

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 RMQ, 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

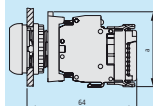
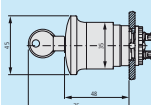
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Ordering

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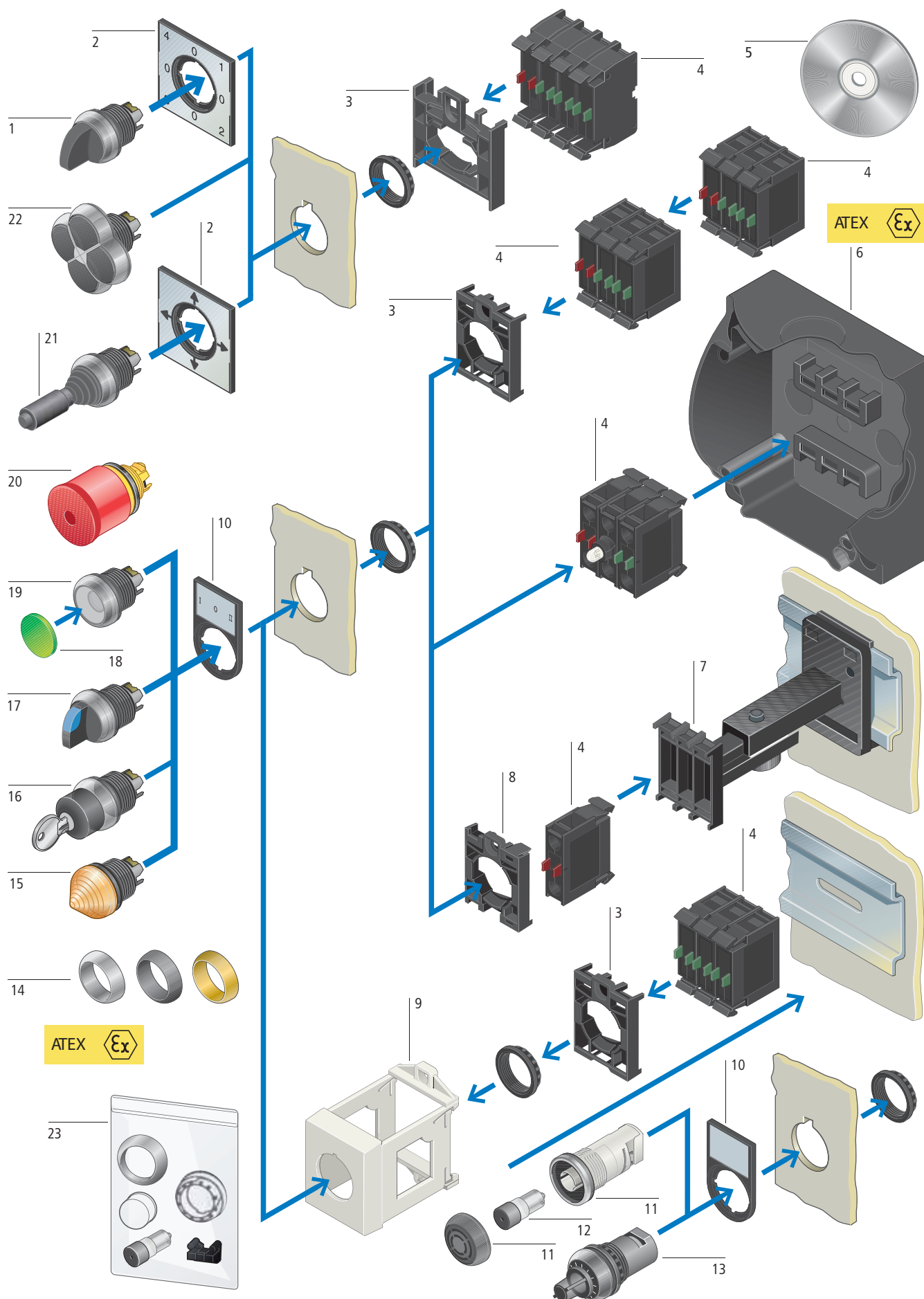
Technical data

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Dimensions

SL signal towers	2/109
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System overview



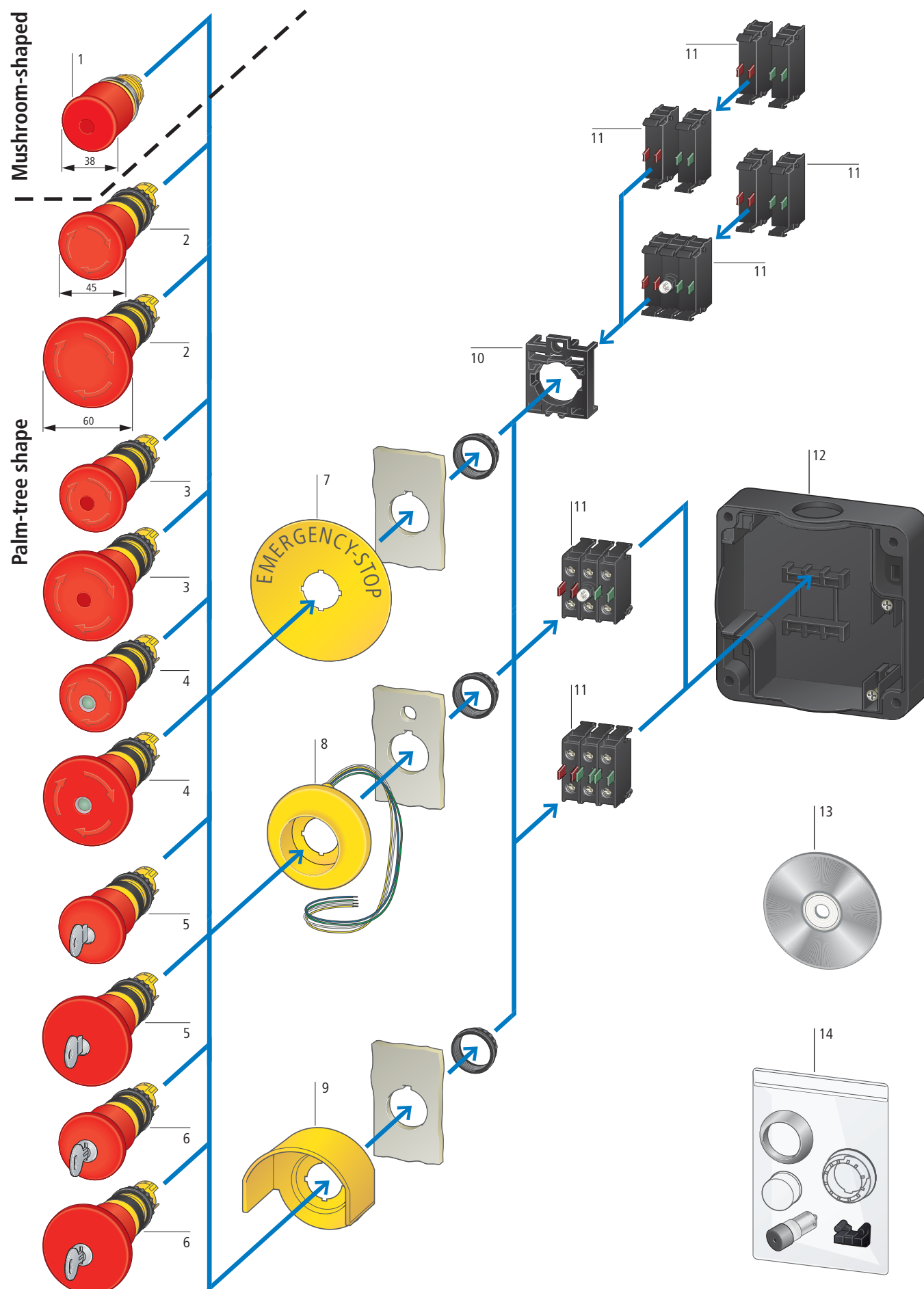


4-way selector switch actuators	1	Telescopic clip	7	Key-operated buttons	16
4 positions		For mounting depth compensation when rear mounting devices in CI enclosures, CI-K enclosures and cabinets		2 and 3 positions	
With rotary head or thumb-grip		→ Page 2/48		Programmable maintained/momentary function and key withdraw	
Maintained function 0-1-0-2-0-3-0-4				Suitable for master key systems	
→ Page 2/20				→ Page 2/21	
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		→ Page 2/48		With rotary head, thumb-grip	
→ Page 2/25				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					
→ Page 2/31		Label mounts	10	Button plates/Button lenses	18
(Double) contact elements	4	For insert labels		Laser inscription for pushbutton actuators and mushroom-headed pushbutton	
Normally closed contact (NC) and normally open contact (N/O)		Colour: black		Button lenses for illuminated pushbutton actuators and indicator lights, flat	
Universalcontacts suitable for use with electronic devices		Insert labels, aluminium-colored, with and without inscription, can be engraved		With standard texts and symbols or with custom labelling	
Positive opening safety function according to IEC/EN 60947-5-1		→ Page 2/35		→ Page 2/36	
Maximum 2 levels, each with 3 contact elements		Acoustic device	11	Pushbutton actuators	19
→ Page 2/31		Protection type IP40 without buzzer		Momentary and maintained	
LED elements	4	→ Page 2/27		Flat and extended	
Voltage range: 12 – 30 V AC/DC		Buzzer	12	with and without guard ring	
85 – 264 V AC		Continuous tone, pulsed tone		Mushroom-headed pushbutton	
→ Page 2/33		18 – 30 V AC/DC		Double actuators	
		→ 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
Surface mounting enclosure	6	→ Page 2/27		Tamper-proof according to ISO 13850/EN 418	
Surface mounting enclosures IP67 up to 6 mounting locations		Bezels	14	Can be secured by sealable shroud	
Surface mounting enclosures IP55 up to 12 mounting locations		• Silver		Additional labels, with and without inscription	
Flush mounting panel, IP54, up to 6 mounting locations		• Black		→ Page 2/8	
Shrouds IP40 for flush mounting panels		• 24 carat gold can only be ordered via M22-Combination		Joystick	21
→ Page 2/45		→ Page 2/48		4 positions	
		Indicator lights	15	→ Page 2/24	
		Flat and conical designs		4-way pushbutton	22
		Colours: white, green, red, yellow, blue		4 positions	
		→ Page 2/26		Pushbutton actuators, momentary	
				→ Page 2/24	
				Accessories devices	23
				→ Page 2/48	

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

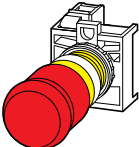
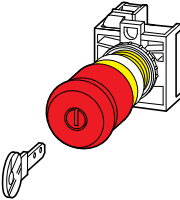
System overview





Emergency stop pushbuttons Emergency switching off pushbuttons Mushroom-shaped	1	Emergency stop pushbuttons Emergency switching off pushbuttons Palm-tree shape	5	Mounting adapter	10
Non-illuminated		with lock mechanism MS1–MS20		For flush mounting plates	
Illuminated with LED		Diameter 45 mm and 60 mm		for contact and LED elements, M22-A...	
with Lock mechanism MS1–MS20		Tamper-proof according to ISO 13850/EN 418		for contact elements, M22-A4	
with lock mechanism for master key system		European Machinery Safety Directive 2006/42/EC		→ Page 2/31	
Tamper-proof according to ISO 13850/EN 418		Additional labels, with and without inscription			
European Machinery Safety Directive 2006/42/EC		Release by turning			
Can be secured by sealable shroud		→ Page 2/8			
Additional labels, with and without inscription					
Release by turning		Emergency stop pushbuttons Emergency switching off pushbuttons Palm-tree shape	6	Contact elements, indicator lights	11
→ Page 2/7		with Ronis 455 lock mechanism		Normally open contact and normally closed contact	
		Diameter 45 mm and 60 mm		Universalcontacts suitable for use with electronic devices	
Emergency stop pushbuttons Emergency switching off label Palm-tree shape	2	Tamper-proof according to ISO 13850/EN 418		Positive opening safety function according to IEC/EN 60947-5-1	
Non-illuminated		European Machinery Safety Directive 2006/42/EC		Up to 2 levels with 3 contact elements each	
Diameter 45 mm and 60 mm		Can be secured by sealable shroud		→ Page 2/31	
Tamper-proof according to ISO 13850/EN 418		Additional labels, with and without inscription			
European Machinery Safety Directive 2006/42/EC		Release by turning or pulling			
Additional labels, with and without inscription		→ Page 2/9		Surface mounting enclosure	12
Release by turning				Surface mounting enclosures IP67 up to 6 mounting locations	
→ Page 2/8		Emergency stop labels Emergency switching off label	7	Surface mounting enclosures IP55 up to 12 mounting locations	
		Round, square, and rectangular types		Flush mounting plate, IP54, up to 6 mounting locations	
Emergency stop pushbuttons Emergency switching off pushbuttons Palm-tree shape	3	Single-language, multi-language, can be individually labeled		Shrouds IP40 for flush mounting	
Illuminated with LED		→ Page 2/11		→ Page 2/45	
Diameter 45 mm and 60 mm					
Tamper-proof according to ISO 13850/EN 418		Illuminated ring	8	Labeling with convenience	13
European Machinery Safety Directive 2006/42/EC		Versions: 24 V AC/DC, 120 V AC, 230 V AC		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.	
Additional labels, with and without inscription		Continuous light		Download:	
Release by turning		Flashing light with separate actuation		www.moeller.net/de/support	
→ Page 2/8		Continuous light with separate actuation, 24 V AC/DC		Keyword: "Labeleditor"	
		can be actuated separately with three LED rows			
Emergency stop pushbuttons Emergency switching off pushbuttons Palm-tree shape	4	→ Page 2/10		Accessories	14
with mechanical operated indicator				→ Page 2/48	
Diameter 45 mm and 60 mm		Guarding	9		
Tamper-proof according to ISO 13850/EN 418		against accidental actuation			
European Machinery Safety Directive 2006/42/EC		for 38 mm and 45 mm designs			
Additional labels, with and without inscription		→ Page 2/10			
Release by turning					
→ Page 2/9					



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	Bezel: Silver 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

							Bezel: silver		
	Number of locations	Contact configuration: ⊕ = Safety function by positive opening according to IEC/EN 60947-5-1	Circuit symbol	Enclosure top	RAL value	Protection type	Part no. Article no.	Price See price list	Std. pack
	Number	N/O = normally open NC = normally closed							
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								M22-COMBINATION-* 228298	1 off
To order use form F0315 → Data sheet in Online Catalog * = Freely selectable customer identification or stock no.; max. 10 characters.									

Notes

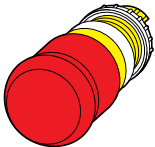
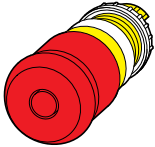
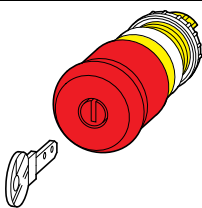
Information relevant for export to North America



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. 14-05; CSA-C22.2 No. 94-91; CE marking
E29184
NKCR
012528
3211-03
UL Listed, CSA certified
UL/CSA Type 3R, 4X, 12, 13

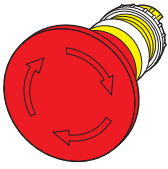
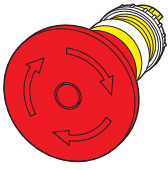
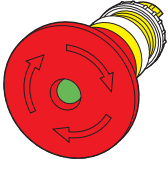
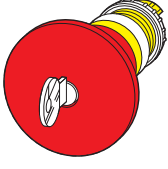
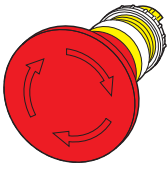
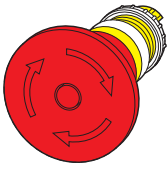


Illumination			Colour mushroom head	RAL no.	Protection type	Bezel: silver Part no. Article no.	Price See price list	Std. pack
Emergency stop pushbutton/Emergency switch-off actuators								
Release by pulling Mushroom button diameter 38 mm ATEX → Engineering								
	Non-illuminated	Pull to release		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  

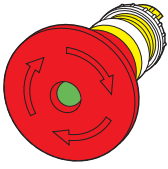
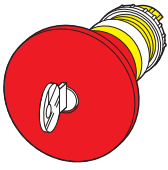
Information relevant for export to North America

NA Certification

Request filed for UL and CSA





Illumination		Colour mushroom head	RAL no.	Protec- tion 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



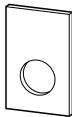
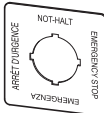
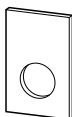
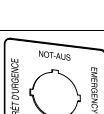
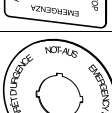
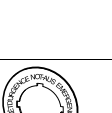
NA Certification

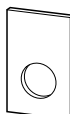
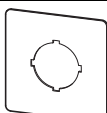
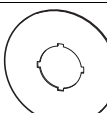
Request filed for UL and CSA

	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			

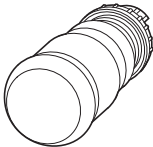
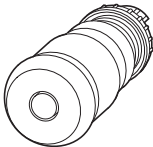
Note: Contact elements → Page 2/32

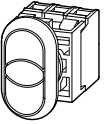
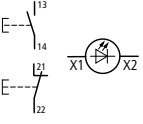
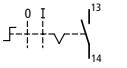
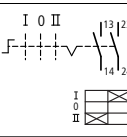
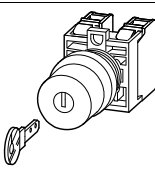


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Emergency-stop labels, IP66										
ATEX  → Engineering Lettering black										
	Emergency-stop	en		RAL 1004	M22-XZK1-D99 121089		10 off  	UL/CSA certification not required		
	Arresto di emergenza	it		RAL 1004	M22-XZK1-I99 121370					
	HÄTÄPYSÄYTYS	fi		RAL 1004	M22-XZK1-SF99 121371					
	Quadrilingual	de, en, fr, it		RAL 1004	M22-XYK11 121373					
	Quadrilingual	de, en, fr, it		RAL 1004	M22-XAK11 121085					
	Quadrilingual	de, en, es, pt		RAL 1004	M22-XAK12 121086					
	Quadrilingual	de, en, nl, fr		RAL 1004	M22-XAK13 121087					
	Quadrilingual	en, sv, fi, da		RAL 1004	M22-XAK14 121088					
	Quadrilingual	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					
	Quadrilingual	de, en, fr, it		RAL 1004	M22-XBK1 216483					

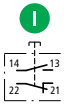
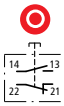
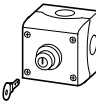
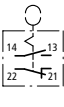
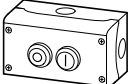
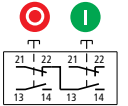
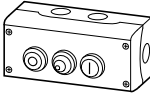
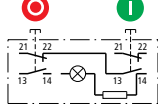
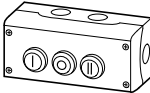
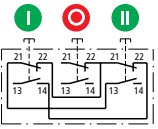
	Inscription	Language		RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
							 	
Emergency-Stop labels								
	–	–		RAL 1004	M22-XZK-* 216479		10 off  	UL/CSA certification not required
	Blank	–		RAL 1004	M22-XZK 216470			
	With custom inscription 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.	Protec- tion 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						
	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
			N/O = normally open contact						
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 ancillary 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  
With indicator light, white LED element 85 - 264 V AC									
	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



Construction type	Button plate	Bezel: silver Part no. Article no.	Price See price list	Bezel: black Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Double pushbutton actuators with indicator light, IP66 ATEX  → 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, B = black

B/S = top blue/bottom black

G/R = top green/bottom red

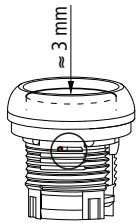
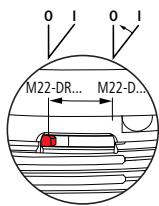
G/S = top green/bottom black

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	Price	Std. pack	Bezel: black	Price	Std. pack	Notes	
		Part no. Article no.	See price list		Part no. Article no.	See price list			
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		50 off  			–		
	Actuator flat, maintained		M22-D-R-X0 216605		10 off  	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		5 off  	Programmable maintained/momentary pushbutton function  
			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		50 off  					
		M22-DR-R-X0 216628		5 off  	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				

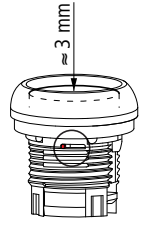
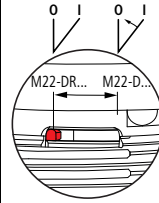
Information relevant for export to North America



Product Standards

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. 14-05; CSA-C22.2 No. 94-91; CE marking
E29184
NKCR
012528
3211-03
UL Listed, CSA certified
UL/CSA Type 3R, 4X, 12, 13

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			
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



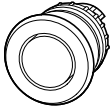
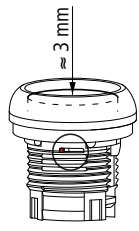
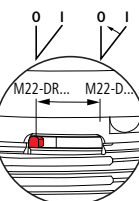
Product Standards

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. 14-05; CSA-C22.2 No. 94-91; CE marking

E29184
NKCR
012528
3211-03
UL Listed, CSA certified
UL/CSA Type 3R, 4X, 12, 13



Button plate		Colour of mushroom head	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
Mushroom-headed pushbuttons, IP67, IP69K									
ATEX  → Engineering									
Bezel gold-plated → Page 2/48									
Momentary					5 off  			5 off  	–
			M22-DP-S 216712			M22S-DP-S 216713			–
			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					5 off  			5 off  	Programmable maintained/momentary pushbutton function  
			M22-DRP-S 216743			M22S-DRP-S 216744			
			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
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. 14-05; CSA-C22.2 No. 94-91; CE marking
E29184
NKCR
012528
3211-03
UL Listed, CSA certified
UL/CSA Type 3R, 4X, 12, 13



					Bezel: Silver			Bezel: black		
Function:	Button plate	Inscription	Function		Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Function: └┘ = Momentary └─ = Maintained										
Selector switch actuators, IP66										
ATEX → 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		10 off
	└─ 60°	—	—	—	M22-WRK-GVP 216868		50 off 			off
With thumb-grip, V position										
	└─ 60°	—	—	—	M22-WKV 216874		5 off 	M22S-WKV 216875		5 off
3 positions (with plunger bridge → engineering)										
With rotary knob										
	40°		—	—	M22-W3 216861		5 off 	M22S-W3 216862		5 off
	60°		—	—	M22-WR3 216863			M22S-WR3 216864		
	60°		AUTO 0 MAN.	—	M22-WR3-X94 226838			M22S-WR3-X94 226839		
	60°		* = with customized inscription through Labeleditor → Engineering	—	M22-WR3-* 226840			M22S-WR3-* 226841		
With thumb-grip										
	40°	—	—	—	M22-WK3 216870		5 off 	M22S-WK3 216871		5 off
	60°	—	—	—	M22-WRK3 216872			M22S-WRK3 216873		
	—	—	—	—	M22-WRK3-*) 217436			M22S-WRK3-*) 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
With thumb-grip										
	45°		—		M22-WRK4 279431		5 off 	M22S-WRK4 279432		5 off

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:					Bezel: Silver	Std. pack	Bezel: black	Std. pack
Key withdrawable in position					Part no. Article no.		Part no. Article no.	
> = Momentary < = Maintained					Price See price list		Price See price list	
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
 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. 14-05; CSA-C22.2 No. 94-91; CE marking
 E29184
 NKCR
 012528
 3211-03
 UL Listed, CSA certified
 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)

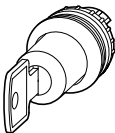
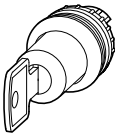
-*: * = Customized inscription using Labeleditor;
 For * enter the automatically generated file name
 (→ Engineering) or "blank" if no inscription required

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	Price See price list	Std. pack	Bezel: black	Price See price list	Std. pack
Key-operated button actuators for master key systems IP66									
ATEX  → Engineering Bezel gold-plated → Page 2/48 With two keys									
Two positions	40° 60° 60°	0 0 0 I	M22-WS-SA(*)-* 216885 M22-WRS-SA(*)-* 216892 M22-WRS-SA(*)-* 285537			5 off 	M22S-WS-SA(*)-* 216886 M22S-WRS-SA(*)-* 216893 M22S-WRS-SA(*)-* 285538		5 off 
									
3 positions	60° 40° 60°	I O II 0 0	M22-WRS3-SA(*)-* 285539 M22-WS3-SA(*)-* 216898 M22-WRS3-SA(*)-* 216905				M22S-WRS3-SA(*)-* 285581 M22S-WS3-SA(*)-* 216899 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 → 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:	For use with	Bezel: Silver	Price	Std. pack	Bezel: black	Price	Std. pack
			Part no. Article no.	See price list		Part no. Article no.	See price list	
	> = Momentary < = Maintained							
Joystick, IP66								
ATEX  → 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
E29184
NKCR
012528
3211-03
UL Listed, CSA certified
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

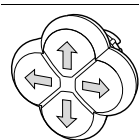
Pushbuttons, IP66, 4-way

ATEX  → 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
E29184
NKCR
012528
3211-03
UL Listed, CSA certified
UL/CSA Type 3R, 4X, 12, 13

UL File No.

UL CCN

CSA File No.

CSA Class No.

NA Certification

Degree of Protection

HPL02025EN



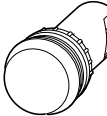
Inscription	For use with	Bezel: Silver Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Labels					
	No inscription	Joystick 4-way selector switch actuators	M22-XCK 279433	10 off  	UL/CSA certification not required
	4 direction arrows	Joystick 4-way 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,



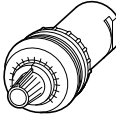
-*-*: * = File name generated by Labeleditor
→ Engineering

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 E29184 NKKCR 012528 3211-03 UL Listed, CSA certified 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	50 off  				
		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 E29184 NKKCR 012528 3211-03 UL Listed, CSA certified 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					
		White	Extended, conical	IP67, IP69K	M22-LCH-W 216914					
		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
		R kΩ	Part no. Article no.	Price See price list		Part no. Article no.	Price See price list	
Potentiometer, IP66								
ATEX  → Engineering Bezel gold-plated → Page 2/48 Three separate screw connections, P_{max} = 0.5 W Accuracy of resistance value: ± 10% (linear) M22...RH with large operating head 		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 $\triangle$ Resistance

2nd wildcard $\triangle$ 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

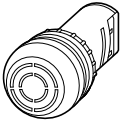
1M = 1 MΩ

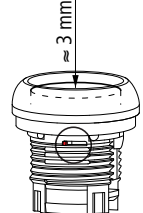
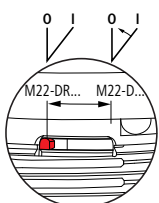
* - *: * = Standard scale/inscription: X1000

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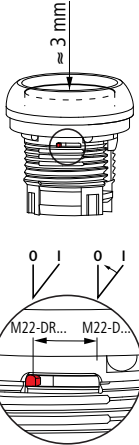
Information relevant for export to North America

- 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		Std. pack	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		 	
Compact acoustic device, IP40									
	Front black, without buzzer, BA 9s lamp socket	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									
for BA 9s base	Continuous tone, 18 – 30 V AC/DC	M22-XAM 229025		1 off  				Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
83 dB/10 cm, 18 - 30 mA, positive pole at X1, f = 2300 Hz	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 Part no. Article no.	Price See price list	Std. pack	Bezel: black Part no. Article no.	Price See price list	Std. pack	Notes
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
 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. 14-05; CSA-C22.2 No. 94-91; CE marking
 E29184
 NKCR
 012528
 3211-03
 UL Listed, CSA certified
 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 → 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

Example: M22-WRLK3-*/*

/: = 1 for ↕ or 2 for ∨

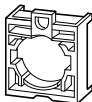
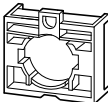
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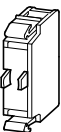
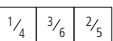
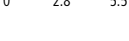
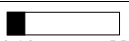
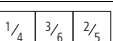
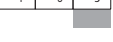
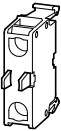
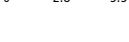
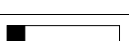
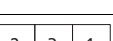
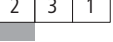
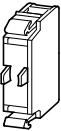
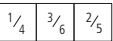
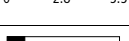
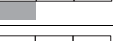
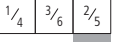
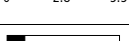
Information relevant for export to North America

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. 14-05; CSA-C22.2 No. 94-91; CE marking
 E29184
 NKCR
 012528
 3211-03
 UL Listed, CSA certified
 UL/CSA Type 3R, 4X, 12, 13



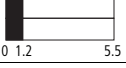
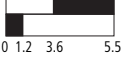
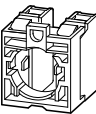
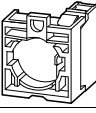
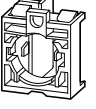
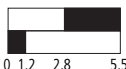
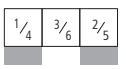
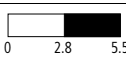
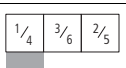
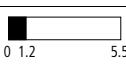
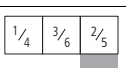
Configuration	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America				
				 				
Fixing adapters								
Fixing adapter (front fixing) for 3contact LED elements For M22-(C)K... contact elements and M22-(C)LED... LED elements. Sequence numbers on fixing 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				M22-K10 216376	20 off
		1 N/O				M22-K10-GVP 216377	500 off
		1 N/O				M22-K10P 110835	20 off
		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				M22-KC10 216380	20 off
		1 N/O				M22-KC10-GVP 216381	200 off
		1 NC ⊕				M22-KC01 216382	20 off
		1 NC ⊕				M22-KC01-GVP 216383	200 off
Front mounting 	Spring-cage terminals	1 N/O				M22-CK10 216384	20 off
		1 NC ⊕				M22-CK01 216385	
		1 NC ⊕				M22-CK01D 262510	
Base fixing 	Spring-cage terminals	1 N/O				M22-CKC10 216386	20 off
		1 NC ⊕				M22-CKC01 216387	20 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: -

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			—	M22-CK20 107898	20 off  
		2 NC ☹			—	M22-CK02 107899	
		1 N/O 1 NC ☹			—	M22-CK11 107940	
Complete modules							
Assembly of contact element with screw terminals and mounting clamp, front fixing							
  	Screw terminals	1 N/O 1 NC ☹				M22-AK11 216505	5 off  
		1 N/O				M22-AK10 216504	
		1 NC ☹				M22-AK01 216503	

Notes

Configuration of fixing adapter with sequence numbers to EN 50013

x = Sequence number on fixing adapter

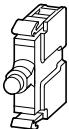


y = Function number on contact element

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

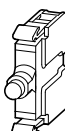
M22...-G only in combination with M22-LED...-G

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									
									
Front mounting 	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. UL CCN CSA File No. CSA Class No. NA Certification 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				
Base fixing 	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. UL CCN CSA File No. CSA Class No. NA Certification 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:

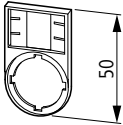
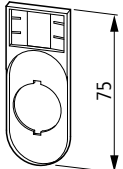
M22...-R only in combination with M22-LED...-R
M22...-G only in combination with M22-LED...-G
M22...-W only in combination with M22-LED...-W
M22...-Y only in combination with M22-LED...-Y
M22...-B in combination with M22-LED...-W or M22-LED...-B

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 × 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							
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 Part no. Article no.	Price See price list	Style extended Part no. Article no.	Price See price list	Std. pack
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 △ color: -R, -G, -B, -W, -Y, -S -GR

2nd wildcard △ 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 Part no. Article no.	Price See price list	Style extended Part no. Article no.	Price See price list	Std. pack
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			
–		–	M22-XDP-*.*) 216440			
with customized inscription via Labeleditor → Note						
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 Part no. Article no.	Price See price list	Std. pack	Style extended Part no. Article no.	Price See price list	Std. pack	Information rele- vant for export to North America  
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 certifica- tion 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 △ color: -R, -G, -B, -W, -Y, -S
 2nd wildcard △ 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 * ≙ color: -R, -G, -B, -W, -Y
 2nd wildcard * ≙ 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:

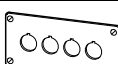
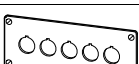
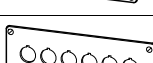
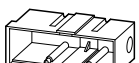
Max. 5 characters per line





Inscription or explanation	For use with	Color, symbol	Style flat 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									
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			

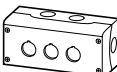
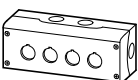
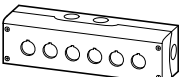


		Protection type	Mounting locations	Color	RAL value	Knock-out cable entries	Part no. Article no.	Price See price list	Std. pack	  Information relevant for export to North America
			Number			Number × M20				
Flush mounting panels										
No legend plates possible with vertical arrangements Protection 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		1 off  	
			2		–	–	M22-E2 216543			
			3		–	–	M22-E3 216544			
			4		–	–	M22-E4 216545			
			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

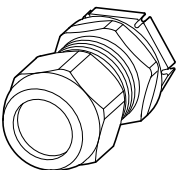
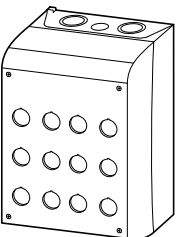


	Mounting locations	Cable entry knockouts		Color	RAL value	Protection type	Part no. Article no.	Price See price list	Std. pack
	Number	Floor Number × M...	Pages Number × M...						
Surface mounting enclosures									
With high-grade steel screws Enclosure base: anthracite									
ATEX  ATEX part numbers for use in dust-laden areas, Zone 22, Category 3 → Engineering									
									
	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



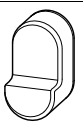
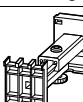
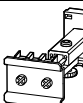
Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking
UL File No.	E29184
UL CCN	NKCR
CSA File No.	012528
CSA Class No.	3211-03
NA Certification	UL Listed, CSA certified
Degree of Protection	UL/CSA Type 3R, 4X, 12, 13



	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

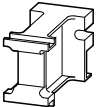
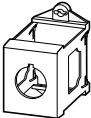
Information relevant for export to North America

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

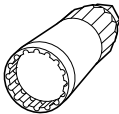
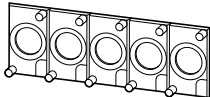
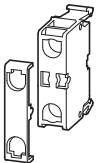
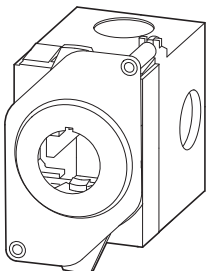
For use with	Color	RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America		
Bezel gold (24 karat)								
Bezel not available individually: Can be ordered only through Eaton sales office as M22-COMBINATION-* (customer-specific complete devices)								
	—	—	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								
	—		M22-B 216388		50 off  	NA Certification Degree of Protection	Request filed for UL and 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 Degree of Protection	Request filed for UL and 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

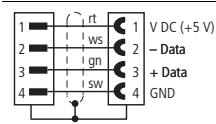
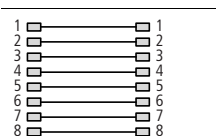
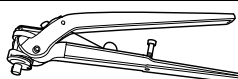
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	UL File No.	E29184
	UL CCN	NKCR
	CSA File No.	012528
	CSA Class No.	3211-03
	NA Certification	UL Listed, CSA certified

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. UL CCN CSA File No. CSA Class No. NA Certification	E29184 NKCR 012528 3211-03 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. UL CCN CSA File No. CSA Class No. NA Certification	E29184 NKCR 012528 3211-03 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. UL CCN CSA File No. CSA Class No. NA Certification	E29184 NKCR 012528 3211-03 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. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection	E29184 NKCR 012528 3211-03 UL Listed, CSA certified 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
	4.8 mm thick	M22-GR7 288852		50 off  	UL File No. UL CCN CSA File No.	E29184 NKCR 012528
	6.0 mm thick	M22-GR-GVP 216404		500 off  	CSA Class No. NA Certification	3211-03 UL Listed, CSA certified
Set of adapter rings, 30/22.3 mm						
Black, consisting of adapter ring and fixing nut, IP67, IP69K						
	Mounting of Ø 22.3 devices in Ø 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_{average} (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		White	A22-LED-W 261362		10 off
	12 - 30 V AC/DC/15 mA	100000		Red	A22-LED-R 261364		
	12 - 30 V AC/DC/15 mA	100000		Green	A22-LED-G 261363		
	12 - 30 V AC/DC/15 mA	100000		Yellow	A22-LED-Y 261365		

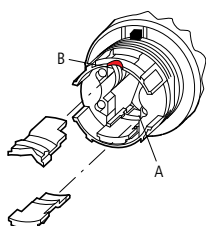
	For use with	Color	Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America  	
Built-in 2.0 A/A USB socket with connection cable								
IP65 with closed cover IP20 with plug connected								
	Front mounting prefabricated cable (60 cm) with perma- nently con- nected 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		10 off  	Blue button plate	Product StandardsUL 508; CSA-C22.2 No. 14; IEC/EN 60947; CE marking E29184 NKCR UL File No. UL CCN CSA File No. CSA Class No. NA Certification UL Listed, CSA certified	
			M22-DZ-B-GB14 254834			Blue button plate Inscription: RESET		
		—	M22-DZ-X 254835			Without button plate, add button plate.		
	M22-DZ-X M22(S)-D-X M22(S)-DR-X M22-D6-X		M22-XD-R 216423		10 off  	Red button plate	UL/CSA certification not required	
			M22-XD-R-X0 218153			Red button plate with white circle		
			M22-XD-R-GB0 218194			Red button plate Inscription: STOP		
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



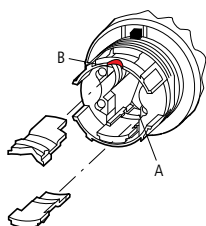
	I	O	II
	A		B
60° ↘ 60°	— ✓	✓ —	— ✓
50° ↘ 50°	— ✓ x	✓ —	— ✓ x
60° ↘ 50°	— ✓	✓ —	— ✓ x
50° ↘ 60°	— ✓ x	✓ —	— ✓
40° ↘ 40°	— ✓ x	✓ —	— ✓ x
60° ↘ 40°	— ✓	✓ —	— ✓ x
50° ↘ 40°	— ✓ x	✓ —	— ✓ x
40° ↘ 60°	— ✓ x	✓ —	— ✓
40° ↘ 50°	— ✓ x	✓ —	— ✓ x

✓ = 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



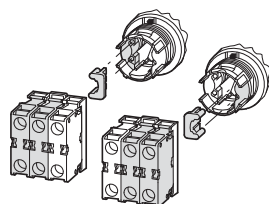
	O	I
		B
↘ 60°	✓ —	— ✓
↘ 50°	✓ —	— ✓ x
↘ 40°	✓ —	— ✓ x

✓ = 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

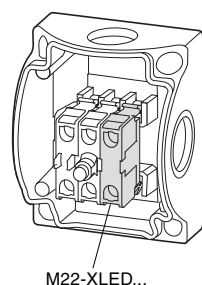
- FAK complete unit
FAK-COMBINATION-* User-definable customer ID; up to 10 characters → Page 2/78
- FAK-ATEX ATEX accessory → Page 2/78
- FAK-IU Enclosure base → Page 2/78
- FAK-S Enclosure top → Page 2/78
- M22-KC10 Normally open contact (N/O) → Page 2/31
- M22-KC10 Normally closed contact → Page 2/31

Engineering

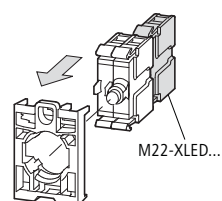
LED series resistor elements

M22-XLED

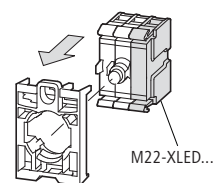
Surface mounting enclosure



Flush mounting at the rear

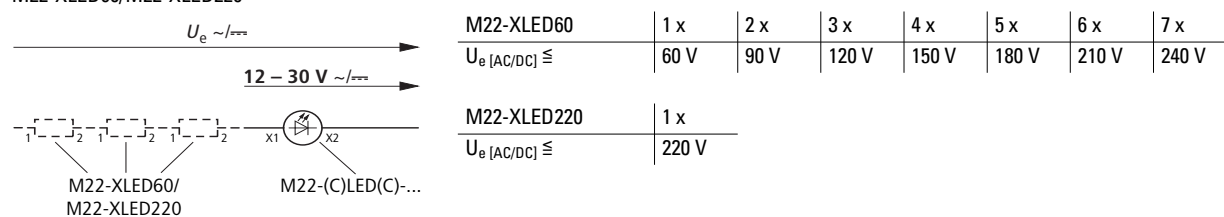


Flush mounting at the side



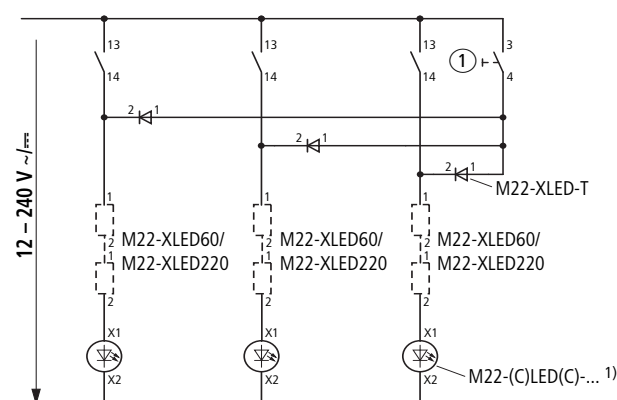
LED resistor element

M22-XLED60/M22-XLED220



LED test element

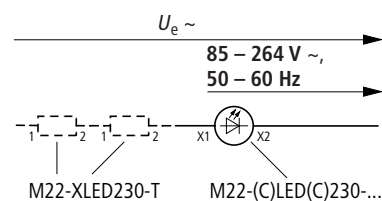
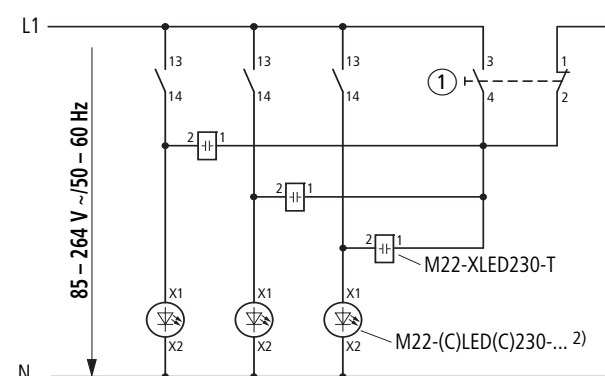
M22-XLED-T



① Test button

1) Only for 12 - 30 V elements

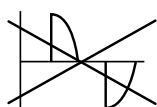
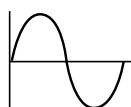
M22-XLED230-T



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		g		30	30	30	30	30	30
Shock duration 11 ms, half-sinusoidal									
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	45	45
Ambient temperature	-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

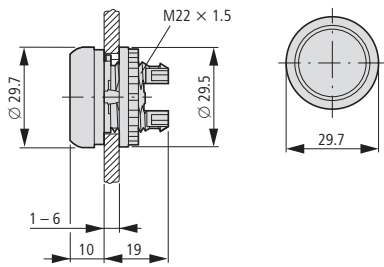
UL-File No. 29184	Pilot Duty	General Use	Terminal capacity
Rating data for approved types to UL/CSA ¹⁾			
RMQ16 contact elements			
E10	C 300, Q 300		Cu cable min. AWG 18, max. AWG 14
E 01	C 300, R 300		
RMQ-Titan contact elements			
M22-K... M22-CK...	A 600, Q 300, > 300 V AC same polarity	10 A – 600 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-...	—



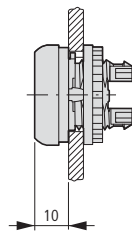
Dimensions

Actuating and indicator elements

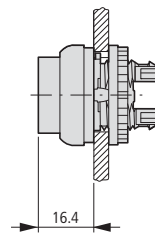


RMQ-Titan pushbutton actuators

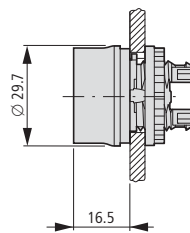
M22...-D-...



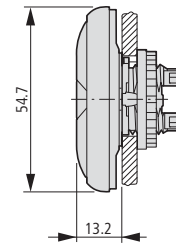
M22...-DH...



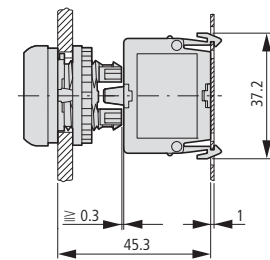
M22-DG(L)...



M22...-DD...

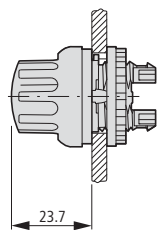


M22-D pushbuttons in base fixing

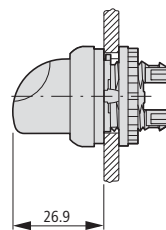


RMQ-Titan selector switch actuators

M22-W...



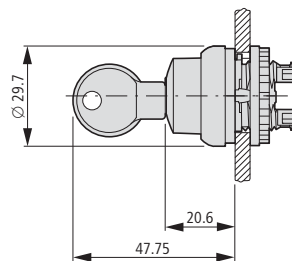
M22...-WL...



RMQ-Titan key-operated button

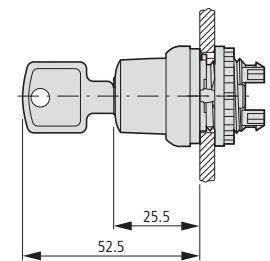
Individual lock mechanism

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



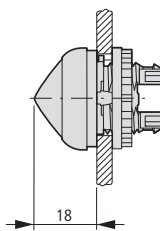
Master key systems

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

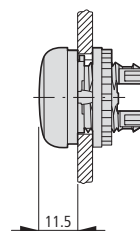


RMQ-Titan indicator light

M22-LH-...

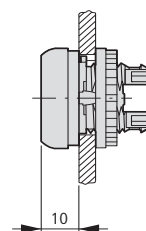


M22-L-...

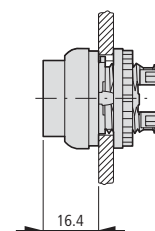


RMQ-Titan illuminated pushbutton actuators

M22...-DL-...

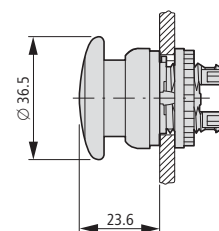


M22...-DLH...



RMQ-Titan mushroom-headed pushbutton

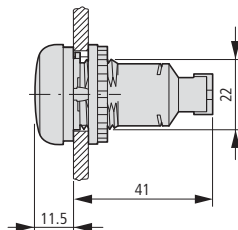
M22...-DP-...



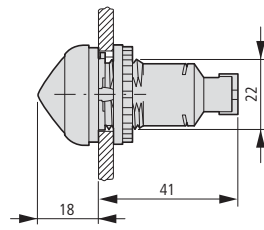
Indicator light, compact acoustic device, compact

M22-LC-...

M22-AM-...

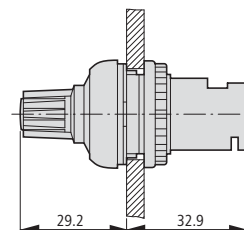


M22-LCH-...



Potentiometer

M22...-R...K



Emergency stop pushbuttons/ emergency switching off pushbutton actuators

Mushroom-shaped

M22-PV...

M22S-PV...

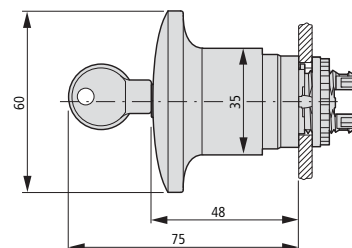
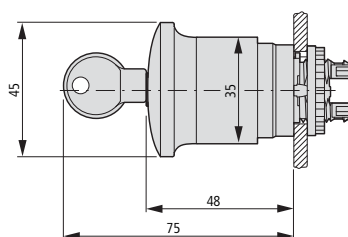
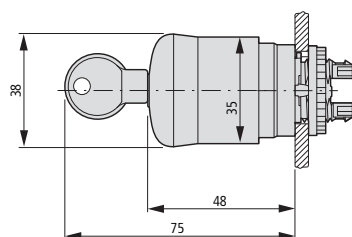
M22-PVL...

