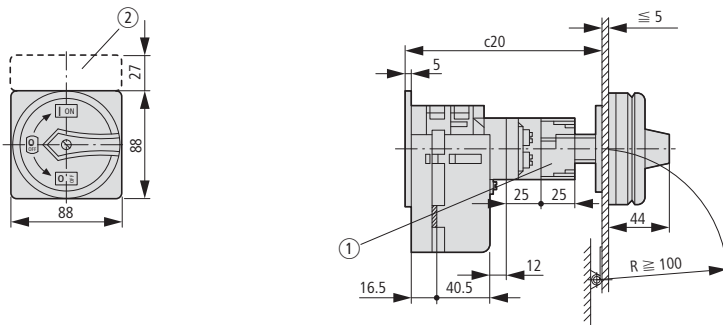


Drilling dimensions door

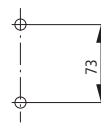


Rear mounting main switches

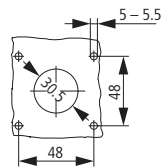
T5(B).../V/SVB



Drilling dimensions base



Drilling dimensions door



Part no.	c2	c20 ≅/≅	c20 with ≅ 4 ZAV	c21	c22
T5(B)-1...	54	92 – 107	207	90	125 (95)
T5(B)-2...	71	109 – 124	224	90	125 (95)
T5(B)-3...	87	125 – 140	240	123	160 (160)
T5(B)-4...	104	142 – 157	257	123	160 (160)
T5(B)-5...	120	158 – 173	273	–	–
T5(B)-6...	137	175 – 190	290	–	–
T5(B)-7...	153	191 – 206	306	–	–
T5(B)-8...	170	208 – 223	323	–	–
T5(B)-9...	186	224 – 239	339	–	–
T5(B)-10...	203	240 – 356	356	–	–

Depth of one contact unit: 16.5 mm

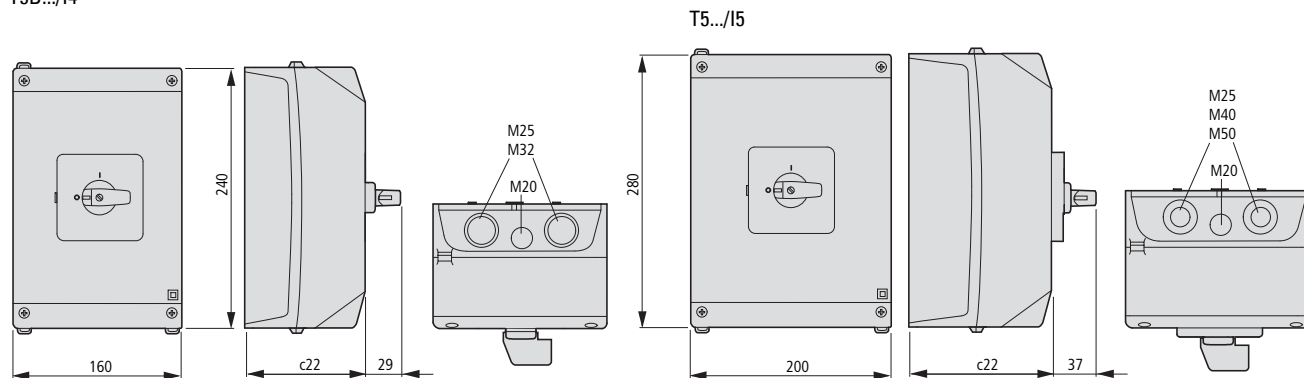
① Extension possible with ZVV-P3, ≤ 4 x 25 = 100 mm

② Not included as standard

Cam switches T5B and T5 have identical designs, only their contacts are different