M22-PVS...

Palm-shaped

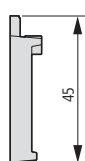
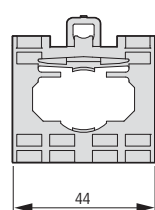
M22-PV...

M22-PV...60...

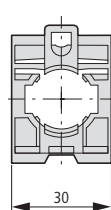
**Front fixing (Construction type: Style Flat)**

Fixing adapters

M22-A...

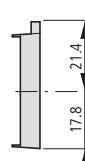
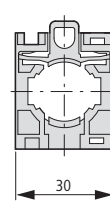


M22-A

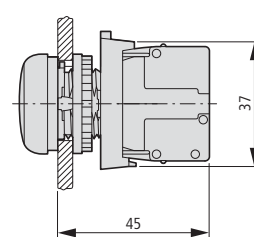
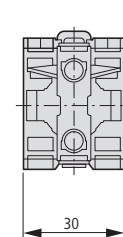
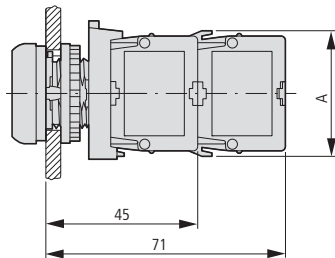
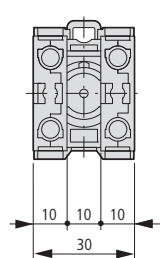
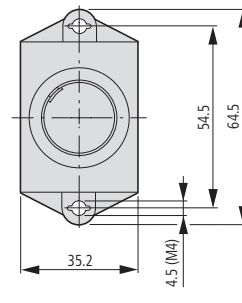
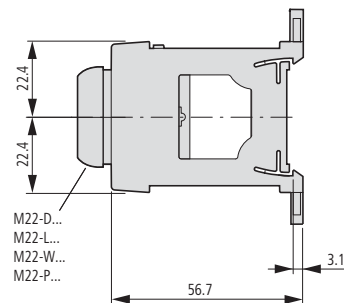


Centring adapter

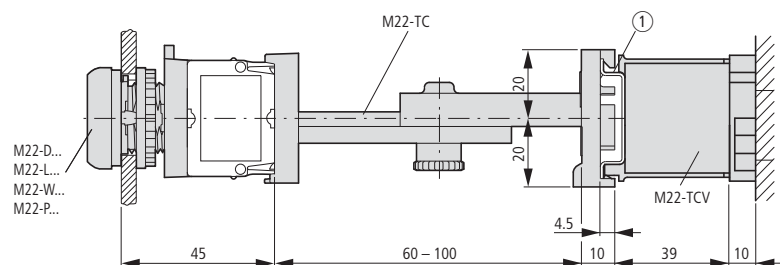
M22-ZA



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

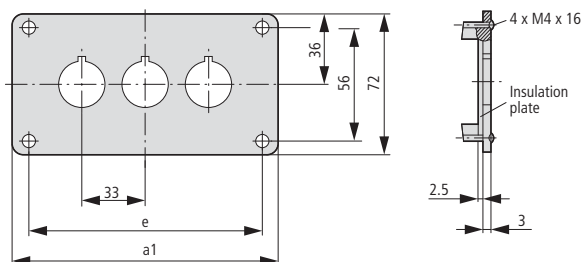
① Top-hat rail to IEC/EN 60715



Front fixing (Style Flat)

RMQ-Titan mounting panel

M22-E...

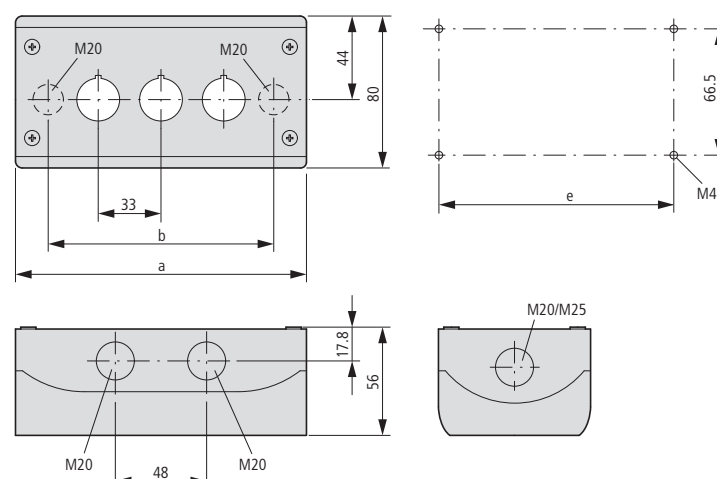


Part no.	a1	e
M22-E(Y)1	72	56
M22-E2	105	89
M22-E3	138	122
M22-E4	171	155
M22-E5	204	188
M22-E6	237	221

Base fixing (Construction type: Style mounting)

RMQ-Titan surface mounting enclosure

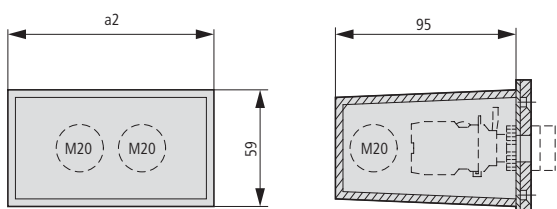
M22-I...



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

Shrouds

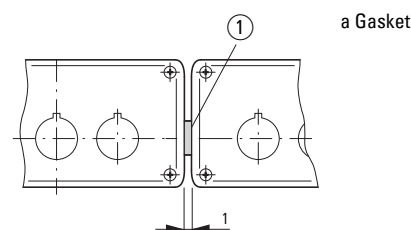
M22-H...



Part no.	a2	Cable entries	Construction type
M22-H1	42	3 x M20	One-piece
M22-H2	75	4 x M20	
M22-H3	108	4 x M20	
M22-H4	141	4 x M20	Split
M22-H5	174	5 x M20	
M22-H6	207	6 x M20	

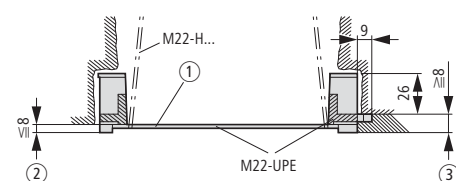
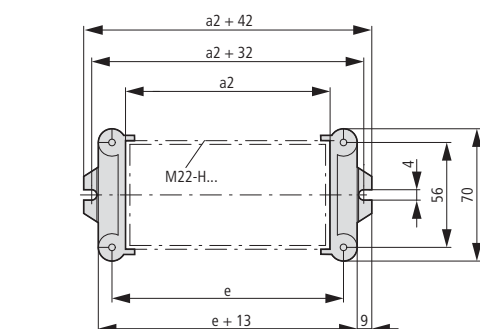
Combination of surface mounting enclosures

M22-XI



Shroud with plaster keys

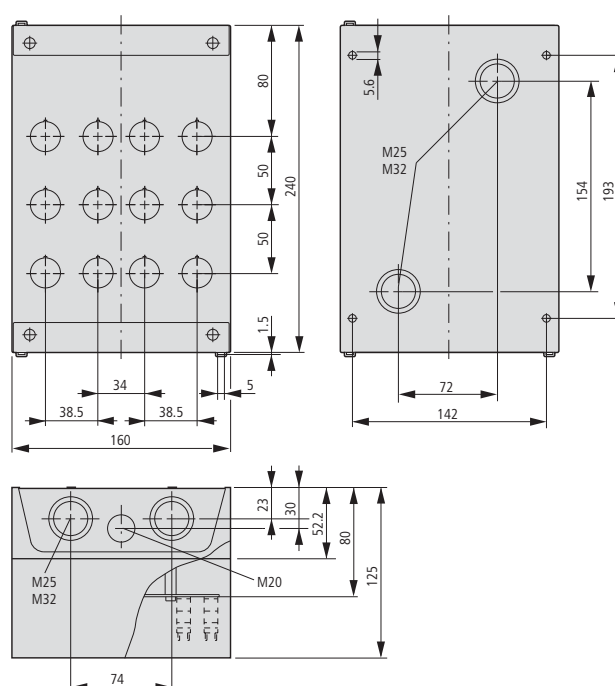
M22-UPE



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

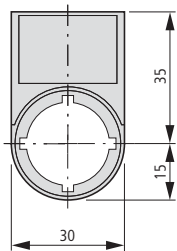
Surface mounting enclosure for 12 mounting locations

M22-I12

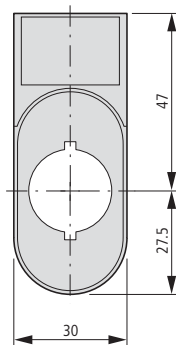


Label mounts

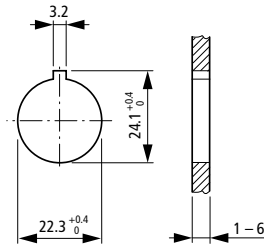
M22S-ST...



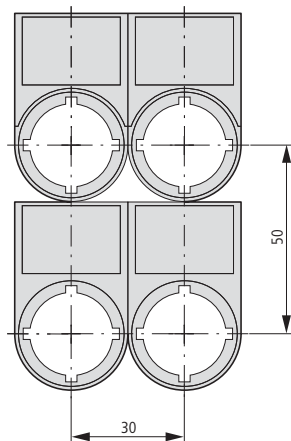
M22S-STDD-X



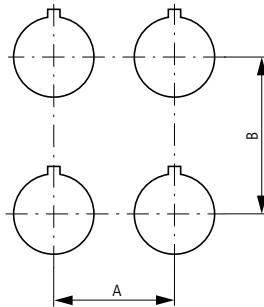
Mounting hole with lug slot



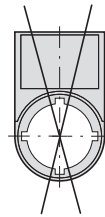
Grid dimension to IEC/EN 60947



Grid dimension for various combinations

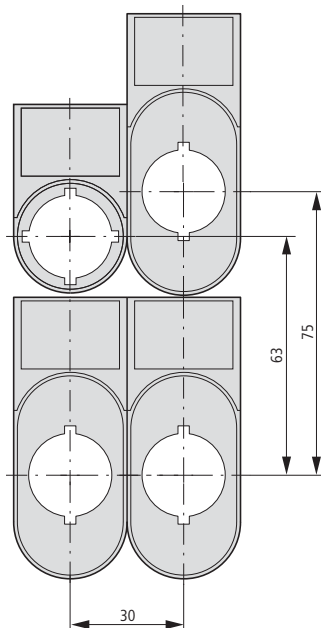


Actuator diaphragm cannot be combined with label mount

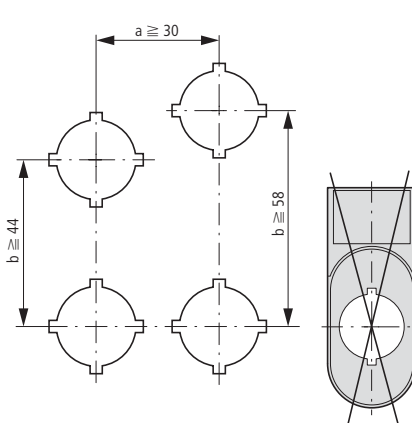
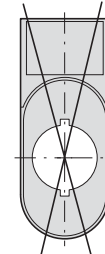


Part no.	A ≧ mm	B ≧ mm
M22(N/O)-...(IEC/EN 60947)	30	50
RMQ-Silver min.	30	40
M22-D... + M22-T-D	33	40
M22-D(R)P...	38	40
M22-PV...	45	45
M22-PV...45	55	55
M22-PV...60	70	70
M22-PV(L) + M22-PL-PV	48	56
M22-PV(L)(N/O...) + M22-D...	33	40
M22-DDL...	30	55
M22-DDL... + M22-T-DD	33	58
M22-ST...	30	50
M22-STDD...	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-WR...4	50	50
M22-W...J4	100	100

Grid dimension for M22-DD...



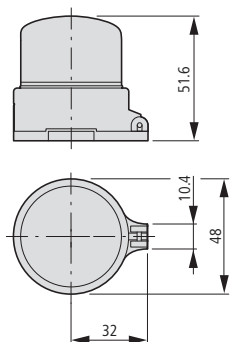
Grid dimension for M22-DDL

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



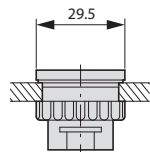
Emergency switching off sealable shroud

M22-PL-PV



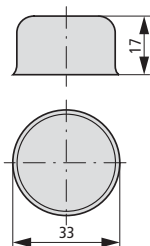
Blanking plugs

M22...B-...

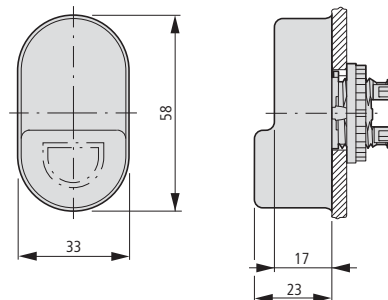


Pushbutton diaphragm

M22-T-D

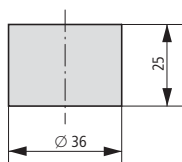


M22-T-D

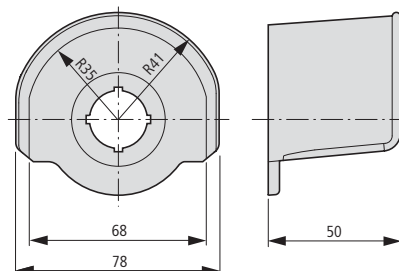


Guard-ring

M22-XGWK

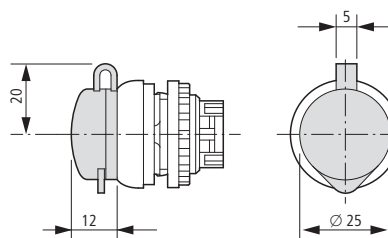


M22-XGPV



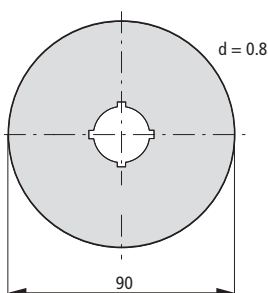
Protective diaphragm

M22-XWS

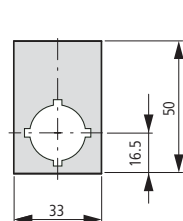


Emergency stop labels

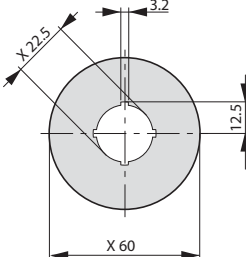
M22-XAK...



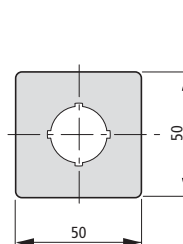
M22-X(Y)ZK...



M22-XBK-...

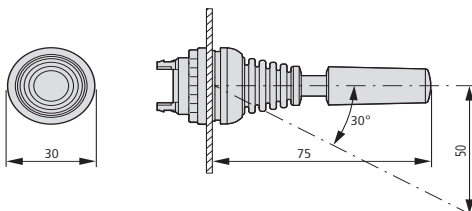


M22-XYK-...



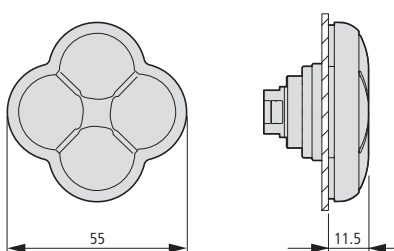
Joystick

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



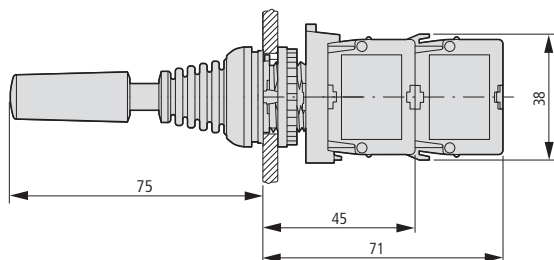
4-way pushbutton

M22-D...4-...

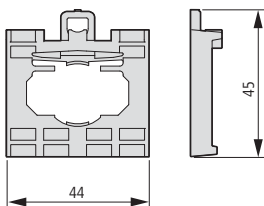
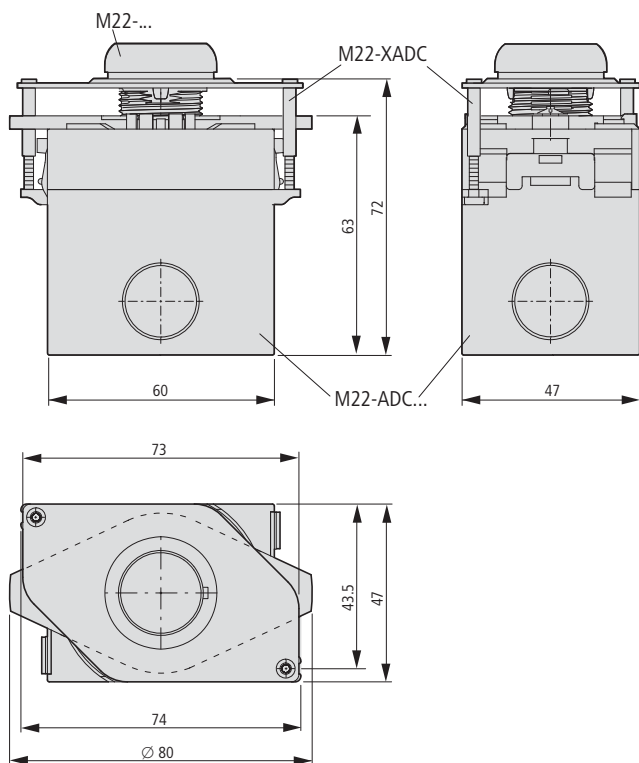


Joystick

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

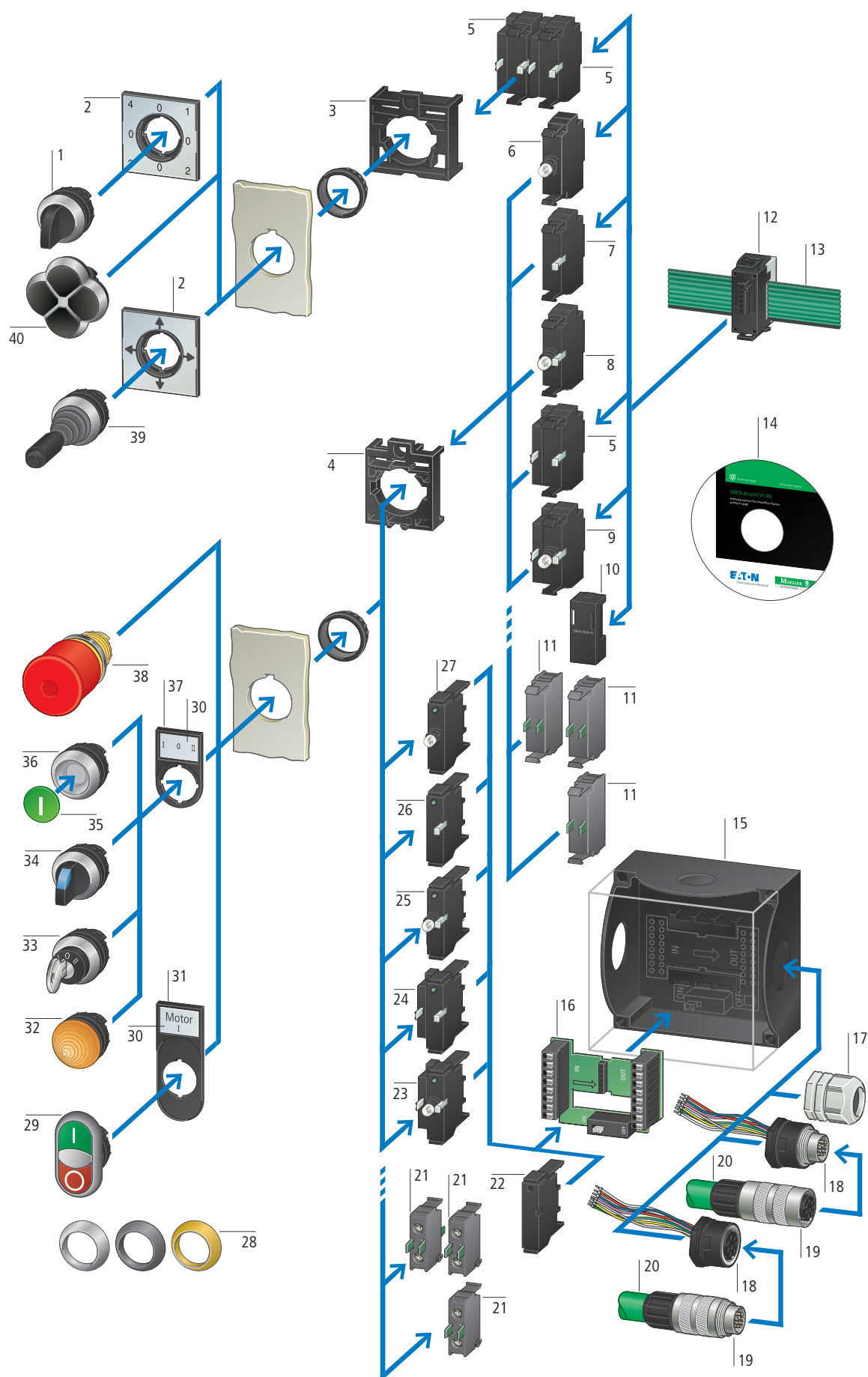
**Fixing adapter**

M22-A4

**Dust cover**



System overview





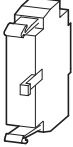
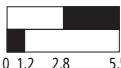
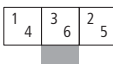
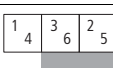
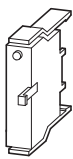
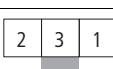
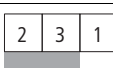
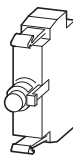
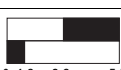
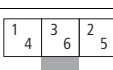
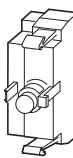
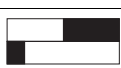
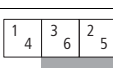
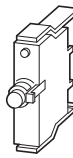
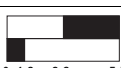
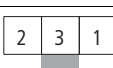
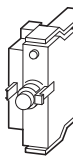
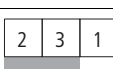
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Function element with 3 positions and LED for front fixing	9
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Function element with 3 positions for base fixing	24
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Function element with 2 positions and LED for base fixing	25
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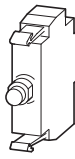
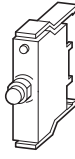
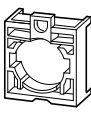
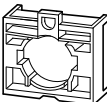
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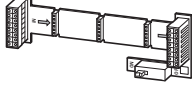
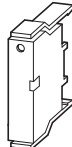
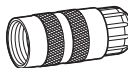
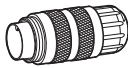
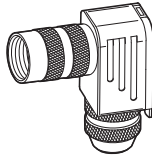
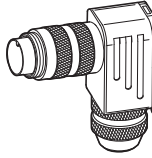
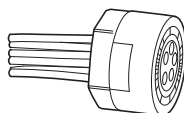
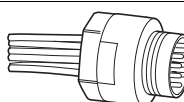
Features

- 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													
	<table border="1"><tr><td>1</td><td>3</td><td>2</td></tr><tr><td>4</td><td>6</td><td>5</td></tr></table>	1	3	2	4	6	5		M22-SWD-LED-W 115966		20 off  	NA Certification	Request filed for UL and CSA
		1	3	2									
		4	6	5									
			M22-SWD-LED-B 115967										
	M22-SWD-LED-G 115968												
	M22-SWD-LED-R 115969												
Base fixing													
	<table border="1"><tr><td>2</td><td>3</td><td>1</td></tr></table>	2	3	1		M22-SWD-LEDC-W 115997		20 off  	NA Certification	Request filed for UL and CSA			
		2	3	1									
			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	<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											
	For 2 function elements M22-SWD-K22... For use with M22-WR4, -WRJ4, -D4 in conjunction with M22-(SWD)-K	<table border="1"><tr><td>1</td><td>4</td><td>2</td><td>3</td></tr></table>	1	4	2	3	—	M22-SWD-A4 116016		10 off  	NA Certification	Request filed for UL and CSA	
1	4	2	3										

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	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	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

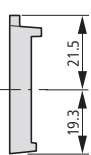
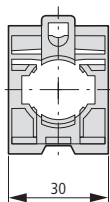


SWD4-SF8-20	SWD4-SM8-20	SWD4-8FRF-10	SWD4-SFL8-20	SWD4-SML8-20
IEC/EN 61131-2 EN 50178				
24 x 26 x 162	24 x 26 x 170	35 x 90 x 35	35 x 83 x 40	35 x 83 x 46
20	22.5	42	50	50
Any	Any	Any	Any	Any
IP67				
IP67	IP67	IP20	IP67	IP67
5 ... 8.4				
8.4 ... 150				
–	–	9	9	9
–	–	–	–	–
–	–	–	–	–
–				
–	–	–	–	–
–	–	–	–	–
8				
–	–	4	4	4
–				
–	–	–	10	10
–	–	–	3	3
–	–	–	1	1
–	–	–	–	–
–				
–	–	–	–	–
–	–	–	10	10
–25 ... +55				
–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

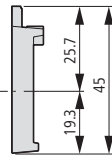
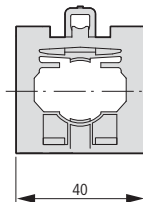
Dimensions

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

M22-A



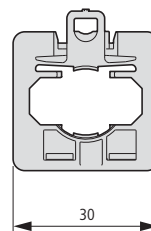
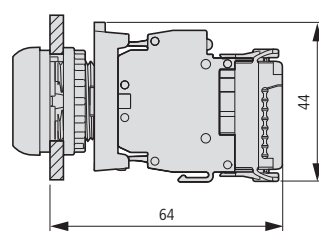
M22-SWD-A4



Function elements

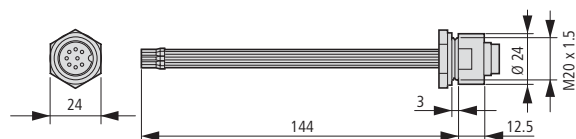
M22-SWD-K...

M22-SWD-LED...



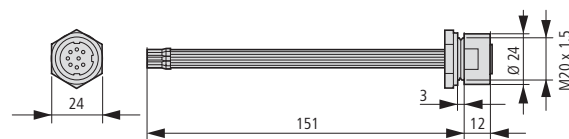
Housing bushing plug

SWD4-SM8-20



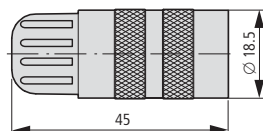
Housing bushing socket

SWD4-SF8-20

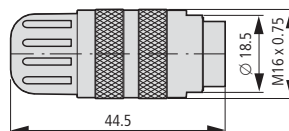


Plug connector for SWD round cable, straight

SWD4-SF8-67

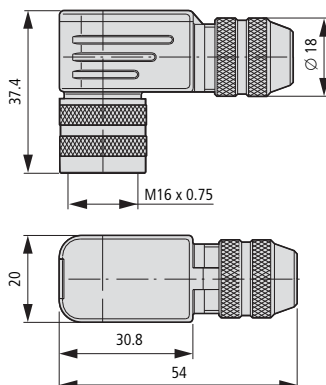


SWD4-SM8-67

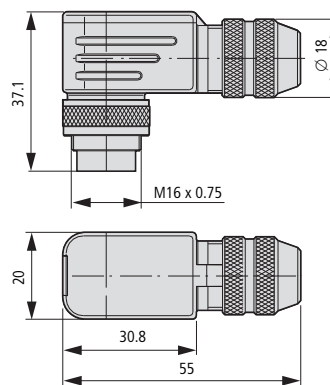


Plug connector for SWD round cable, angled

SWD4-SF8-67W

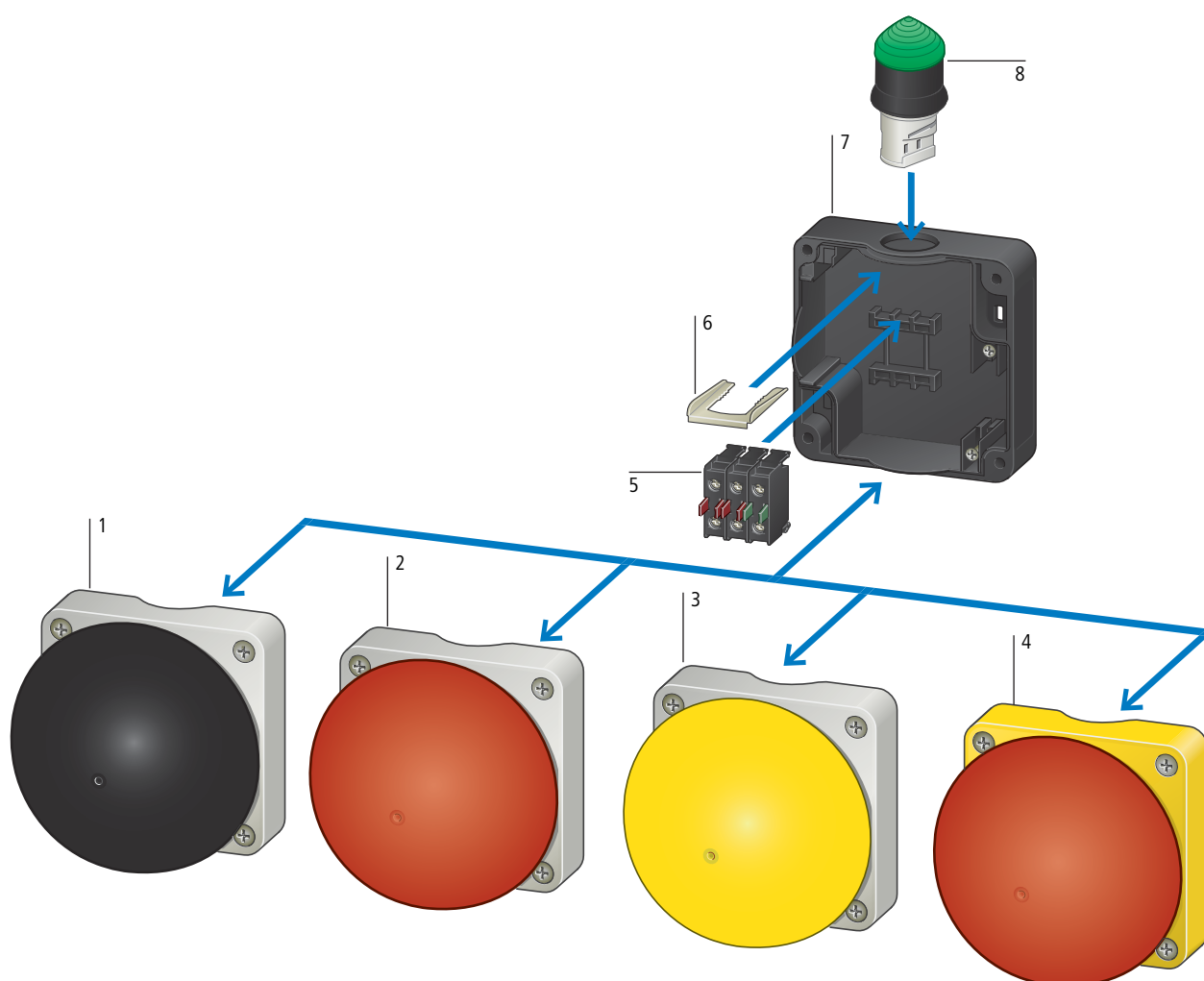


SWD4-SM8-67W





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

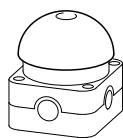
Conical

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
symbolColor of
mushroom
headIndicator
lightsDegree 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

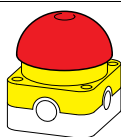
1 NC



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



–

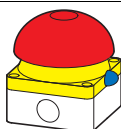
2 NC



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

–

–



Black



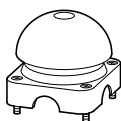
IP67, IP69K



Black



IP67, IP69K

Enclosure top**Momentary**

–

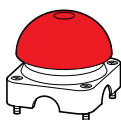
–



Gray

Black

IP67, IP69K



–

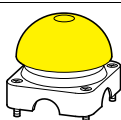
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Gray

Red

IP67, IP69K



–

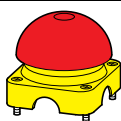
–



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

HPL02079EN

FAK-...



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 	 ATEX → Engineering	Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking
FAK-R/KC11/I 229746		1 off 		UL File No.	E29184
FAK-R/V/KC01/IY 229747		1 off 		UL CCN	NKCR
FAK-R/V/KC11/IY 229748				CSA File No.	012528
FAK-R/V/KC02/IY 256790				CSA Class No.	3211-03
FAK-R/V/KC11A/I 001475		1 off		NA Certification	UL Listed, CSA certified
				Degree of Protection	UL/CSA Type 3R, 4X, 12, 13
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
FAK-R 071810				UL File No.	E29184
FAK-Y 229754				UL CCN	NKCR
FAK-R/V/Y 229755				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-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

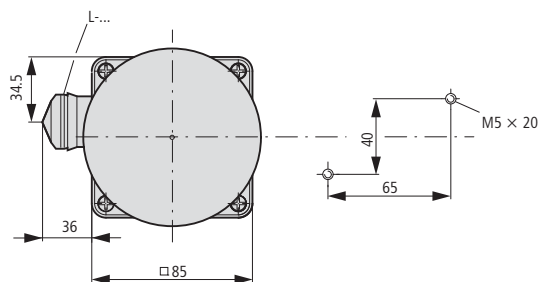
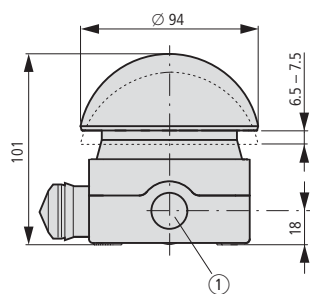
FAK



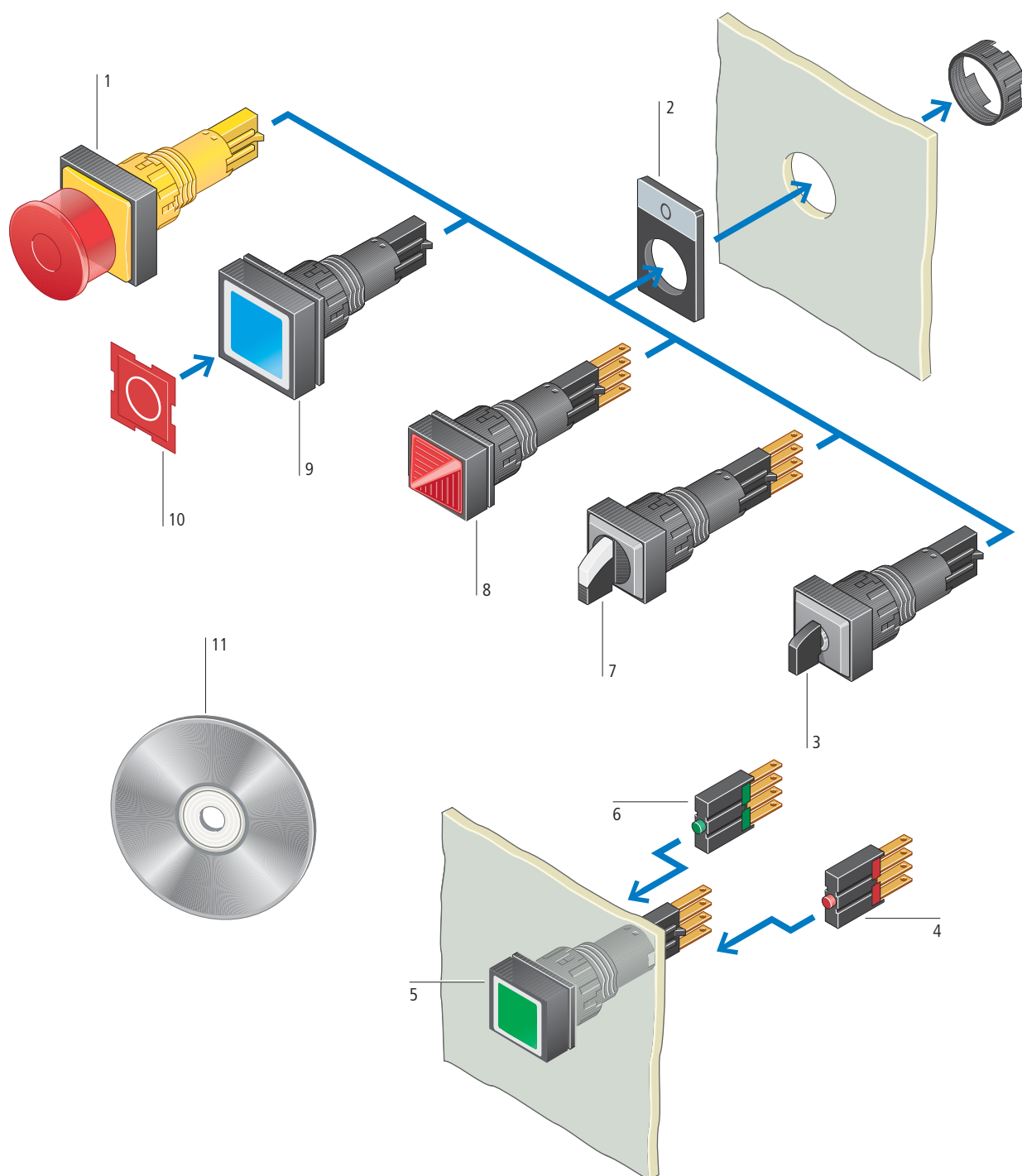
Dimensions

Foot and palm switch RMQ-Titan

FAK...



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

**System overview**



Emergency stop pushbuttons	1
Can also be used as emergency switching-off devices	
Tamper-proof according to ISO 13850/EN 418	
Illuminated and non-illuminated	
Additional labels, with and without inscription	
European Machinery Safety Directive 2006/42/EC	
→ Page 2/90	
Label mounts	2
For insert labels	
Color: light gray, black, yellow	
Insert labels, with inscription and blank	
→ Page 2/94	
Key-operated buttons	3
2 and 3 positions	
Switching angle 45°	
Momentary and maintained	
Various lock mechanisms	
→ Page 2/88	
Contact element NC (red)	4
With blade terminal	
Universal contacts suitable for use with electronic devices	
Positive opening safety function according to IEC/EN 60947-5-1	
→ Page 2/84	

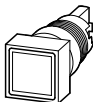
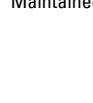
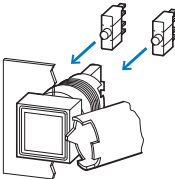
Illuminated pushbutton actuators	5
Momentary and maintained	
Replaceable insert labels	
Colors: white, green, red, yellow, blue Custom laser labeling	
→ Page 2/85	
Contact element N/O (green)	6
With blade terminal	
Universal contacts suitable for use with electronic devices	
→ Page 2/84	
Selector switch actuators	7
2 and 3 positions	
Switching angle 45°	
Momentary and maintained	
Illuminated selector switch actuators with built-in lamp socket	
Colors: white, green, red	
→ Page 2/86	
Indicator lights	8
Flat and conical designs	
Built-in lamp socket	
For filament bulbs and LEDs	
Colors: white, green, red, yellow, blue Custom laser labeling	
→ Page 2/89	

Pushbutton actuators	9
Momentary and maintained	
Replaceable button plates	
Colors: white, green, red, yellow, blue, black	
→ Page 2/84	
Button plates/insert labels	10
Wear-resistant button plates for pushbutton actuators	
Transparent insert plates for illuminated pushbuttons and indicator lights	
With and without inscription	
With standard texts and symbols or with custom laser labeling	
→ Page 2/91	
Labeling with convenience	11
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"	

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



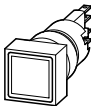
Color Button plate			Front dimensions 18 x 18 mm	Front dimensions 25 x 25 mm	Part no. Article no.	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
								 	
Pushbutton actuators, IP65									
	Momentary		Green	Q18D-11 086332	Q25D-11 090471			10 off  	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
			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				
	Maintained								
			Black	Q18DR-SW 086269	Q25DR-SW 088739			10 off  	 Accessories Assembly aids and accessories → 2/96 Contact elements N/O → 2/84 NC → 2/84
			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				

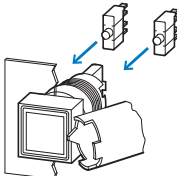
⊖ = Safety function by positive opening according to IEC/EN 60947-5-1		Circuit symbol	Contact sequence	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America	
N/O = normally open contact		NC = normally closed contact						 	
Contact elements							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

Notes

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



						Price See price list	Std. pack	Information relevant for export to North America		
Color Lens			Part no. Article no.	Part no. Article no.				 		
Illuminated pushbutton actuators, IP65										
	Momentary Without filament bulb		–	Q18LT-WS 089202	Q25LT-WS 086262		10 off  	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking E29184		
			–	Q18LT-GN 089067	Q25LT-GN 086206			UL File No. NKCR		
			–	Q18LT-RT 089776	Q25LT-RT 086238			UL CCN 46552		
			–	Q18LT-GE 088808	Q25LT-GE 086173			CSA File No. 3211-03		
			–	Q18LT-BL 088764	Q25LT-BL 090479			CSA Class No. UL Listed, CSA certified		
		–	Without lens	Q18LT-X 051745	Q25LT-X 051746			NA Certification Degree of Protection UL/CSA Type 1		
	With filament bulb, 24 V		–	Q18LT-WS/WB 088561	Q25LT-WS/WB 090226		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-GN 087831	Q25LTR-GN 086812		10 off  			
			–	Q18LTR-RT 087918	Q25LTR-RT 086840					
			–	Q18LTR-GE 087764	Q25LTR-GE 086784					
			–	Q18LTR-BL 086813	Q25LTR-BL 086739					
			–	Q18LTR-X 051735	Q25LTR-X 051736					
		–	Without lens	Q18LTR-WS/WB 086708	Q25LTR-WS/WB 086447					
	With filament bulb, 24 V		–	Q18LTR-GN/WB 086413	Q25LTR-GN/WB 086380		10 off  			
			–	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							



Accessories

Assembly aids and accessories

Contact elements

N/O

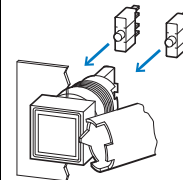
NC

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**Accessories**

Assembly aids and accessories

Contact elements

N/O

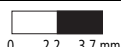
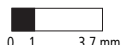
NC

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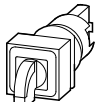
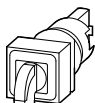
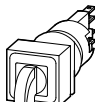
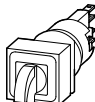
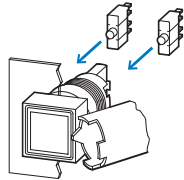
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Contact configuration: ⊕ = Safety function via positive opening to IEC/EN 60947-5-1 N/O = normally open contact NC = normally closed contact			Circuit symbol	Contact sequence	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant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

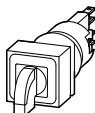
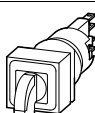
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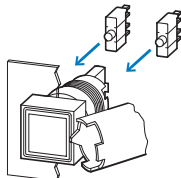
$\begin{matrix} | \\ xy \end{matrix}$ x = Sequence number on front element
 $\begin{matrix} | \\ xy \end{matrix}$ y = Function number on contact element



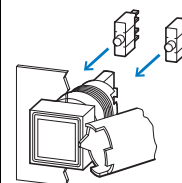
				Front dimensions 18 x 18 mm	Front dimensions 25 x 25 mm	Price See price list	Std. pack	Information relevant for export to North America  
Function:	Color	Part no. Article no.	Part no. Article no.					
 = Momentary  = Maintained								
Selector switch actuators, IP65								
With VS anti-rotation feature								
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 E29184 UL File No. NKCR UL CCN 46552 CSA File No. 3211-03 CSA Class No. UL Listed, CSA certified NA Certification UL/CSA Type 1 Degree of Protection	
	 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 E29184 UL File No. NKCR UL CCN 46552 CSA File No. 3211-03 CSA Class No. UL Listed, CSA certified NA Certification UL/CSA Type 1 Degree of Protection	
	 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 Contact elements N/O NC	
	 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				
							Page → 2/96	
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							→ 2/84	



			Front dimensions 18 x 18 mm	Front dimensions 25 x 25 mm	Price See price list	Std. pack	Information relevant for export to North America  
Function:	Color	Part no. Article no.	Part no. Article no.				
> = Momentary < = 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 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° < 45°		Q18LWK3-RT 072323	Q25LWK3-RT 072359			
	45° < 45°		Q18LWK3-GN 072324	Q25LWK3-GN 072360			
	45° < 45°		Q18LWK3R-WS 072325	Q25LWK3R-WS 072361			
	45° < 45°		Q18LWK3R-RT 072326	Q25LWK3R-RT 072362			
	45° < 45°		Q18LWK3R-GN 072327	Q25LWK3R-GN 072363			
	45° < 45°		Q18LWK3R1-WS 072328	Q25LWK3R1-WS 072364			
	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



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

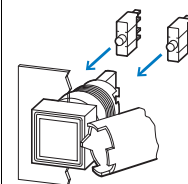


Function: Key withdrawable in position Color						Front dimensions 18 × 18 mm	Front dimensions 25 × 25 mm	Price See price list	Std. pack	Information relevant for export to North America	
▷ = Momentary ▽ = Maintained						Part no. Article no.	Part no. Article no.				
IP65, key-operated button actuators											
With 1 key and VS anti-rotation feature											
Two positions											
	▷ 45°	—	0	—	●	Q18S1 038806	Q25S1 038773		5 off 	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking E29184 UL File No. NKCR UL CCN CSA File No. 46552 CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Part no. 1	
	▽ 45°	I	0	—	●	Q18S1R 038805	Q25S1R 038772				
	▷ 45°	—	0	—	●	Q18S1R-A1 072312	Q25S1R-A1 072376				
	▷ 45°	—	0	—	●	Q18S1-GN 062148	Q25S1-GN 062150				
	▽ 45°	I	0	—	●	Q18S1R-GN 062151	Q25S1R-GN 062108				
	▷ 45°	—	0	—	●	Q18S1-RT 046841	Q25S1-RT 046843				
	▽ 45°	I	0	—	●	Q18S1R-RT 046837	Q25S1R-RT 046839				
	▷ 45°	—	0	—	○	Q18S1-WS 046849	Q25S1-WS 046851				
	▽ 45°	I	0	—	○	Q18S1R-WS 046845	Q25S1R-WS 046847				
	▷ 45°	—	0	—	●	Q18S1-BL 045959	Q25S1-BL 046835				
	▽ 45°	I	0	—	●	Q18S1R-BL 062814	Q25S1R-BL 045502				
Three positions											
	45°↕45°	—	0	—	●	Q18S3 072313	Q25S3 072377		5 off 		
	45°↕45°	I	0	II	●	Q18S3R 072314	Q25S3R 072378				
	45°↕45°	—	0	—	●	Q18S3R-A1 072315	Q25S3R-A1 072379				
	45°↕45°	I	0	—	●	Q18S3R-A2 072316	Q25S3R-A2 072380				
	45°↕45°	—	0	II	●	Q18S3R-A3 072317	Q25S3R-A3 072381				
	45°↕45°	I	0	—	●	Q18S3R-A4 072318	Q25S3R-A4 072382				
	45°↕45°	—	0	—	●	Q18S3R-A5 072319	Q25S3R-A5 072383				
	45°↕45°	—	0	II	●	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°	I	0	II	●	Q18S3R-GN 062152	Q25S3R-GN 062147				
	45°↕45°	—	0	—	●	Q18S3-RT 046842	Q25S3-RT 046844				
	45°↕45°	I	0	II	●	Q18S3R-RT 046838	Q25S3R-RT 046840				
	45°↕45°	—	0	—	○	Q18S3-WS 046850	Q25S3-WS 046852				
	45°↕45°	I	0	II	○	Q18S3R-WS 046846	Q25S3R-WS 046848				
	45°↕45°	—	0	—	●	Q18S3-BL 046368	Q25S3-BL 046836				
	45°↕45°	I	0	II	●	Q18S3R-BL 064430	Q25S3R-BL 045646				

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

Notes

For each color there is a corresponding key.
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Accessories

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Assembly aids and accessories

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Contact elements

N/O

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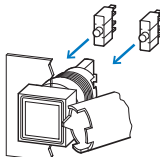
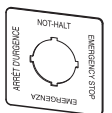
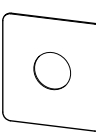
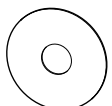
NC

→ 2/84



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			Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
		Q18LF-GN 088337	Q25LF-GN 090000			UL File No. E29184
		Q18LF-RT 088387	Q25LF-RT 090198			UL CCN NKCR
		Q18LF-GE 088303	Q25LF-GE 089252			CSA File No. 46552
		Q18LF-BL 088270	Q25LF-BL 089229			CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
Without lens						
	—	Q18LX 051739	Q25LX 051740			Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
With filament bulb, 24 V						
		Q18LF-WS/WB 088059	Q25LF-WS/WB 089151			Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
		Q18LF-GN/WB 087947	Q25LF-GN/WB 088828			UL File No. E29184
		Q18LF-RT/WB 088001	Q25LF-RT/WB 089104			UL CCN NKCR
		Q18LF-GE/WB 087915	Q25LF-GE/WB 088798			CSA File No. 46552
		Q18LF-BL/WB 087860	Q25LF-BL/WB 088761			CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
Conical						
Without filament bulb						
		Q18LH-WS 088705	Q25LH-WS 086263			Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
		Q18LH-GN 088629	Q25LH-GN 086207			UL File No. E29184
		Q18LH-RT 088655	Q25LH-RT 086241			UL CCN NKCR
		Q18LH-GE 088585	Q25LH-GE 090481			CSA File No. 46552
		Q18LH-BL 088560	Q25LH-BL 090428			CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1
With filament bulb, 24 V						
		Q18LH-WS/WB 088535	Q25LH-WS/WB 090405			Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CE marking
		Q18LH-GN/WB 088483	Q25LH-GN/WB 090312			UL File No. E29184
		Q18LH-RT/WB 088507	Q25LH-RT/WB 090354			UL CCN NKCR
		Q18LH-GE/WB 088448	Q25LH-GE/WB 090285			CSA File No. 46552
		Q18LH-BL/WB 088424	Q25LH-BL/WB 090240			CSA Class No. 3211-03 NA Certification UL Listed, CSA certified Degree of Protection UL/CSA Type 1



									
	Color	Protection	Front dimensions 25 x 25 mm	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  		
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									
 							Accessories	Page	
							Assembly aids and accessories	→ 2/96	
							Contact elements		
							N/O	→ 2/84	
							NC	→ 2/84	
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. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection	E29184 NKCR 46552 3211-03 UL Listed, CSA certified 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. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection	E29184 NKCR 46552 3211-03 UL Listed, CSA certified UL/CSA Type 1	
Emergency stop labels									
Yellow, black lettering		Square 50 x 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 x 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		Square 50 x 50 mm		IP65	SQ-GE 063263	5 off  	UL/CSA certification not required		
Not suitable for engraving		Round ø 60 mm		IP65	SR-GE 063264	5 off  			



Inscription	Symbol	Button plates for pushbutton actuators			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.	Price See price list		
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 * △ Color, e.g.: -R, -G, -B, -W, -Y, -S

2nd wildcard * △ File name generated by Labeleditor → Engineering

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

Inscription	Symbol	Button plates for pushbutton actuators			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.	Price See price list		
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



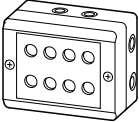
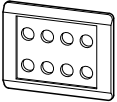
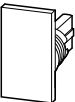
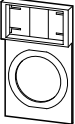
Inscription	Symbol	Button plates for pushbutton actuators 25 × 25 mm Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  		
Marking plates							
LINKS		134T025 093494		20 off  	UL/CSA certification not required		
LEFT		234T025 090987					
GAUCHE		334T025 092567					
RECHTS		135T025 093527					
RIGHT		235T025 091009					
DROITE		335T025 092594					
ZU		153T025 090632					
CLOSE		253T025 091089					
FERME		353T025 092609					
AUF		172T025 090732					
UP		272T025 091124					
MONTEE		372T025 092711					
AB		173T025 090822					
DOWN		273T025 091152					
DESCENTE		373T025 092775					
RESET		287T025 091185					
VOR		190T025 090852					
ZURÜCK		191T025 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		01S025 037986		20 off  	UL/CSA certification not required
Blank, aluminum-colored, can be engraved		Q25TS-02 046185		02S025 038074			
Blank, yellow, not for engraving		Q25TGE-05 063259		05S025 063201			
AUS		Q25TS-117 046194					
EIN		Q25TS-121 046196					
ON		Q25TS-221 046197					
STOP		Q25TS-110 046190		110S025 038507			
START		Q25TS-111 046192					
Störung		Q25TS-150 046198					
FAULT		Q25TS-250 046199					
DÉFAUT		Q25TS-386 072306		386S025 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		199S025 063200			
EMERGENCY STOP		Q25TGE-299 063261		299S025 063199			
RUN				283S025 038767			
EN SERVICE				383S025 038771			
ARRET D'URGENCE				399S025 048638			
–		Q25TS-10 046186		10S025 038268		1 off  	UL/CSA certification not required
–		Q25TS-11 046187					
–		Q25TS-32 046188					
–		Q25TS-90 046189		90S025 038271			
–		Q25TS-93 072304		93S025 072300			
With customized inscription through Labeleditor → Notes	–	XQ25TS-*.* 109773					

Notes

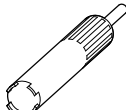
When ordering, complete part no. XQ25TS-*.*:
 1st wildcard * △ Color: AL = aluminum, B = black, Y = yellow
 2nd wildcard * △ File extension



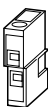
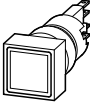
Color	RAL value	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
Surface mounting enclosures, IP65¹⁾					
For conventional wiring or for mounting ILP1 printed circuit boards With plastic cover fixing screws Enclosure base: black (RAL 9005) 8 mounting 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 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
		RAL 9005	E8-SW 065212	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.					
–	–	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 $t_a = +25\text{ }^{\circ}\text{C}$ 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 × 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 × 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 × 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 × 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 × 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 × 18 mm	—		Q18BS 037985		10 off  	UL/CSA certification not required
	For grid dimension 25 × 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



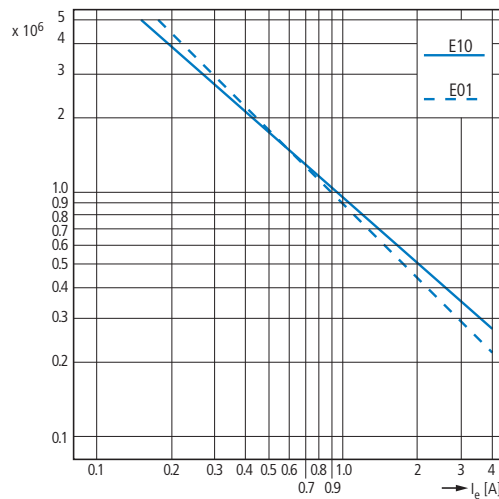
	For use with	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America  
IP20, screw adapter						
Conductor cross-sections 1 × 1.5 mm ² , 2 × 0.75 mm ²						
	For NC		SRA01 028101		20 off  	UL/CSA certification not required
	For N/O		SRA10 028100			
	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	> 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			
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			

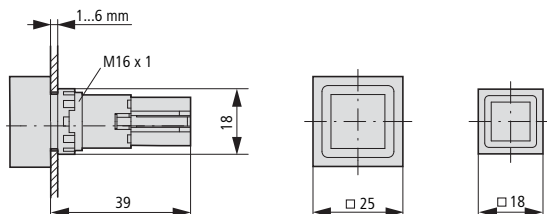


Durability, electrical AC-15 to
IEC/EN 60947-5-1 at 230 V
I_e = rated operational current

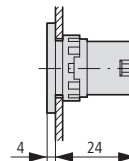
Dimensions

Actuating and indicator elements

Square style

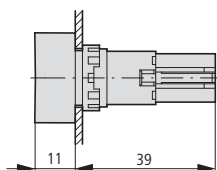


Q...BS

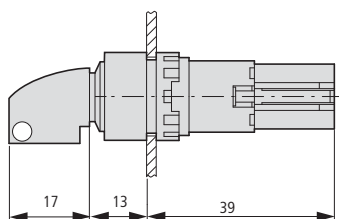


Q...D-...

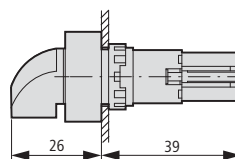
Q...DR-...



Q...S...



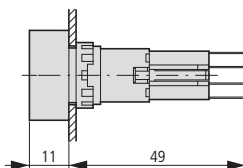
Q...WK...



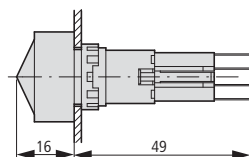
Q...LT-...

Q...LTR-...

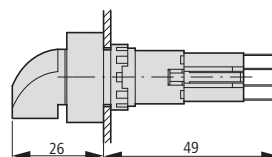
Q...LF-...



Q...LH-...

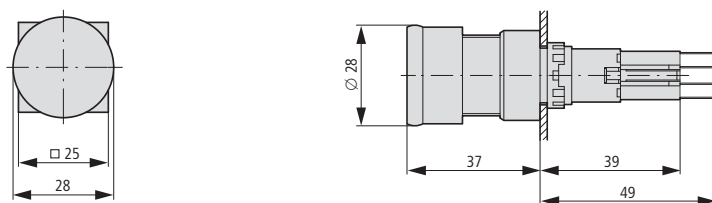


Q...LWK...



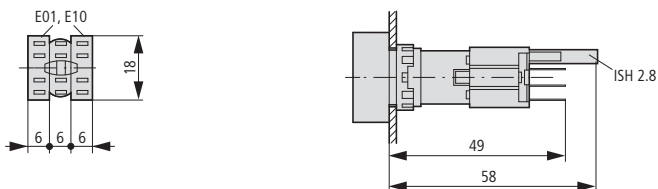
Q25PV...

Q25LPV...

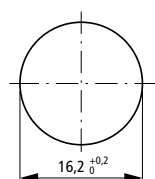


Front fixing

Q18, Q25, E89, SRA, VS, M16

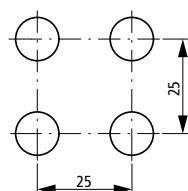


Drilling dimensions



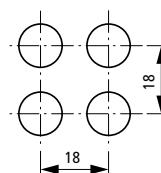
Grid dimension to IEC/EN 60947

Q25

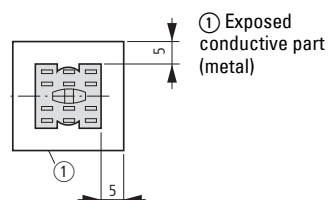


Minimum grid spacing dimension

Q18



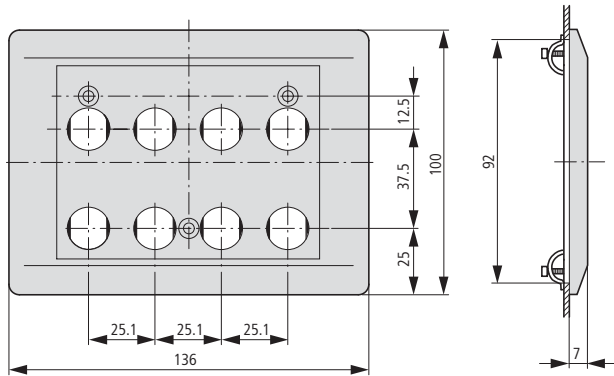
Mounting distance





Flush mounting panel

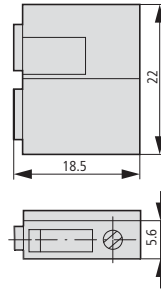
E8...



Size of cutout: 92 × 94

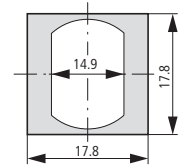
RMQ16 screw adapter

SRA...



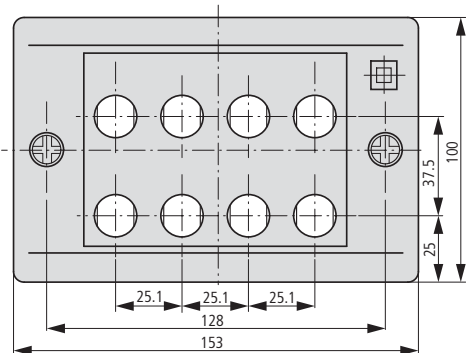
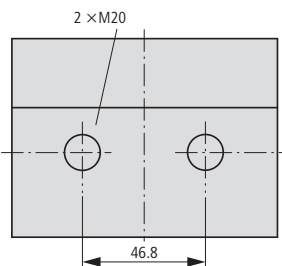
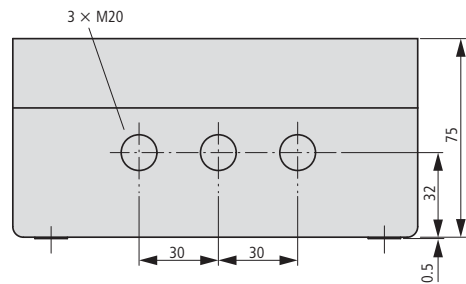
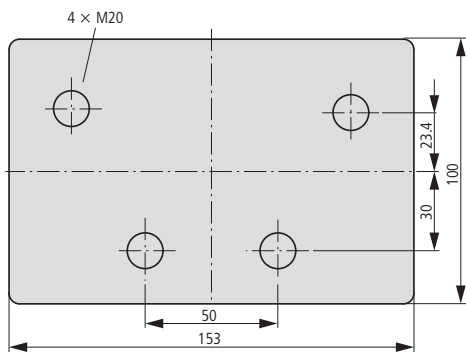
Anti-rotation feature

VS



RMQ16 housing extension

I8...

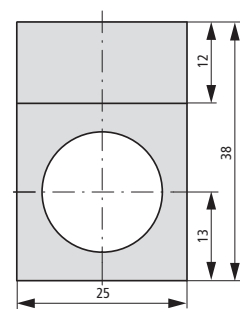


Fixing hole: 2 x Ø 4.5 mm

Distance: 128 mm

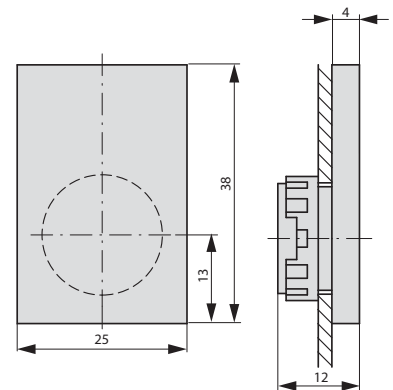
RMQ16 label mount

Q25TS...



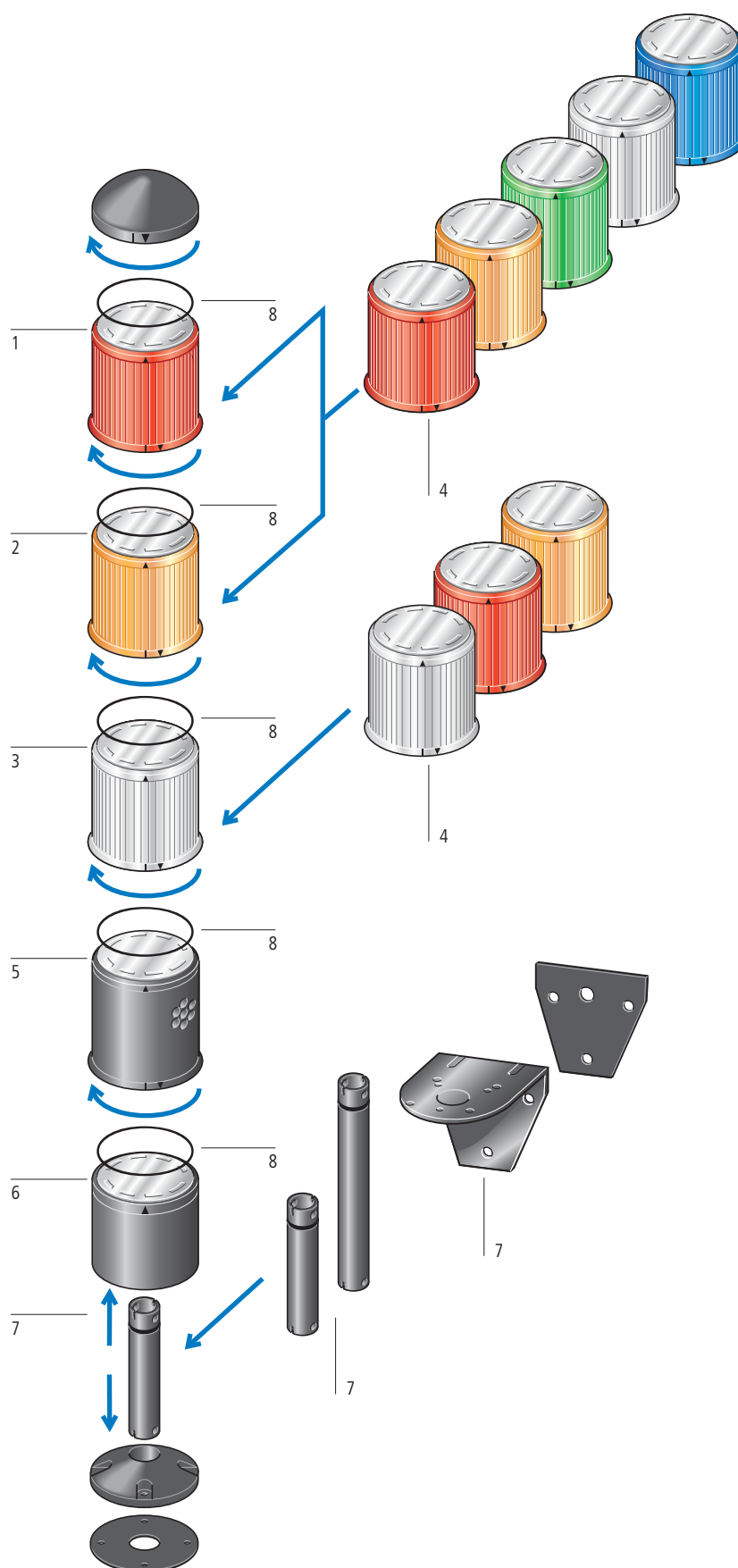
Blanking plates

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	

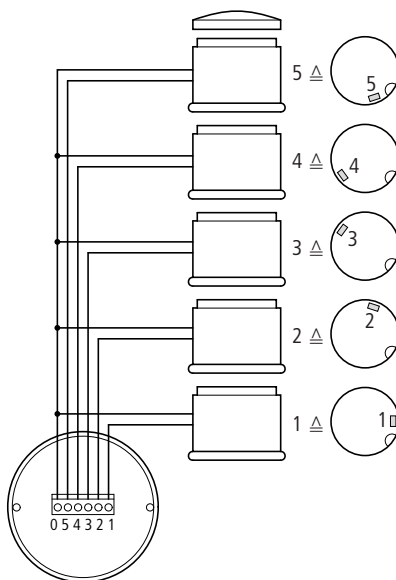
Base module	6
Easy mounting with bayonet fitting	
Protection type IP54	
For bottom mounting or in tubular column	
Terminal connection capacity 6 × 1.5 mm ²	
With top cover	
→ Page 2/104	

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
24 V AC/DC	2		SL-100-L-RG/24 205354		1 off  	UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection	E29184 NKCR 012528 3211-03 UL Listed, CSA certified 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. UL CCN CSA File No. CSA Class No. NA Certification	E29184 NKCR 012528 3211-03 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 trade-mark 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): • 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
			SL-L-R 205313			UL File No.	E29184
			SL-L-G 205314			UL CCN	NKCR
			SL-L-Y 205315			CSA File No.	012528
			SL-L-B 205316			CSA Class No.	3211-03
						NA Certification	UL Listed, CSA certified

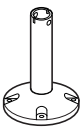


	Rated operational voltage	Color	Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America		
	U _e V							
Flashing light module								
Without light element, f ≈ 1 Hz								
	24 V AC/DC (+10 %/-15 %)		SL-BL24-W 205317		1 off  	Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94-91; CE marking E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification	
			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 UL File No. UL CCN CSA File No. CSA Class No. NA Certification	
	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 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 °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 E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification	
	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 E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification	
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 E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification	
		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 E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification		
				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 ± 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 E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification Degree of Protection	



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

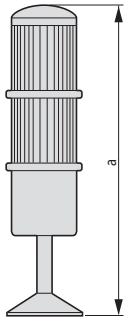
SL-B-ASI base module for signal towers			
General			
Connection to AS-Interface cable			Screw terminal on printed circuit board
Addressing			Via connection to AS-Interface cable
Maximum total current		mA	≤ 250
Energy supply			Completely from the AS-Interface cable
Ambient temperature		°C	-25 - +55
Status 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

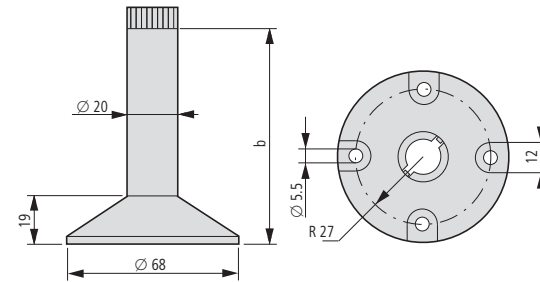
SL-100-...



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

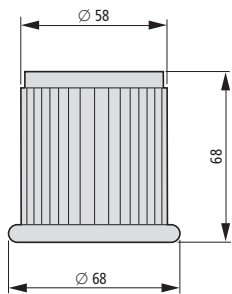
Modules

SL-L-...

SL-BL...

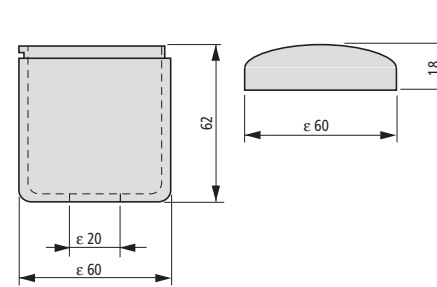
SL-A...

SL-FL...



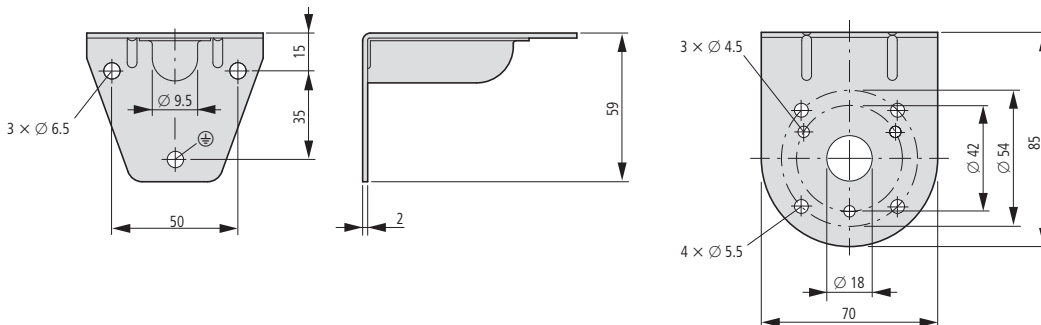
Basic modules with cover

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
Accessories	3/10

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

Contact travel diagrams for LS-Titan position switches	3/19
--	------

Technical data

(Safety) position switch LS-Titan	3/22
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Dimensions

(Safety) position switch LS-Titan.	3/25
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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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iProx series	3/59
E57 Miniature series	3/62
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E52-Series	3/71
E56-Series	3/74

Capacitive sensors

E53-Series	3/77
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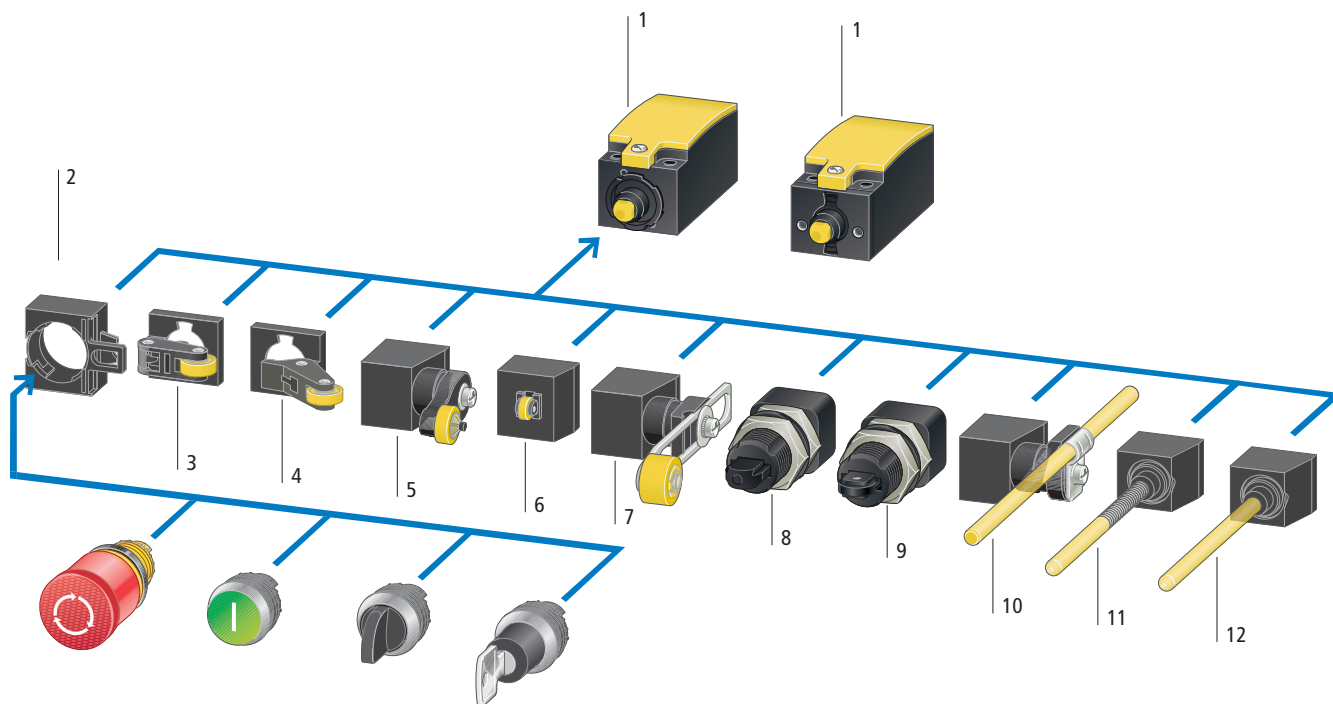
Optical sensors

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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

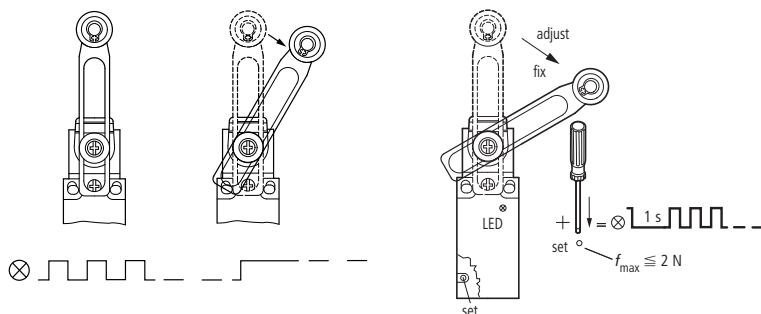
HPL03003EN

Ordering

Contact configuration	Circuit symbol	Contact travel ■ = Contact closed □ = Contact open	Color Enclosure cover	Part no. Article no.	Price See price list	Std. pack		
☞ Safety function safety function to IEC/EN 60947-5-1								
N/O = normally open contact	NC = normally closed contact							
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								
TÜV Functional Safety FS TÜV Rheinland Group Type Approved	1 N/O	1 NC	+U_e electron Q1 Q2 0 V	0 0.5 5.5 6.1 Q1 Q2 default = 3.0		LSE-11 266121	2 off 	1)
	—	2 NC	+U_e electron Q1 Q2 0 V	0 0.5 5.5 6.1 Q1 Q2 default = 3.0		LSE-02 266122	2 off 	1)

Notes

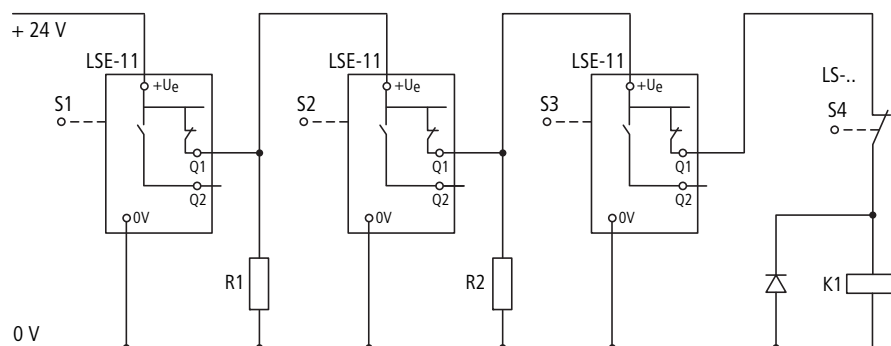
LSE-11 and LSE-02: Individual operating point adjustment:



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 closed
□ = Contact open

Color
Enclosure
covers

Enclosure

Connection
type

Part no.
Article no.

Price
See
price list

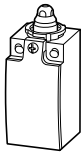
Std. pack

⊕ Positive opening
safety function according to
IEC/EN 60947-5-1

N/O = normally open
NC = normally closed contact

Basic unit, expandable

Rounded plunger, IP66, IP67



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

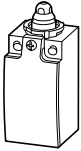
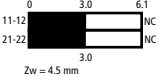
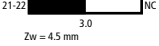
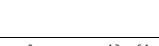
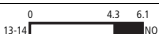
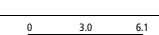
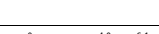
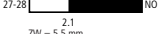
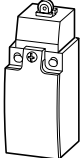
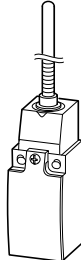
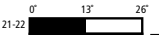
Information relevant for export to North America



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
NKR
12528
3211-03
UL Listed, CSA certified
IEC: IP66, 67, UL/CSA Type 3R, 4X (indoor use only), 12, 13

HPL030005EN

	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 travel ■ = Contact closed □ = Contact open	Color Enclosure covers	Enclosure	Connection type	Part no. Article no.	Price See price list	Std. pack
Complete units									
Rounded plunger, IP66, IP67 (front fixing)									
	—	2 NC ⊖				plastic	Cage Clamp	LS-02/F 292365	1 off   1) 2)
	—	2 NC ⊖				plastic	Screw terminal	LS-S02/F 106780	1 off   2)
	—	2 NC ⊖				metal	Cage Clamp	LSM-02/F 292371	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11/F 290176	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Screw terminal	LS-S11/F 106784	1 off   2)
	1 N/O	1 NC ⊖				metal	Cage Clamp	LSM-11/F 292372	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Screw terminal	LS-S11D/F 106792	1 off   2)
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11D/F 292366	1 off   1) 2)
	1 N/O	1 NC ⊖				metal	Cage Clamp	LSM-11D/F 292373	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11DA/F 292369	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Screw terminal	LS-S11DA/F 106796	1 off   2)
	1 N/O	1 NC ⊖				metal	Cage Clamp	LSM-11DA/F 292376	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11S/F 292367	1 off   1) 2)
	1 N/O	1 NC ⊖				plastic	Screw terminal	LS-S11S/F 106799	1 off   2)
	1 N/O	1 NC ⊖				metal	Cage Clamp	LSM-11S/F 292374	1 off   1) 2)
Roller plungers, IP66, IP67									
	1 N/O	1 NC ⊖				plastic EN 50047 Form C	Cage Clamp	LS-11/P 266112	2 off   1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form C	Screw terminal	LS-S11/P 106788	2 off   2)
	1 N/O	1 NC ⊖				metal EN 50047 Form C	Cage Clamp	LSM-11/P 266147	2 off   1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form C	Cage Clamp	LS-11S/P 266118	2 off   1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form C	Screw terminal	LS-S11S/P 106801	2 off   2)
	1 N/O	1 NC ⊖				metal EN 50047 Form C	Cage Clamp	LSM-11S/P 266153	2 off   1) 2)
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) 2)
	1 N/O	1 NC ⊖				plastic	Screw terminal	LS-S11S/S 106805	2 off   2)
	1 N/O	1 NC ⊖				metal	Cage Clamp	LSM-11S/S 266139	2 off   1) 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



	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									
Complete units									
Roller lever IP66, IP67									
Long									
	—	2 NC ⊖				plastic	Cage Clamp	LS-02/L 266108	2 off 1) 2)
	—	2 NC ⊖				plastic	Screwed terminal	LS-S02/L 106781	2 off 2)
	—	2 NC ⊖				metal	Cage Clamp	LSM-02/L 266143	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form E	Cage Clamp	LS-11/L 266110	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form E	Screwed terminal	LS-S11/L 106785	2 off 2)
	1 N/O	1 NC ⊖				metal EN 50047 Form E	Cage Clamp	LSM-11/L 266145	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11D/L 266115	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic	Screwed terminal	LS-S11D/L 106793	2 off 2)
	1 N/O	1 NC ⊖				metal	Cage Clamp	LSM-11D/L 266150	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form E	Cage Clamp	LS-11S/L 266116	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic EN 50047 Form E	Screwed terminal	LS-S11S/L 106800	2 off 2)
	1 N/O	1 NC ⊖				metal EN 50047 Form E	Cage Clamp	LSM-11S/L 266151	2 off 1) 2)
Short									
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11/LS 290173	2 off 1) 2)
	1 N/O	1 NC ⊖				plastic	Screwed terminal	LS-S11/LS 106787	1 off 2)
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11D/LS 290174	1 off 1) 2)
	1 N/O	1 NC ⊖				plastic	Screwed terminal	LS-S11D/LS 106794	1 off 2)
Large									
	1 N/O	1 NC ⊖				plastic	Cage Clamp	LS-11/LB 290175	1 off 1) 2)
	1 N/O	1 NC ⊖				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	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										
Rotary lever, IP66, IP67										
	1 N/O	1 NC ⊕				plastic EN 50047 Form A	Cage Clamp	LS-11/RL 266111	2 off	1) 2)
	1 N/O	1 NC ⊕				metal EN 50047 Form A	Cage Clamp	LSM-11/RL 266146	2 off	1) 2)
	1 N/O	1 NC ⊕				plastic EN 50047 Form A	Screwed terminal	LS-S11/RL 106789	2 off	2)
	1 N/O	1 NC ⊕				plastic EN 50047 Form A	Cage Clamp	LS-11S/RL 266117	2 off	1) 2)
	1 N/O	1 NC ⊕				plastic EN 50047 Form A	Screwed terminal	LS-S11S/RL 106802	2 off	2)
	1 N/O	1 NC ⊕				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 ⊕				plastic	Cage Clamp	LS-11/RLA 266113	2 off	1) 2)
	1 N/O	1 NC ⊕				plastic	Screwed terminal	LS-S11/RLA 106790	2 off	2)
	1 N/O	1 NC ⊕				metal	Cage Clamp	LSM-11/RLA 266148	2 off	1) 2)
	1 N/O	1 NC ⊕				plastic	Cage Clamp	LS-11S/RLA 266119	2 off	1) 2)
	1 N/O	1 NC ⊕				plastic	Screwed terminal	LS-S11S/RLA 106803	2 off	2)
	1 N/O	1 NC ⊕				metal	Cage Clamp	LSM-11S/RLA 266154	2 off	1) 2)
Actuating rod IP66, IP67										
	1 N/O	1 NC ⊕				plastic	Cage Clamp	LS-11S/RR 266106	4 off	1) 2)
	1 N/O	1 NC ⊕				plastic	Screwed terminal	LS-S11S/RR 106804	4 off	2)
	1 N/O	1 NC ⊕				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
symbolContact travel
■ = Contact closed
□ = Contact openColor
Enclosure
cover

Enclosure

Connection
typePart no.
Article no.Price
See
price list

Std. pack

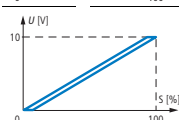
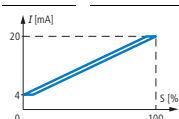
⊕ Positive opening
safety function
according to
IEC/EN 60947-5-1

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
ClampLSE-AI
2694612 off

2)

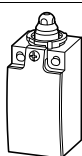


plastic

Cage
ClampLSE-AU
2740962 off

2)

Rounded plunger, IP66, IP67



2 N/O

—



plastic

Cage
ClampLS-20
26612010 off

1) 2)

2 N/O

—

Cage
ClampLS-20-SW
27200810 off

1) 2)

2 N/O

—

Screwed
terminalLS-S20
1068081 off

2)

2 N/O

—

Screwed
terminalLS-S20-SW
10681210 off

2)

2 N/O

—



metal

Cage
ClampLSM-20
2661552 off

1) 2)

2 N/O

—



plastic

Cage
ClampLS-20A
2923621 off

1) 2)

2 N/O

—



plastic

Screwed
terminalLS-S20A
10681010 off

2)

2 N/O

—



metal

Cage
ClampLSM-20A
1000512 off

1) 2)

2 N/O

—

plastic
EN 50047
Form BCage
ClampLS-20B
11670610 off

1) 2)

2 N/O

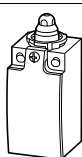
—

plastic
EN 50047
Form BScrewed
terminalLS-S20B
11670710 off

2)

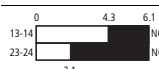
Basic unit, not expandable

Rounded plunger, IP66, IP67 (front fixing)



2 N/O

—



plastic

Cage
ClampLS-20/F
2923681 off

1)

2 N/O

—



plastic

Screwed
terminalLS-S20/F
1068091 off

1)

2 N/O

—



metal

Cage
ClampLSM-20/F
2923751 off

1)

2 N/O

—



plastic

Cage
ClampLS-20A/F
2923701 off

1)

2 N/O

—



plastic

Screwed
terminalLS-S20A/F
1068111 off

1)

2 N/O

—



metal

Cage
ClampLSM-20A/F
2923771 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

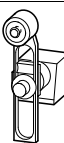
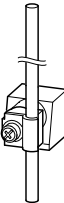
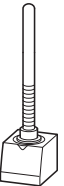
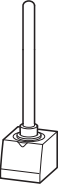


Product Standards

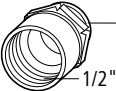
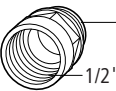
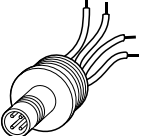
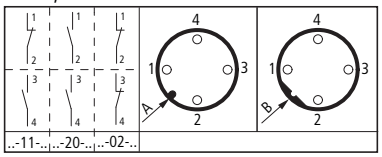
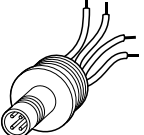
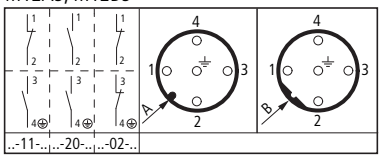
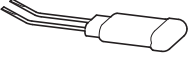
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Degree of Protection

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

HPL03009EN

		plastic Part no. Article no.	Price See price list	Std. pack	metal Part no. Article no.	Price See price list	Std. pack	Notes
Rounded plunger, center fixing								
	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.
Roller plunger, center fixing								Information relevant for export to North America  
	For installation in M18 × 1 enclosure wall or mounting plate drilling	LS-XZRS 114025					1 off  	Product Standards IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking E29184 NKCR 12528 CSA Class No. 3211-03 UL Listed, CSA Certified
Roller plunger								UL File No. UL CCN CSA File No. CSA Class No. NA Certification
	—	LS-XP 266125		10 off  	LSM-XP 266158		10 off  	
Roller lever								
	Large	LS-XLB 290178		5 off  				
	Short	LS-XLS 290177		1 off  				
	Long	LS-XL 266123		10 off  	LSM-XL 266156		10 off  	
Angled roller lever								
	—	LS-XLA 266124		10 off  	LSM-XLA 266157		10 off  	
Rotary lever								
	—	LS-XRL 266126		5 off  	LSM-XRL 266159		5 off  	
Adjustable roller lever								
	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  				
Actuating rod								
	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  	
Spring rod								
	Not to be used as a safety position switch Use only in conjunc- tion with snap-action contact.	LS-XS 266133		5 off  	LSM-XS 266163		5 off  	
Actuating rod								
	—	LS-XOR 290190		1 off  				
Fixing adapters								UL/CSA certification not required
	Actuation through front element RMQ-Titan®	M22-LS 266137		10/1 off  				

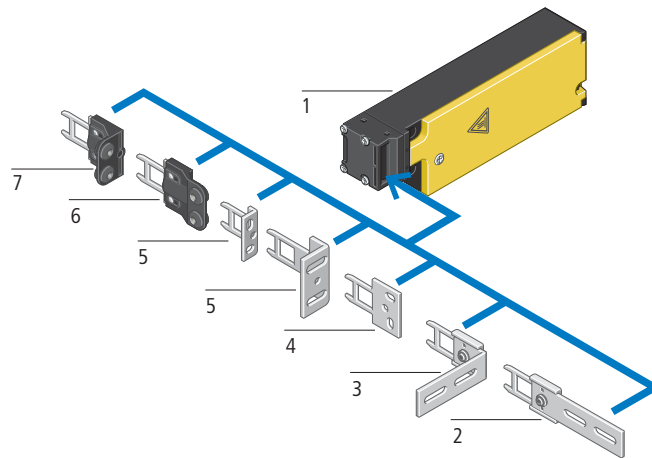


Description		Part no. Article no.	Price See price list	Std. pack	Notes	Information relevant for export to North America	
Screw connection to fit M20 to 1/2"						 	
	M20 1/2"	V1/2"/M20-NA 225269		10 off  	The screw connection is for grounding; no total insulation For connection thread lengths up to 9 mm	Product Standards UL 508; CSA-C22.2 No. 14 E29184 UL File No. UL CCN CSA File No. CSA Class No. NA Certification	UL 508; CSA-C22.2 No. 14 E29184 NKCR 12528 3211-03 UL Listed, CSA Certified
	M20 1/2"	V1/2"/M20 225270		10 off  	For connection thread lengths up to 9 mm	Specially designed for NA✓ 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  	—		

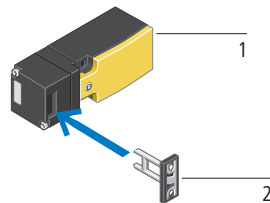


System overview

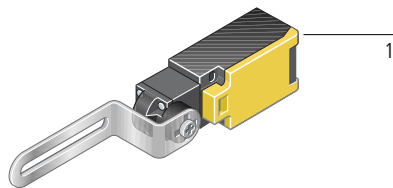
LS-...ZBZ



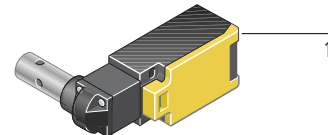
LS-...ZB



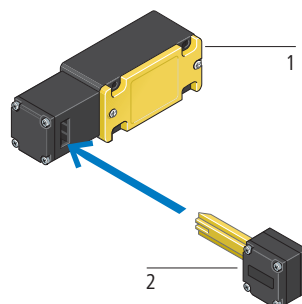
LSR-...TKG



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

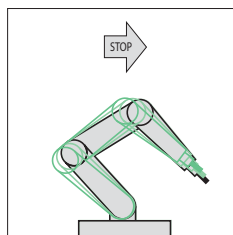
LS4/ZB

LSR-...TKG

LSR-...TS

"Personnel protection" by monitoring of the protective mechanism

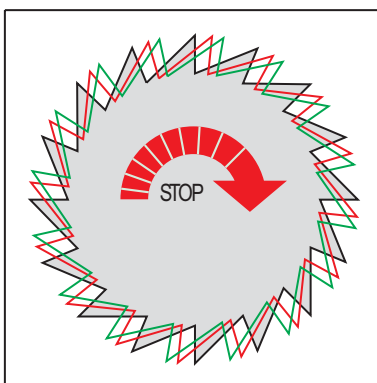
- Door open
- LS-...ZB disconnects power
- No danger



LS/ZBZ

"Increased personnel protection" by monitoring and interlocking the protective mechanism

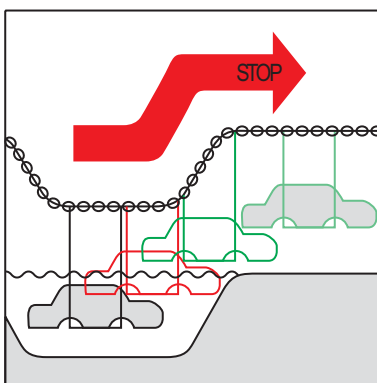
- Stop command
- Waiting time
- Machine is stopped
- Protective mechanism open
- No danger



LS/ZBZ

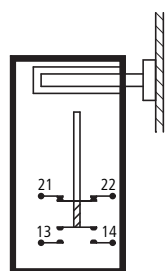
"Increased personnel protection" by monitoring and interlocking the protective mechanism

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

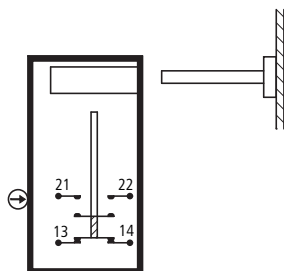


LS...ZB

Closed



Open



→ Personnel protection

Door open

→ Enabling contact (21-22) opening positively

Door open

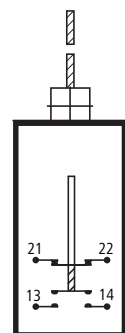
→ Enabling contact safely open; tamperproof against simple tools

Door close

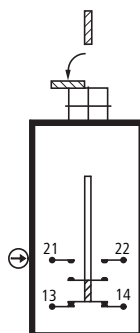
→ Triple coded actuator closes the enabling contact

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

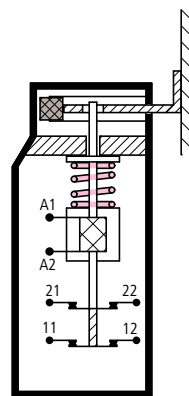
→ Enabling contact safely open; tamperproof against simple tools

Closing of guard mechanism

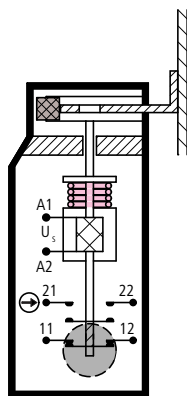
→ Closes enabling contact (21-22)

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

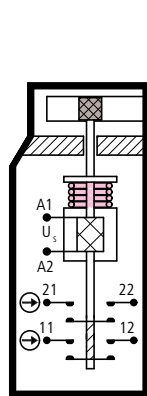
Interlocked



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

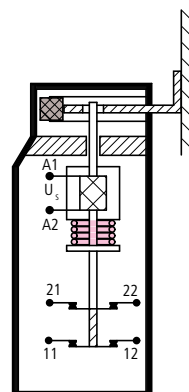
Door close

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

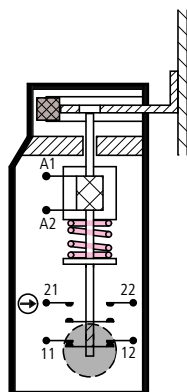
Interlock door

→ 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)**

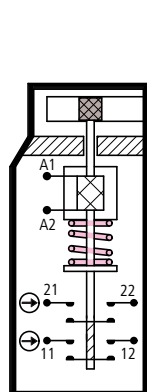
Interlocked



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

⇒ Safety function by positive opening according to IEC/EN 60947-5-1

N/O = normally open contact

NC = normally closed contact

Circuit symbol

Rated control voltage for magnet drive U_s

V

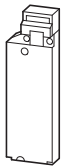
Part no.
Article no.