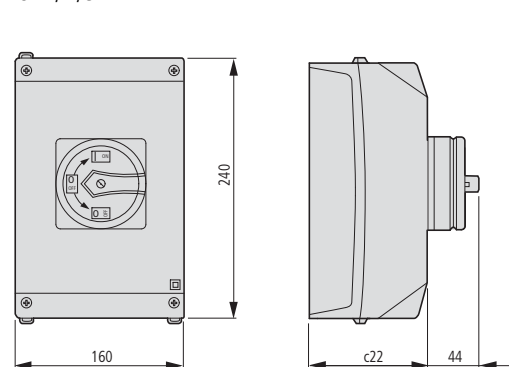
Surface mounting

T5B.../14

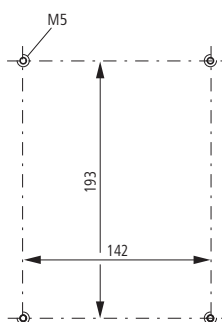


Surface mounting main switches

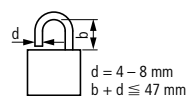
T5B.../14/SVB



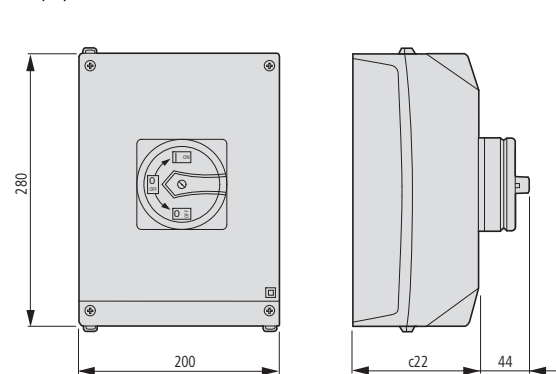
Drilling dimensions



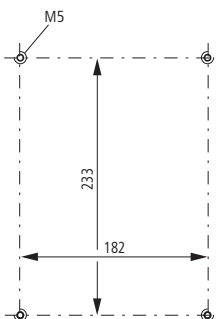
≅ 3 padlocks



T5.../15/SVB

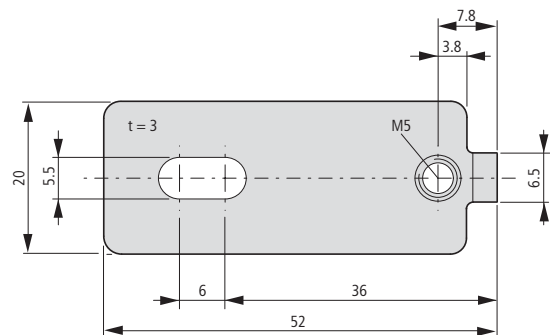


Drilling dimensions



External fixing brackets

AB-CI-K415



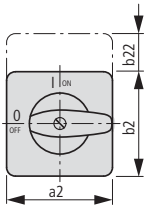
Part no.	c22
T5(B)-1...	125
T5(B)-2...	125
T5(B)-3...	160
T5(B)-4...	160

Depth of one contact unit: 16.5 mm

Cam switches T5B and T5 have identical designs, only their contacts are different

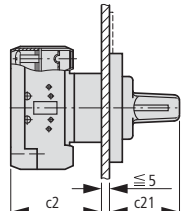
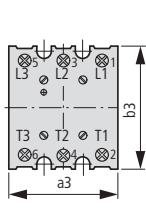
Flush mounting

P.../E



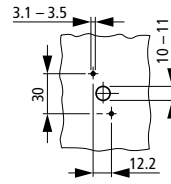
Center mounting

P1.../EZ

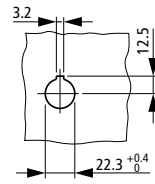


P1.../EZ = c2 + 5 mm

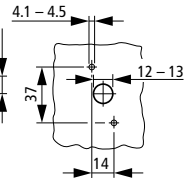
Drilling dimensions door
P1.../E



P1.../EZ

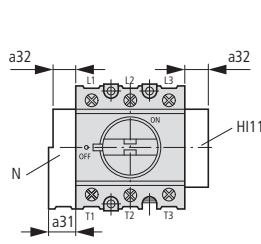
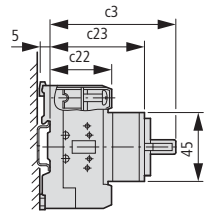
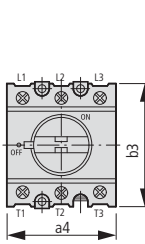