Price
See price list

Std. pack

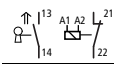
Basic units with spring-powered interlock (closed-circuit principle) IP65

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



1 N/O

1 NC ⇒

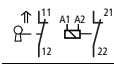


24 V DC

LS-S11-24DFT-ZBZ/X
106829

—

2 NC ⇒

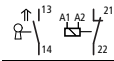


24 V DC

LS-S02-24DFT-ZBZ/X
106823

1 N/O

1 NC ⇒

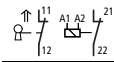


120 V 50/60 Hz

LS-S11-120AFT-ZBZ/X
106825

—

2 NC ⇒

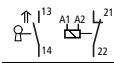


120 V 50/60 Hz

LS-S02-120AFT-ZBZ/X
106778

1 N/O

1 NC ⇒

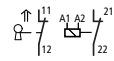


230 V 50/60 Hz

LS-S11-230AFT-ZBZ/X
106827

—

2 NC ⇒



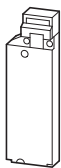
230 V 50/60 Hz

LS-S02-230AFT-ZBZ/X
106821

1 off
USA Canada

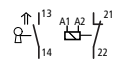
Basic units with magnet-powered interlock (open-circuit principle) IP65¹⁾

- With interlock monitoring
- Monitoring of door position: continuous



1 N/O

1 NC ⇒

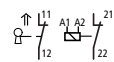


24 V DC

LS-S11-24DMT-ZBZ/X
106830

—

2 NC ⇒

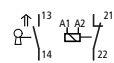


24 V DC

LS-S02-24DMT-ZBZ/X
106824

1 N/O

1 NC ⇒

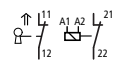


120 V 50/60 Hz

LS-S11-120AMT-ZBZ/X
106826

—

2 NC ⇒

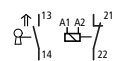


120 V 50/60 Hz

LS-S02-120AMT-ZBZ/X
106820

1 N/O

1 NC ⇒

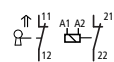


230 V 50/60 Hz

LS-S11-230AMT-ZBZ/X
106828

—

2 NC ⇒



230 V 50/60 Hz

LS-S02-230AMT-ZBZ/X
106822

1 off
USA Canada

Notes

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

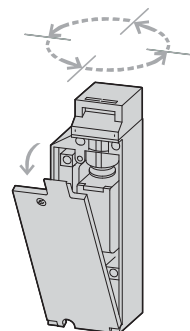
With the actuator inserted, the N/O contact is open and the NC contact is closed.



Switch must never be used as a mechanical stop!

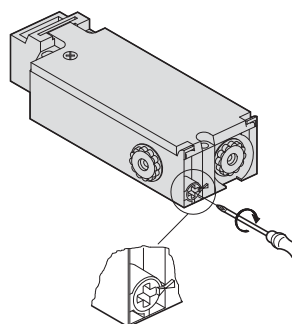
¹⁾ Time control of the release operation possible using ESR5-NV30-30

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

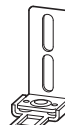
Information relevant for export to North America



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

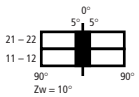
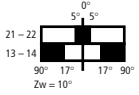
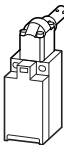
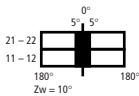
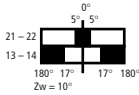
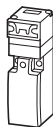
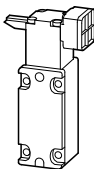
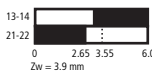
IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
E29184
NKCR
12528
3211-03
UL Listed, CSA Certified
IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

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. UL CCN NKCR CSA File No. 12528 CSA Class No. 3211-03 NA Certification UL Listed, CSA Certified
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 ■ = Contact closed □ = Contact open	Approval mark	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									
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

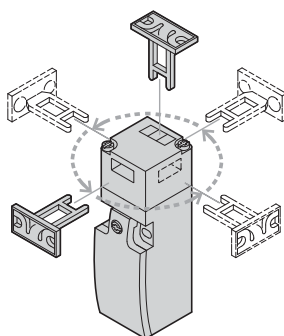
Electric circuitry with contactors DIL and safety relay ESR5
 → Safety manual TB02000-009, Article no. 119906



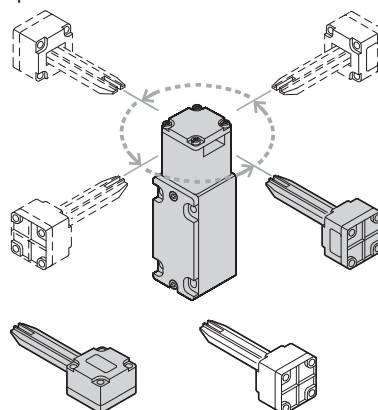
Switch must never be used as a mechanical stop!

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.

¹⁾

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

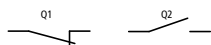
UL File No.
 UL CCN
 CSA File No.
 CSA Class No.
 NA Certification
 Degree of Protection

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

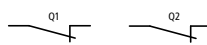
Engineering



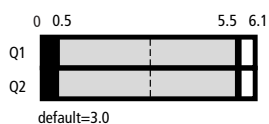
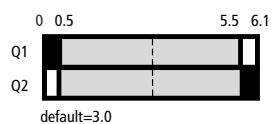
LSE-11



LSE-02



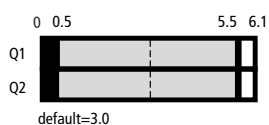
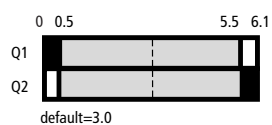
Basic units



Operating heads

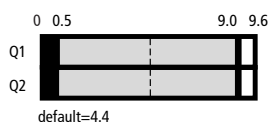
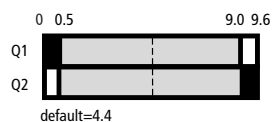
Roller plunger

LS-XP
LSM-XP
LS-XOR



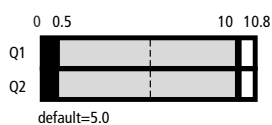
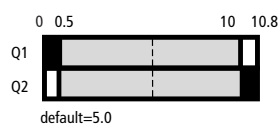
Roller lever

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



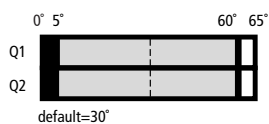
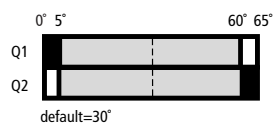
Angled roller lever

LS-XLA
LSM-XLA



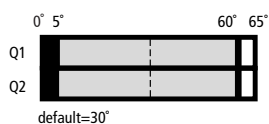
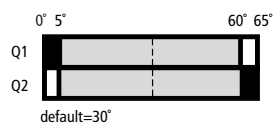
Rotary lever

LS-XRL
LSM-XRL



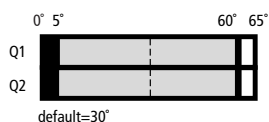
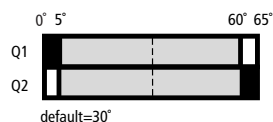
Adjustable roller lever

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



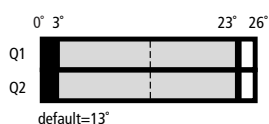
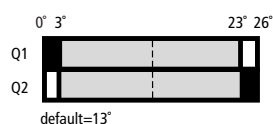
Actuating rod

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



Spring rod actuator

LS-XS
LSM-XS

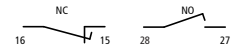
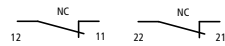


Notes: LS-(S)02A,
LS-(S)11A → Page 3/4
LS-(S)20B → Page 3/8

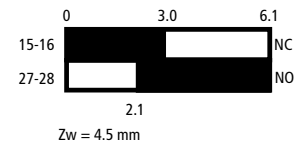
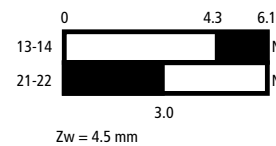
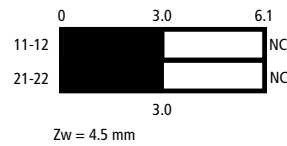
LS-02
LS-S02
LSM-02

LS-11
LS-S11
LSM-11

LS-11D
LS-S11D
LSM-11D



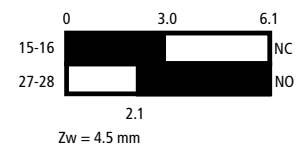
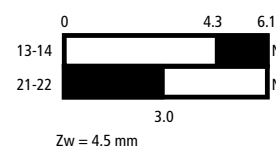
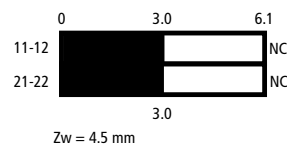
Basic units



Operating heads

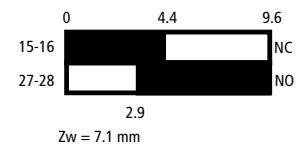
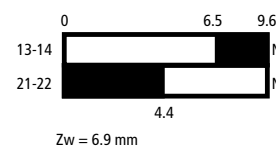
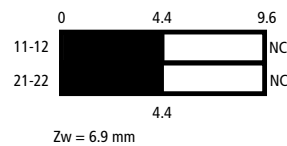
Roller plunger

LS-XP
LSM-XP

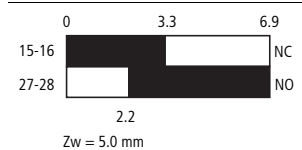
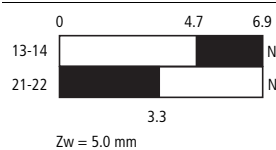
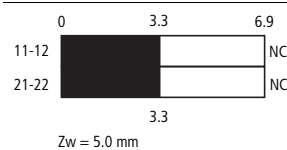


Roller lever

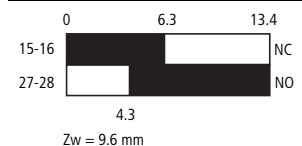
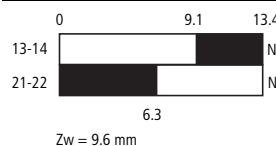
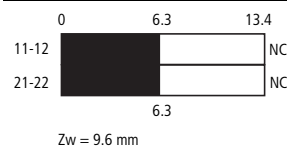
LS-XL, LSM-XL



Roller lever, short
LS-XLS

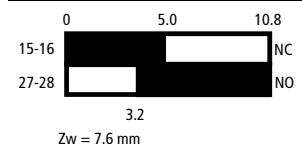
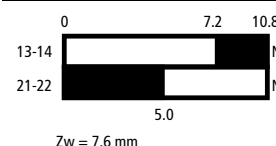
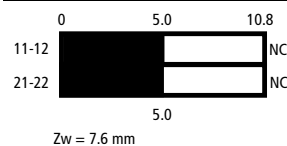


Roller lever, large
LS-XLB



Angled roller lever

LS-XLA, LSM-XLA



Rotary lever

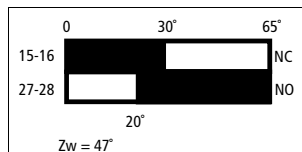
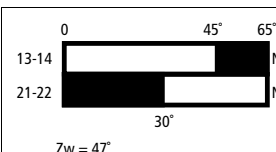
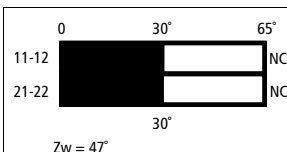
LS-XRL, LSM-XRL

Adjustable roller lever

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

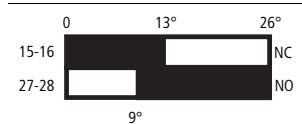
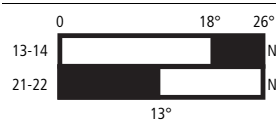
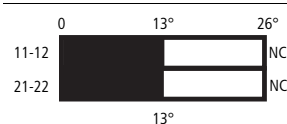
Actuating rod

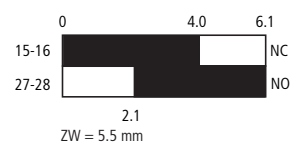
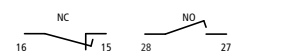
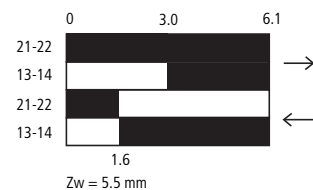
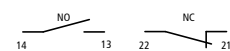
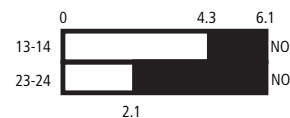
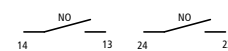
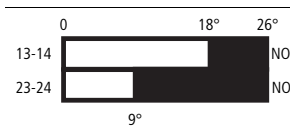
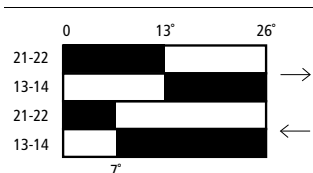
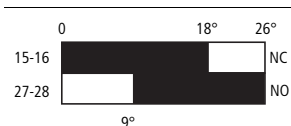
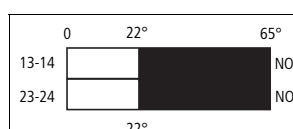
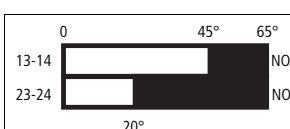
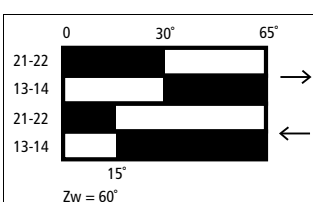
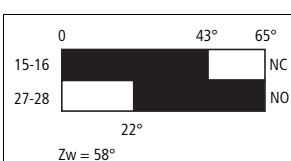
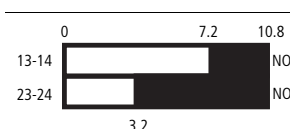
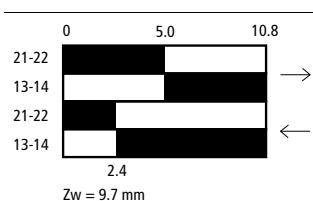
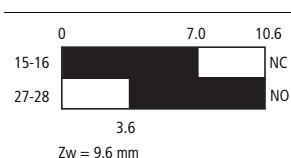
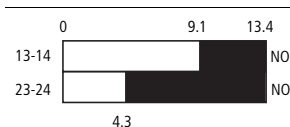
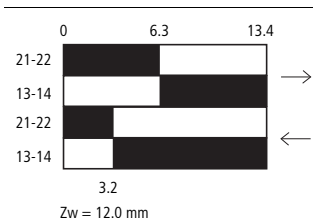
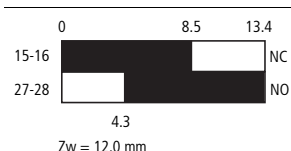
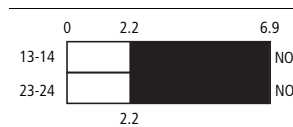
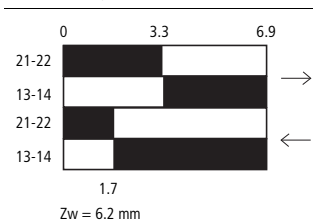
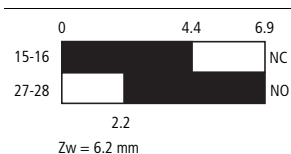
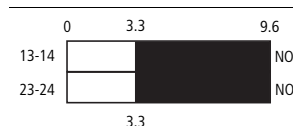
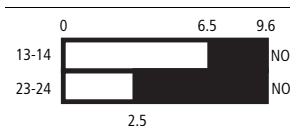
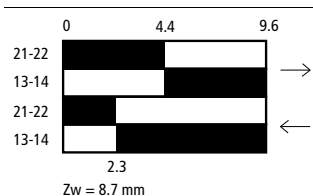
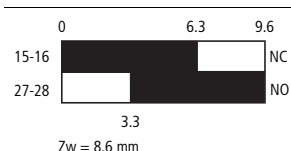
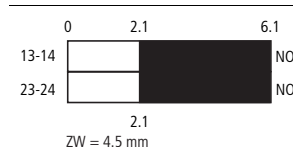
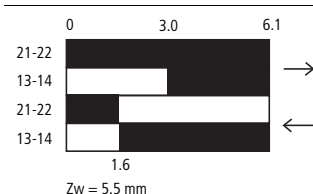
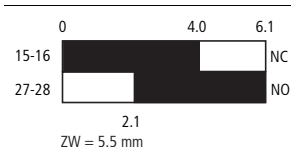
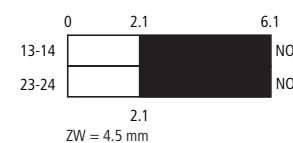
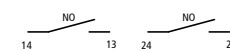
LS-XRR, LSM-XRR,
LS-XRRM, LSM-XRRM



Spring rod actuator

LS-XS, LSM-XS



LS-11DA
LS-S11DA
LSM-11DALS-11S
LS-S11S
LSM-11SLS-20
LS-S20
LSM-20LS-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	± 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

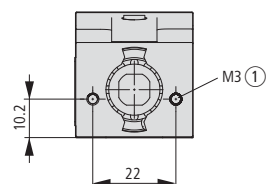
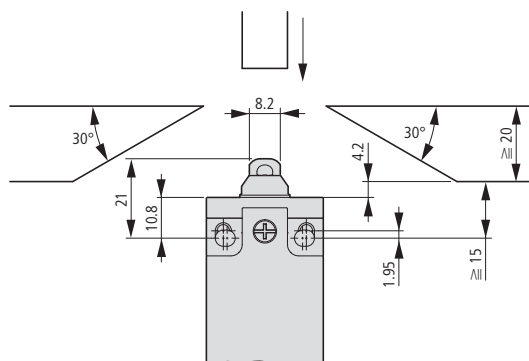


				Safety position switches			
				LS-...ZBZ	LS-...ZB	LS4...ZB	LSR...
General							
Standards				IEC/EN 60947	IEC/EN 60947	IEC/EN 60947	IEC/EN 60947
Climatic proofing				Damp heat, constant, to IEC 60068-2-78, Damp heat, cyclic, to IEC 60068-2-30			
Ambient temperature		°C		-25 - +40	-25 - +70	-25 - +70	-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	x 10 ⁶		1	10	10	20
Snap-action contact	Operations	x 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		x 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)

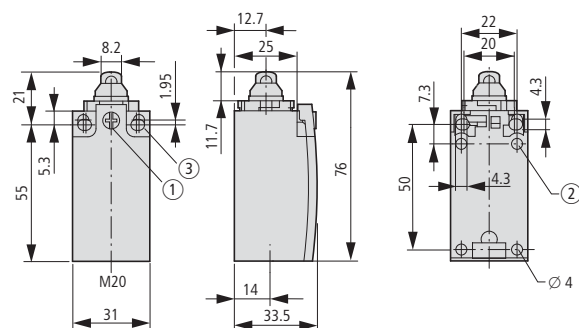
LS(M)-.../F



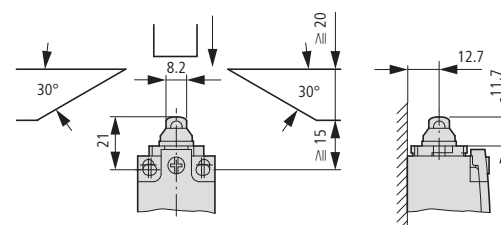
① Screw-in depth max. 12 mm

Basic units, expandable,

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

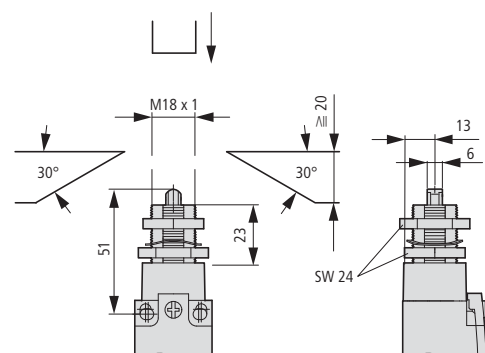
① Tightening torque of cover screw: 0.8 Nm $\pm$ 0.2 Nm

② Only with LS (insulated version)

③ Fixing screw 2 x M4 $\geq$ 30M_A = 1.5 Nm

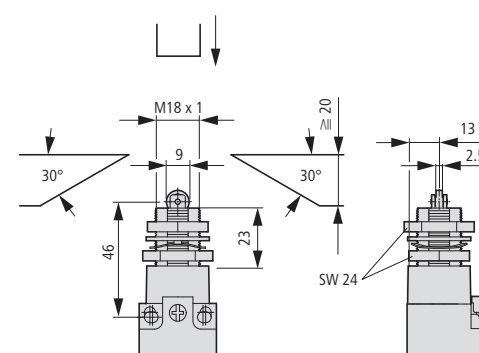
Rounded plunger, center fixing

LS-XZS



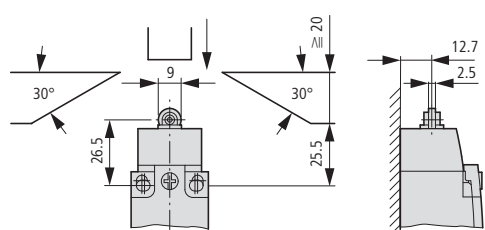
Roller plunger, center fixing

LS-XZRS



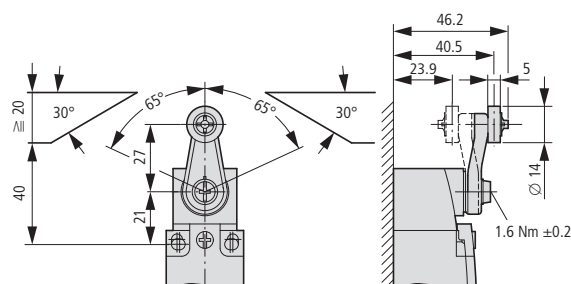
Roller plunger

LS(M)-.../P



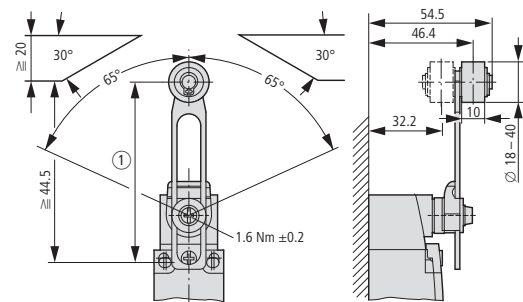
Rotary lever

LS(M)-.../RL



Adjustable roller lever

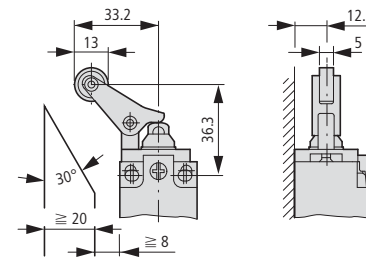
LS(M)-.../RLA



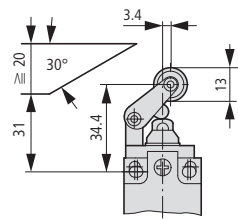
① Setting range from 54.5 to 97

Angled roller lever

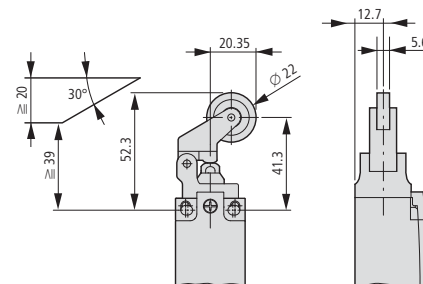
LS(M)-XLA

**Roller lever**

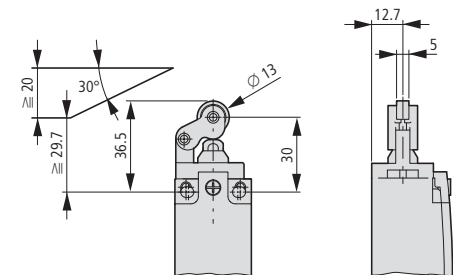
LS(M)-.../L

**Roller lever**

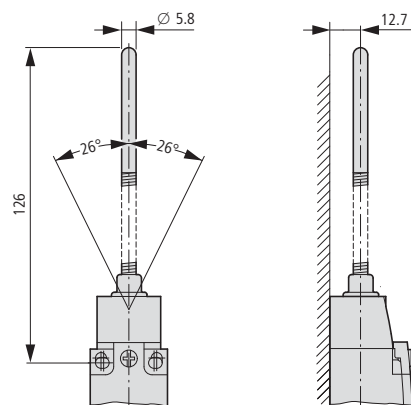
LS(M)-.../LB

**Roller lever**

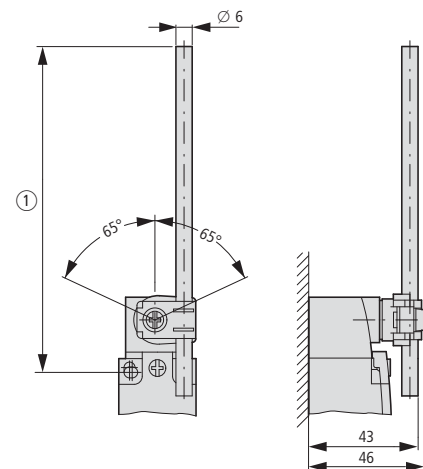
LS(M)-.../LS

**Spring rod**

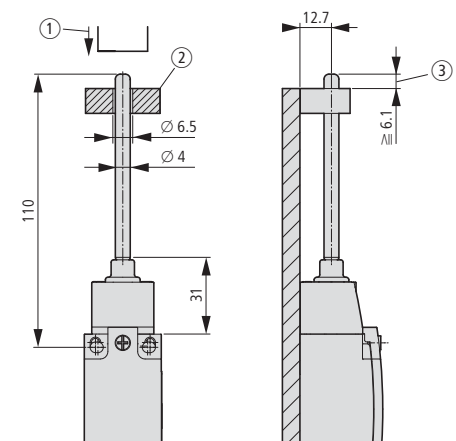
LS(M)-.../S

**Actuating rod**

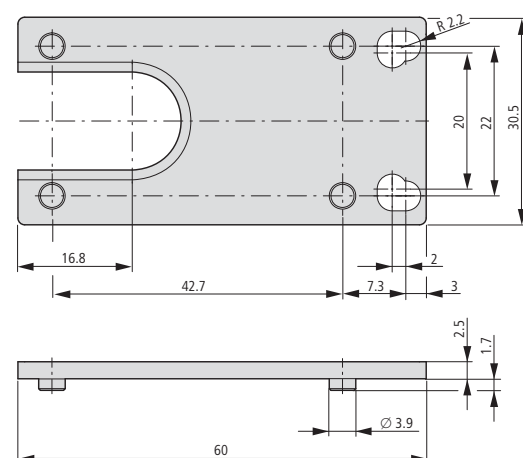
LS(M)-.../RR

① LS.../RR ≤ 150
LS.../RRM ≤ 210**Actuating rod**

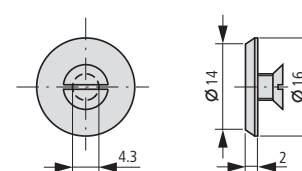
LS(M)-.../OR

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

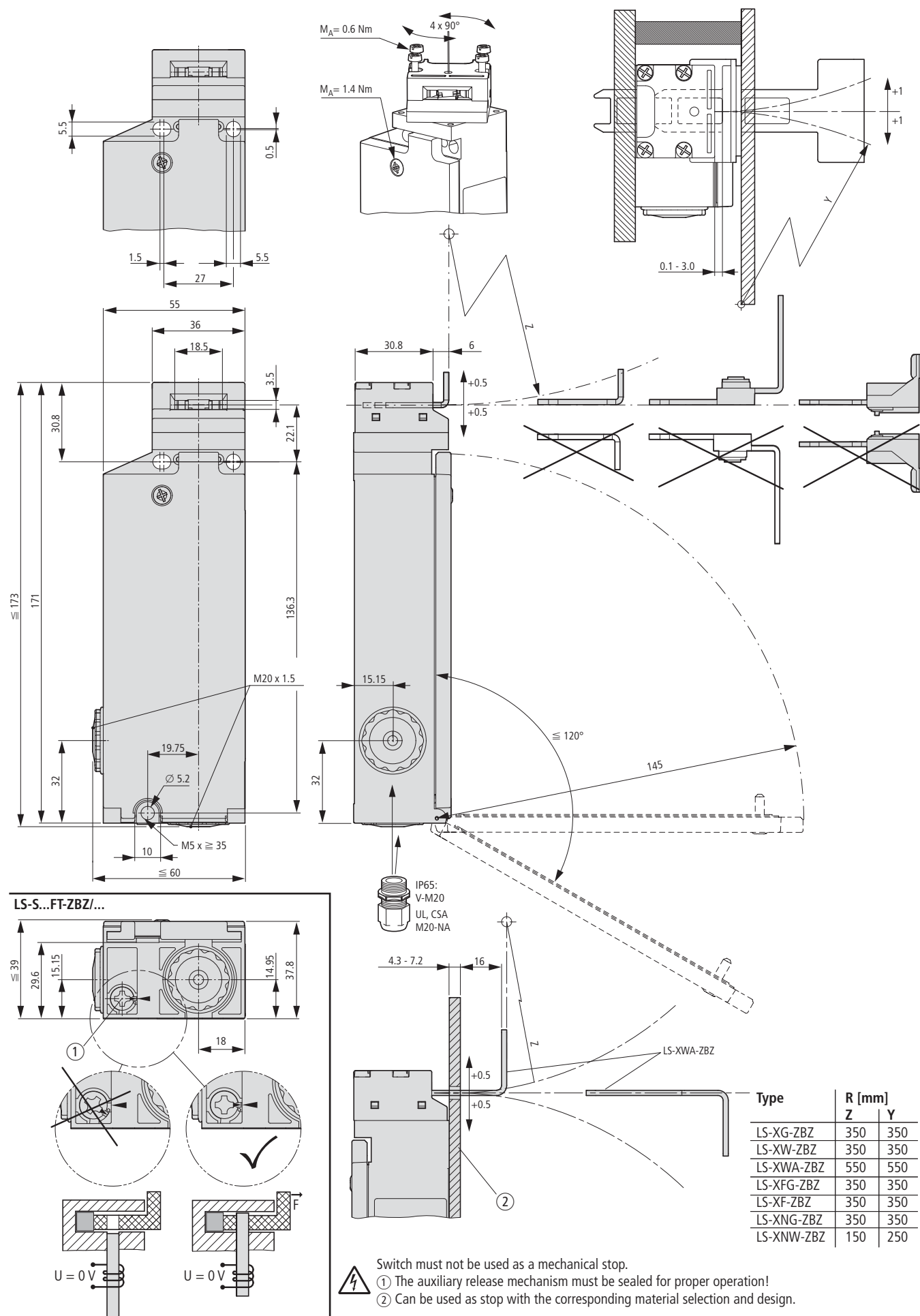
LS-XAP

**Locating plate**

FS-AT

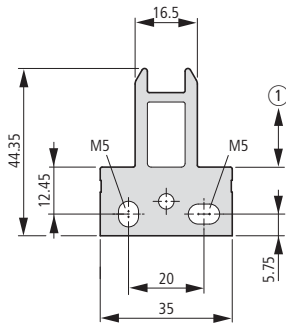


Safety position switches LS...ZBZ

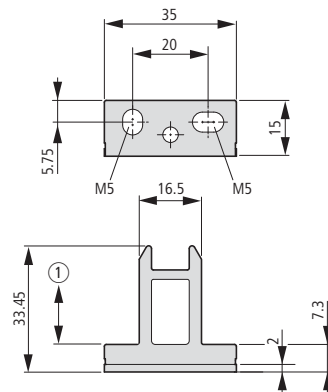


Actuating element

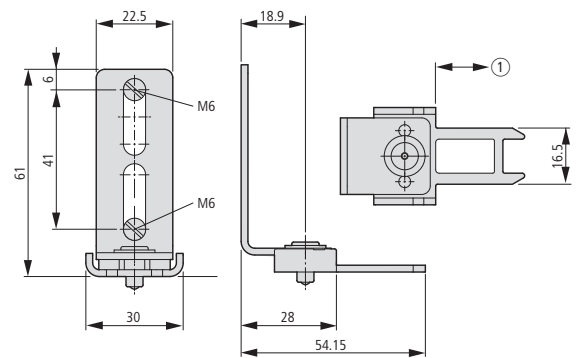
LS-XG-ZBZ



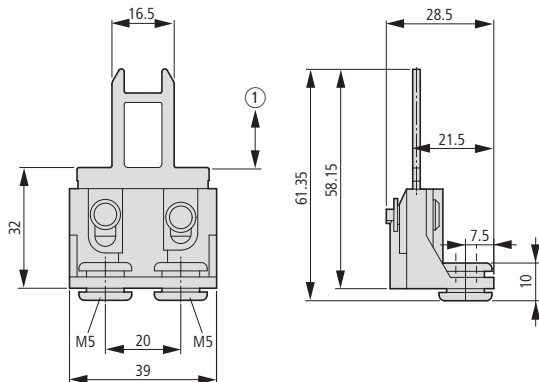
LS-XW-ZBZ



LS-XF-ZBZ

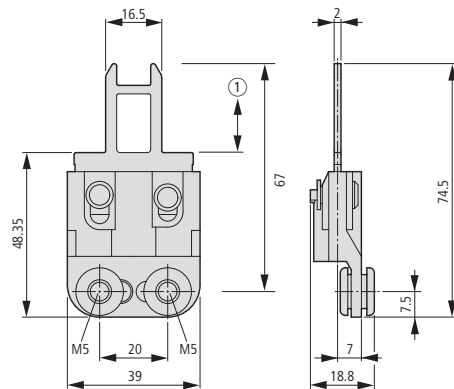


LS-XNW-ZBZ



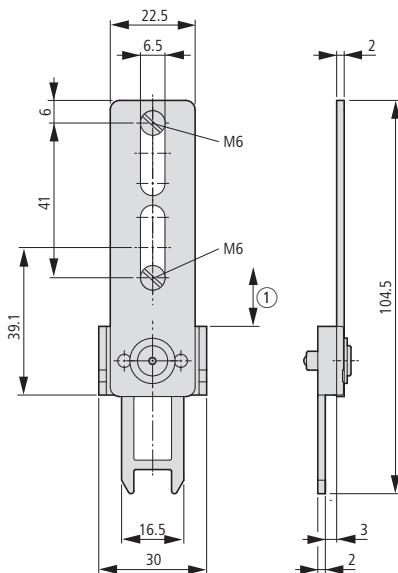
Fixing only allowed with M5 fixing screw and washer according to DIN EN ISO 7093

LS-XNG-ZBZ



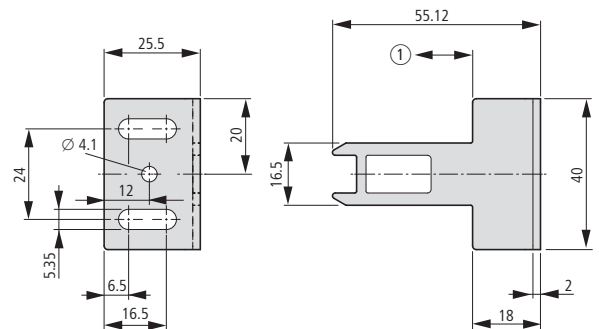
Fixing only allowed with M5 fixing screw and washer according to DIN EN ISO 7093

LS-XFG-ZBZ

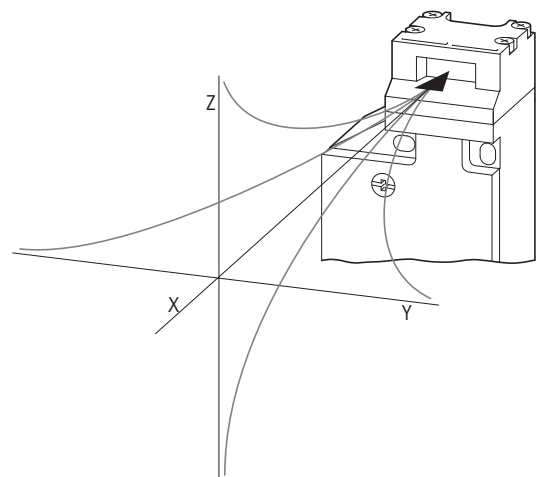


Part no.	R [mm]		
	F [N]	Z	Y
LS-XG-ZBZ	1700	350	350
LS-XW-ZBZ	1700	350	350
LS-XWA-ZBZ	1600	550	550
LS-XFG-ZBZ	1600	350	350
LS-XF-ZBZ	1600	350	350
LS-XNG-ZBZ	1700	350	350
LS-XNW-ZBZ	1200	150	250

LS-XWA-ZBZ



Pin with a 4 mm pin after mounting



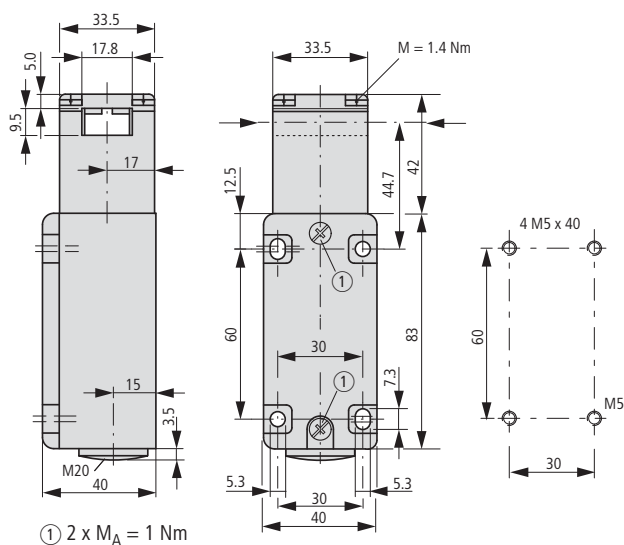
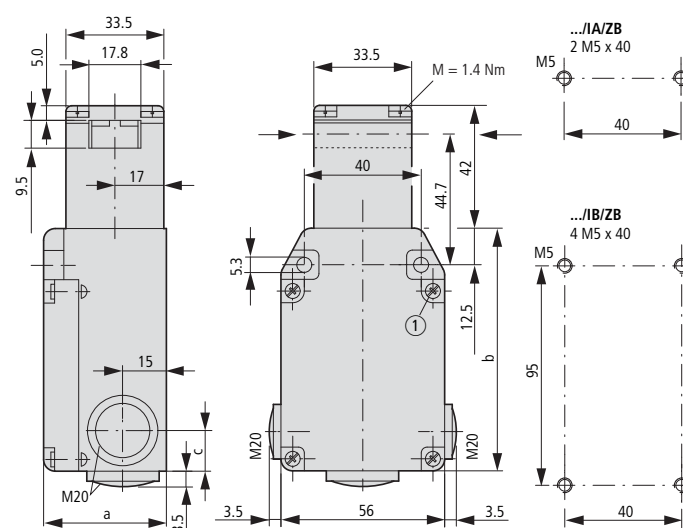
① Distance to unit head = 0.1 ... 3.0 mm

Safety position switches

LS4...ZB

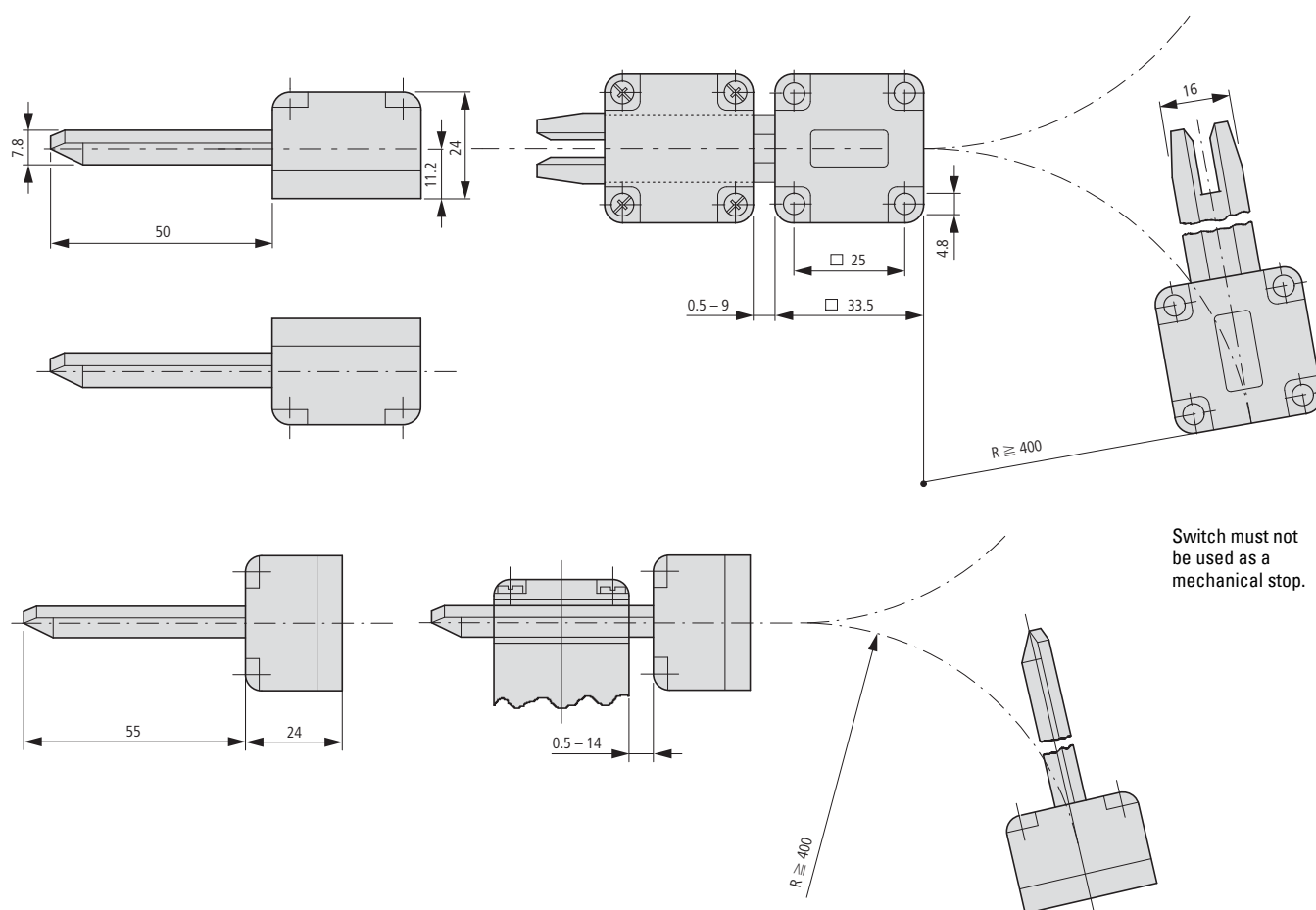
LS4/.../IA/ZB

LS4/.../IB/ZB


$$\textcircled{1} \quad 2 \times M_A = 1 \text{ Nm}$$

$$\textcircled{1} 4 \times M_A = 1 \text{ Nm}$$

	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.



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.

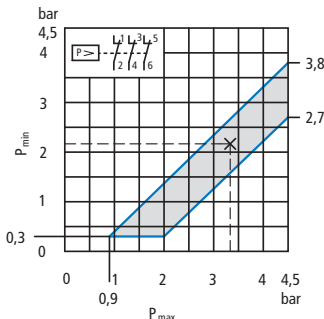
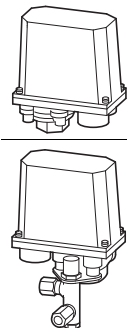
Price

See price
list

Std.
pack

Notes

Pressure switches with main contacts IP65, 3 pole



Min. switching differential: 0.6 bar
Example:
Cut-out pressure 3.3 bar
Cut-in pressure 2.2 bar

Variable
switching
differential

7

MCSN4
057679

With relief
valve
for 6 mm
compression
fitting

7

MCSN4-V
062425

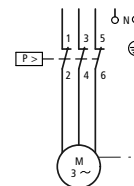
1 off

- Features:
- 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

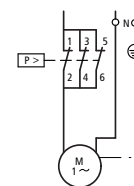
R 1/4" corresponds to G 1/4
R 1/2" corresponds to G 1/2 to ISO 228-1

For use as a motor load switch to
IEC/EN 60947-4-1 for:

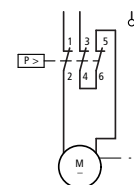
Three-phase current AC-3



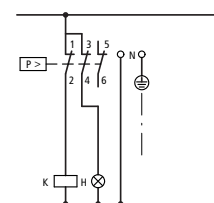
Single-phase current



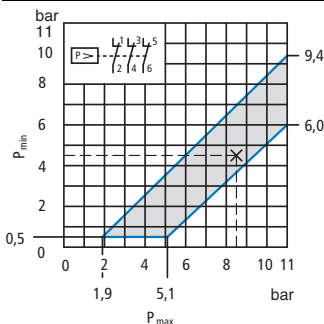
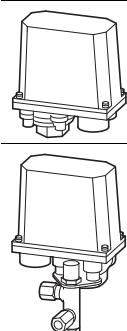
Direct current DC-3



For use as control switch:



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



Min. switching differential: 1.4 bar
Example:
Cut-out pressure 8.5 bar
Cut-in pressure 4.5 bar

Variable
switching
differential

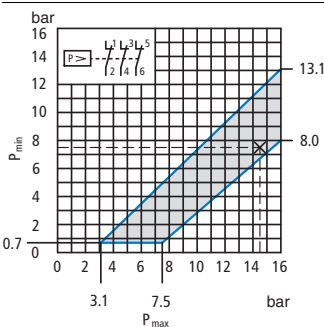
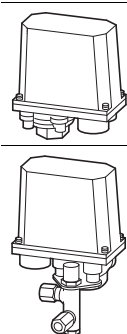
15

MCSN11
029203

With relief
valve
for 6 mm
compression
fitting

15

MCSN11-V
033949



Min. switching differential: 2.4 bar
Example:
Cut-out pressure 14.5 bar
Cut-in pressure 7.5 bar

Variable
switching
differential

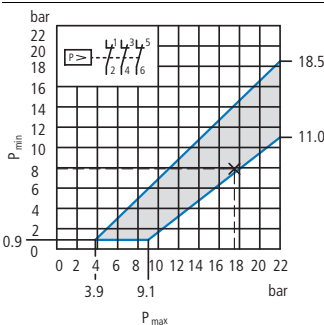
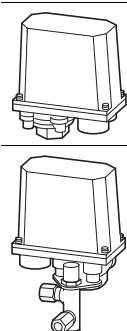
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MCSN16
038695

With relief
valve
for 6 mm
compression
fitting

25

MCSN16-V
043441



Min. switching differential: 3.0 bar
Example:
Cut-out pressure 17.5 bar
Cut-in pressure 7.8 bar

Variable
switching
differential

25

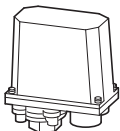
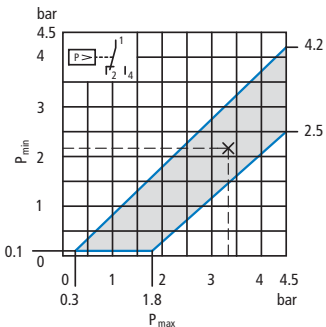
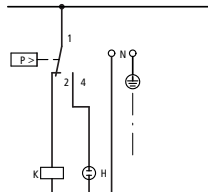
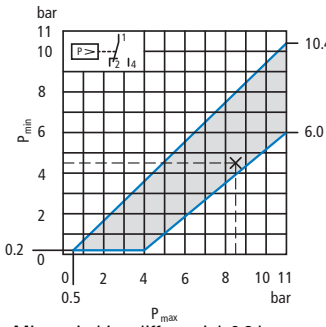
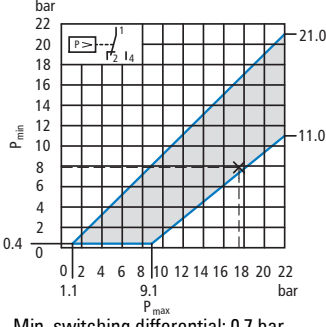
MCSN22
048187

With relief
valve
for 6 mm
compression
fitting

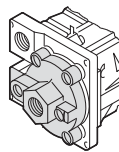
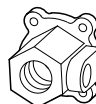
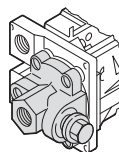
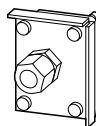
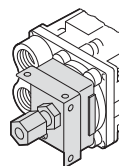
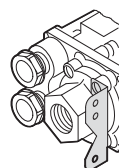
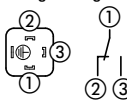
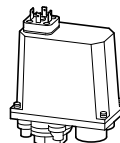
25

MCSN22-V
052933



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	Std. pack	Notes
Number	bar				See price list		
Pressure switch with auxiliary contacts, IP65							
							
1 changeover contact	7	 Min. switching differential: 0.2 bar Example: Cut-out pressure 3.3 bar Cut-in pressure 2.2 bar	MCS4 019711			1 off	 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 with gold-plated	7		MCS4-G¹⁾ 058693				
2 changeover contacts with gold-plated contacts	7		MCS4-SOND910-G¹⁾ 087792				
1 changeover contact	15	 Min. switching differential: 0.3 bar Example: Cut-out pressure 8.5 bar Cut-in pressure 4.5 bar	MCS11 088527				
1 changeover contact with gold-plated	15		MCS11-G¹⁾ 058692				
2 changeover contacts with gold-plated contacts	15		MCS11-SOND910-G¹⁾ 087793				
1 changeover contact	25	 Min. switching differential: 0.7 bar Example: Cut-out pressure 17.5 bar Cut-in pressure 7.8 bar	MCS22 098019				
1 changeover contact with gold-plated	25		MCS22-G¹⁾ 058691				
2 changeover contacts with gold-plated contacts	25		MCS22-SOND910-G¹⁾ 087794				

HPL03033EN

	For use with	Part no. Article no.	Price See price list	Std. pack	Notes	
Pressure pipe flange						
	MCS with R ½"	+R1/2"-MCS 001627		1 off	Order no. when ordering basic unit	
	MCS with R ½"	R1/2"-MCS 031617			Order no. when ordering separately	
	MCSN(-V) with R ¼"	+R1/4"-MCSN 001628			Order no. when ordering basic unit	
	MCSN(-V) with R ¼"	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

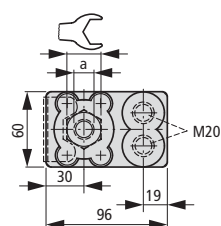
- Desired part no.: MCS4
 - Required cut-in pressure in bar: 2.2
 - Required cut-out pressure in bar: 3.3
- A maximum of one decimal place after the comma is possible with the pressure definition.
The correct part no. is:
MCS4 + **PMIN(2.2)/PMAx(3.3)**



Rating data for approved types to UL/CSA ¹⁾	Max. pressure	Rated insulation voltage to UL/CSA	Maximum motor rating HP = PS					Rated operational current	Part no. Article no.	Price See price list	Std. pack
	psi ²⁾		115 V HP	200 V HP	230 V HP	460 V HP	575 V HP	I _e A			
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		

Notes¹⁾ Devices for world markets IEC Δ UL/CSA²⁾ In North America, pressure is stated in pounds/inch (psi) (1 bar = 14.5 psi)³⁾ Heavy Pilot Duty = High switching duty⁴⁾ Selection data and application notes $\rightarrow$ 3/32**Dimensions****Pressure switches**

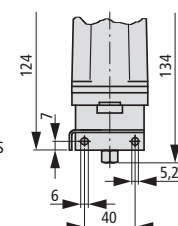
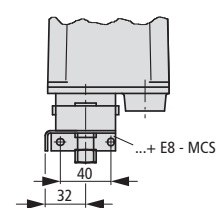
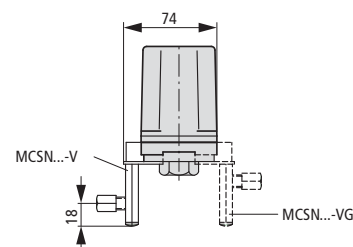
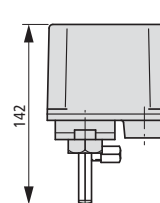
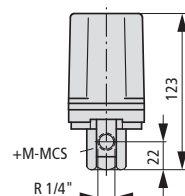
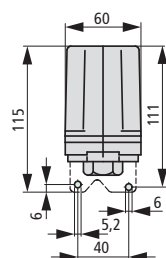
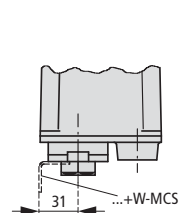
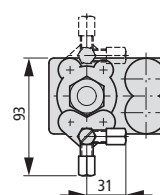
MCS..., MCSN...



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					
Terminal screw			Tunnel-type screw terminal M3	Tunnel-type screw terminal M3	Flat terminal with clamping washer 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-DB 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-DB 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-D1DB 135873		
		8	Non-flush	—	plug connector M12 x 1	1 N/O	Metal	E57-12GE08-DB 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		
	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-DB 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-DB 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-D1DB 135919		
		16	Non-flush	—	plug connector M12 x 1	1 N/O	Metal	E57-18GE16-DB 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-DDB 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-DDB 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-DDB 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	E57-08GE03-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 CEN
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		

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

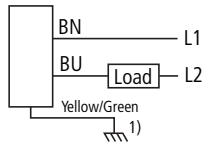
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224447
4652-84
CSA certified
250 V AC, 30 V DC
IEC: IP67; UL/CSA Type: -

Engineering



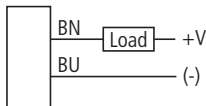
Circuit diagram

E57...-A

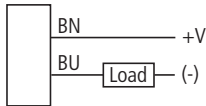


1) Internally connected to enclosure (wiring optional)

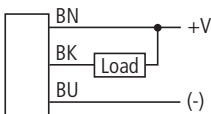
E57...-D
E57...-D1



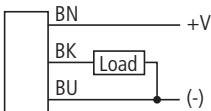
E57...-D
E57...-D1



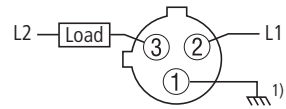
E57...-C



E57...-G

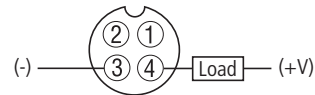


E57...-AAB

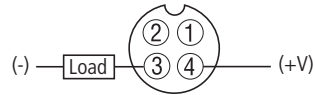


1) Internally connected to enclosure (wiring optional)

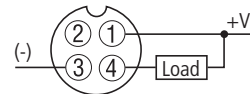
E57...-DDB
E57...-D1DB



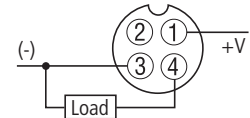
E57...-DDB
E57...-D1DB



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



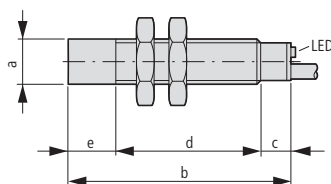
			E57-...(3-wire)				
			E57-08...	E57-12... E57-12GE...	E57-12GS...	E57-12GU...	E57-18... E57-18GE...
General							
Standards			IEC/EN 60947-5-2				
Ambient temperature		°C	-0 - +60	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type			IP67	IP67	IP67	IP67	IP67
Mechanical shock resistance		g	30 Shock 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...	
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

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

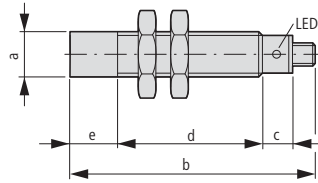
Dimensions

2 m connection cable



		a	b	c	d	e
2-wire						
20-250 V AC	E57-12GS02-A	M12x1	65	15	50	—
	E57-12GU04-A	M12x1	60	15	42	8
	E57-18GS05-A	M18x1	80	20	60	—
	E57-18GU08-A	M18x1	80	20	48	12
	E57-30GS10-A	M30	80	20	60	—
	E57-30GU15-A	M30	80	20	45	15
10-30 V DC	E57-12GS02-D	M12x1	50	—	50	—
	E57-12GU04-D	M12x1	50	—	42	8
	E57-12GU04-D1	M12x1	50	—	42	8
	E57-12GE08-D	M12x1	50	—	42	8
	E57-12GE08-D1	M12x1	50	—	42	8
	E57-18GS05-D	M18x1	55	5	50	—
	E57-18GU08-D	M18x1	55	5	38	12
	E57-18GE16-D	M18x1	55	5	38	12
	E57-18GE16-D1	M18x1	55	5	38	12
	E57-30GS10-D	M30	55	5	50	—
	E57-30GU15-D	M30	55	5	35	15
	E57-30GE25-D	M30	55	5	35	15
	E57-30GE25-D1	M30	55	5	35	15

		a	b	c	d	e
3-wire						
10-30 V DC	E57-08GE03-C	M8x1	46	6	40	—
	E57-08GE06-C	M8x1	46	1	41	4
	E57-08GE03-G	M8x1	46	6	40	—
	E57-08GE06-G	M8x1	46	1	41	4
	E57-08GS01-C	M8x1	45	—	45	—
	E57-08GS01-G	M8x1	45	—	45	—
	E57-08GU02-C	M8x1	45	—	41	4
	E57-08GU02-G	M8x1	45	—	41	4
	E57-12GE05-C	M12x1	51	2	49	—
	E57-12GE05-G	M12x1	51	2	49	—
	E57-12GE10-C	M12x1	50.5	1.7	41	7.8
	E57-12GE10-G	M12x1	50.5	1.7	41	7.8
	E57-12GS02-C	M12x1	50	—	50	—
	E57-12GS02-G	M12x1	50	—	50	—
	E57-12GU04-C	M12x1	50	—	42	8
	E57-12GU04-G	M12x1	50	—	42	8
	E57-18GE08-C	M18x1	67.5	2.5	65	—
	E57-18GE08-G	M18x1	65.5	2.5	65	—
	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	E57LAL12A2 ¹⁾ 135995		1 off  
			Flush	—	plug connector M12 x 1	1 N/O		E57LAL12A2SA ¹⁾ 135998		
			Flush	—	2 m connection cable	1 NC		E57LBL12A2 ¹⁾ 136030		
			Flush	—	plug connector M12 x 1	1 NC		E57LBL12A2SA ¹⁾ 136033		
		4	Non-flush	—	2 m connection cable	1 N/O		E57LAL12A2E ¹⁾ 135996		
			Non-flush	—	plug connector M12 x 1	1 N/O		E57LAL12A2EA ¹⁾ 135997		
			Non-flush	—	2 m connection cable	1 NC		E57LBL12A2E ¹⁾ 136031		
			Non-flush	—	plug connector M12 x 1	1 NC		E57LBL12A2EA ¹⁾ 136032		
M18 x 1										
	20 - 250 V AC	5	Flush	—	2 m connection cable	1 N/O	Stainless steel	E57LAL18A2 ¹⁾ 136007		
			Flush	—	2 m connection cable	1 NC		E57LBL18A2 ¹⁾ 136042		
			Flush	—	M12 plug connector x 1	1 NC		E57LBL18A2SA ¹⁾ 136045		
	20 - 250 V AC	5	Flush	—	2 m connection cable	1 N/O		E57RAL18A2 ²⁾ 136066		
		5	Flush	—	2 m connection cable	1 NC		E57RBL18A2 ²⁾ 136078		
		8	Non-flush	—	2 m connection cable	1 N/O		E57RAL18A2E ²⁾ 136067		
		8	Non-flush	—	2 m connection cable	1 NC		E57RBL18A2E ²⁾ 136079		
	20 - 250 V AC	8	Non-flush	—	2 m connection cable	1 N/O		E57LAL18A2E ¹⁾ 136008		
			Non-flush	—	plug connector M12 x 1	1 N/O		E57LAL18A2EA ¹⁾ 136009		
			Non-flush	—	2 m connection cable	1 NC		E57LBL18A2E ¹⁾ 136043		
			Non-flush	—	plug connector M12 x 1	1 NC		E57LBL18A2EA ¹⁾ 136044		
	20 - 250 V AC	5	Flush	—	plug connector M12 x 1	1 N/O		E57RAL18A2SA ²⁾ 136069		
		5	Flush	—	plug connector M12 x 1	1 NC		E57RBL18A2SA ²⁾ 136081		
		8	Non-flush	—	plug connector M12 x 1	1 N/O		E57RAL18A2EA ²⁾ 136068		
		8	Non-flush	—	plug connector M12 x 1	1 NC		E57RBL18A2EA ²⁾ 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
- 2) Product Standards
UL File No.
UL CCN
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: -
- 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							
		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



- 1) Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection
- 2) 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: -
- 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: -

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		E57RAL18T111 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	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	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



- ¹⁾ Product Standards
UL File No.
UL CCN
NA Certification
Max. Voltage Rating
Degree of Protection

- ²⁾ Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL Listed
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -

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: -



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



¹⁾ Product Standards
UL File No.
UL CCN
NA Certification
Max. Voltage Rating
Degree of Protection

²⁾ Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

UL 508; IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL Listed
48 V DC
IEC: IP67, IP69K; UL/CSA Type: -

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: -

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		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		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		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		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



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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		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		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		
			Flush	PNP	2 m connection cable	1 NC		E57SBL12T111 136148		
			Flush	PNP	plug connector M12 x 1	1 NC		E57SBL12T111SD 136151		
		4	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 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, 250 V DC
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 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, 250 V DC
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  
			Flush	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		
			Non-flush	NPN	2 m connection cable	1 NC		E57SBL30T110E 136177		
			Non-flush	NPN	plug connector M12 x 1	1 N/O		E57SAL30T110ED 136132		
			Non-flush	PNP	2 m connection cable	1 N/O		E57SAL30T111E 136135		
			Non-flush	PNP	plug connector M12 x 1	1 N/O		E57SAL30T111ED 136136		
			Non-flush	NPN	plug connector M12 x 1	1 NC		E57SBL30T110ED 136178		
			Non-flush	PNP	2 m connection cable	1 NC		E57SBL30T111E 136181		
			Non-flush	PNP	plug connector M12 x 1	1 NC		E57SBL30T111ED 136182		

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
50513
3211-03
UL Listed, CSA certified
250 V AC, 250 V DC
IEC: IP67, IP69K; UL/CSA Type: -

Engineering

Circuit diagram	Contacts	2 m connection cable	M12 plug connector (front view plug)
Rated operating voltage 2-wire sensors 20–250 V AC/DC and AC-only Example AC connection	N/O and NC		
20–250 V AC/DC Example DC connection	N/O and NC (NPN)		
	N/O and NC (PNP)		
3-wire sensors 6–48 V DC	N/O (NPN)		
	N/O (PNP)		
	NC (NPN)		
	NC (PNP)		



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					

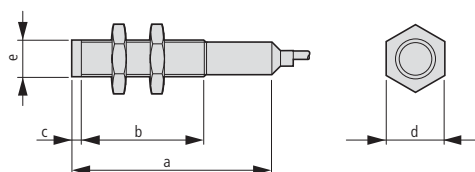
		E57-L...L30A	E57-L...L30T	E57-S...L30A	E57-S...L30T
General					
Standards		IEC/EN 60947-5-2	IEC/EN 60947-5-2	IEC/EN 60947-5-2	IEC/EN 60947-5-2
Ambient temperature	°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type		IP67	IP67	IP67	IP67
Mechanical shock resistance	g	30 Shock duration 11 ms	30 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

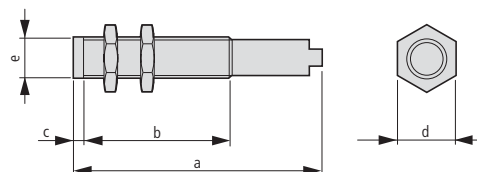
Further technical data can be found in the Online Catalogue at www.moeller.net

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

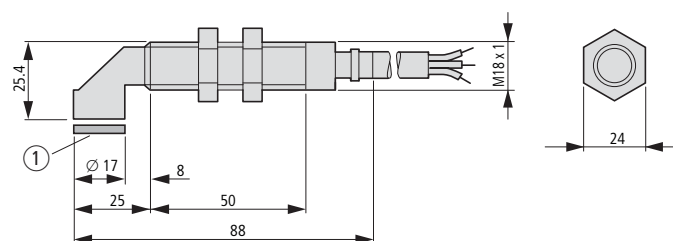
3-wire, 2 m connection cable

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

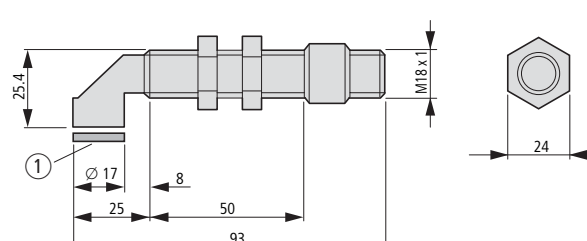
12 mm	Flush	68.7	50.3	-	16.8	M12x1
	Non-flush	77.7	50.3	9.14	16.8	M12x1
18 mm	Flush	69.3	50.9	-	23.8	M18x1
	Non-flush	69.4	37.2	14.1	23.8	M18x1
30 mm	Flush	74.1	50.3	-	35.9	M30x1.5
	Non-flush	74.1	37.8	13.26	35.9	M30x1.5

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

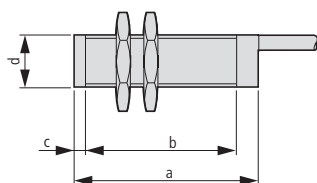


① Sensor surface

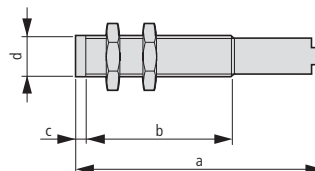
E57R...SA
E57R...EA
E57R...SD
E57R...ED



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 opera- tional voltage	Rated switching distance S _n mm	Installa- tion type	Switch- ing 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 PNP	2 m connection cable	1 N/O	Stainless steel	E59-M12A105C02-D1 136205		1 off  
			Flush	NPN PNP	2 m connection cable	1 NC	Stainless steel	E59-M12A105C02-D2 136206		
			Flush	NPN PNP	plug connector M12 x 1	1 N/O	Stainless steel	E59-M12A105D01-D1 136207		
			Flush	NPN PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M12A105D01-D2 136208		
	6 - 48 V DC	10	Non- flush	NPN PNP	2 m connection cable	1 N/O	Stainless steel	E59-M12C110C02-D1 136209		
			Non- flush	NPN PNP	2 m connection cable	1 NC	Stainless steel	E59-M12C110C02-D2 136210		
			Non- flush	NPN PNP	plug connector M12 x 1	1 N/O	Stainless steel	E59-M12C110D01-D1 136211		
			Non- flush	NPN PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M12C110D01-D2 136212		
M18 x 1										
	6 - 48 V DC	8	Flush	NPN PNP	2 m connection cable	1 N/O	Stainless steel	E59-M18A108C02-D1 136213		1 off  
			Flush	NPN PNP	2 m connection cable	1 NC	Stainless steel	E59-M18A108C02-D2 136214		
			Flush	NPN PNP	plug connector M12 x 1	1 N/O	Stainless steel	E59-M18A108D01-D1 136215		
			Flush	NPN PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M18A108D01-D2 136216		
		18	Non- flush	NPN PNP	2 m connection cable	1 N/O	Stainless steel	E59-M18C116C02-D1 136217		1 off  
			Non- flush	NPN PNP	2 m connection cable	1 NC	Stainless steel	E59-M18C116C02-D2 136218		
			Non- flush	NPN PNP	plug connector M12 x 1	1 N/O	Stainless steel	E59-M18C116D01-D1 136219		
			Non- flush	NPN 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 PNP	2 m connection cable	1 N/O	Stainless steel	E59-M30A115C02-D1 136221		1 off  
			Flush	NPN PNP	2 m connection cable	1 NC	Stainless steel	E59-M30A115C02-D2 136222		
			Flush	NPN PNP	plug connector M12 x 1	1 N/O	Stainless steel	E59-M30A115D01-D1 136223		
			Flush	NPN PNP	plug connector M12 x 1	1 NC	Stainless steel	E59-M30A115D01-D2 136224		
		29	Non- flush	NPN PNP	2 m connection cable	1 N/O	Stainless steel	E59-M30C129C02-D1 136225		
			Non- flush	NPN PNP	2 m connection cable	1 NC	Stainless steel	E59-M30C129C02-D2 136226		
			Non- flush	NPN PNP	plug connector M12 x 1	1 N/O	Stainless steel	E59-M30C129D01-D1 136227		
			Non- flush	NPN 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 File No.
UL CCN
CSA File No.

UL 508; CSA-C22.2 No. 14;
IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
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

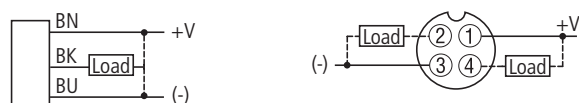
			E59-M12A105	E59-M18A108	E59-M12C110	E59-M30A115	E59-M18C116	E59-M30C129
General								
Standards			IEC/EN 60947-5-2					
Ambient temperature		°C	-40 - +70					
Protection type			IP67	IP69K	IP67	IP69K	IP69K	IP69K
Mechanical shock resistance			30 Shock duration 11 ms					
Characteristic values								
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

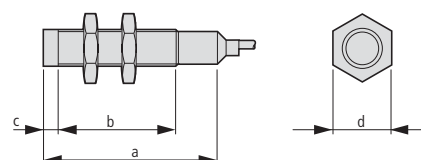
Circuit diagram

59...C02-D1
E59...C02-D2E59...D01-D1
E59...D01-D2

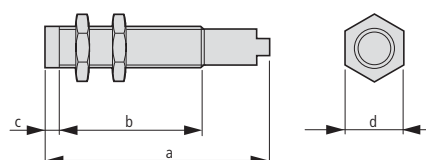
Pins 2 and 4 internally interconnected.

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										
	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

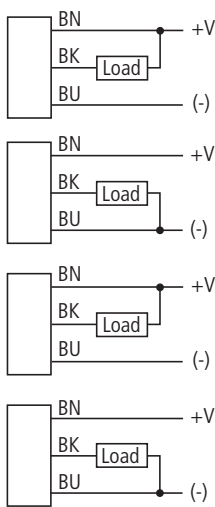
N/O (NPN)

N/O (PNP)

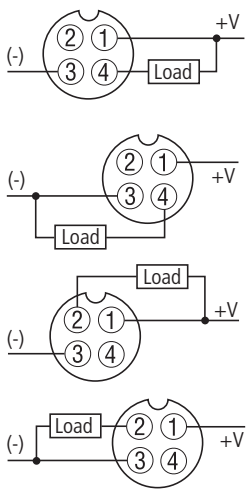
NC (NPN)

NC (PNP)

2 m connection cable

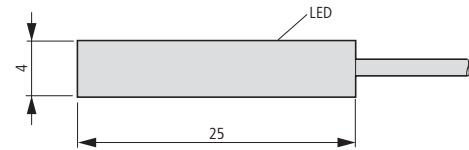


M12 plug connector (front view plug)

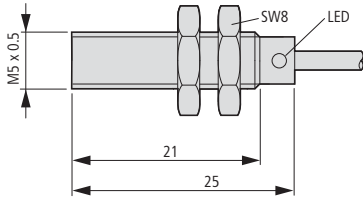


Dimensions

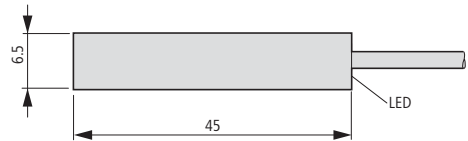
E57EAL4T...



E57EAL5T...

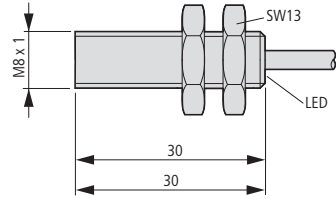


E57EAL6T...



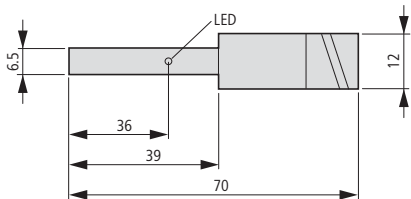
E57...8T...SP

E57...8T...EP

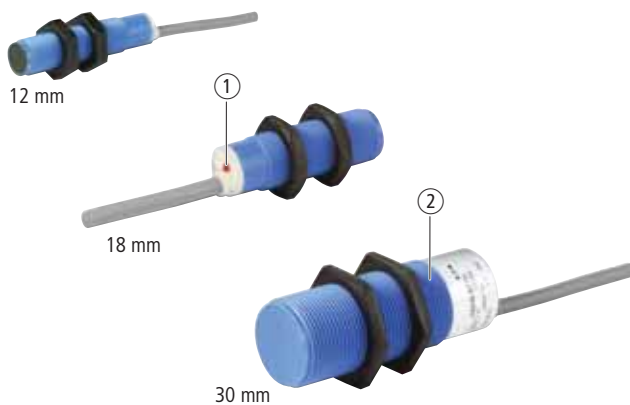


E57...8T...SD

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.

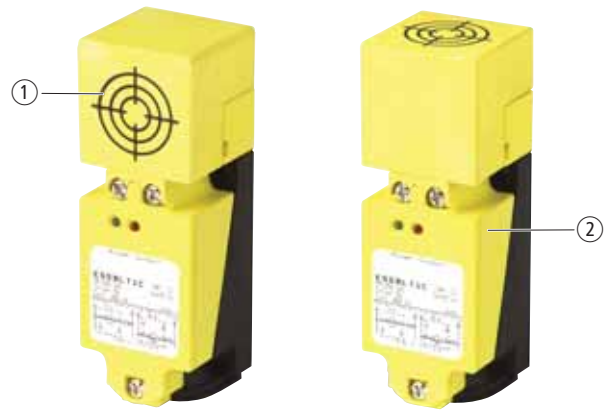
Approvals



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

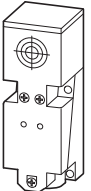
- Nonmetallic enclosure offers excellent resistance to corrosion.
- Same form factor and mounting as standard limit switches for easy retrofit.
- Sensor head features five sensing positions (top and all four sides) that can be easily changed in the field.
- Long sensing ranges up to 40 mm.

HPL03067EN

	Design (outer dimensions)	Rated operational voltage	Rated switching distance	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact P = Normally closed contact/ Normally open closed pro- grammable	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	1 N/O	plastic	E55CAL12A2 135816		1 off
			2	Flush	—		1 NC		E55CBL12A2 135834		
			4	Non- flush	—		1 N/O		E55CAL12A2E 135817		
			4	Non- flush	—		1 NC		E55CBL12A2E 135835		
	M18 x 1		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	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	1 N/O	plastic	E55CAL12T110 135818		1 off
			2	Flush	PNP		1 N/O		E55CAL12T111 135820		
			2	Flush	PNP		1 NC		E55CBL12T111 135837		
			4	Non- flush	NPN		1 N/O		E55CAL12T110E 135819		
			4	Non- flush	PNP		1 N/O		E55CAL12T111E 135821		
			4	Non- flush	NPN		1 NC		E55CBL12T110E 135836		
			4	Non- flush	PNP		1 NC		E55CBL12T111E 135838		
				M18 x 1	5		Flush		NPN		
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	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact P = Normally closed contact/ Normally open closed pro- grammable	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	1 N/O	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	1 P	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				

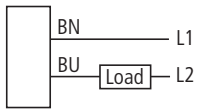
			E55C...L18T...E	E55C...L30T	E55C...L30A	E55C...L30T...E	E55BLT...
General							
Standards			IEC/EN 60947-5-2				
Ambient temperature		°C	-25 - +70	-25 - +70	-25 - +70	-25 - +70	-25 - +70
Protection type			IP66	IP66	IP66	IP66	IP67
Mechanical shock resistance		g	30 Shock duration 11 ms				
Characteristic 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

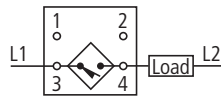
Further technical data can be found in the Online Catalogue at www.moeller.net

Engineering

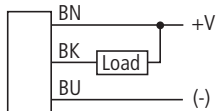
E55CAL...AZ, E55CBL...A2
E55CAL...A2E, E55CBL...A2E



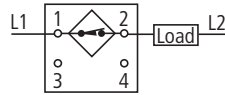
E55BL...



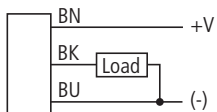
E55CAL...110, E55CBL...110
E55CAL...110E, E55CBL...110E



E55BL...



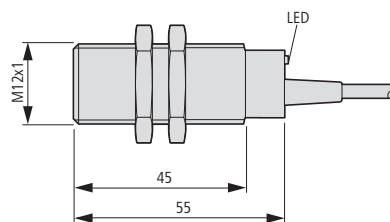
E55CAL...111, E55CBL...111E
E55CAL...111, E55CBL...111E

**Note:**

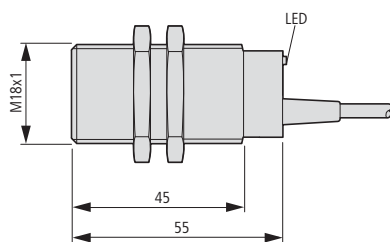
Switches are supplied configured as N/O. Can be switched internally to NC.

Dimensions

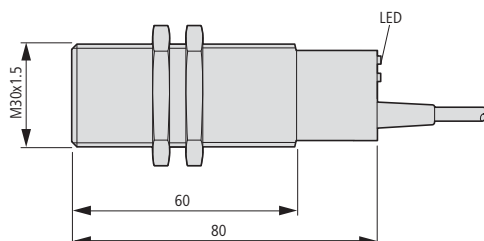
E55CAL12...
E55CBL12...



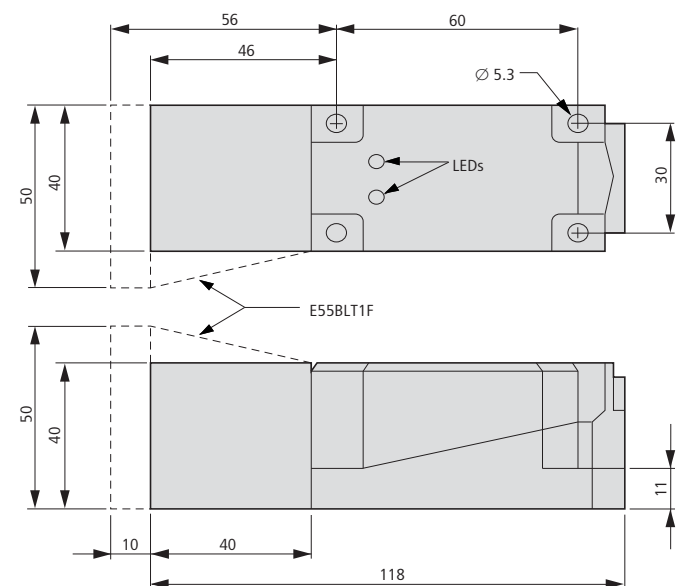
E55CAL18...
E55CBL18...



E55CAL30...
E55CBL30...



E55BL...



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		

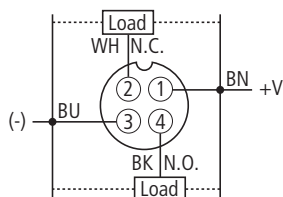
Information relevant for export to North America



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

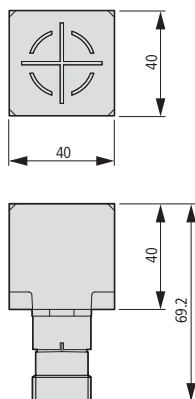
Engineering

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

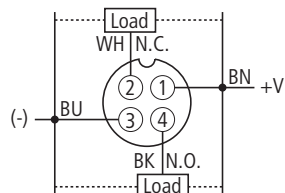
	Function	Design (outer dimensions)	Rated operational voltage	Rated switching distance	Installation type	Switching type	Connection option	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack	
				S _n mm									
E56 Series													
	4-wire	79 x 79 x 39	6 - 48 V DC	40	Flush	NPN PNP	plug connectors	1 NC/1 N/O	plastic	E56ADL40SAD01 136234		1 off	
		79 x 79 x 39		50	Non-flush	NPN PNP		1 NC/1 N/O		E56ADL40UAD01 136235			
		109 x 110 x 41		70	Non-flush	NPN PNP		1 NC/1 N/O		E56BDL70UAD01 136236			
		171.5 x 171.5 x 67.4		100	Non-flush	NPN PNP		1 NC/1 N/O		E56CDL100UAD01 136237			

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

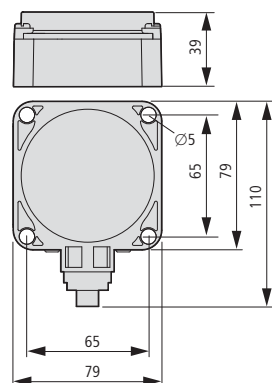
Engineering



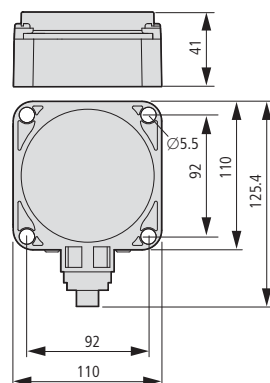
Through autoconfiguration connectable to both +V or (-).

Dimensions

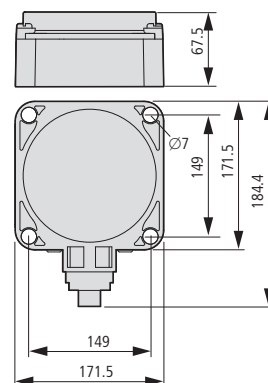
E56ADL40...



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.



- ① With mounting bracket.

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.

Approvals



Ordering



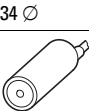
	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
E53 Series										
2-wire										
M18 x 1										
	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		
		15	Non-flush	–	2 m connection cable	1 N/O		E53KAL18A2E 134518		
			Non-flush	–	plug connector M12 x 1	1 N/O		E53KAL18A2EA 134519		
			Non-flush	–	2 m connection cable	1 NC		E53KBL18A2E 134792		
			Non-flush	–	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		
		25	Non-flush	–	2 m connection cable	1 N/O		E53KAL30A2E 134770		
			Non-flush	–	plug connector M12 x 1	1 N/O		E53KAL30A2EA 134771		
			Non-flush	–	2 m connection cable	1 NC		E53KBL30A2E 134804		
			Non-flush	–	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		

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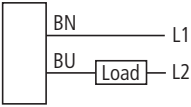
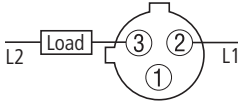
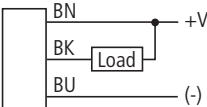
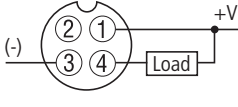
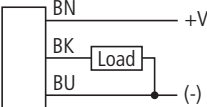
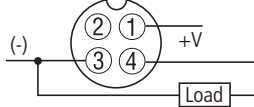
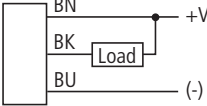
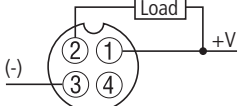
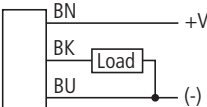
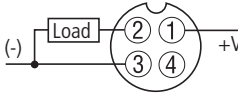
	Rated operational voltage	Rated switching distance S _n mm	Installation type	Switching type	Connection options	Contact configuration NC = Normally closed contact N/O = Normally open contact	Material	Part no. Article no.	Price See price list	Std. pack
3-wire										
M18 x 1										
	10 - 30 V DC	15	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		E53KAL30T110E 134774		
			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										
	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										
	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		°C	-25 - +70	-25 - +70
Protection type			IP65	IP65
Mechanical shock resistance		g	30 Shock duration 11 ms	
Characteristic values				
Repetition accuracy of S_n		%	10	10
Temperature drift of S_n		%	10	10
Switching hysteresis of S_n		%	20	20
Rated operating voltage			20 - 250 V AC	10 - 30 V DC
Residual ripple of U_e		%	10	10
Rated operational current	I_e	mA	300	300
Voltage drop at I_e	U_d	V	9	2
Switching frequency		Hz	15	250
Min. load current	I_e	mA	5	5
Switching state indication		LED	Red	Red
Function			2-wire	3-wire
Material			plastic	plastic

Notes

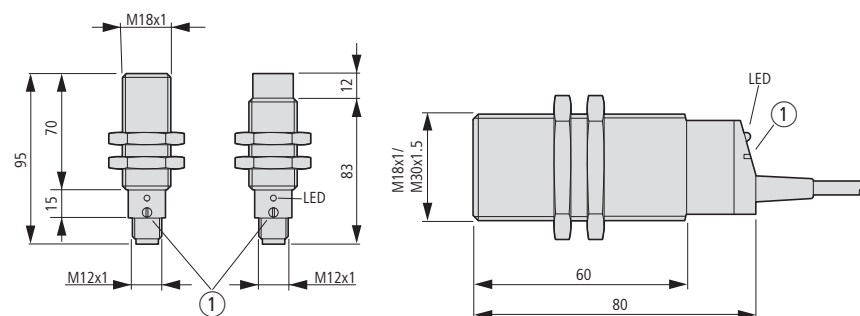
Further technical data can be found in the Online Catalogue at www.moeller.net

Dimensions



E53KAL18...

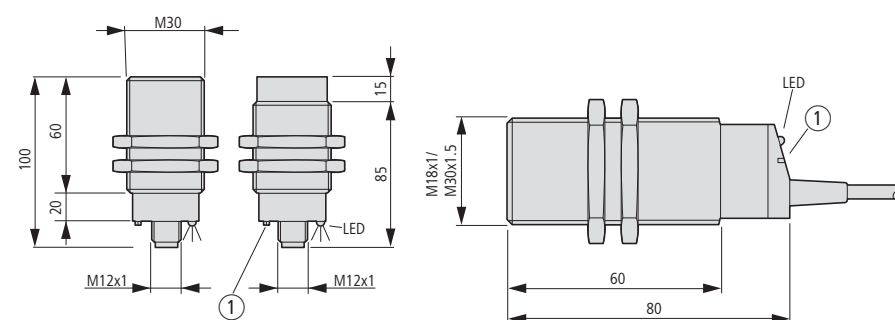
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① Sensitivity setting

E53KAL30...

E53KBL30...

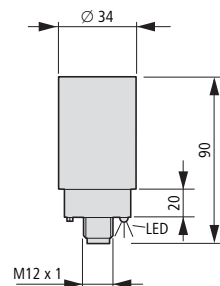


① Sensitivity setting

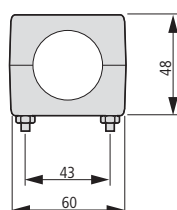
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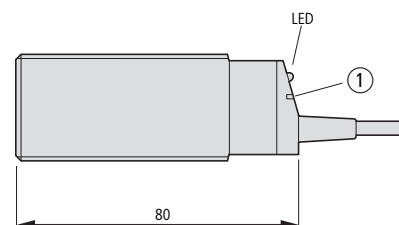
M12 plug connector



Fixing bracket (included as standard)

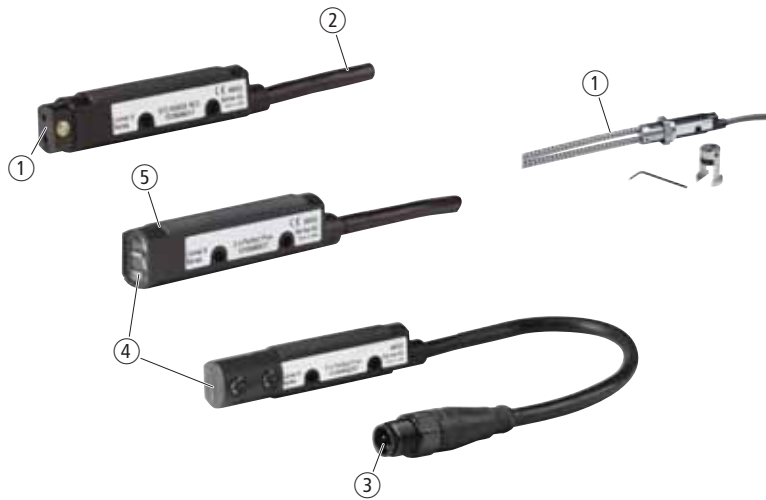


2 m connection cable



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 photo-electric 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		
				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		
			2 m connection cable	13105A6513 135614					
			plug connector M12 x 1	13105AQD03 135616					
			100	2 m connection cable		Infrared	13101A6513 135586		
			100	plug connector M12 x 1			13101AQD03 135588		
			150	2 m connection cable	—		13107AS6513 135626		
				plug connector M12 x 1			13107ASQD03 135628		
				2 m connection cable	With background suppression (Perfect Prox)		13108A6513 135634		
				plug connector M12 x 1			13108AQD03 135636		
			200	2 m connection cable	—		13106A6513 135618		
			200	plug connector M12 x 1			13106AQD03 135620		
			225	2 m connection cable	With background suppression (Perfect Prox)		13103A6513 135594		
			225	plug connector M12 x 1			13103AQD03 135596		
			610	2 m connection cable	—		13100A6513 135578		
			610	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			13104RS5003 135610		
			100	2 m connection cable			13104RS5013 135612		
			150	2 m connection cable	—	Infrared	13107RS6513 135630		
				plug connector M12 x 1			13107RSQD03 135632		
				2 m connection cable	With background suppression (Perfect Prox)		13108R6513 135638		
				plug connector M12 x 1			13108RQD03 135640		
			200	2 m connection cable	—		13106R6513 135622		
			200	plug connector M12 x 1			13106RQD03 135624		
			225	2 m connection cable	With background suppression (Perfect Prox)		13103R6513 135598		
			225	plug connector M12 x 1			13103RQD03 135600		
			610	2 m connection cable	—		13100R6513 135582		
			610	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									
	10 - 30 V DC	NPN PNP	6000	2 m connection cable	–	Visible red	12100A6517¹⁾ 135567		1 off  
			6000	plug connector M12 x 1			12100AQD07¹⁾ 135569		
			24000	2 m connection cable			12102A6517¹⁾ 135575		
			24000	plug connector M12 x 1			12102AQD07¹⁾ 135577		
	10 - 30 V DC	NPN PNP	6000	2 m connection cable	–	Visible red	11100A6517¹⁾ 135555		1 off  
			6000	plug connector M12 x 1			11100AQD07¹⁾ 135557		
			24000	2 m connection cable			11102A6517¹⁾ 135563		
			24000	plug connector M12 x 1			11102AQD07¹⁾ 135565		
	10 - 30 V DC	NPN PNP	6000	2 m connection cable	–	Visible red	12100R6517¹⁾ 135571		1 off  
			6000	plug connector M12 x 1			12100RQD07¹⁾ 135573		
	10 - 30 V DC	NPN PNP	6000	2 m connection cable	–	Visible red	11100R6517¹⁾ 135559		1 off  
			6000	plug connector M12 x 1			11100RQD07¹⁾ 135561		
	10 - 30 V DC	NPN PNP	3000	2 m connection cable	For combination with reflector with polarisation filter	Visible red	14101R6517¹⁾ 135651		1 off  
			3000	plug connector M12 x 1			14101RQD07¹⁾ 135653		
			4500	2 m connection cable	For combination with reflector		14102R6517¹⁾ 135659		
			4500	plug connector M12 x 1			14102RQD07¹⁾ 135661		
	10 - 30 V DC	NPN PNP	4500	2 m connection cable	For combination with reflector with polarisation filter	Visible red	14101A6517¹⁾ 135647		1 off  
			4500	plug connector M12 x 1			14101AQD07¹⁾ 135649		
			7600	2 m connection cable	For combination with reflector	Infrared	14100A6517¹⁾ 135643		
				plug connector M12 x 1			14100AQD07¹⁾ 135645		
				2 m connection cable		Visible red	14102A6517¹⁾ 135655		
				plug connector M12 x 1			14102AQD07¹⁾ 135657		
	10 - 30 V DC	NPN PNP	40	2 m connection cable	–	Visible red	13102A6517¹⁾ 135591		1 off  
			40	plug connector M12 x 1			13102AQD07¹⁾ 135593		

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: -

HPL03087EN

	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		
			2 m connection cable	13104AQD07 ¹⁾					
				plug connector M12 x 1	135605				
			100	2 m connection cable	Infrared	13105A6517 ¹⁾			
				plug connector M12 x 1		135615			
			100	2 m connection cable	13105AQD07 ¹⁾				
				plug connector M12 x 1	135617				
			150	2 m connection cable	–	13101A6517 ¹⁾			
				plug connector M12 x 1		135587			
			200	2 m connection cable	With background suppression (Perfect Prox)	13101AQD07 ¹⁾			
				plug connector M12 x 1		135589			
			200	2 m connection cable	–	13107AS6517 ¹⁾			
				plug connector M12 x 1		135627			
			225	2 m connection cable	With background suppression (Perfect Prox)	13107ASQD07 ¹⁾			
				plug connector M12 x 1		135629			
225	2 m connection cable	–	13108A6517 ¹⁾						
	plug connector M12 x 1		135635						
610	2 m connection cable	With background suppression (Perfect Prox)	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	With background suppression (Perfect Prox)	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	With background suppression (Perfect Prox)	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	With background suppression (Perfect Prox)	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	plug connector M12 x 1	Infrared	13104RQD07			
				2 m connection cable		135609			
			150	plug connector M12 x 1	–	13104RS5007			
				2 m connection cable		135611			
			200	plug connector M12 x 1	With background suppression (Perfect Prox)	13104RS5020			
				2 m connection cable		135613			
			200	plug connector M12 x 1	–	13107RS6517			
				2 m connection cable		135631			
			225	plug connector M12 x 1	With background suppression (Perfect Prox)	13107RSQD07			
				2 m connection cable		135633			
			225	plug connector M12 x 1	–	13108R6517			
				2 m connection cable		135639			
			610	plug connector M12 x 1	With background suppression (Perfect Prox)	13108RQD07			
				2 m connection cable		135641			
610	plug connector M12 x 1	–	13106R6517						
	2 m connection cable		135623						
610	plug connector M12 x 1	With background suppression (Perfect Prox)	13106RQD07						
	2 m connection cable		135625						
610	plug connector M12 x 1	–	13103R6517						
	2 m connection cable		135599						
610	plug connector M12 x 1	With background suppression (Perfect Prox)	13103RQD07						
	2 m connection cable		135601						
610	plug connector M12 x 1	–	13100R6517						
	2 m connection cable		135583						
610	plug connector M12 x 1	With background suppression (Perfect Prox)	13100RQD07						
	2 m connection cable		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	6235A-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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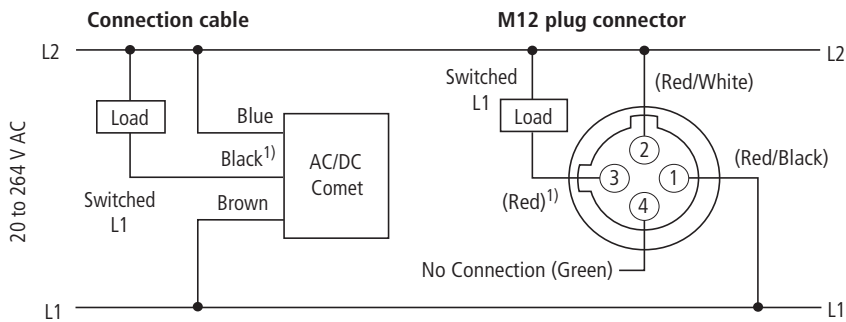
	Design (outer dimensions)	Material	Part no. Article no.	Price See price list	Std. pack
	3.2 Ø x 914	Stainless steel	E51KF823 135799		1 off
	3.2 Ø x 914	PVC	E51KF423 135777		1 off
	0.5 x 3.9 Ø x 914	PVC	E51KF293 135769		1 off
	3.2 Ø x 914	Stainless steel	E51KF813 135798		1 off
	3.2 Ø x 914	PVC	E51KF413 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



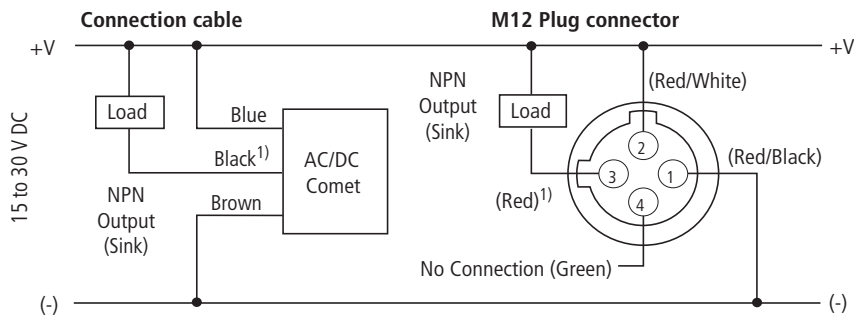
Engineering

Circuit diagram

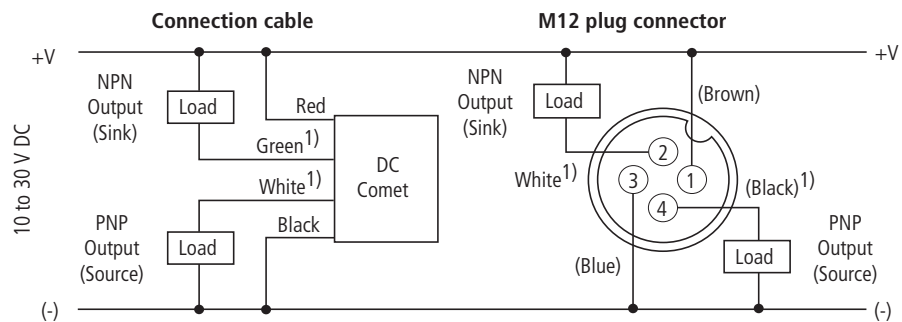
AC/DC connection (AC units)



AC/DC connection (DC units)



DC connection (DC units)

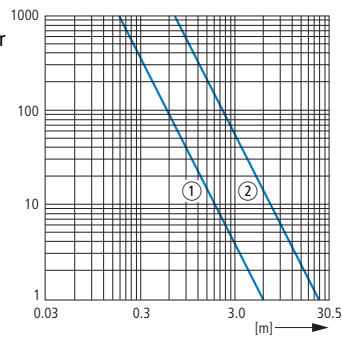


Note: AC/DC sensors have AC plug connectors. Take into account when using with DC voltage.