P3.../E

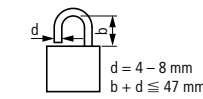


Service distribution board flush mounting

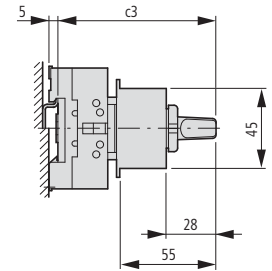
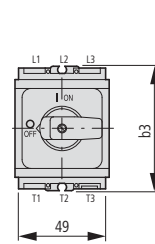
P3.../IVS



≅ 3 padlocks

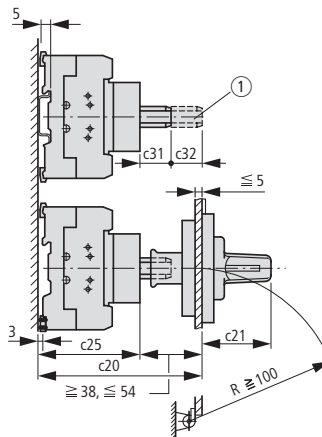
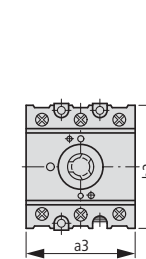
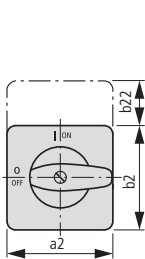


P1.../IVS

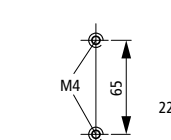


Rear mounting

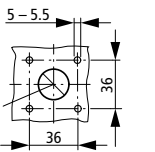
P.../Z



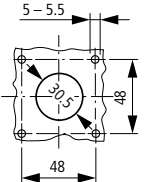
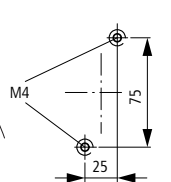
Drilling dimensions base
P1.../Z



Drilling dimensions door



P3.../Z



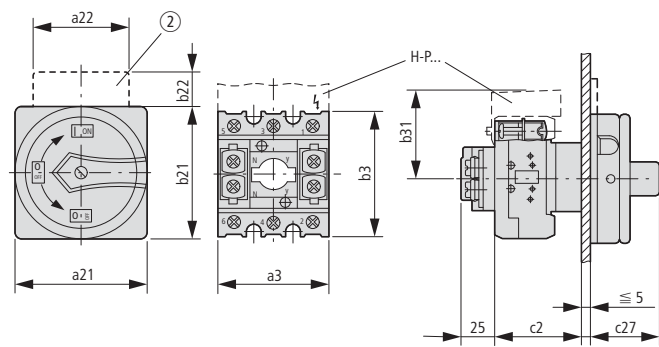
① Shaft extension with ZAV-... possible $\leq 4 \times 25 = 100$ mm

Part no.	a2	a3	a4	a21	a22	a23	a31	a32	a33	b2	b3	b21	b22	b23	b24	b31
P1	48	49	53.5	65	48	87	15	15	83	48	70	65	17	180	32	49
P3	87	72	71.5	87	87	125	18	15	114	87	83	87	27	175	-	60

Part no.	c2	c3	c20 \cong/\cong	c20 with ≤ 4 ZAV/ZVV	c21	c22	c23	c24	c25	c27	c28	c31	c32	c33
P1	59	86	96 - 112	212	35	32	65	68	58	35	77	25	25	27
P3	59	82	103 - 118	218	37	41	63	81	65	44	90	25	25	29

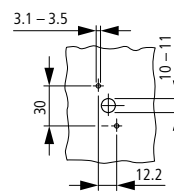
Flush mounting main switches

P.../EA/SVB

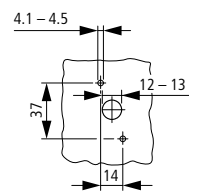


Drilling dimensions door

P1...