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)

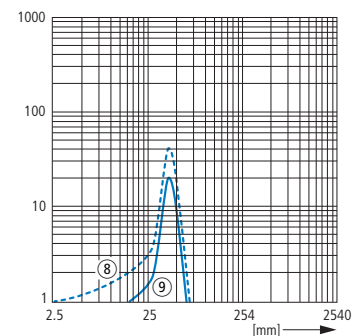
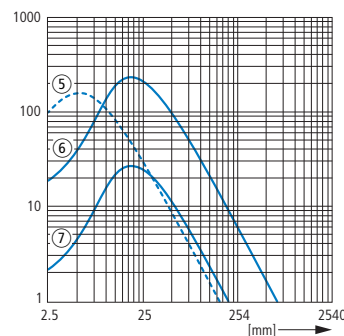
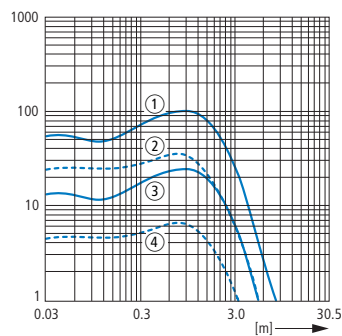
- ① 14100A/14102A
② 14102R
③ 14101A
④ 14101R

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

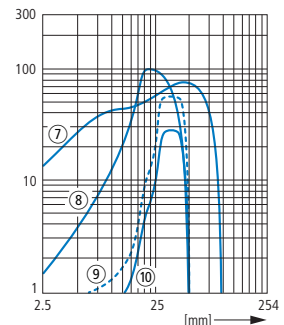
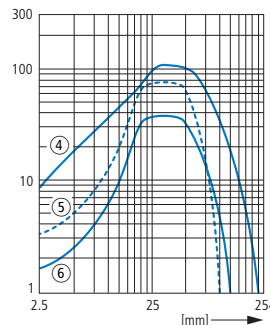
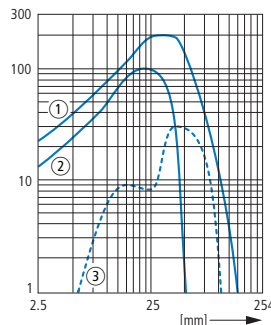


Perfect Prox®

- ① 13108A/13108R
② 13104A
③ 14104RS

- ④ 13103A/13103R
⑤ 13101A typ.
⑥ 13101A minimum

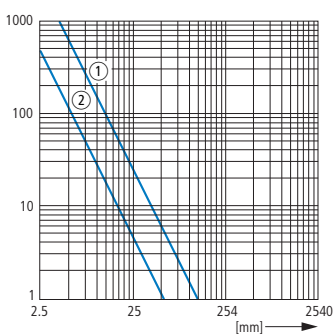
- ⑦ 13101AS
⑧ 13104R
⑨ 13105A typ.
⑩ 13105A minimum



Thru-beam sensor

With single F0 cable E51KF823

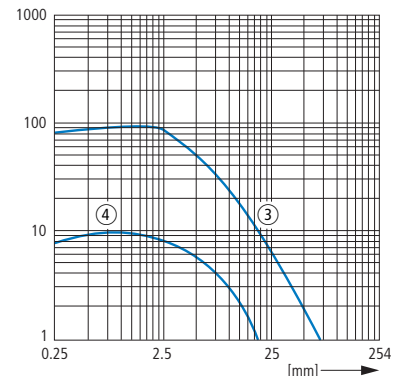
- ① 13100A Comet
② 13106A Comet



Diffuse reflective sensors

With duplex F0 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			

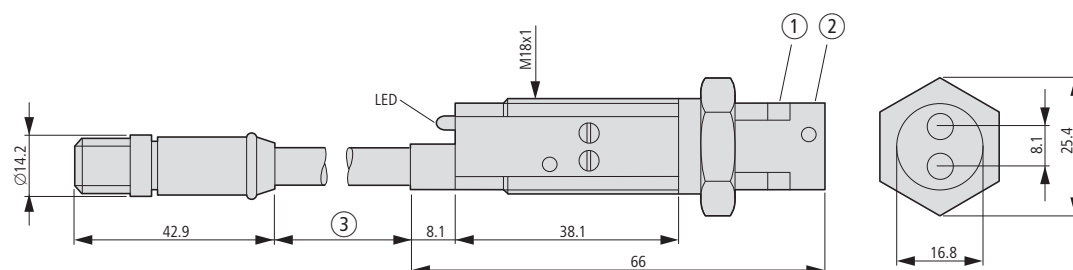
			4-wire 111 Types	121 Types	131 Types	141 Types
General						
Standards			IEC/EN 60947-5-2			
Ambient temperature		°C	-20 - +70	-40 - +70	-40 - +70	-40 - +70
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	100 Shock duration 3 ms			
Characteristic values						
Rated operating voltage			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

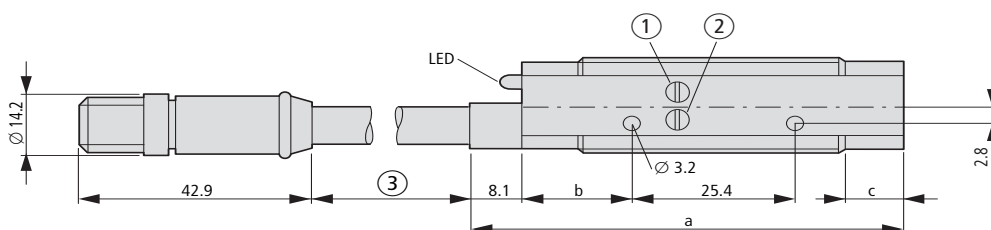
Further technical data can be found in the Online Catalogue at www.moeller.net

Dimensions

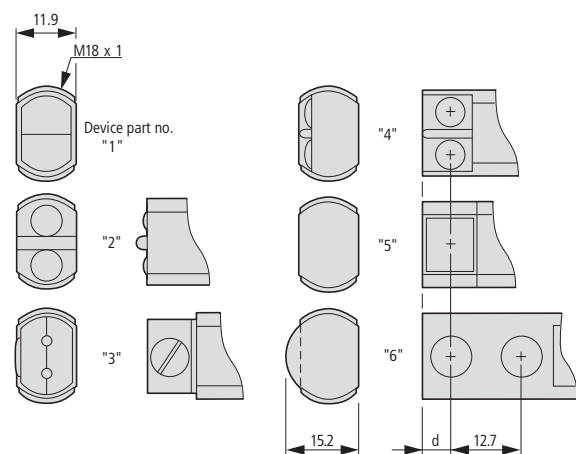
Sensor with installed adapter



- ① Seal
② Adapter
③ Cable length

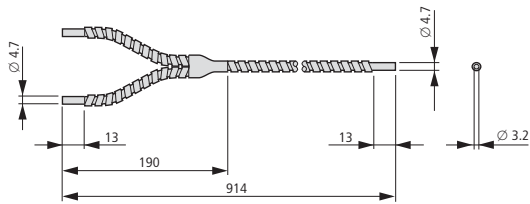
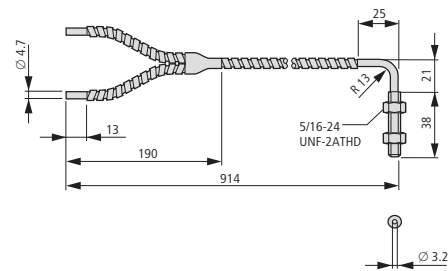
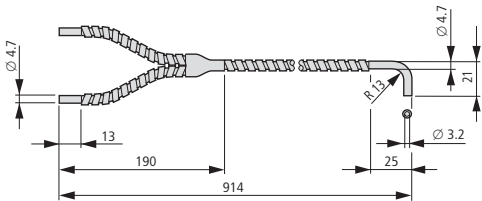
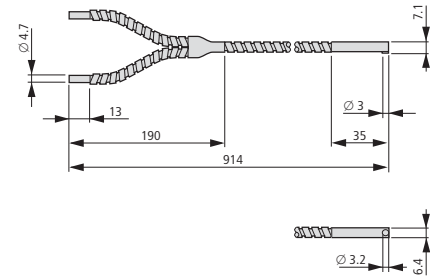
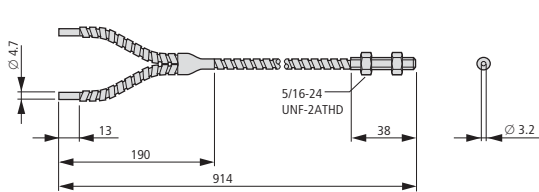
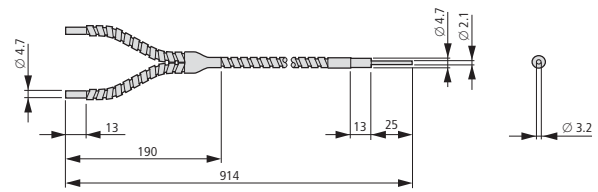
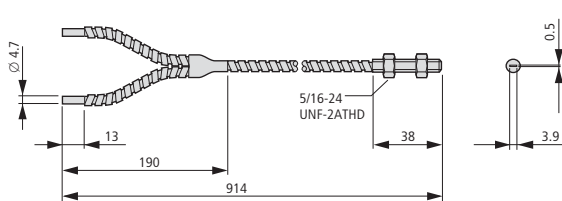
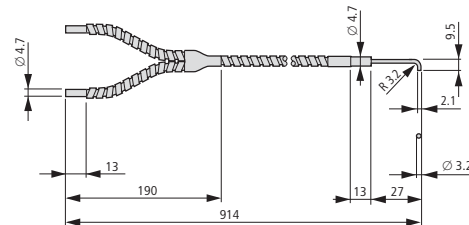
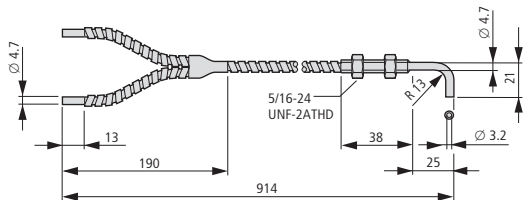
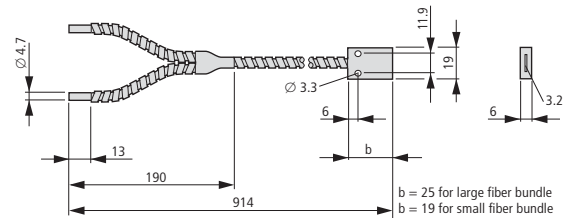
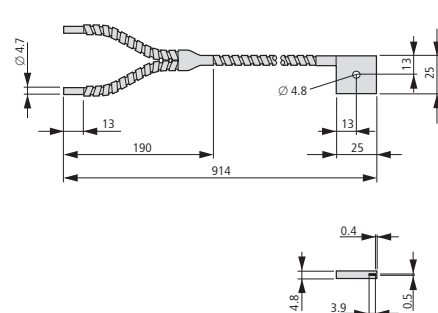


- ① Brightness setting
② Gain adjustment
③ Cable length



	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

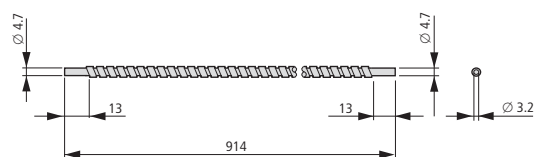
Glass fiber duplex cable

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E51KF7B3E51KF333
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E51KF723E51KF183
E51KF583E51KF193
E51KF593E51KF173
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E51KF553

Glass fiber simplex cable

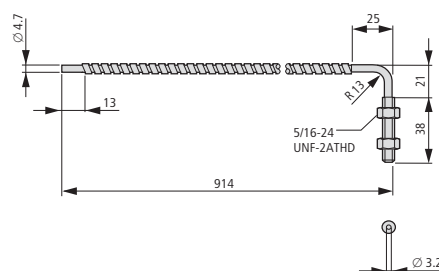
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E51KF813



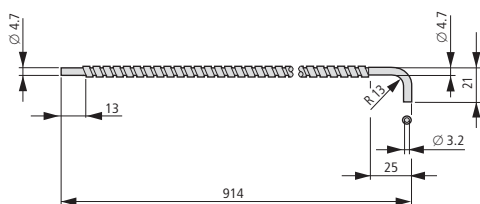
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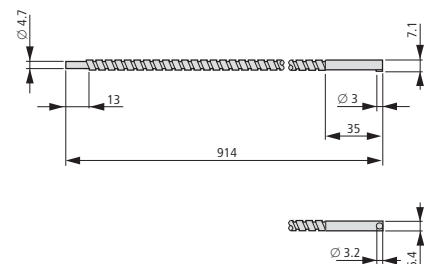
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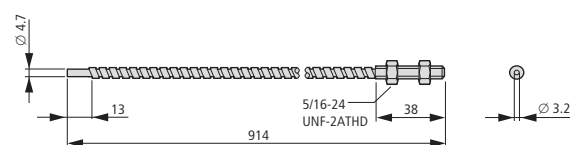
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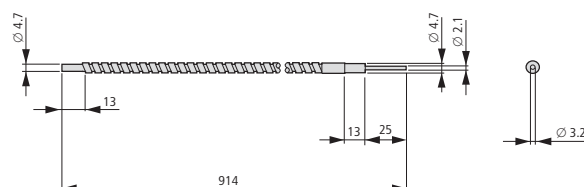
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E51KF823



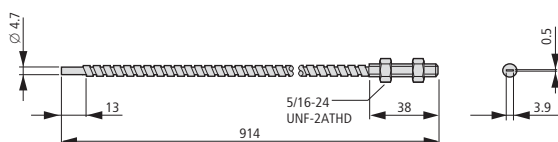
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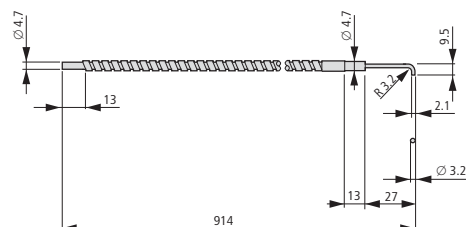
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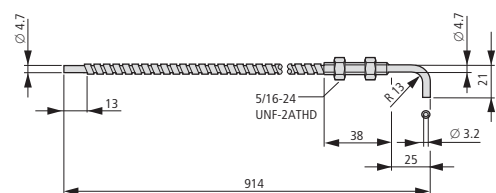
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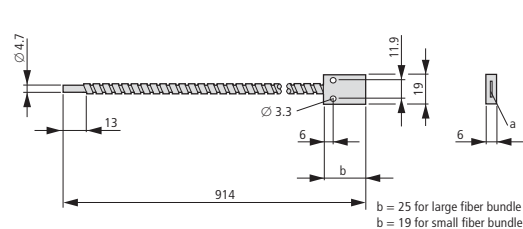
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E51KF8A3



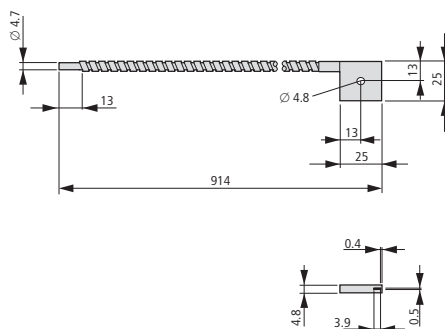
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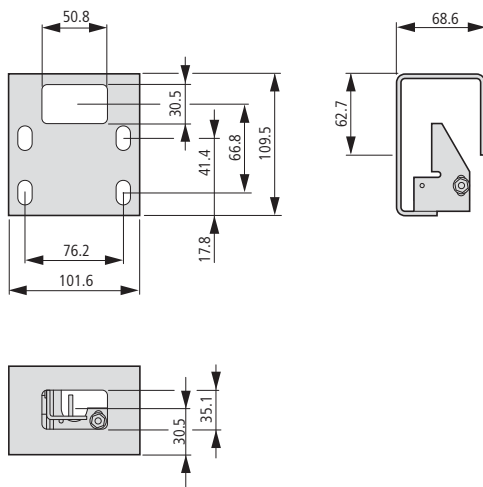
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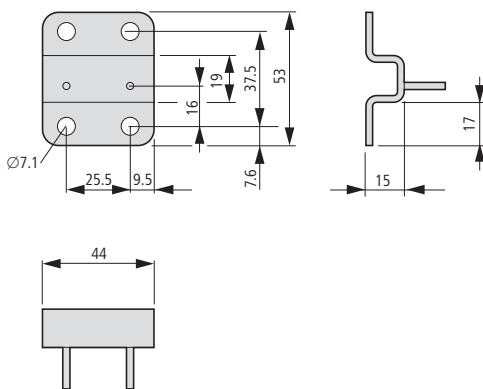
Dimensions



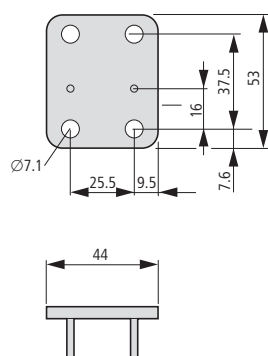
Protective bracket, adjustable



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	plug connector M12 x 1			Dark switching	E58-18DP50-HDP 135671	
				50	NPN	2m connection cable			Light switching	E58-18DP50-HL 135672	
				50	PNP	plug connector M12 x 1			Light switching	E58-18DP50-HLP 135673	
				100	NPN	2m connection cable			Dark switching	E58-18DP100-HD 135664	
				100	PNP	plug connector M12 x 1			Dark switching	E58-18DP100-HDP 135665	
				100	NPN	2m connection cable			Light switching	E58-18DP100-HL 135666	
				100	PNP	plug connector M12 x 1			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	plug connector M12 x 1			Dark switching	E58-30DP150-HDP 135677	
				150	NPN	2m connection cable			Light switching	E58-30DP150-HL 135678	
				150	PNP	plug connector M12 x 1			Light switching	E58-30DP150-HLP 135679	
				280	NPN	2m connection cable			Dark switching	E58-30DPS280-HD 135680	
				280	PNP	plug connector M12 x 1			Dark switching	E58-30DPS280-HDP 135681	
				280	NPN	2m connection cable			Light switching	E58-30DPS280-HL 135682	
				280	PNP	plug connector M12 x 1			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		

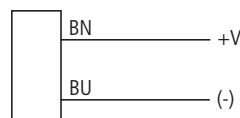
Information relevant for export to North America**Product Standards**

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

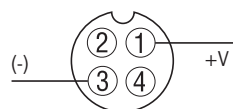
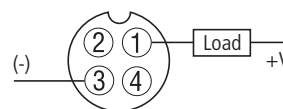
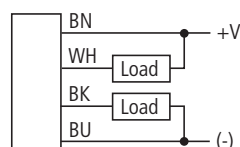
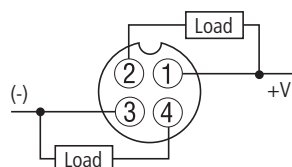
UL 508; CSA-C22.2 No. 14;
IEC60947-5-2; CE marking
E166051
NRKH, NRKH7
UL report applies to both Canada and US
—
UL Listed, certified by UL for use in Canada
30 V DC
IEC: IP68, IP69K; UL/CSA Type: -

Engineering**Circuit diagram**

E58...HA



E58...HAP

E58...DDP
E58...DLPE58...HD
E58...HLE58...HDP
E58...HLP

Excess gain chart

Thru-beam

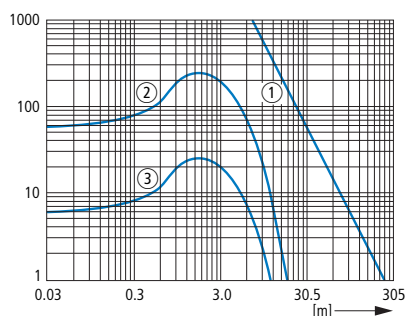
① Thru-beam

Reflex

② 84 mm-reflector

Polarized reflex

③ 84 mm-reflector



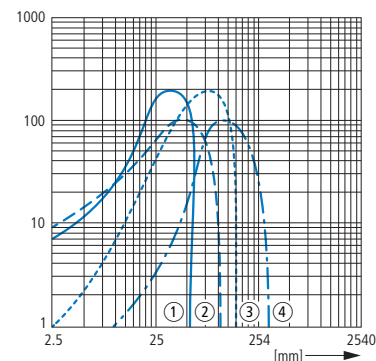
Perfect Prox®

① 18 mm diameter, 50 mm-designs

② 18 mm diameter, 100 mm-designs

③ 30 mm diameter, 150 mm-designs

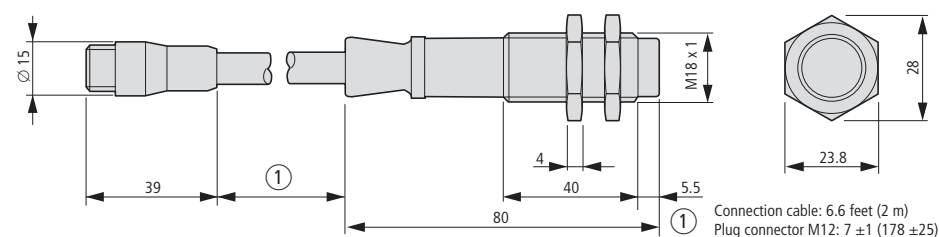
④ 30 mm diameter, 280 mm-Design



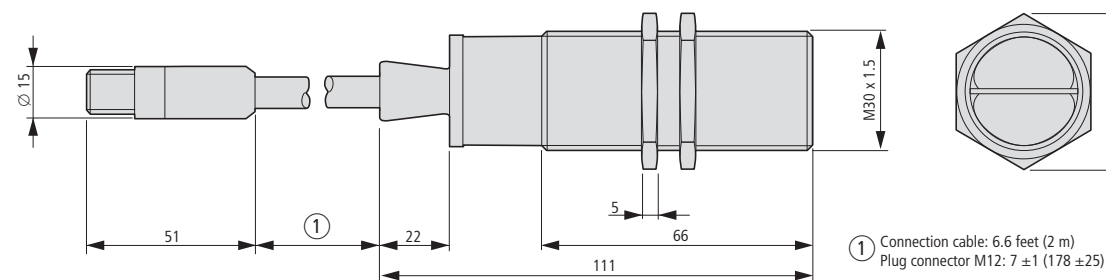
Dimensions

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	-40 - +70	-25 - +55	-40 - +55	-40 - +55
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						
Construction type			2-wire	2-wire	4-wire	4-wire
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

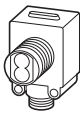


Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Max. Voltage Rating
Degree of Protection

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
132 V AC, 30 V DC
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		°C	-25 - +55	-25 - +55	-25 - +55	-25 - +55
Protection type			IP67	IP67	IP67	IP67
Mechanical shock resistance		g	50 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	20	40
Rated operational current	I _e	mA	200	100	100	—
Switching frequency		Hz	31	500	—	—
Switching state indication		LED	Red	Red	Red	Red
Operating voltage display		LED	Green	Green	Green	Green
Boundary gain			Yellow	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

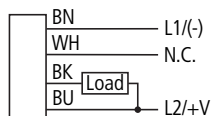
Notes

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

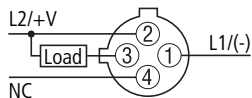
Engineering

Circuit diagram

E65...GD
E65...GL



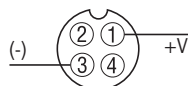
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E65...GLD



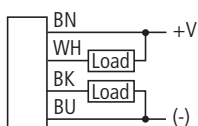
E65...HA



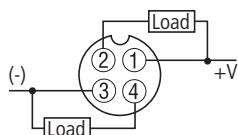
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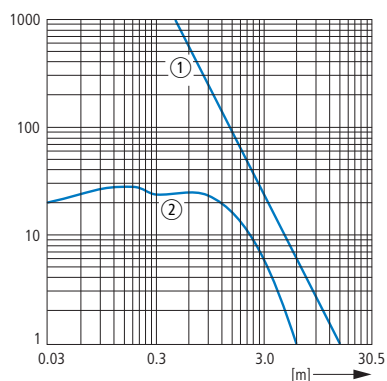
E65...HD
E65...HL



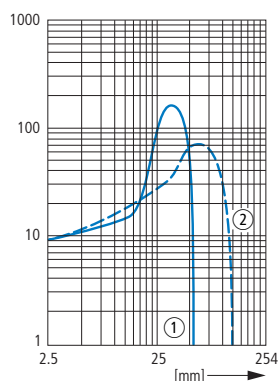
E65...HDD
E65...HLD



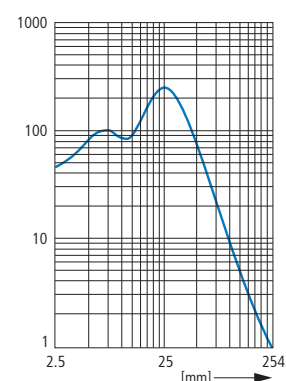
Excess gain chart



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



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

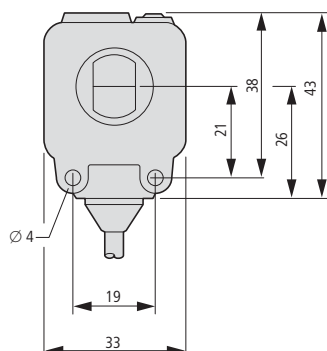


- Photoelectric sensors
(90 % reflective test card)

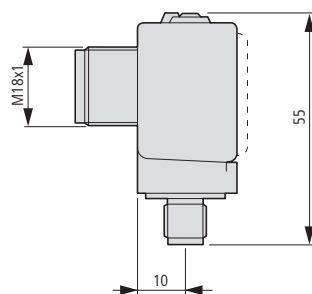
Dimensions

E65 SM Series

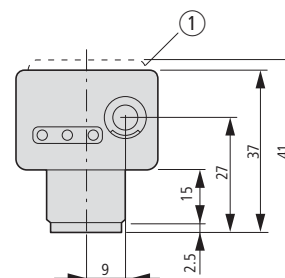
E65...-GD
E65...-GL
E65...-HD
E65...-HL
E65...-HA



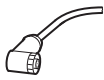
E65...-HDD
E65...-HLD
E65...-HAD



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



HPL03105EN

	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		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	
					5000	CSDR4A3CY2205-LP²⁾ 136275	
					10000	CSDR4A3CY2210 136276	
				4-pole	2000	CSDR4A4CY2202 136279	
					5000	CSDR4A4CY2205 136282	
					10000	CSDR4A4CY2210 136284	

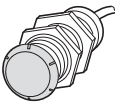
Notes

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			1 off	
	Cable	5000		PNP		CBDR6P05 136305				
	Spring cage	–		NPN		CBDR6NSC 136304				
	Spring cage	–		PNP		CBDR6PSC 136320				
	Cable	10000		PNP	8-pole	CBDR8P10 136322				1 off
	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				
	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				

HPL03107EN

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		
			Metal	6167A-6501 135742		
	Adjustable, insulated	M18 sensors	Stainless steel	E58KAM18 135749		
	Adjustable, not insulated	M18 sensors		E58KAM18U 135751		
	Adjustable, insulated	M30 sensors		E58KAM30 135752		
	Adjustable, not insulated	M30 sensors		E58KAM30U 135753		
	with ball joint	M18 sensors	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

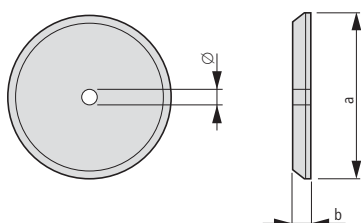
1 off

63 mm Ø

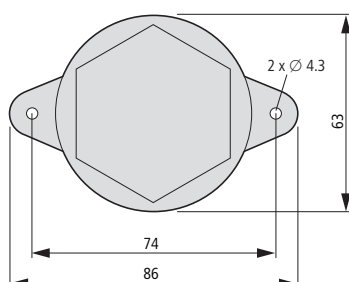
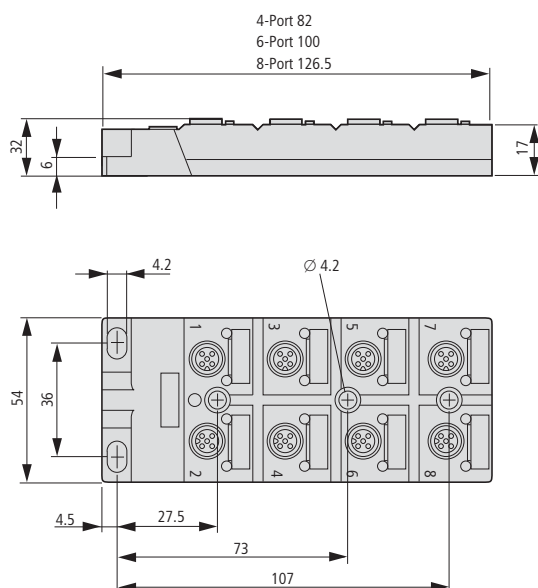
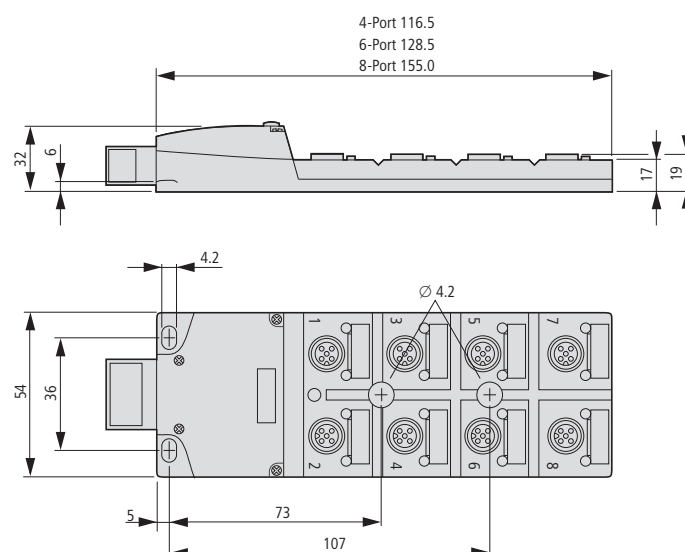
Plastic

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

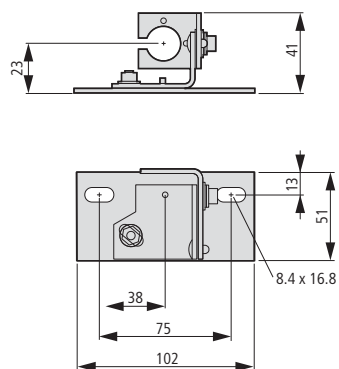
E65KR55**Multi-connection blocks****Cable****Spring cage**

Dimensions

Fixing brackets

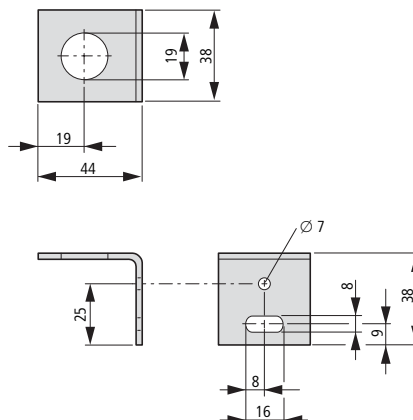
E58KAM18

E58KAM18U



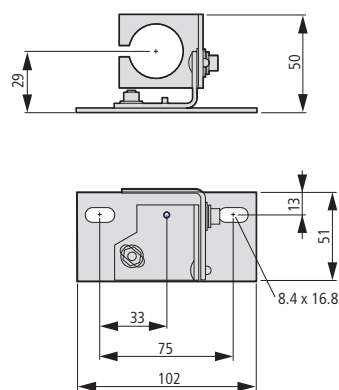
6161A-6501

6161AS-6501

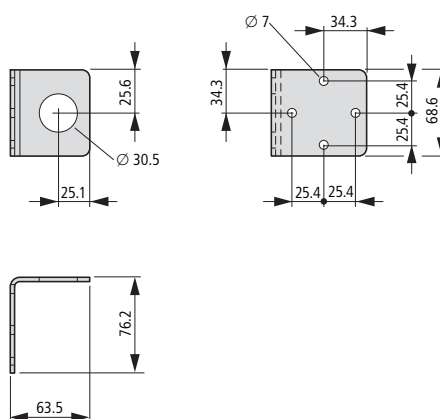


E58KAM30

E58KAM30U



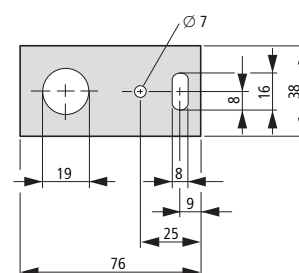
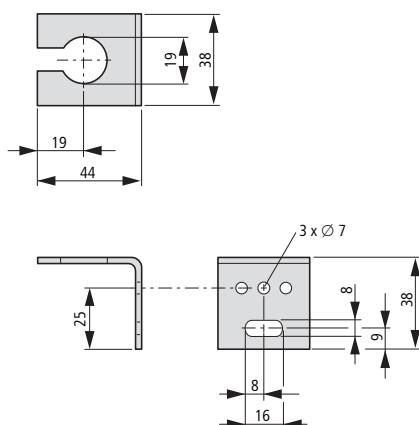
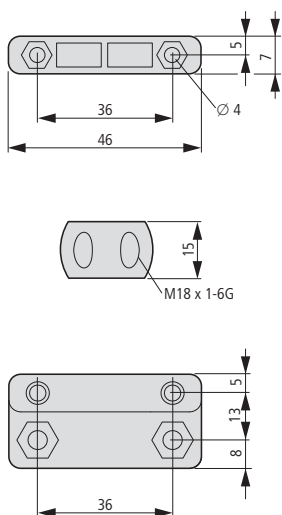
6167A-6501



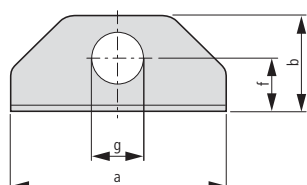
E58KAM18B

6161AS-7050

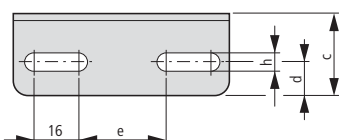
6161AS-5295



E57KM...

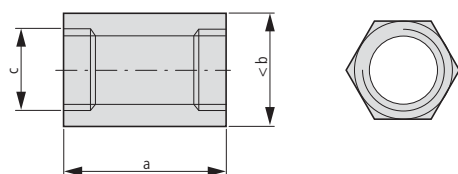


	a	b	c	d	e	f	g	h
8 mm	76	34	29	17	31	19	8	6
12 mm	76	34	29	17	31	19	12	6
18 mm	76	34	29	17	31	19	18	6
30 mm	108	55	45	25	51	29	30	7



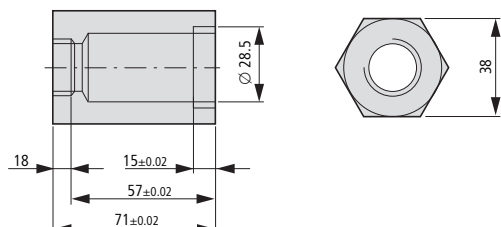
Cable adapters

E57KC...



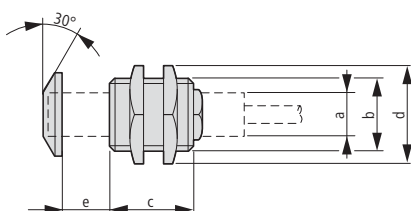
	a	b	c
8 mm	25	25	M8x1
12 mm	38	25	M12x1
18 mm	38	25	M18x1
30 mm	48	38	M30x1.5

E58KC30



Sensor fixing

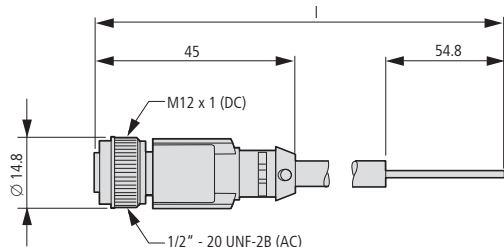
E57KNZ



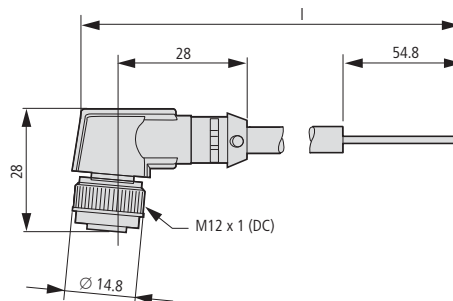
	a	b	c	d	e
8 mm	M8x1	M16x1.5	22	22	9
12 mm	M12x1	M22x1.5	22	29	10
18 mm	M18x1	M30x1.5	30	36	12
30 mm	M30x1.5	M47x1.5	37	51	15

Connecting cables

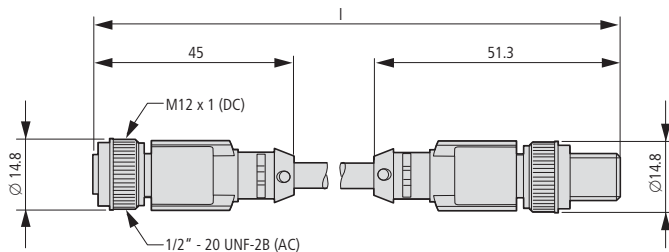
Coupling straight, cable end open



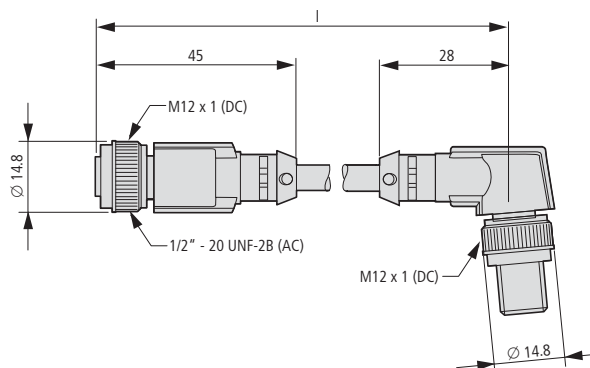
Coupling angled, cable end open



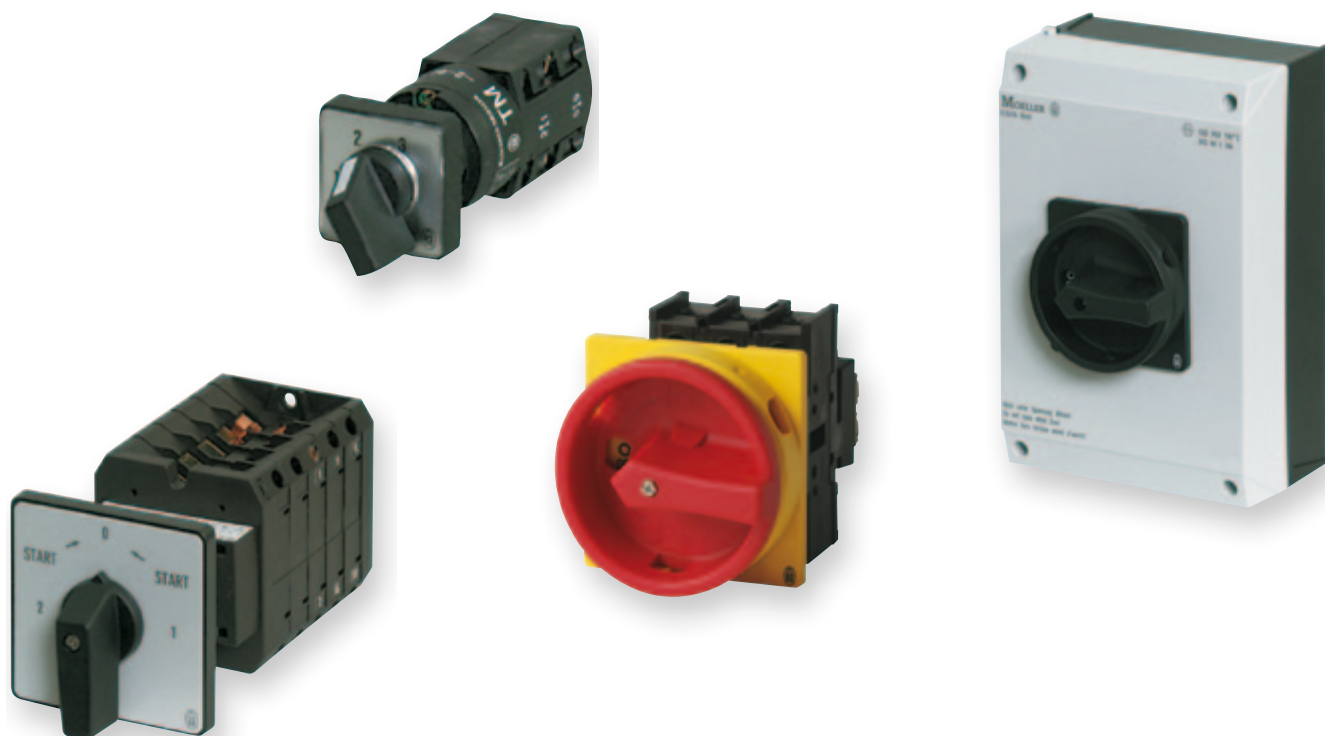
Straight coupling, straight plug



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
------------------------------------	-----

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
-------------------------------------	-----

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

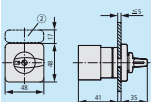
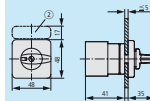
Technical data

Mini rotary switches	4/99
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Dimensions

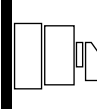
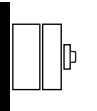
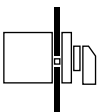
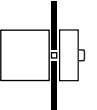
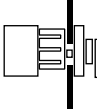
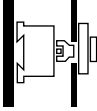
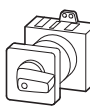
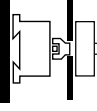
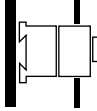
Mini rotary switches	4/111
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CI-K and CI basic enclosures and small enclosures	20/92
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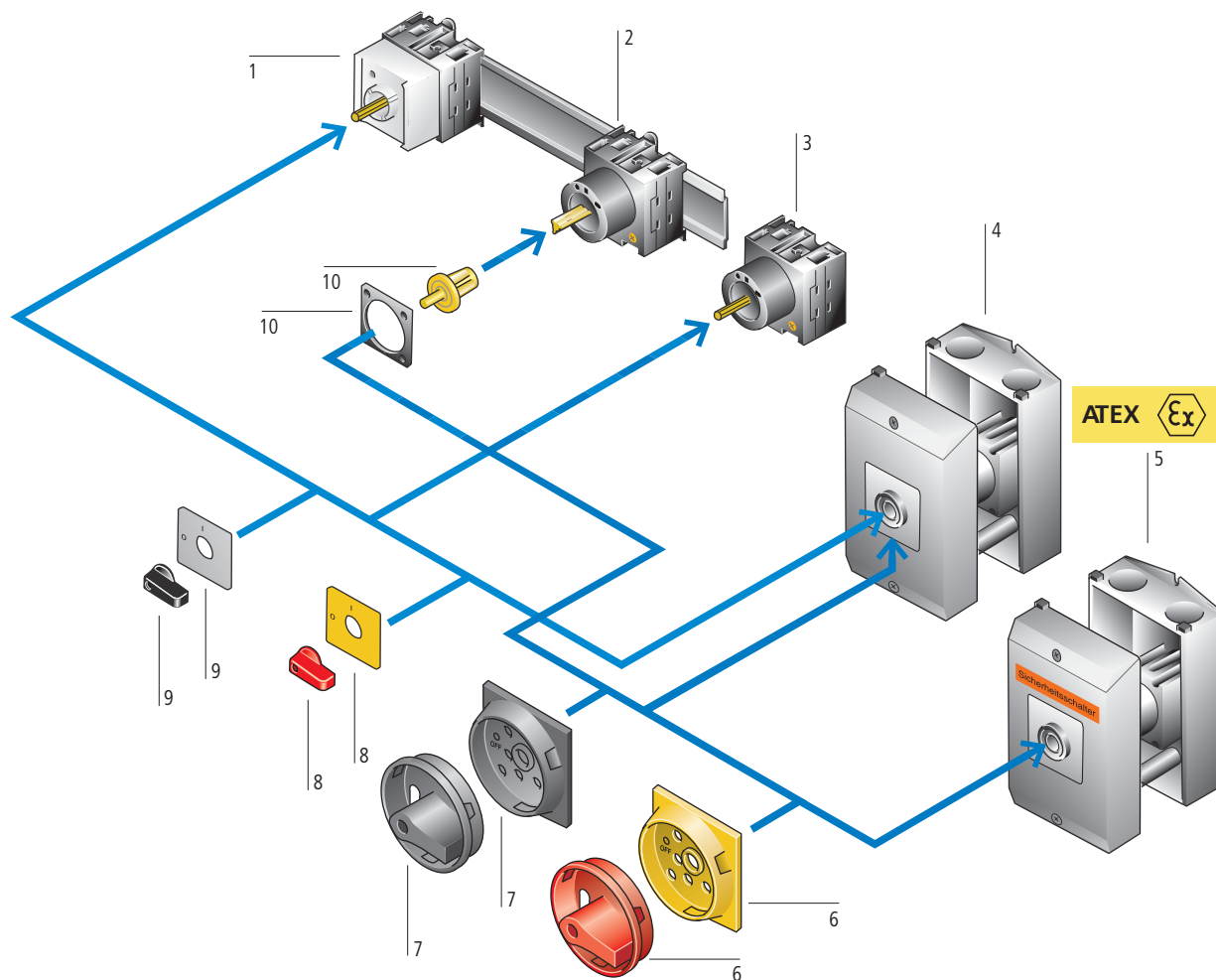
T, P, TM



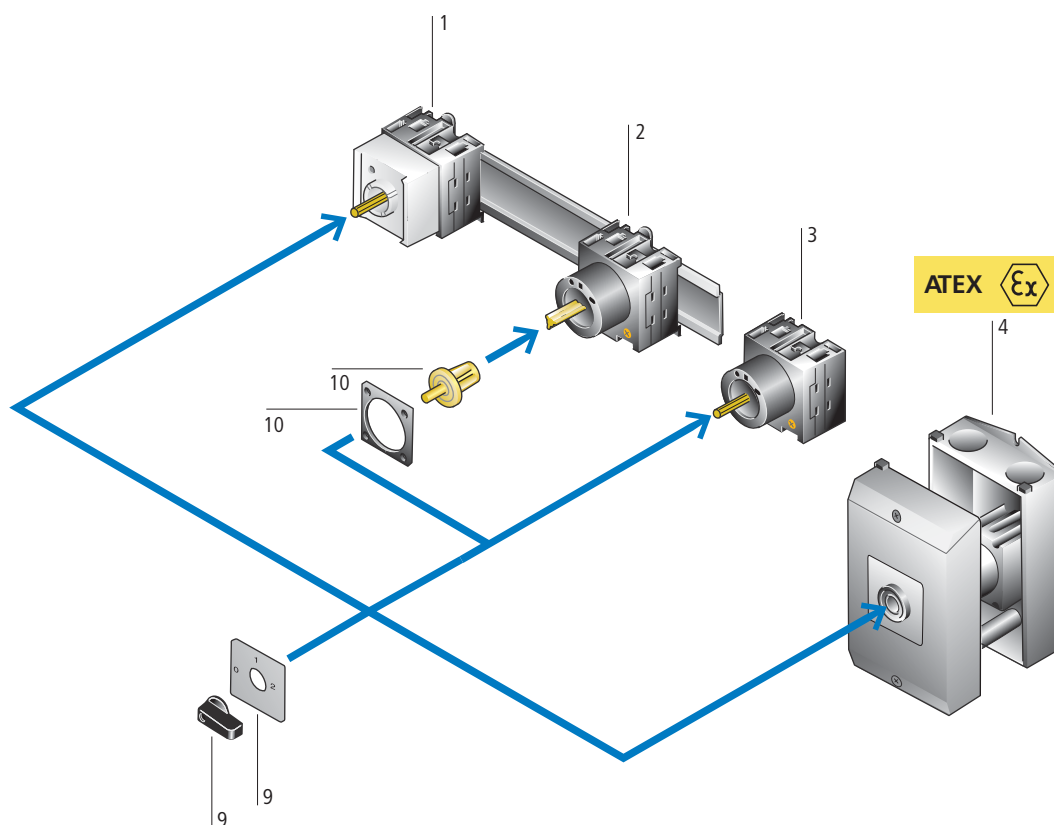
Switch, basic type		Part no.	TM	T0	T3	T5B	
Max. motor rating			3.0 kW	6.5 kW	13 kW	22 kW	
AC-23 A, 400/415 V, 50/60 Hz							
Max. rated operational current I _u			≤ 10 A	20 A	32 A	63 A	
Switch-disconnectors							
Main switches, maintenance/manual override switches			–	→ 4/10	→ 4/10	→ 4/10	
On-Off switches			→ 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	.../V/SVB...	–	✓	✓	✓
		Service distribution board mounting	.../IVS...	✓	✓	–	–

System overview

ON-OFF switches T0, T3, T5B, T5



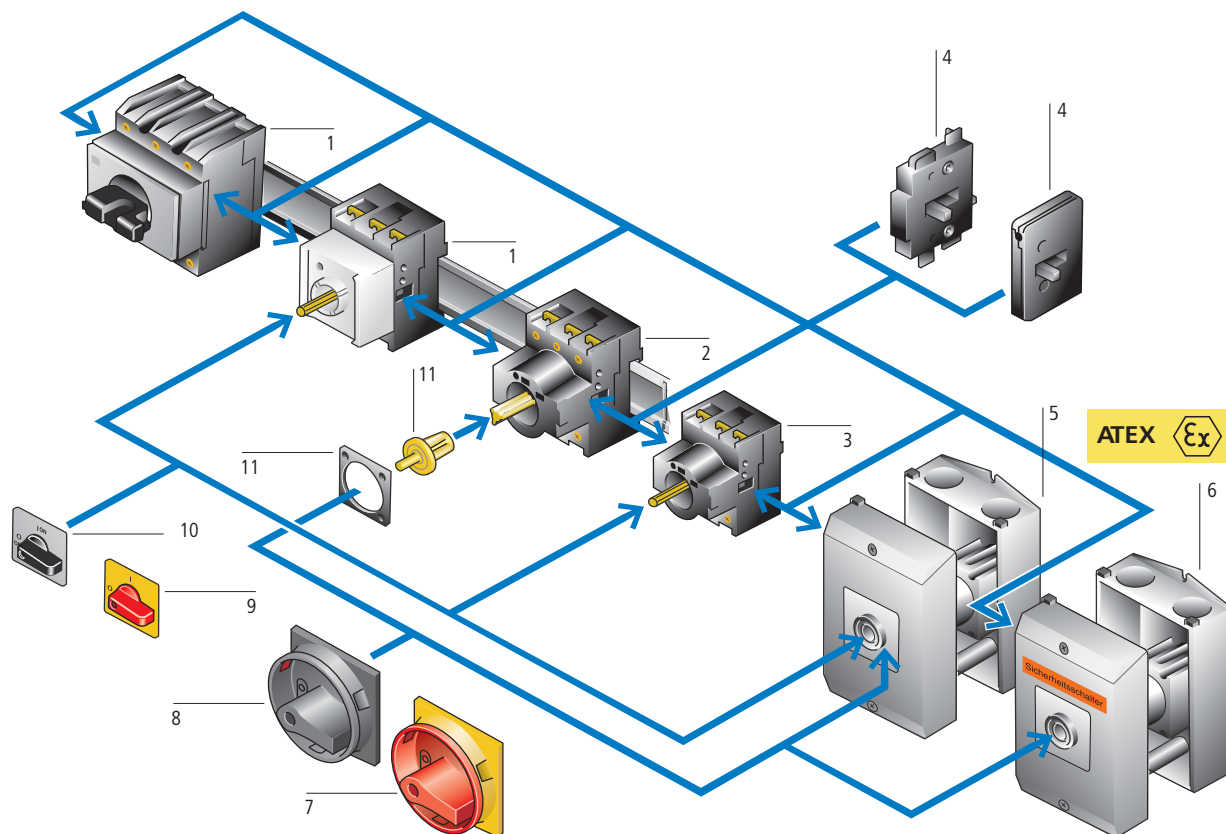
Control switches T0, T3, T5B, T5



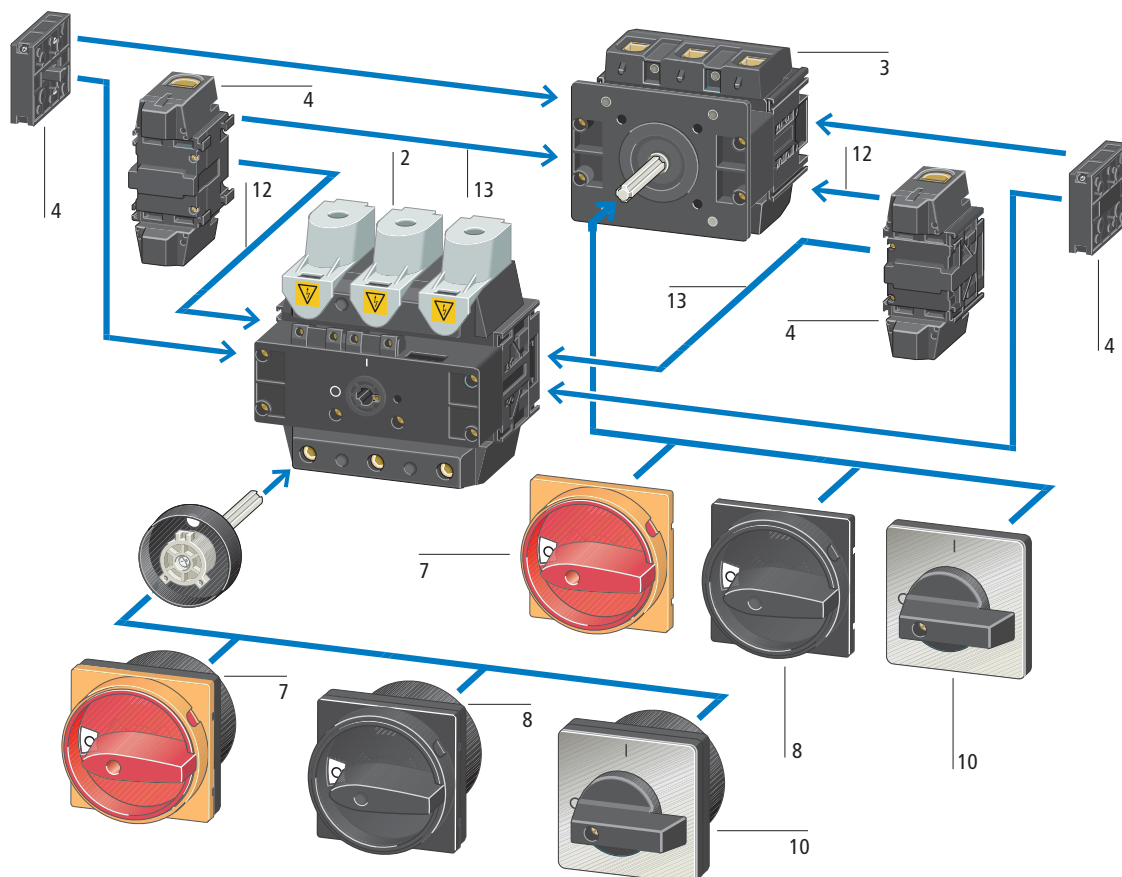
Service distribution board mounting (.../IVS) 1 Front IP30 Can be snapped onto top-hat rail as per IEC/EN 60715 (only T0 and T3) Mounting - In service distribution board up to 3 contact units (45 mm mounting depth) - In control panel up to 11 contact units → Page 4/22	Flush mounting main switch (.../EA/SVB)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



ON-OFF switches P1, P3



ON OFF switches P5



Service distribution board mounting (.../IVS) 1	Flush mounting (.../E) 3	Surface mounting main switch (.../I...) 5	Main switch (kit) for use as emergency switching off device 7
Front IP30	Front IP65	IP65	To IEC/EN 60204-1, VDE 0113 Part 1
Fitting dimensions according to DIN 43880	Flush mounting and connection from rear	totally insulated	With red rotary handle and yellow locking collar
For snap fitting to top-hat rail according to IEC/EN 60715	Terminals: Crosshead screwdriver Pozidrive	With an additional terminal	Lockable in the 0 (Off) position
Space requirement	Back-of-hand proof	To IEC/ENEN 60204, VDE 0113 and IEC/EN 60947-3	→ Page 4/58
P1, 3 pole: 3 space units	2 add-on modules can be retrofitted	Position 0 lockable with 3 padlocks	
P3, 3 pole: 4 space units	→ Page 4/22	Installable add-on modules:	
P3-.../IVS lockable with padlock in "0" position		P1: HI 11-P1/P3 or N-P1..., P3: HI 11-P1/P3 and/or N-P5	
→ Page 4/22		Enclosures for metric cable glands to EN 50262	
		→ Page 4/10	
Rear mounting (.../Z) 2	Flush mounting main switch (.../EA/SVB) 3		Main switch (kit) 8
Front IP65	Front IP65		Black rotary handle and locking collar
Fixing either by snap-on or screw fixing	To IEC/ENEN 60204, VDE 0113 and IEC/EN 60947-3		Lockable in the 0 position
For snap fitting to top-hat rail according to IEC/EN 60715	N and PE terminal		→ Page 4/58
Drive coupling in door or cover	Position 0 lockable with 3 padlocks		
Connection from front	2 add-on modules can be retrofitted		Thumb-grip, for use as emergency switching off device 9
2 add-on modules can be retrofitted	→ Page 4/10		To IEC/EN 60204-1, VDE 0113 Part 1
→ Page 4/22			Red thumb-grip and yellow front plate
			→ Page 4/58
Rear mounting main switch (.../V/SVB) 2	Center mounting (.../EZ) 3	Safety switch (.../I...-SI) 6	Thumb-grip 10
Front IP65	Front IP65	IP65	Black thumb-grip with front plate
To IEC/ENEN 60204, VDE 0113 and IEC/EN 60947-3	Mounted in Ø 22.3 fixing hole to IEC/EN 60947-5-1	totally insulated	→ Page 4/58
With door interlock in "I" position	"One man mounting" by center fixing	With an additional terminal	
Maintenance key for commissioning or fault-finding	→ Page 4/22	With cover fixing in 0 position	
Position 0 lockable with 3 padlocks		Position 0 lockable with 3 padlocks	Coupling drive 11
2 add-on modules can be retrofitted	Add-on modules 4	"Safety Switch" label; color: orange	Including push-fit shaft
→ Page 4/10	Switchable N conductor (early-make N/O contact)	Enclosures for metric cable glands to EN 50262	For retrofitting mounting switches T0(T3)-.../XZ as rear mounting design spare part for T0(T3)/(P1)-.../Z
	Auxiliary contacts	→ Page 4/30	For converting flush mounting switches T5(B)-.../E into rear mounting switch spare part for T5(B)/(P3)-.../Z
	Finger proof		→ Page 4/65
	Auxiliary N/O contact: Always connected as a load-shedding contact (late-make on, late-break off)		
	→ Page 4/64		
		ATEX 	Ground terminal 12
		→ Page 4/58	Front mounting, right
	Surface mounting (.../I...) 5		Service distribution board mounting, left
	IP65		
	totally insulated		Neutral terminal 13
	With an additional terminal		Front mounting, left
	Installable add-on modules:		Service distribution board mounting, right
	P1: HI 11-P1/P3 or N-P1..., P3: HI 11-P1/P3 and/or N-P5		→ Page 4/64
	Enclosures for metric cable glands to EN 50262		
	→ Page 4/22		



T0, T3, T5, T5B**Description**

Cam switches can be used for many switching and control applications. For example as ON-OFF switches, main switches, main/control switches, instrument switches.

The switches consist of a hand actuator, the switch unit and the mounting accessories.

The contact chamber (contact unit = BE) contains 1 or 2 contacts.

Our "T Cam Switches" catalog has over 800 popular standard contact sequences (please request under K115D/F/GB, article no. 077643).

The following pages feature a selection of our standard contact sequences.

T cam switches and P switch-disconnectors are manufactured without PCB, CFC, asbestos and silicon. The contacts are cadmium free.

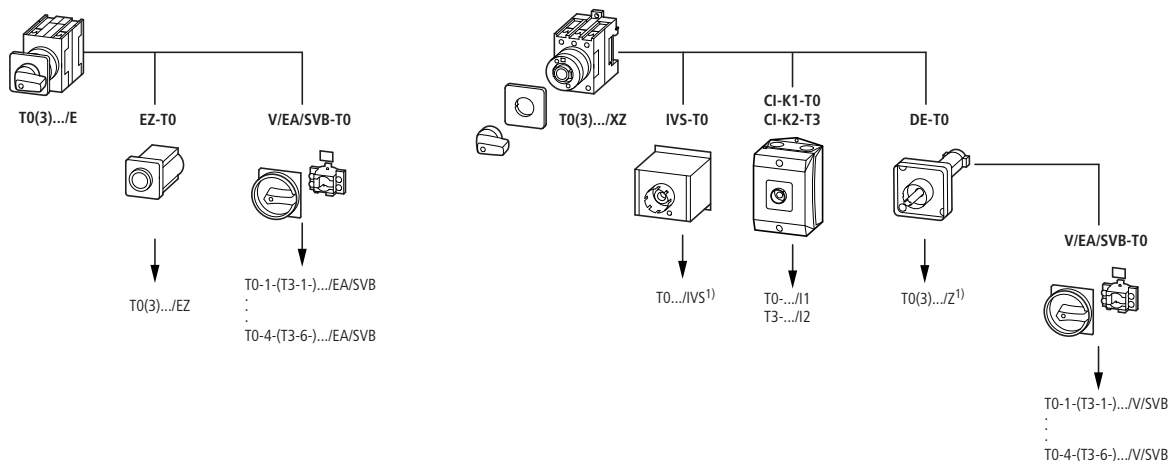
The CI-K... insulated enclosures are silicon and halogen free.

Cam switches T0 and T3**Key to part numbers**

T - /

↑ ↑ ↑ ↑

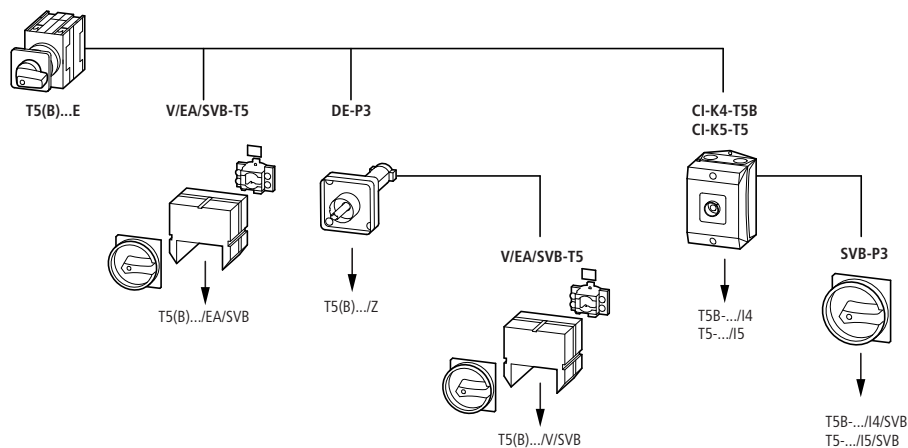
Switch size **Number of contact chambers** **Contact sequence** **Mounting form**
T0 or T3 = contact units number → Page 4/2

Using the modular system to convert the mounting form**Cam switch TB5****Key to part numbers**

T - /

↑ ↑ ↑ ↑

Switch size **Number of contact chambers** **Contact sequence** **Mounting form**
T5(B) = contact units number → Page 4/2

Using the modular system to convert the mounting form T5(B)**Note**

¹⁾ Including shaft

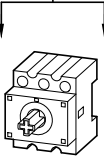
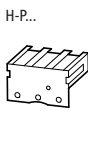
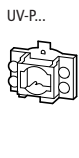
P1, P3, TM

Switch-disconnectors P1 and P3

Key to part numbers

P.....-...../.....-...../.....				
↑	↑	↑	↑	↑
Switch size P1 or P3	Rated uninterrupted current	Mounting form → Page 4/2	Part no. suffix (if required)	Accessories from → Page 7/47

Add-on functions due to modular system

				
3-pole basic unit .../E or .../Z	N-P...E or N-P...Z Switched neutral Can be fitted left or right (for P1.../I: left only)	HI 11-P1/P3E or HI 11-P1/P3Z Auxiliary contact Can be fitted left or right (for P1.../I: left only)	H-P... Terminal shroud can be fitted at top or bottom	UV-P... N + PE terminals, also as cover interlock on .../Z-switches.

TM mini cam switches

The TM mini cam switch is a particularly small switch with a small space requirement. It is ideally suited for small voltages and currents such as electronic controls. For greater safety the contacts are gold plated.

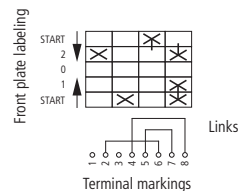
TM switches have consecutive terminal markings starting with 1.

Selection pages: Starting on → Page 7/54

Key to part numbers

TM-.....-...../.....+.....			
↑	↑	↑	↑
Number of contact chambers = contact units	Contact sequence number	Mounting form → Page 4/2	Accessories → Page 7/59

Circuit representation



(see also ordering example in the electronic catalogue)

Switch from 0 to 1

Contact 1 – 2 open,
Contact 3 – 4 open,
Contact 5 – 6 open,
Contact 7 – 8 closed

Switch from 1 to START
with automatic return to 1

Contact 1 – 2 open,
Contact 3 – 4 closed,
Contact 5 – 6 open,
Contact 7 – 8 remains closed

Switch from 1 to 0

Contact 1 – 2 open,
Contact 3 – 4 open,
Contact 5 – 6 open,
Contact 7 – 8 open

Switch from 0 to 2

Contact 1 – 2 closed,
Contact 3 – 4 open,
Contact 5 – 6 open,
Contact 7 – 8 closed

Switch from 2 to START
with automatic return to 2

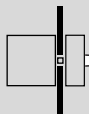
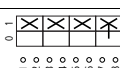
Contact 1 – 2 open,
Contact 3 – 4 open,
Contact 5 – 6 closes with early make,
Contact 7 – 8 opens with late break

Switch from 2 to 0

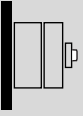
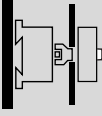
Contact 1 – 2 open,
Contact 3 – 4 open,
Contact 5 – 6 open,
Contact 7 – 8 open

Ordering

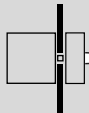
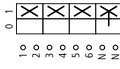
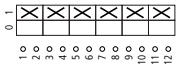
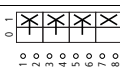
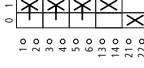
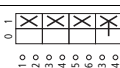


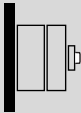
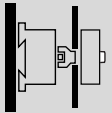
Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O 	N/O  N/C 	400 V P kW	I _u A				
Main switch as emergency switching 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 1 0 2 0	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			
 1 0 2 0 3 0 4 0	2	0	0	6.5	20	T0-1-102/EA/SVB¹⁾ 091078			1 Off
				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 0 2 0 3 0 4 0 5 0 6 0	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			
 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0	3 + N	0	0	6.5	20	T0-2-8900/EA/SVB¹⁾ 207400			1 Off  
				13	25	P1-25/EA/SVB/N¹⁾ 081587			
 1 0 2 0 3 0 4 0 5 0 6 0 7 0 8 0 9 0 10 0 11 0 12 0	3 + N	0	0	13	25				
				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			



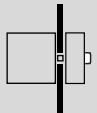
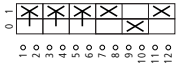
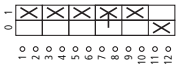
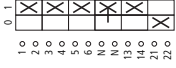
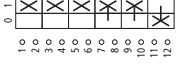
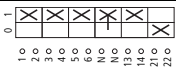
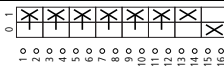
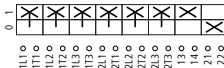
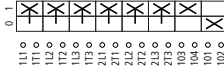
Surface mounting		Rear mounting			
IP65		Front IP65			
					
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
			Information relevant for export to North America		
			 		
T0-1-8200/I1/SVB 207145		1 Off	T0-1-8200/V/SVB 057856		1 Off  
T3-1-8200/I2/SVB²⁾ 207200		1 Off  	T3-1-8200/V/SVB¹⁾ 007255		
T5B-1-8200/I4/SVB³⁾ 207240		1 Off  	T5B-1-8200/V/SVB³⁾ 094273		
T0-1-102/I1/SVB 207143		1 Off	T0-1-102/V/SVB¹⁾ 095824		
T3-1-102/I2/SVB²⁾ 207198		1 Off  	T3-1-102/V/SVB¹⁾ 019120		
T5B-1-102/I4/SVB³⁾ 207238		1 Off  	T5B-1-102/V/SVB³⁾ 094463		
T5-1-102/I5/SVB 207273		1 Off			
T0-2-1/I1/SVB 207147		1 Off	T0-2-1/V/SVB¹⁾ 043619		1 Off  
P1-25/I2/SVB²⁾ 207293		1 Off  	P1-25/V/SVB²⁾ 055335		
P1-25/I2H/SVB 226900		1 Off			
P1-32/I2/SVB²⁾ 207314		1 Off  	P1-32/V/SVB¹⁾ 095676		
P3-63/I4/SVB¹⁾ 207343		1 Off  	P3-63/V/SVB¹⁾ 048218		
			P5-125/V/SVB⁴⁾ 280914		
P3-100/I5/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/I1/SVB 207151		1 Off	T0-2-8900/V/SVB¹⁾ 207405		1 Off  
P1-25/I2/SVB/N²⁾ 207298		1 Off  	P1-25/V/SVB/N²⁾ 086333		
P1-25/I2H/SVB/N 227860		1 Off			
P1-32/I2/SVB/N²⁾ 207319		1 Off  	P1-32/V/SVB/N¹⁾ 095825		
P1-32/I2H/SVB/N 227871		1 Off			
P3-63/I4/SVB/N¹⁾ 207349		1 Off  	P3-63/V/SVB/N¹⁾ 015144		
			P5-125/V/SVB/N⁴⁾ 280916		
P3-100/I5/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		

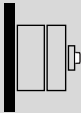
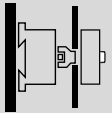
Surface mounting IP65			Rear mounting Front IP65			Information relevant for export to North America
Part no. Article no.		Price See price list	Part no. Article no.		Price See price list	
Std. pack			Std. pack			 
Totally insulated						
						
T0-3-8342/11/SVB 207159		1 Off	P5-250/V/SVB/N ⁽⁴⁾ 280944		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
T3-3-8342/12/SVB ⁽²⁾ 207208		1 Off	P5-315/V/SVB/N ⁽⁴⁾ 280958		1 Off	
T5B-3-8342/14/SVB ⁽³⁾ 207242		1 Off	T0-3-8342/V/SVB ⁽¹⁾ 034128		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
T5-3-8342/15/SVB 207279		1 Off	T3-3-8342/V/SVB ⁽¹⁾ 076072		1 Off	
T0-4-8344/11/SVB 207163		1 Off	T5B-3-8342/V/SVB ⁽³⁾ 092300		1 Off	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: IP65; UL/CSA Type 1, 3R, 12, 13
T3-4-8344/12/SVB ⁽²⁾ 207212		1 Off	T5-3-8342/V/SVB 096381		1 Off	
T5B-4-8344/14/SVB ⁽³⁾ 207248		1 Off	T0-4-8344/V/SVB ⁽¹⁾ 014007		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
T5-4-8344/15/SVB 207283		1 Off	T3-4-8344/V/SVB ⁽¹⁾ 020598		1 Off	
			T5B-4-8344/V/SVB ⁽³⁾ 092056		1 Off	
			T5-4-8344/V/SVB 095959		1 Off	
T0-2-15679/11/SVB 207149		1 Off	T0-2-15679/V/SVB ⁽¹⁾ 086334		1 Off	
P1-25/12/SVB/HI11 ⁽²⁾ 207297		1 Off	P1-25/V/SVB/HI11 ⁽¹⁾ 095826		1 Off	
P1-25/12H/SVB/HI11 226902		1 Off			1 Off	
P1-32/12/SVB/HI11 ⁽¹⁾ 207318		1 Off	P1-32/V/SVB/HI11 ⁽¹⁾ 015145		1 Off	
P1-32/12H/SVB/HI11 227870		1 Off			1 Off	
P3-63/14/SVB/HI11 ⁽¹⁾ 207348		1 Off	P3-63/V/SVB/HI11 ⁽¹⁾ 024637		1 Off	
P3-100/15/SVB/HI11 ⁽¹⁾ 207378		1 Off	P3-100/V/SVB/HI11 ⁽¹⁾ 034129		1 Off	
			P5-125/V/SVB/HI10 ⁽⁴⁾ 280915		1 Off	
			P5-160/V/SVB/HI10 ⁽⁴⁾ 280929		1 Off	
			P5-250/V/SVB/HI10 ⁽⁴⁾ 280943		1 Off	
			P5-315/V/SVB/HI10 ⁽⁴⁾ 280957		1 Off	



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									
With auxiliary contacts									
		3	2	1	6.5	20	T0-3-15683/EA/SVB ¹⁾ 015571		1 Off 
		3	2	1	13	32	T3-3-15683/EA/SVB ¹⁾ 040478		
		3 + N	1	1	6.5	20	T0-3-15680/EA/SVB ¹⁾ 038875		
					13	32	P1-25/EA/SVB/N/HI11 ¹⁾ 048367		
					13	32	T3-3-15680/EA/SVB ¹⁾ 012002		
		3 + N	1	1	15	32	P1-32/EA/SVB/N/HI11 ¹⁾ 057859		
		3 + N	1	1	6.5	20	T0-3-8901/EA/SVB ¹⁾ 231932		1 Off 
					13	32	T3-3-8901/EA/SVB ¹⁾ 231945		
					22	63	T5B-3-8901/EA/SVB ³⁾ 207420		
					30	100	T5-3-8901/EA/SVB 207408		1 Off
		3 + N	1	1	37	63	P3-63/EA/SVB/N/HI11 ¹⁾ 067351		1 Off 
		3 + N	1	1	50	100	P3-100/EA/SVB/N/HI11 ¹⁾ 076843		
		6	1	1	6.5	20	T0-4-15682/EA/SVB ¹⁾ 019892		
					13	32	T3-4-15682/EA/SVB ¹⁾ 054716		
					22	63	T5B-4-15682/EA/SVB ³⁾ 207425		
					30	100	T5-4-15682/EA/SVB 207413		
		6	1	1	55	160			
		6	1	1	132	275			

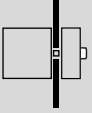
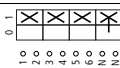
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Surface mounting IP65			Rear mounting Front IP65			Information relevant for export to North America	
Part no. Article no.		Price See price list	Part no. Article no.		Price See price list	Std. pack	
							
T0-3-15683/I1/SVB 207157			T0-3-15683/V/SVB¹⁾ 015634			1 Off 	
T3-3-15683/I2/SVB²⁾ 207206			T3-3-15683/V/SVB¹⁾ 045224			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	
T0-3-15680/I1/SVB 207153			T0-3-15680/V/SVB¹⁾ 043621				
T3-3-15680/I2/SVB²⁾ 207202			P1-25/V/SVB/N/HI11¹⁾ 053113				
			T3-3-15680/V/SVB¹⁾ 016748			1 Off 	
			P1-32/V/SVB/N/HI11¹⁾ 062605				
T0-3-8901/I1/SVB 231934							
T3-3-8901/I2/SVB²⁾ 218987						1 Off 	
T5B-3-8901/I4/SVB³⁾ 207244			T5B-3-8901/V/SVB³⁾ 207422				
T5-3-8901/I5/SVB 207277							
P3-63/I4/SVB/N/HI11¹⁾ 207350			P3-63/V/SVB/N/HI11¹⁾ 072097			1 Off 	
P3-100/I5/SVB/N/HI11¹⁾ 207380			P3-100/V/SVB/N/HI11¹⁾ 081589				
T0-4-15682/I1/SVB 207161			T0-4-15682/V/SVB¹⁾ 024638				
T3-4-15682/I2/SVB²⁾ 207210			T3-4-15682/V/SVB¹⁾ 059462			1 Off 	
T5B-4-15682/I4/SVB³⁾ 207246			T5B-4-15682/V/SVB³⁾ 207427				
T5-4-15682/I5/SVB 207281			T5-4-15682/V/SVB 207415			1 Off	
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	



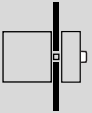
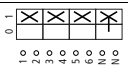
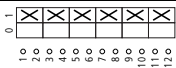
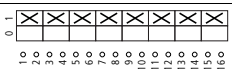
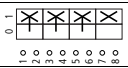
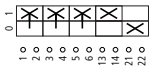
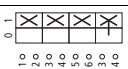
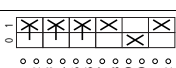


Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O	N/O	N/C	400 V P kW	I _u A			
Main switch without emergency switching 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			
	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		Std. pack	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		
						
						
T0-1-8200/11/SVB-SW 207146		1 Off	T0-1-8200/V/SVB-SW¹⁾ 060229		1 Off 	1) Product Standards UL File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for Degree of Protection
T3-1-8200/12/SVB-SW²⁾ 207201		1 Off 	T3-1-8200/V/SVB-SW¹⁾ 004882			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, suitable as motor disconnect IEC: IP65; UL/CSA Type 3R, 12
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 File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for Degree of Protection
P1-25/12/SVB-SW²⁾ 207294		1 Off 	P1-25/V/SVB-SW²⁾ 050738			UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking E36332 NLRV 12528 3211-05 UL Listed, CSA certified Branch circuits, suitable as motor disconnect IEC: IP65; UL/CSA Type 3R, 12
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 File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for Degree of Protection
			P5-160/V/SVB-SW⁴⁾ 280931			UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking E36332 NLRV7 12528 3211-05 UL Listed, CSA certified Branch circuits, suitable as motor disconnect IEC: IP65; UL/CSA Type 1, 3R, 12, 13
			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 File No. UL CCN CSA File No. CSA Class No. NA Certification Suitable for Degree of Protection
P1-32/12H/SVB-SW/N 227874		1 Off				UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking E36332 NLRV, NLRV7 223805 3211-05 UL Listed, CSA certified Branch circuits, suitable as motor disconnect IEC: IP65; UL/CSA Type 3R, 12
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			

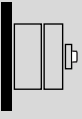
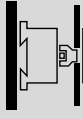




Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O 	N/O N/C 	400 V P kW	I _u A				
Main switch without emergency switching 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	125	P5-125/EA/SVB-SW/N ⁽⁴⁾ 280913		1 Off
					55	160	P5-160/EA/SVB-SW/N ⁽⁴⁾ 280927		
					90	250	P5-250/EA/SVB-SW/N ⁽⁴⁾ 280941		
					110	315	P5-315/EA/SVB-SW/N ⁽⁴⁾ 280955		
		6	0	0	6.5	20	T0-3-8342/EA/SVB-SW ⁽¹⁾ 031755		1 Off
					13	32	T3-3-8342/EA/SVB-SW ⁽¹⁾ 073699		
					22	63	T5B-3-8342/EA/SVB-SW ⁽³⁾ 092307		
					30	100	T5-3-8342/EA/SVB-SW 096382		1 Off
		8	0	0	6.5	20	T0-4-8344/EA/SVB-SW ⁽¹⁾ 008268		1 Off
					13	32	T3-4-8344/EA/SVB-SW ⁽¹⁾ 008965		
					22	63	T5B-4-8344/EA/SVB-SW ⁽³⁾ 092061		
					30	95			
					30	100	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	13	25	P1-25/EA/SVB-SW/HI11 ⁽¹⁾ 070194		
			1	1	13	25			
			1	1	13	25			
			1	1	15	32	P1-32/EA/SVB-SW/HI11 ⁽¹⁾ 012772		
			1	1	15	32			
			1	1	37	63	P3-63/EA/SVB-SW/HI11 ⁽¹⁾ 022264		
			1	1	50	100	P3-100/EA/SVB-SW/HI11 ⁽¹⁾ 031756		
		3	1	0	45	125	P5-125/EA/SVB-SW/HI10 ⁽⁴⁾ 280912		1 Off
			0	0	55	160	P5-160/EA/SVB-SW/HI10 ⁽⁴⁾ 280926		
			0	0	90	250	P5-250/EA/SVB-SW/HI10 ⁽⁴⁾ 280940		
			0	0	110	315	P5-315/EA/SVB-SW/HI10 ⁽⁴⁾ 280954		
		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



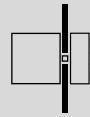
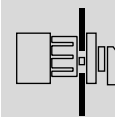
Contact sequence	Front plate no.	Main contacts	Auxiliary contacts	Max. motor rating AC-23 A, 400/415 V, 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65	Part no. Article no.	Price See price list	Std. pack
	 FS 908	Pole N/O	N/O	400 V P kW	I _u A				
Main switch without emergency switching 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/HI1⁽¹⁾ 050740		
					13	32	T3-3-8901/EA/SVB-SW⁽¹⁾ 231946		
					15	32	P1-32/EA/SVB-SW/N/HI1⁽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/HI1⁽¹⁾ 069724		1 Off
		3 + N	1	1	50	100	P3-100/EA/SVB-SW/N/HI1⁽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		Rear mounting		Information relevant for export to North America	
IP65	totally insulated		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					
 					
T0-3-15680/I1/SVB-SW 207154		1 Off	T0-3-15680/V/SVB-SW¹⁾ 045994		1 Off  
T3-3-15680/I2/SVB-SW⁴⁾ 207203		1 Off  	T3-3-15680/V/SVB-SW¹⁾ 019121		
			P1-32/V/SVB-SW/N/HI11¹⁾ 064978		
T0-3-8901/I1/SVB-SW 231935		1 Off			1 Off  
T3-3-8901/I2/SVB-SW²⁾ 218988		1 Off  	P1-25/V/SVB-SW/N/HI11¹⁾ 055486		
T5B-3-8901/I4/SVB-SW³⁾ 207245		1 Off  	T5B-3-8901/V/SVB-SW³⁾ 207423		
T5-3-8901/I5/SVB-SW 207278		1 Off			
P3-63/I4/SVB-SW/N/HI11¹⁾ 207347		1 Off  	P3-63/V/SVB-SW/N/HI11¹⁾ 074470		
P3-100/I5/SVB-SW/N/HI11¹⁾ 207377		1 Off  	P3-100/V/SVB-SW/N/HI11¹⁾ 083962		
T0-4-15682/I1/SVB-SW 207162		1 Off	T0-4-15682/V/SVB-SW¹⁾ 027011		
T3-4-15682/I2/SVB-SW²⁾ 207211		1 Off  	T3-4-15682/V/SVB-SW¹⁾ 061835		
T5B-4-15682/I4/SVB-SW³⁾ 207247		1 Off  	T5B-4-15682/V/SVB-SW³⁾ 207428		
T5-4-15682/I5/SVB-SW 207282		1 Off	T5-4-15682/V/SVB-SW 207416		1 Off
T6-160-6/I45/SVB-SW/HI11⁵⁾ 201447		1 Off	T6-160-6/V/SVB-SW/HI11 200127		
T8-3-8342/I48/SVB-SW/HI11⁶⁾ 201449		1 Off			
			T8-3-8342/V/SVB-SW/HI11 200128		
Notes					
⁵⁾ Enclosure without flanges with K95/1N/BR					
⁶⁾ With KS4-CI and K150/1/BR: Ingress protection IP66					



Contact
sequenceFront plate
no.Main
contacts
Pole

Auxiliary contacts

Max. motor
rating:
AC-23A
400/415 V
50/60 HzRated
uninter-
rupted
currentFlush mounting
Front IP65Part no.
Article no.Price
See price
listCenter mounting
Front IP65Part no.
Article no.Price
See price
list

Std. pack

On-Off switches

Without auxiliary contacts
With black thumb-grip and front plate

1

0

0

6.5

20

T0-1-8200/E⁽¹⁾
067352T0-1-8200/EZ⁽²⁾
069725

1 Off



1

1

0

0

6.5

20

1

1

0

0

13

32

T3-1-8200/E⁽⁴⁾
064208T3-1-8200/EZ⁽⁴⁾
066581

1

1

0

0

22

63

T5B-1-8200/E⁽⁶⁾
094281

2

2

0

0

6.5

20

T0-1-102/E⁽¹⁾
088709T0-1-102/EZ⁽²⁾
091082

2

2

0

0

13

32

T3-1-102/E⁽¹⁾
076073T3-1-102/EZ⁽¹⁾
078446

2

2

0

0

22

63

T5B-1-102/E⁽⁶⁾
094471

3

3

0

0

6.5

20

T0-2-1/E⁽¹⁾
024639T0-2-1/EZ⁽¹⁾
027012

3

3

0

0

6.5

20

3

3

0

0

13

25

P1-25/E⁽¹⁾
038724P1-25/EZ⁽¹⁾
041250

3

3

0

0

13

25

3

3

0

0

15

32

P1-32/E⁽¹⁾
079065P1-32/EZ⁽¹⁾
048369

3

3

0

0

15

32

3

3

0

0

37

63

P3-63/E⁽⁸⁾
026861

3

3

0

0

45

125

P5-125/E⁽⁹⁾
280897

3

3

0

0

50

100

P3-100/E⁽⁸⁾
067201

3

3

0

0

55

160

P5-160/E⁽⁹⁾
280921

3

3

0

0

90

250

P5-250/E⁽⁹⁾
280935

3

3

0

0

110

315

P5-315/E⁽⁹⁾
280949

3 + N

3 + N

0

0

6.5

20

T0-2-8900/E⁽¹⁾
207398T0-2-8900/EZ⁽¹⁾
207402

3 + N

3 + N

0

0

13

25

P1-25/E/N⁽¹⁾
076845P1-25/EZ/N⁽¹⁾
079218

3 + N

3 + N

0

0

13

25

3 + N

3 + N

0

0

15

32

P1-32/E/N⁽¹⁾
093456P1-32/EZ/N⁽¹⁾
095829

3 + N

3 + N

0

0

15

32

3 + N

3 + N

0

0

37

63

P3-63/E/N⁽⁸⁾
019894

3 + N

3 + N

0

0

50

100

P3-100/E/N⁽⁸⁾
031759

4

4

0

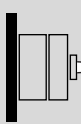
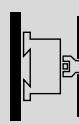
0

6.5

20

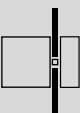
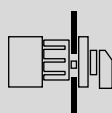
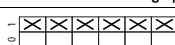
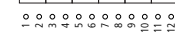
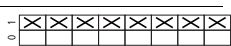
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T, P

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		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
						T0-1-15401/Z¹⁾ 048346				2) → Page 4/24
T3-1-8200/12⁴⁾ 207167		1 Off  				T3-1-8200/Z⁴⁾ 071327				3) → Page 4/24
T5B-1-8200/14⁵⁾ 207218		1 Off  				T5B-1-8200/Z⁶⁾ 094270				4) → Page 4/24
T0-1-102/11 207061		1 Off	T0-1-102/IVS³⁾ 015147			T0-1-102/Z¹⁾ 095828				5) → Page 4/24
						T0-1-15402/Z¹⁾ 062584				6) → Page 4/24
T3-1-102/12⁴⁾ 207165		1 Off  				T3-1-102/Z⁴⁾ 083192				7) → Page 4/24
T5B-1-102/14⁵⁾ 207215		1 Off  				T5B-1-102/Z⁶⁾ 094460				8) → Page 4/24
T0-2-1/11 207081		1 Off	T0-2-1/IVS³⁾ 031758			T0-2-1/Z¹⁾ 036504				9) → Page 4/24
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								
P1-32/12⁸⁾ 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/Z⁹⁾ 280920				
P3-100/15⁸⁾ 207381		1 Off  	P3-100/IVS⁷⁾ 081439			P3-100/Z⁹⁾ 090931				
						P5-160/Z⁹⁾ 280934				
						P5-250/Z⁹⁾ 280948				
						P5-315/Z⁹⁾ 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				





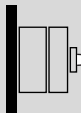
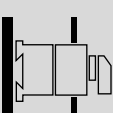
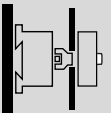
Contact sequence	Front plate no.	Main contacts Pole	Auxiliary contacts	Max. motor rating: AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65	Center mounting Front IP65	Std. pack			
	FS 908										
		N/O	N/O	N/C	P kW	I _u A	Part no. Article no.	Price See price list	Part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

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, suitable as motor disconnect IEC: IP65; UL/CSA Type 3R, 12	2) 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, suitable as motor disconnect IEC: IP65; UL/CSA Type: –	3) 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, suitable as motor disconnect IEC: IP30; UL/CSA Type: –	6) 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; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking E36332 NLRV 12528 3211-07 UL Listed, CSA certified Branch circuits, suitable as motor disconnect IEC: IP65; UL/CSA Type 1	7) 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; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking E36332 NLRV 12528 3211-05 UL Listed, CSA certified Branch circuits, suitable as motor disconnect IEC: IP65; UL/CSA Type: –	8) 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; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking E36332 NLRV 12528 3211-05 UL Listed, CSA certified Branch circuits, suitable as motor disconnect IEC: IP65; UL/CSA Type 3R, 12
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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)

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

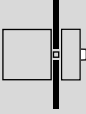
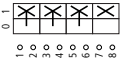
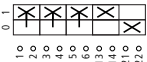
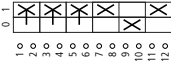
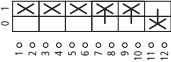
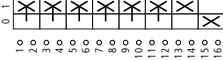
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Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-07
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits, suitable as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

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
		N/O 	N/O 	N/C 	400 V P kW	I _u A			
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		

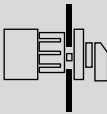
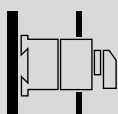
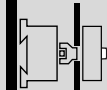
Information relevant for export to North America



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

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T, P

Center mounting Front IP65			Surface mounting IP65			Distribution board - mounting Front IP30			Rear mounting Front IP65		
Part no. Article no.	Price See price list		Part no. Article no.	Price See price list		Part no. Article no.	Price See price list		Part no. Article no.	Price See price list	
											
T0-2-15679/EZ¹⁾ 031760		1 Off  	T0-2-15679/I1 207094		1 Off	T0-2-15679/IVS²⁾ 036506		1 Off  	T0-2-15679/Z¹⁾ 041252		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)		4)		5)	
Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking	Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking	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 File No.	E36332	UL File No.	E36332
UL CCN	NLRV	UL CCN	NLRV	UL CCN	NLRV
CSA File No.	12528	CSA File No.	12528	CSA File No.	12528
CSA Class No.	3211-07	CSA Class No.	3211-07	CSA Class No.	3211-07
NA Certification	UL Listed, CSA certified	NA Certification	UL Listed, CSA certified	NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits, suitable as motor disconnect	Suitable for	Branch circuits, suitable as motor disconnect	Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12	Degree of Protection	IEC: IP65; UL/CSA Type 1	Degree of Protection	IEC: IP65; UL/CSA Type: –



Contact sequence

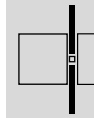
Front
plate no.

FS 908

Main
contacts
PoleAuxiliary
contactsMax. motor rating:
AC-23A
400/415 V
50/60 HzRated
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

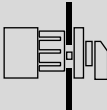
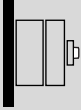
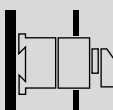
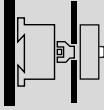
	1	0	0	6.5	20	T0-1-8200/E-RT¹⁾ 009474	
				13	32	T3-1-8200/E-RT³⁾ 017025	
				22	63	T5B-1-8200/E-RT⁴⁾ 094280	
				30	100	T5-1-8200/E-RT 097225	
	2	0	0	6.5	20	T0-1-102/E-RT¹⁾ 009046	
				13	32	T3-1-102/E-RT¹⁾ 016318	
				22	63	T5B-1-102/E-RT⁴⁾ 094470	
	3	0	0	6.5	20	T0-2-1/E-RT¹⁾ 011082	
				13	25	P1-25/E-RT¹⁾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

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

HPL04029EN

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	Part no. Article no.	Price See price list	Std. pack
			T0-1-8200/I1-RT 207075		1 Off	T0-1-8200/IVS-RT²⁾ 081956		1 Off  			
			T0-1-102/I1-RT 207062		1 Off	T0-1-102/IVS-RT²⁾ 079583					
			T3-1-102/I2-RT³⁾ 207166		1 Off  						
			T0-2-1/I1-RT 207082		1 Off	T0-2-1/IVS-RT²⁾ 084329					
			P1-25/I2-RT⁷⁾ 207300		1 Off  	P1-25/IVS-RT⁶⁾ 013140					
			P1-32/I2-RT⁷⁾ 207321		1 Off  	P1-32/IVS-RT⁶⁾ 022632					
			P3-63/I4-RT⁷⁾ 207357		1 Off  	P3-63/IVS-RT⁶⁾ 045845					
			P3-100/I5-RT⁷⁾ 207382		1 Off  	P3-100/IVS-RT⁶⁾ 086185					
			T0-2-8900/I1-RT 207110		1 Off	T0-2-8900/IVS-RT²⁾ 207404					

3)		4)		5)	
Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking	Product Standards	UL 508; CSA-C22.2 No. 14-05; CSA-C22.2 No. 94; IEC/EN 60947-3; CE marking	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 File No.	E36332	UL File No.	E36332
UL CCN	NLRV	UL CCN	NLRV	UL CCN	NLRV
CSA File No.	12528	CSA File No.	12528	CSA File No.	12528
CSA Class No.	3211-07	CSA Class No.	3211-07	CSA Class No.	3211-07
NA Certification	UL Listed, CSA certified	NA Certification	UL Listed, CSA certified	NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits, suitable as motor disconnect	Suitable for	Branch circuits, suitable as motor disconnect	Suitable for	Branch circuits, suitable as motor disconnect
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12	Degree of Protection	IEC: IP65; UL/CSA Type 1	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 HzRated uninterrupted
currentAs an emergency switching off/
emergency stop device¹⁾

Surface mounting

IP65

totally insulated



FS 908

N/O

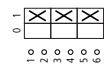
N/O

N/C

400 V
P
kW I_u
APart no.
Article no.Price
See price
list

Std. pack

Safety switches with warning label



3

0

0

13

25

P1-25/I2-SI³⁾
207308

1 Off

15

32

P1-32/I2-SI³⁾
207329

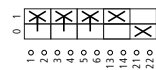
37

63

P3-63/I4-SI³⁾
207361

50

100

P3-100/I5-SI³⁾
207386

3

1

1

13

25

P1-25/I2-SI/HI11³⁾
207310

15

32

P1-32/I2-SI/HI11³⁾
207331

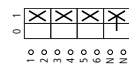
37

63

P3-63/I4-SI/HI11³⁾
207363

50

100

P3-100/I5-SI/HI11³⁾
207388

3 + N

0

0

13

25

P1-25/I2-SI/N³⁾
207312

15

32

P1-32/I2-SI/N³⁾
207333

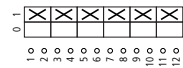
37

63

P3-63/I4-SI/N³⁾
207365

50

100

P3-100/I5-SI/N³⁾
207390

6

0

0

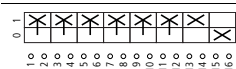
22

63

T5B-3-8342/I4-SI⁴⁾
207250

30

100

T5-3-8342/I5-SI⁴⁾
207447

6

1

1

22

63

T5B-4-15682/I4-SI⁴⁾
207254

30

100

T5-4-15682/I5-SI⁴⁾
207285

6

2

0

22

63

T5B-4-8903/I4-SI⁴⁾
207258

30

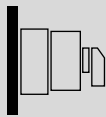
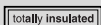
100

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

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

10ff

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 0 (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.