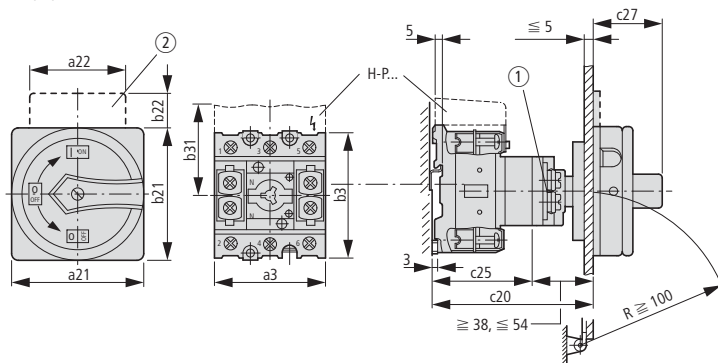


P3



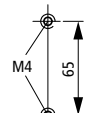
Rear mounting main switches

P.../V/SVB

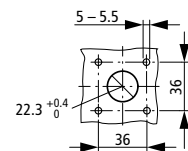


Drilling dimensions base

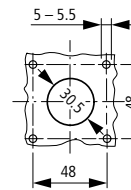
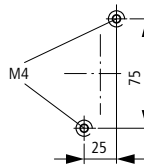
P1/V/SVB



Drilling dimensions door



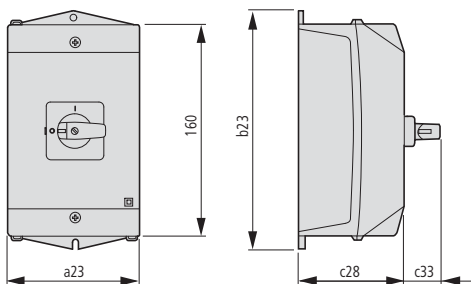
P3/V/SVB



- ① Interlock extension with ZVV-...+ZAV... possible $\leq 4 \times 25 = 100$ mm
- ② Not included as standard

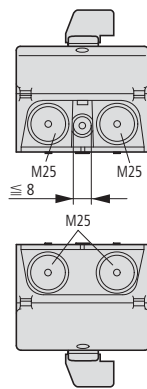
Surface mounting

P1.../I2

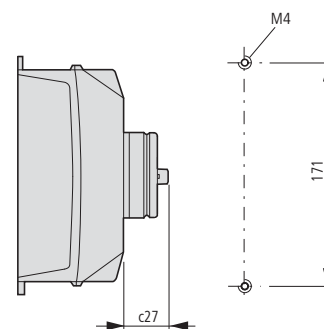


Surface mounting main switches/ safety switches

P1.../I2/SVB
P1.../I2/SI



Drilling dimensions

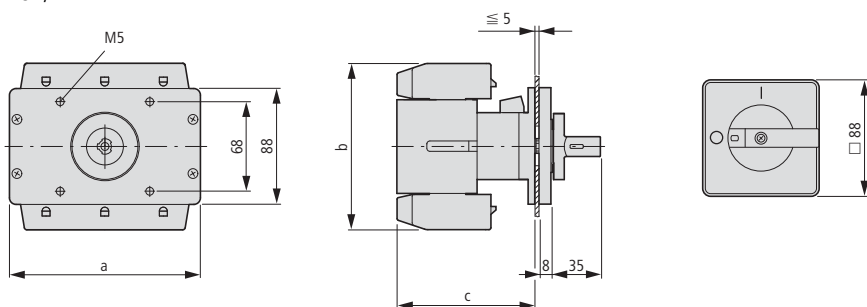


Part no.	a2	a3	a4	a21	a22	a23	a31	a32	a33	b2	b3	b21	b22	b23	b24	b31
P1.../I2	48	49	53.5	65	48	100	15	15	83	48	70	65	17	180	35.5	49

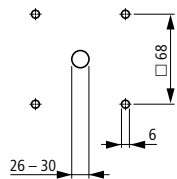
Part no.	c2	c3	c20 \cong/\cong	c20 with $\cong 4$ ZAV/ZVV	c21	c22	c23	c24	c25	c27	c28	c31	c32	c33
P1...	59	86	96 - 112	212	35	32	65	68	58	35	80	25	25	27

Flush mounting

P5.../E

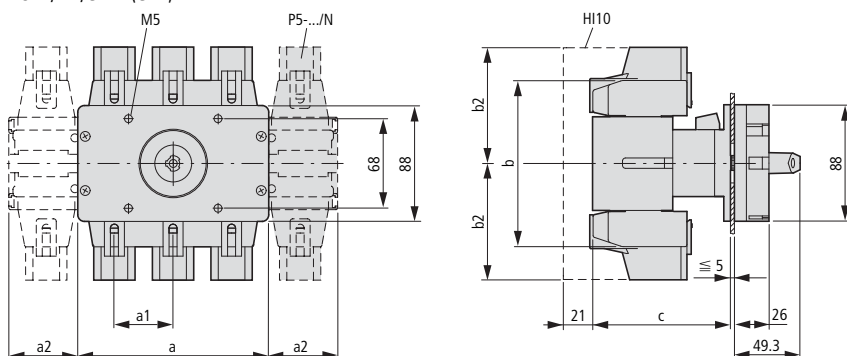


Drilling dimensions



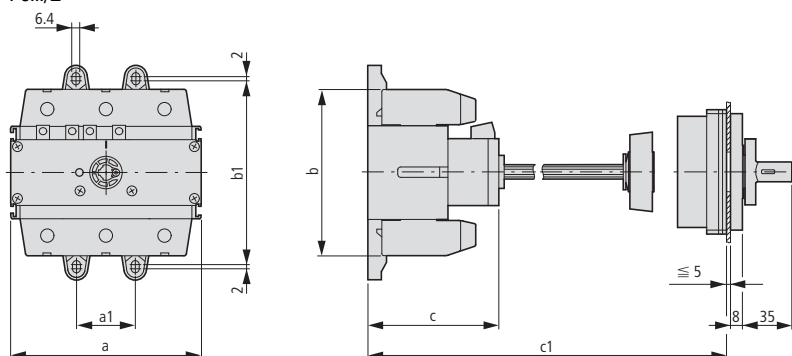
Flush mounting main switches

P5.../EA/SVB-(SW)

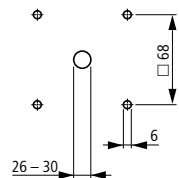


Rear mounting

P5.../Z

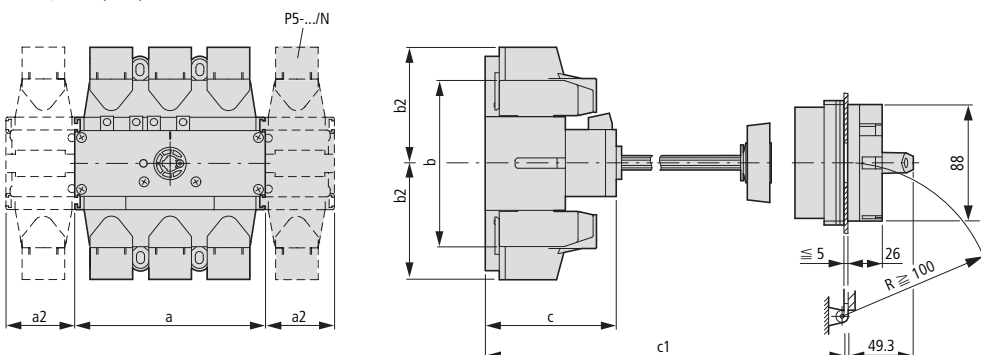


Drilling dimensions



Rear mounting main switches

P5.../SVB-(SW)



Part no.	a	a1	a2	b	b1	b2	c	c1
P5-125/160	112	36	38	108	120	76	91	≥ 130 ≤ 287
P5-250/315	145	44	52.5	126	144	88	98	≥ 140 ≤ 280

4/110 Cam switches, switch-disconnectors

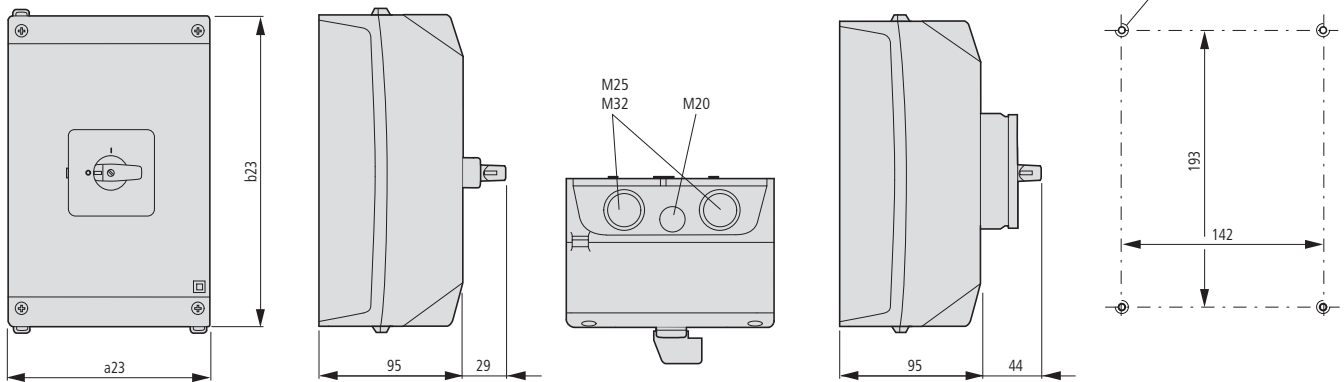
Switch-disconnectors

P3

Surface mounting P3-63/14

Surface mounting main switches/safety switches P3-63/14/SVB P3-63/14/SI T5B-.../14/SI

Drilling dimensions

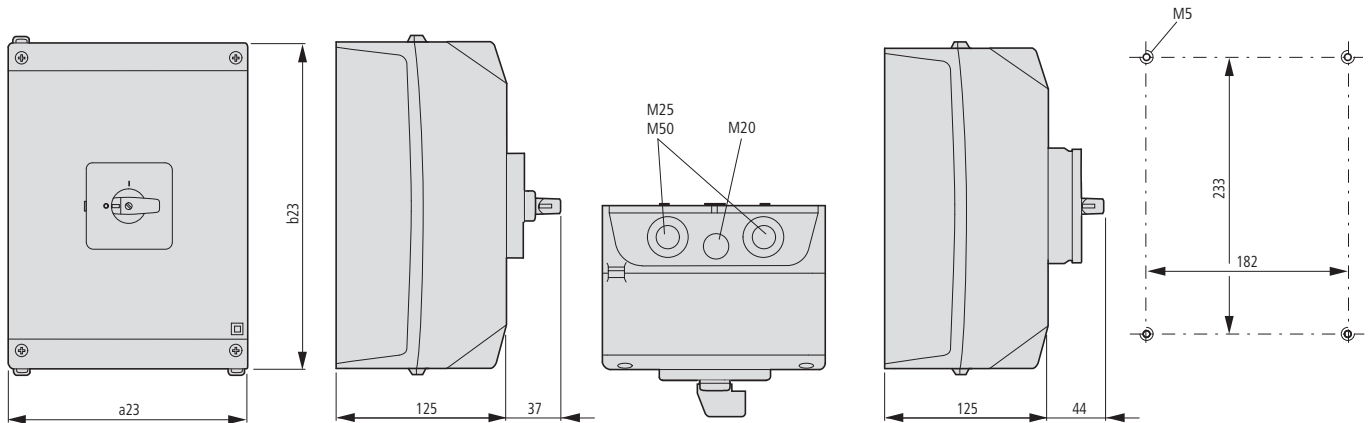


Surface mounting

P3-100/15

Surface mounting main switches/safety switches P3-100/15/SVB P3-100/15/SI T5-.../15/SI

Drilling dimensions

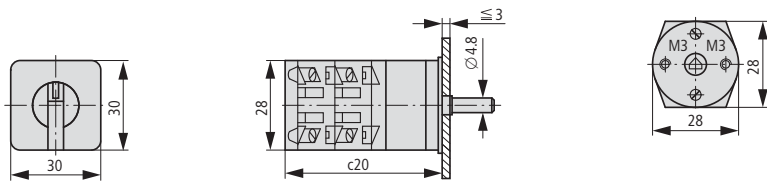


Part no.	a2	a3	a4	a21	a22	a23	a31	a32	a33	b2	b3	b21	b22	b23	b24	b31
P3-63/14	87	72	71.5	87	87	160	18	15	114	87	83	87	27	240	35.5	60
P3-100/15	87	72	71.5	87	87	200	18	15	114	87	83	87	27	280	35.5	60

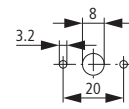
Part no.	c2	c3	c20 ≅/≅	c20 with ≅ 4 ZAV/ZVV	c21	c22	c23	c24	c25	c27	c28	c31	c32	c33
P3-63	59	82	103 – 118	218	37	41	63	81	65	44	125	25	25	37
P3-100	59	82	103 – 118	218	37	41	63	81	65	44	125	25	25	37

Flush mounting

TM.../E



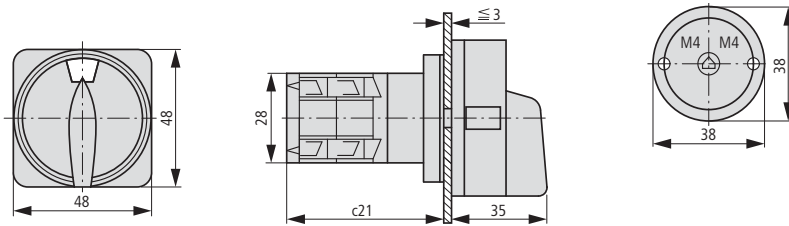
Drilling dimensions



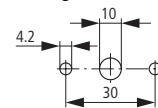
Control circuit isolators

for 2 padlocks \varnothing 4 mm or 1 padlock \varnothing 6 mm

TM-.../E/SVB-(SW)

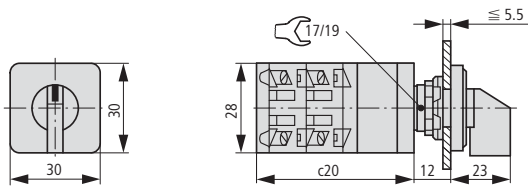


Drilling dimensions

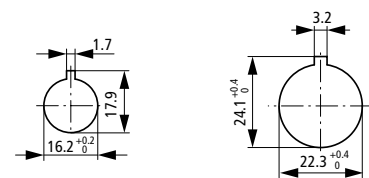


Center mounting

TM-.../EZ

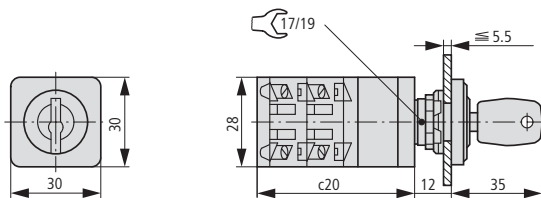


Drilling dimensions¹⁾

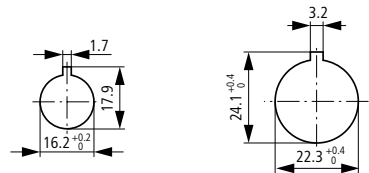


Center mounting with key operation

TM-...+EZ/S-..



Drilling dimensions¹⁾

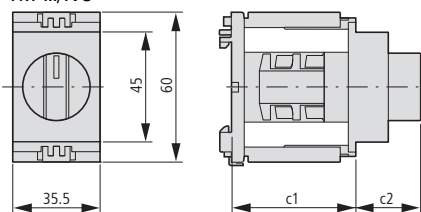


Part no.	c20	c21
TM-1	39	42
TM-2	51	54
TM-3	63	66
TM-4	75	
TM-5	87	
TM-6	99	
TM-7	111	
TM-8	123	

Depth of one contact unit: 12 mm

Service distribution board mounting

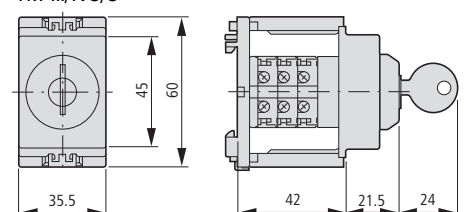
TM-.../IVS



Part no.	c1	c2
TM-1	44	21
TM-2	46	26.5

Depth of one contact unit 12 mm

TM-.../IVS/S



Notes

¹⁾ Drilling dimensions optionally: 16.2 mm = without reduction Δ RMQ16; 22.3 mm = with reduction Δ RMQ Titan