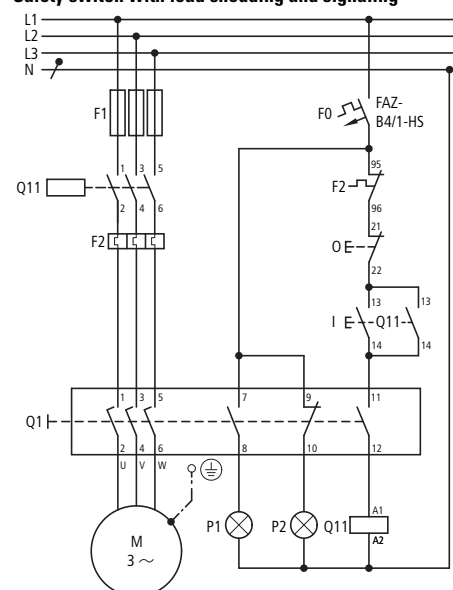
Selection

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

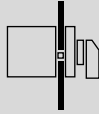
- 1) According to motor switching capacity, when the switch is fitted in such a way that the operator may use it for operational ON and OFF switching.
- 2) The rating data always applies to 3 poles. When the motor rating is divided between 6 poles, such as for star-delta switching, a 6 pole switch can 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

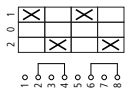
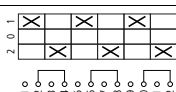
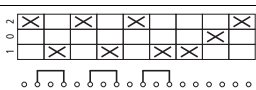




Contact sequence	Front plate no.	Main contacts Pole	Max. operating power AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
		N/O 	400 V P kW	I_u A				

Changeover switches

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

	 FS 684	1	6.5	20	T0-1-8210/E¹⁾ 012742		1 Off 
			13	32	T3-1-8210/E¹⁾ 054718		
			22	63	T5B-1-8210/E⁵⁾ 094261		
	 FS 4011	1	6.5	20			
	 FS 684	2	6.5	20	T0-2-8211/E¹⁾ 022234		
			13	32	T3-2-8211/E¹⁾ 061837		
			22	63	T5B-2-8211/E⁵⁾ 093094		
		3	6.5	20	T0-3-8212/E¹⁾ 029353		
			13	32	T3-3-8212/E¹⁾ 068956		
			22	63	T5B-3-8212/E⁵⁾ 092386		
			30	100	T5-3-8212/E 096466		
	 FS 684	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)

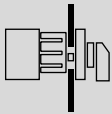
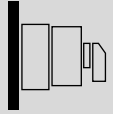
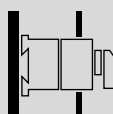
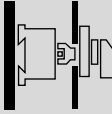
Product Standards UL 508; CSA-C22.2 No. 14-05;
IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits
Degree of Protection IEC: IP65; UL/CSA Type 3R, 12

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 			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
T0-1-8210/EZ⁽¹⁾ 048337		1 Off  	T0-1-8210/I1 207076		1 Off	T0-1-8210/IVS⁽²⁾ 074440		1 Off  	T0-1-8210/Z⁽¹⁾ 019862		1 Off  
T3-1-8210/EZ⁽¹⁾ 003072			T3-1-8210/I2⁽³⁾ 207169		1 Off  				T3-1-8210/Z⁽¹⁾ 057091		
			T5B-1-8210/I4⁽⁴⁾ 207432		1 Off  				T5B-1-8210/Z⁽⁵⁾ 094258		
T0-1-8214/EZ⁽¹⁾ 076815									T0-1-8214/Z⁽¹⁾ 050720		
T0-2-8211/EZ⁽¹⁾ 053083			T0-2-8211/I1 207102		1 Off	T0-2-8211/IVS⁽²⁾ 076813			T0-2-8211/Z⁽¹⁾ 029354		
T3-2-8211/EZ⁽¹⁾ 003075			T3-2-8211/I2⁽³⁾ 207178		1 Off  				T3-2-8211/Z⁽¹⁾ 064210		
			T5B-2-8211/I4⁽⁴⁾ 207220		1 Off  				T5B-2-8211/Z⁽⁵⁾ 093082		
T0-3-8212/EZ⁽¹⁾ 057829			T0-3-8212/I1 207123		1 Off	T0-3-8212/IVS⁽²⁾ 079186			T0-3-8212/Z⁽¹⁾ 036473		
T3-3-8212/EZ⁽¹⁾ 003080			T3-3-8212/I2⁽³⁾ 207183		1 Off  				T3-3-8212/Z⁽¹⁾ 071329		
			T5B-3-8212/I4⁽⁴⁾ 207223		1 Off  				T5B-3-8212/Z⁽⁵⁾ 092383		
			T5-3-8212/I5 207266		1 Off				T5-3-8212/Z 096464		1 Off

3)

Product Standards UL 508; CSA-C22.2 No. 14-05;
CE marking IEC/EN 60947-3;
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)

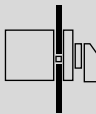
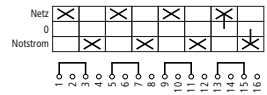
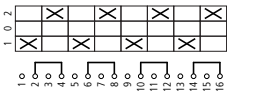
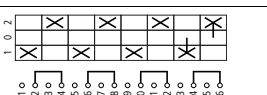
Product Standards UL 508; CSA-C22.2 No. 14-05;
CE marking IEC/EN 60947-3; CE marking
UL File No. E36332
UL CCN NLRV7
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits
Degree of Protection IEC: IP65; UL/CSA Type: –

5)

Product Standards UL 508; CSA-C22.2 No. 14-05;
CE marking 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	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	4	6.5	20	T0-4-8213/E¹⁾ 031726			
			13	32	T3-4-8213/E¹⁾ 076075			
			22	63	T5B-4-8213/E⁵⁾ 092112			
	 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		1 Off	

Information relevant for export to North America



1)

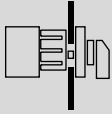
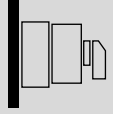
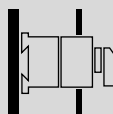
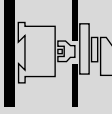
Product Standards	UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
UL File No.	E36332
UL CCN	NLRV
CSA File No.	12528
CSA Class No.	3211-05
NA Certification	UL Listed, CSA certified
Suitable for	Branch circuits
Degree of Protection	IEC: IP65; UL/CSA Type 3R, 12

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: –

HPL04035EN

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
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		
			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

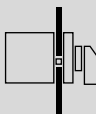
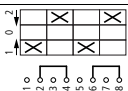
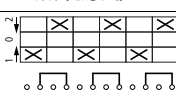
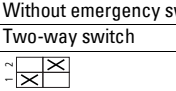
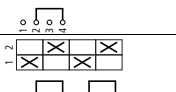
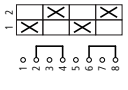
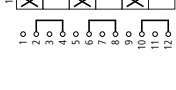
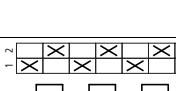
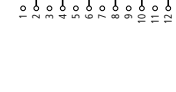
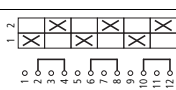
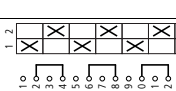
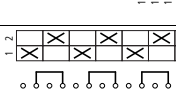
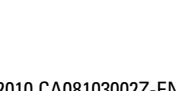
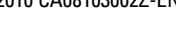
UL File No. E36332
UL CCN NLRV7
CSA File No. 12528
CSA Class No. 3211-05
NA Certification UL Listed, CSA certified
Suitable for Branch circuits
Degree of Protection IEC: IP65; UL/CSA Type: –

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
		N/O 	400 V P kW	I _u A				
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			
		2	6.5	20	T0-2-8215/E²⁾ 022236			
		2	13	32	T3-2-8215/E²⁾ 016751			
		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  
		2	6.5	20	T0-2-8221/E²⁾ 038847			
			13	32	T3-2-8221/E²⁾ 045227			
			22	63	T5B-2-8221/E⁴⁾ 093047			
		3	6.5	20	T0-3-8222/E²⁾ 048339			
			13	32	T3-3-8222/E²⁾ 052346			
			22	63	T5B-3-8222/E⁴⁾ 092378			
		4	6.5	20	T0-4-8223/E²⁾ 050712			
			13	32	T3-4-8223/E²⁾ 059465			
			22	63	T5B-4-8223/E⁴⁾ 092108			
		5	6.5	20	T0-5-8369/E²⁾ 060204			
		5	13	32	T3-5-8369/E²⁾ 066584			
		6	6.5	20	T0-6-8370/E²⁾ 062577			
		6	13	32	T3-6-8370/E²⁾ 073703			
		8	6.5	20	T0-8-8372/E²⁾ 064950			
		8	13	32	T3-8-8372/E²⁾ 080822			

Information relevant for export to North America

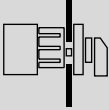
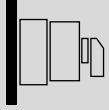
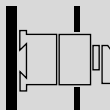
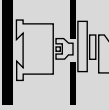


1)

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

Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 			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

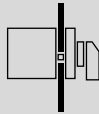
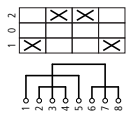
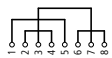
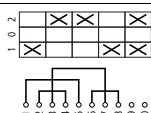
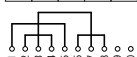
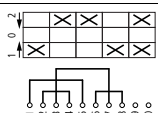
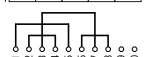
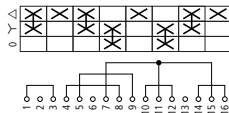
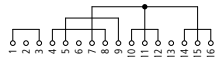
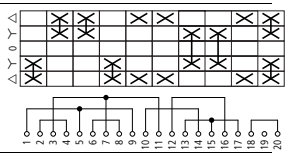
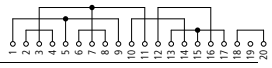
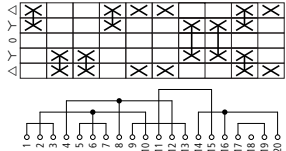
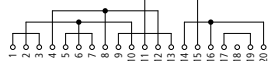
4)

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: –

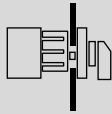
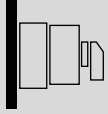
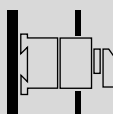
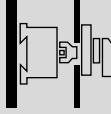


Contact sequence	Front plate no.	Main contacts Pole	Max. operating power AC-23A 400/415 V 50/60 Hz	Rated uninterrupted current	Flush mounting Front IP65 	Part no. Article no.	Price See price list	Std. pack
		S 	400 V P kW	I _u A				
Reversing switch with 0 (Off) position								
With black thumb-grip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

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

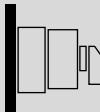
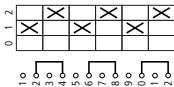
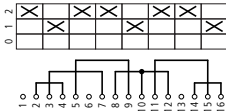
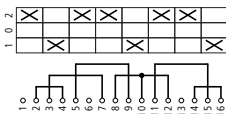
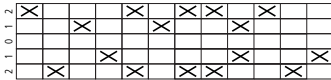
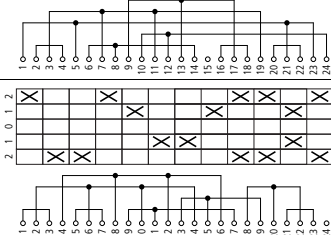
Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 			Front IP30			Front IP65		
											
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
T0-2-8400/EZ¹⁾ 055452		1 Off  	T0-2-8400/I1 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/I1 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/I1 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/I1 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	Part no. Article no.	Price See price list	Std. pack
		N/O 	400 V P kW	I _u A				
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 	
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

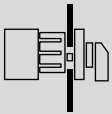
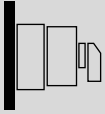
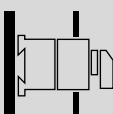
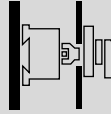


1)

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

Center mounting			Surface mounting			Distribution board mounting			Rear mounting		
Front IP65			IP65 			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	Center mounting ¹⁾ Front IP65	Std. pack
		Pole N/O	Part no. Article no.	Part no. Article no.	Price See price list
					Price See price list
					Std. pack
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	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



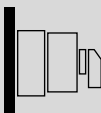
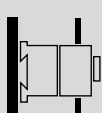
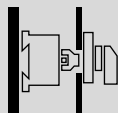
1)

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		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
T0-1-8240/I1 207079		1 Off	T0-1-8240/IVS 027076		
T0-2-8241/I1 207107			T0-2-8241/IVS 057835		
T0-2-8242/I1 207108			T0-2-8242/IVS 074446		
T0-3-8243/I1 207128			T0-3-8243/IVS 088684		
T0-3-8244/I1 207129			T0-3-8244/IVS 012749		
T0-3-8280/I1 207130			T0-3-8280/IVS 041225		
			T0-5-8281/IVS 055463		
			T0-6-8282/IVS 069701		
			T0-1-8240/Z 060208		
T0-2-8241/Z 062581		T0-2-8241/Z 062581			
T0-2-8242/Z 076819		T0-2-8242/Z 076819			
T0-3-8243/Z 091057		T0-3-8243/Z 091057			
T0-3-8244/Z 015122		T0-3-8244/Z 015122			
T0-3-8280/Z 043598		T0-3-8280/Z 043598			
			T0-5-8281/Z 057836		
			T0-6-8282/Z 072074		

2)

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: IP30; UL/CSA Type: –





Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾ Front IP65	Center mounting ¹⁾ 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
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
	FS 943				T0-1-8220/EZ 095799
		1	T0-2-8230/E 088685		
	FS 404				T0-2-8230/EZ 091058
		1	T0-2-8231/E 012750		
	FS 606				T0-2-8231/EZ 015123
		1	T0-3-8232/E 026988		
	FS 408				T0-3-8232/EZ 029361
		1	T0-3-8233/E 041226		
	FS 410				T0-3-8233/EZ 043599
		2	T0-4-8251/E 013971		
	FS 406				T0-4-8251/EZ 013972
		3	T0-3-8222/E 048339		
	FS 943				T0-3-8222/EZ 015118
		3	T0-5-8270/E 091059		
	FS 404				T0-5-8270/EZ 093432
		3	T0-6-8271/E 015124		
	FS 406				T0-6-8271/EZ 017497

Information relevant for export to North America



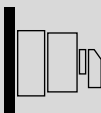
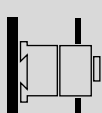
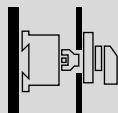
1)

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		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

2)

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: IP30; UL/CSA Type: –





Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾			Center mounting ²⁾		
			Front IP65			Front IP65		
		Pole N/O	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
		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		

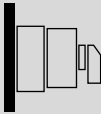
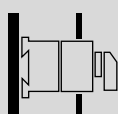
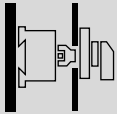
Information relevant for export to North America



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 			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/I1 207067		1 Off	T0-1-15401/ IVS 045973		1 Off  			
T0-1-15402/I1 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
		Pole N/O	Part no. Article no.	Price See price list
			Std. pack	Std. pack
			Part no. Article no.	Price See price list
			Std. pack	Std. pack
Changeover switches				
With black thumb-grip and front plate				
		1	T0-1-15421/E 095806	T0-1-15421/EZ 098179
	FS 429			
		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				
		1	T0-1-15431/E 019872	T0-1-15431/EZ 022245
	FS 1401			
		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				
		1	T0-1-15434/E 062586	T0-1-15434/EZ 018053
	FS 1414000			
		2	T0-2-15435/E 003191	T0-2-15435/EZ 003192
With momentary from START				
		2	T0-2-15907/E 066931	T0-2-15907/EZ 069304
	FS 1413890			
Without 0 (Off) position				
		1	T0-1-15451/E 076824	T0-1-15451/EZ 079197
	FS 19334			
		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

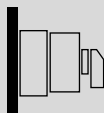
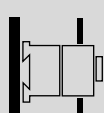
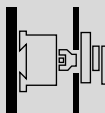
1)

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

HPL04049EN

T

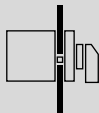
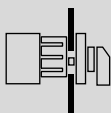
Surface mounting IP65			Distribution board mounting ²⁾ Front IP30			Rear mounting ¹⁾ Front IP65		
								
Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
T0-1-15421/I1 207069		1 Off	T0-1-15421/IVS 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		

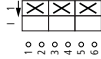
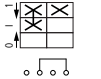
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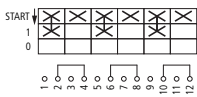
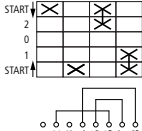
Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification
Suitable for
Degree of Protection

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: IP30; UL/CSA Type: –



Contact sequence	Front plate no.	Main contacts	Flush mounting Front IP65		Center mounting Front IP65	
		Pole N/O		Part no. Article no.	Price See price list	Std. pack
				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 	T0-1-15321/EZ 088690
	FS 4721	2	T0-1-15322/E 010382			T0-1-15322/EZ 012755
		3	T0-2-15323/E 024620			T0-2-15323/EZ 026993
			T0-1-15366/E 081572			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 	T0-1-15511/EZ 022248
		2	T0-2-15512/E 034113			T0-2-15512/EZ 036486
		3	T0-3-15513/E 048351			T0-3-15513/EZ 050724
		see K 115	T0-2-8177/E 015130			T0-2-8177/EZ 017503

Information relevant for export to North America



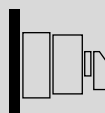
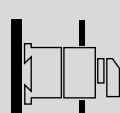
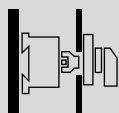
1)

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		
T0-3-15513/I1 207117								
T0-2-8177/I1 207101			T0-2-8177/IVS 022249			1 Off  	T0-2-8177/Z 024622	

2)

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

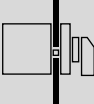
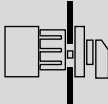
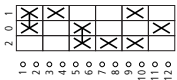
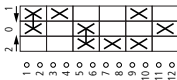
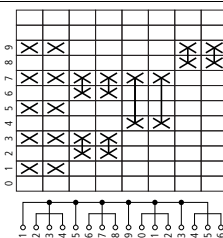
UL Listed, CSA certified

Branch circuits

IEC: IP30; UL/CSA Type: –

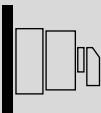
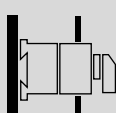
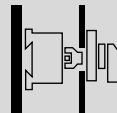




Contact sequence	Front plate no.	Main contacts	Flush mounting ¹⁾ Front IP65		Center mounting ¹⁾ Front IP65			
								
		Pole N/O	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Universal control switches								
With black thumb-grip and front plate								
Maintained switches with 3 positions 1 contact closed in each position								
• 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								
			T0-3-15391/E 029365		1 Off  	T0-3-15391/EZ 031738		1 Off  
	FS 429							
Momentary from positions 1 and 2 With black thumb-grip and front plate								
			T0-3-15394/E 072079		1 Off  	T0-3-15394/EZ 074452		1 Off  
	FS 458							
Coding switches								
With black thumb-grip and front plate With complete rotation in both directions.								
		Binary BCD code	T0-4-15602/E 029368		1 Off  	T0-4-15602/EZ 031741		1 Off  
	FS 312							
Series switches								
With black thumb-grip and front plate With 0 (Off) position (heater switches)								
		1	T0-1-91/E 072082		1 Off  	T0-1-91/EZ 074455		1 Off  
	FS 614							
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 			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	
	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;
UL File No.	CE marking
UL CCN	E36332
CSA File No.	NLRV
CSA Class No.	12528
NA Certification	3211-05
Suitable for	UL Listed, CSA certified
Degree of Protection	Branch circuits
	IEC: IP30; UL/CSA Type: –





Contact sequence	Front plate no.	Pole	Main contacts	Flush mounting ¹⁾		Center mounting ¹⁾			
				Front IP65		Front IP65			
			Pole N/O	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Voltmeter selector switch									
With black thumb-grip and front plate									
		3 x phase-N with 0 position	3 + N	T0-2-15921/E 067337		1 Off 	T0-2-15921/EZ 069710		1 Off
		3 x phase-phase 3 x phase-N with 0 position	3 + N	T0-3-8007/E 095813			T0-3-8007/EZ 098186		
		3 x phase-phase 3 x phase-N without 0 position with complete rotation in both directions	3 + N	T0-3-15924/E 019878			T0-3-15924/EZ 022251		
		3 x phase-phase with 0 position	3	T0-2-15920/E 038861			T0-2-15920/EZ 041234		
		3 x phase-phase without 0 position	3	T0-2-15922/E 053099			T0-2-15922/EZ 055472		
Ammeter selector switch									
With black thumb-grip and front plate With complete rotation in both directions. Measurement via current transformer With 0 (Off) position									
				T0-3-8048/E 034116		1 Off 	T0-3-8048/EZ 036489		1 Off

Information relevant for export to North America



1)

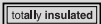
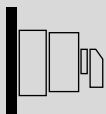
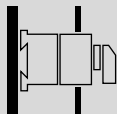
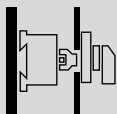
Product Standards

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

HPL04055EN

T

Surface mounting			Distribution board mounting ²⁾ Front IP30			Rear mounting ¹⁾ Front IP65		
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
			T0-2-15921/IVS 074456		1 Off  	T0-2-15921/Z 076829		1 Off  
T0-3-8007/I1 207120		1 Off	T0-3-8007/IVS 012759			T0-3-8007/Z 015132		
T0-3-15924/I1 207119		1 Off	T0-3-15924/IVS 026997			T0-3-15924/Z 029370		
			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		1 Off  	T0-3-8048/Z 043608		1 Off  

2)

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

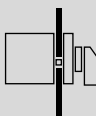
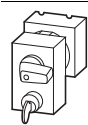
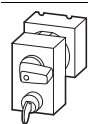
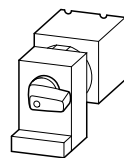
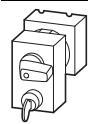
3211-05

UL Listed, CSA certified

Branch circuits

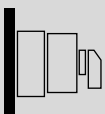
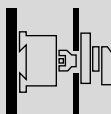
IEC: IP30; UL/CSA Type: –



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
		Pole N/O	400 V P kW	I _u A				Std. pack
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

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

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

HPL04058EN

	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  	- For locking the 0 position - For switches with positions 0-I at 90°
			T5B-.../E, .../Z, .../I4 T5-.../E, .../Z, .../I5 P3-63/E, .../Z, .../I4 P3-100/E, .../Z, .../I5	SVB-P3 052999	1 off  	- Switching angle as front plate FS908 - Lockable with max. 3 padlocks
	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  	- For locking the 0 position - For locking the I position when required
			T5B-.../E, .../Z, .../I4 T5-.../E, .../Z, .../I5 P3-63/E, .../Z, .../I4 P3-100/E, .../Z, .../I5	SVB-SW-P3 062491	1 off  	Lockable with max. 3 padlocks
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  	For converting flush mounting switch T.../E into flush mounting main switch T.../EA/SVB...
			T5(B)-.../E, .../Z	V/EA/SVB-T5 045065	1 off  	For converting rear mounting switch T.../Z (with FS908 front plate) into interlocked rear mounting main switch T.../V/SVB
	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  	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  	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...			
			P3...	KNK-P3 000649	5 off  	
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

HPL04059EN

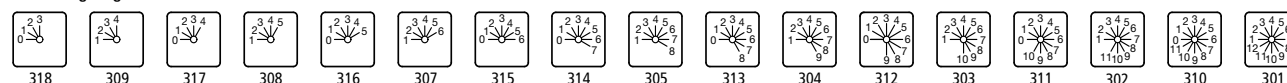
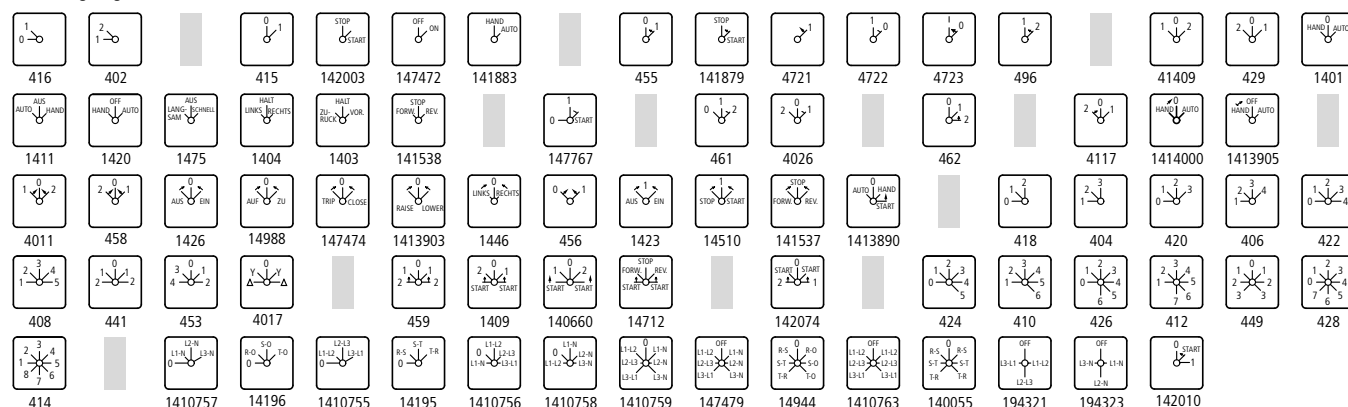
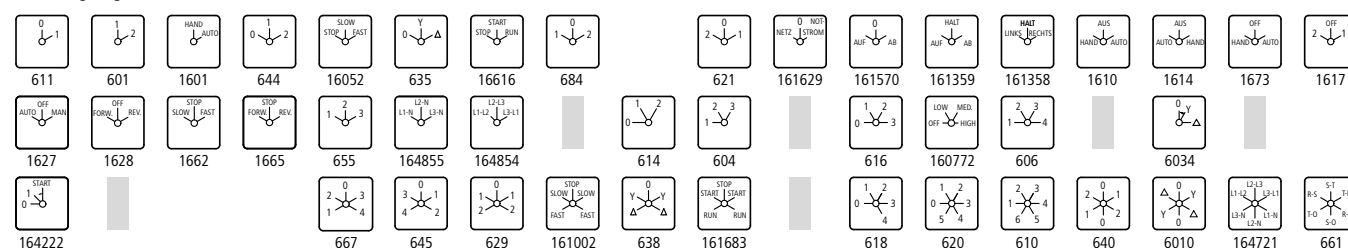
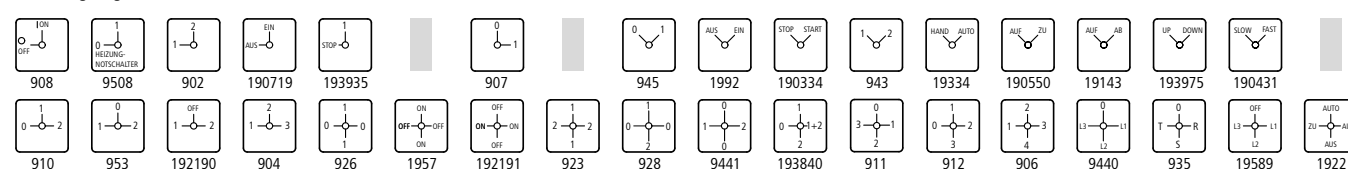
Front plates

FS...-T0(P3)

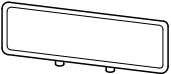
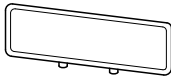
Switch size	Dimensions (W x H x D) mm	For use with	Blank plate Can be engraved Part no. Article no.	Price See price list	Std. pack	Information relevant for export to North America
Standard front plate						
Suitable for laser inscription						UL/CSA certification not required
T0, T3, P1	45 x 45	(for frame 48 x 48)	FS(*)-T0 231893		10 off  	
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 of label mount and insert label							
							
- 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		25 off  	ZFS61/62-P3 065739		25 off  
	French	ZFS63-T0 047424			ZFS63-P3 047423		25 off  
	Italian	ZFS68-T0 065751					
	Portuguese	ZFS72-T0 205541					
	Swedish	ZFS75-T0 205544					
	Spanish	ZFS77-T0 065752			ZFS77-P3 047422		25 off  
	Hungarian	ZFS80-T0 205548			ZFS80-P3 205565		
Blank, can be engraved	none	ZFS60-T0 019924			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	ZFS(*)-P5 105225		1 off  			
	P5-.../V/SVB						

Information relevant for export to North America

UL/CSA certification not required



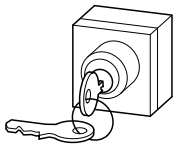


For use with

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

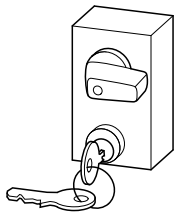
T0-1.../I1 to T0-4.../I1
T0-1.../E to T0-6.../E
T0-1.../Z to T0-6.../Z
T3-1.../E to T3-5.../E
T3-1.../Z to T3-5.../Z
T3-1.../I2 to T3-4.../I2
P1.../E
P1.../I2
P1.../Z

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-.../I1, T0-.../Z
T3-.../E, T3-.../I2, T3-.../Z
P1-.../E, P1-.../I2, P1-.../Z

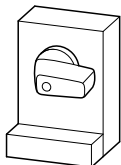
Withdrawable positions can be programmed by user

T0-1... to T0-4.../I1
T0-1.../E to T0-4.../E
T3-1... to T3-5.../I2
T3-1... to T3-6.../E
P1-.../I2, 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-.../I1, T0-.../Z
T3-.../E, T3-.../I2, T3-.../Z
P1-.../E, P1-.../I2, P1-.../Z

Switches with FS908 can be used as main switches for:
T0-1... to T0-4.../I1, .../E
T3-1... to T3-5.../I2
T3-1... to T3-6.../E
P1-.../I2, P1-.../E

The positions that can be locked can be programmed by the user

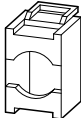
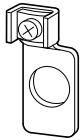
The positions that can be locked are programmable at the factory as ordered

Part no. Article no.	Price See price list	Std. pack	Notes
S-T0 086709		1 off	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. On cam switches ordered with front plate FS908 together with key operation, the key is only withdrawable in the 0 position. The key withdraw can be changed (also retrospectively) with the locking cam "VR-T0". When retrofitting the key operation, the existing front plate of the cam switch must be used. Keys → Page 4/66
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	N-P1Z 000652		1 off	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-.../E, .../EA...	N-P3E 062432			
		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 UL File No. E36332 UL CCN NLRV CSA File No. 12528 CSA Class No. 3211-05 NA Certification UL Listed, CSA certified	
	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  		
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 rele- vant 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 certifica- tion 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 certifica- tion 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 certifica- tion 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 certifica- tion 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 certifica- tion 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 certifica- tion 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 certifica- tion 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 certifica- tion 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	T5(B)-.../E, .../Z	H1-T5 045062		1 off 	Can be optionally used for input wiring and/or outgoer
	Extension for H1-T5 protective shroud on 3 - 8 contact units	H1-T5	HZ-T5 045063		10 off 	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

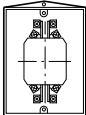
2)

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

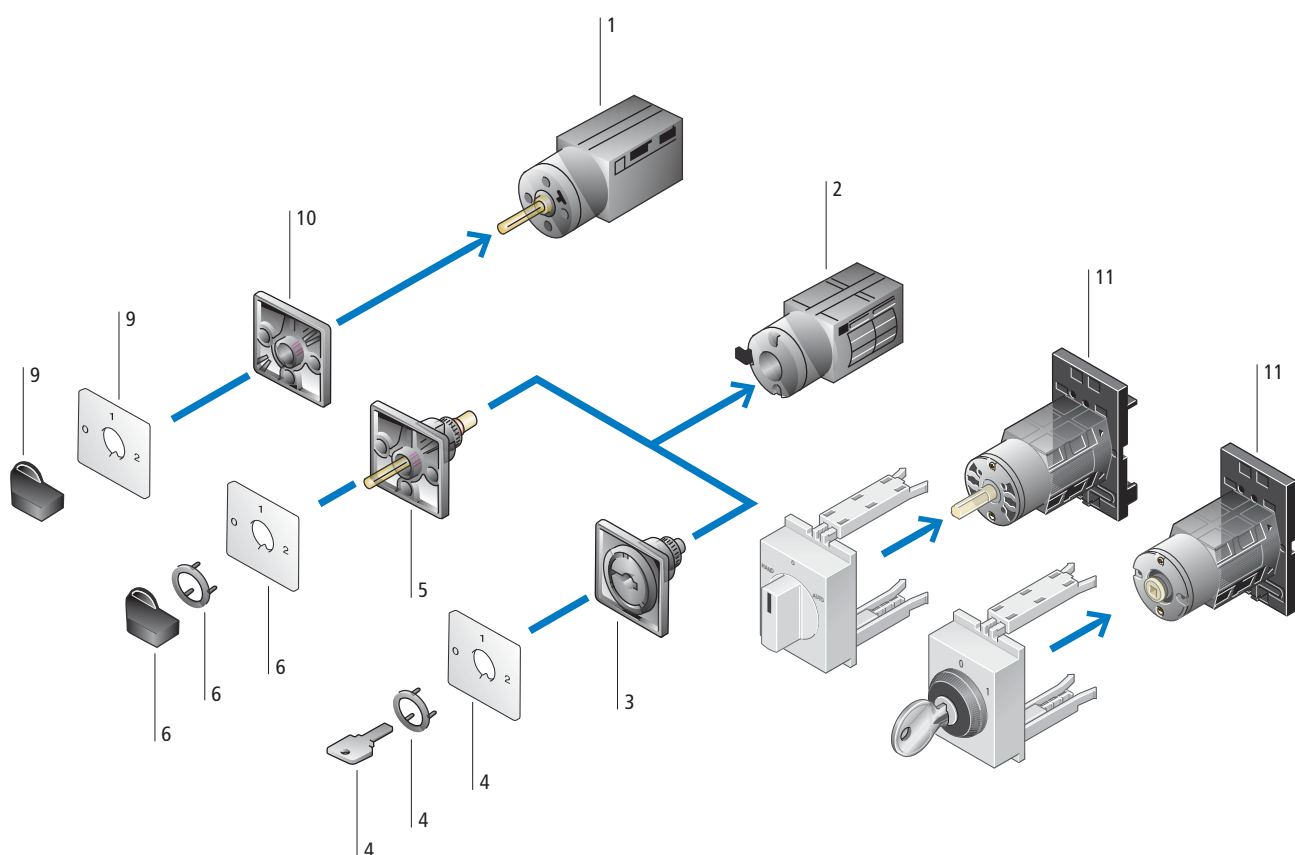
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		For use with	Part no. Article no.	Price See price list	Std. pack	Notes
IP65 insulated enclosures						
	1 - 2 contact units	With push-through cable entry diaphragm.	T0-.../Z	CI-K1-T0-2 207435	1 off	The diaphragm can be pierced with the cable Main 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-T3-2 ¹⁾ 207437	1 off  	
	3 - 4 contact units		T3-.../Z	CI-K2-T3-4 ¹⁾ 225325		
	5 contact units		T3-.../Z	CI-K2-T3-5 ¹⁾ 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-K1/2 ²⁾ 207451		20 off  	
		T5B-.../I4, CI-K4-T5B-... P3-.../I4, CI-K4	K-CI-K4 ²⁾ 206916			
		T5-.../I5, CI-K5-T5-... P3-.../I5, CI-K5	K-CI-K5 ²⁾ 218488			
Set of external fixing brackets						
		T5B-.../I4, T5-.../I5, P3-63/I4, P3-100/I5	AB-CI-K4/5 ²⁾ 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-T5-1/2 ²⁾ 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-T5-3/4 ²⁾ 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**



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	

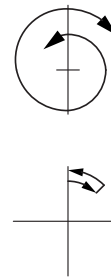
Product features

Contact chamber

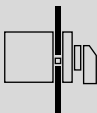
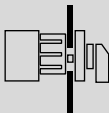
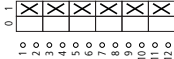
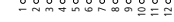
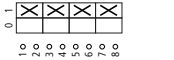
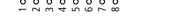
- Rated uninterrupted current 10 A
- Positively opening contacts
- 1 – 2 contacts per contact chamber, up to 16 contacts per switch
- For switching unequal potentials
- Control circuit reliability

Switch position

- Safety due to indexing
- Switching angles 30°, 45°, 60°, 90°
- Spring action with automatic return with max. 6 contacts, switching angle $\geq 60^\circ$
- 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°								
	 F 056	1	TM-1-8290/E 070131		1 off  	TM-1-8290/EZ 000693		1 off  
		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



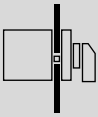
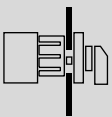
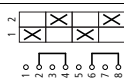
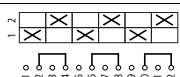
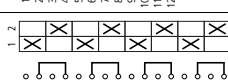
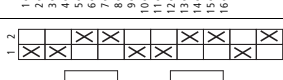
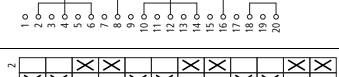
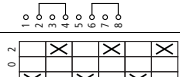
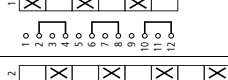
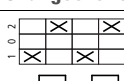
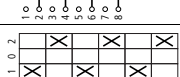
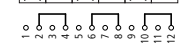
Product Standards

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

			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		
Changeover switches without 0 (Off) position 60°										
	 F 072	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°										
	 F 071	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°										
	 F 057	2	TM-2-8219/E 017926		1 off  					
		3	TM-3-8299/E 020299							
	 F 071									

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
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Contact sequence	Front plate no.	Pole	Flush mounting Front IP65	Center mounting Front IP65	Distribution board - mounting Front IP30	Std. pack	
			Part no. Article no.	Price See price list	Part no. Article no.	Price See price list	
Manual/auto switch 60°							
	 F 288	1			TM-1-8220F288/EZ 016925		1 off
	 F 085	1	TM-1-15431/E 025045		TM-1-15431/EZ 000691		1 off
		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°							
	 F 025	1	TM-1-8214/E 032164				1 off
		2	TM-2-8215/E 034537				1 off
Step switches without 0 (Off) position							
3 steps, 60°							
	 F 076	1	TM-2-8230/E 039283		TM-2-8230/EZ 000701		1 off
		3	TM-5-8270/E 041656		TM-5-8270/EZ 046124		1 off
4 steps, 60°							
	 F 077	1	TM-2-8231/E 044029		TM-2-8231/EZ 000700		1 off
		3	TM-6-8271/E 046402		TM-6-8271/EZ 046128		1 off

Information relevant for export to North America

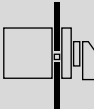
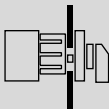
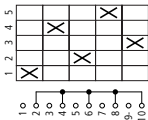
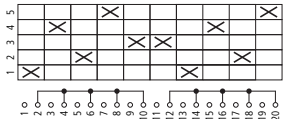
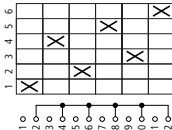
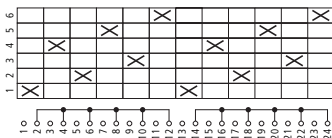
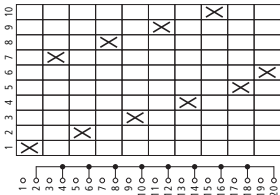


Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

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	Center mounting Front IP65	Part no. Article no.	Price See price list	Std. pack
									
Step switches without 0 (Off) position									
5 steps, 60°									
	 F 078	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									
	 F 079	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°									
	 F 011	1	TM-5-8237/E 069150		1 off 	TM-5-8237/EZ 015661		1 off 	

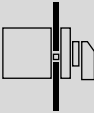
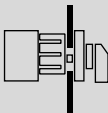
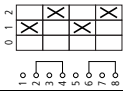
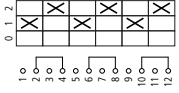
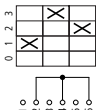
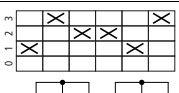
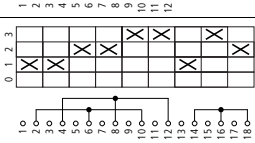
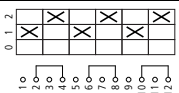
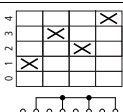
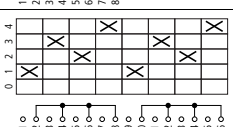
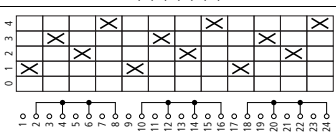
Information relevant for export to North America



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.	—
NA Certification	UL Listed, certified by UL for use in Canada





			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
Step switches								
With 0 (Off) position								
2 steps, 60°								
	 F 075	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°								
	 F 109	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°								
	 F 075	3	TM-3-8280/E 063013		1 off  			
4 steps, 30°								
	 F 002	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



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			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
Step switches								
With 0 (Off) position								
5 steps, 30°								
		1	TM-3-8243/E 079624		1 off 	TM-3-8243/EZ 015537		1 off
6 steps, 30°								
		1	TM-3-8244/E 081997		1 off 	TM-3-8244/EZ 045495		1 off
9 steps, 30°								
		1	TM-5-8247/E 009741		1 off 	TM-5-8247/EZ 015565		1 off
Group switches								
2 groups, 60°								
		1	TM-1-8310/E 084370		1 off 	TM-1-8310/EZ 045479		1 off
3 groups, 30°								
		1				TM-2-8311/EZ 045487		1 off
ON OFF switches								
ON switch 30°								
		1				TM-1-8175/EZ 015690		1 off
ON OFF switches 90°/30° With spring-return from start to 1								
		1	TM-1-8178/E 098608		1 off 	TM-1-8178/EZ 016786		1 off

Information relevant for export to North America

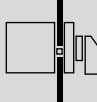
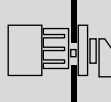
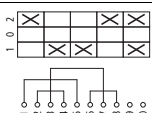
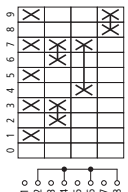
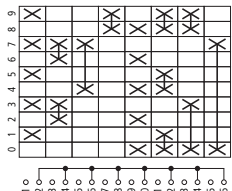


Product Standards
UL File No.
UL CCN
CSA File No.
CSA Class No.
NA Certification

UL 508; CSA-C22.2 No. 14-05; IEC/EN 60947-3; CE marking
E36332
NLRV
UL report applies to both US and Canada
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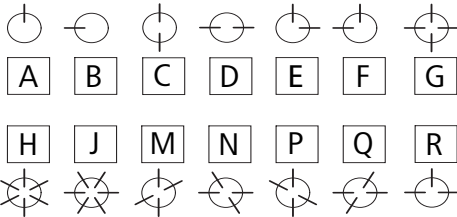
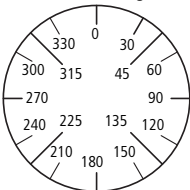
			Flush mounting Front IP65			Center mounting Front IP65		
								
Contact sequence	Front plate no.	Pole	Part no. Article no.	Price See price list	Std. pack	Part no. Article no.	Price See price list	Std. pack
Reversing switches, 60°								
	 F 071	3	TM-3-8401/E 015554		1 off  			
Coding switches								
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
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

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-FRONTSCCHILD-NR(*) 239021		1 off  	Switching angles 30°  F023  F024  F025  F039  F053  F258  F259  F708  F001  F002  F003  F004  F005  F006  F007  F011
TM.../EZ	29 x 29	(for frame 30 x 30)	TM/EZ-FRONTSCCHILD-NR(*) 239022		1 off  	
Switching angle 45°  F215  F216  F738  F109  F115  F330  F105  F113  F293  F741  F106  F110  F785  F788  F111  F322						
Switching angle 60°  F072  F234  F288  F071  F073  F075  F076  F085  F249  F373  F732  F077  F102  F078  F079  F121						
Switching angle 90°  F056  F063  F068  F700  F743  F057  F209  F719  F059  F060  F062  F206  F718  F437  F119  F990						

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*/V/SVB ²⁾	907817		T0-6-SOND*/Z ²⁾	907844		
	T0-1-SOND*/V/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*/V/SVB ²⁾	907818		T0-9-SOND*/E ¹⁾	907773		
	T0-2-SOND*/V/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*/V/SVB ²⁾	907819		T0-11-SOND*/IVS ⁴⁾	907816		
	T0-3-SOND*/V/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*/V/SVB ²⁾	907820					
	T0-4-SOND*/V/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*/E¹⁾	907850		T3-5-SOND*/E¹⁾	907854		1 off  
	T3-1-SOND*/EA/SVB¹⁾	907861		T3-5-SOND*/EA/SVB¹⁾	907865		
	T3-1-SOND*/EA/SVB-SW¹⁾	908080		T3-5-SOND*/EA/SVB-SW¹⁾	908084		
	T3-1-SOND*/EZ¹⁾	907872		T3-5-SOND*/EZ¹⁾	907876		
	T3-1-SOND*/I2²⁾	207492		T3-5-SOND*/I2²⁾	207504		
	T3-1-SOND*/I2/SVB²⁾	207493		T3-5-SOND*/I2/SVB²⁾	207506		
	T3-1-SOND*/I2/SVB-SW²⁾	207494		T3-5-SOND*/I2/SVB-SW²⁾	207507		
	T3-1-SOND*/N/SVB¹⁾	907891		T3-5-SOND*/N/SVB¹⁾	907895		
	T3-1-SOND*/N/SVB-SW¹⁾	908091		T3-5-SOND*/N/SVB-SW¹⁾	908095		
	T3-1-SOND*/Z¹⁾	907913		T3-5-SOND*/Z¹⁾	907917		
	T3-2-SOND*/E¹⁾	907851		T3-6-SOND*/E¹⁾	907855		
	T3-2-SOND*/EA/SVB¹⁾	907862		T3-6-SOND*/EA/SVB¹⁾	907866		
	T3-2-SOND*/EA/SVB-SW¹⁾	908081		T3-6-SOND*/EA/SVB-SW¹⁾	908085		
	T3-2-SOND*/EZ¹⁾	907873		T3-6-SOND*/EZ¹⁾	907877		
	T3-2-SOND*/I2²⁾	207495		T3-6-SOND*/N/SVB¹⁾	907896		
	T3-2-SOND*/I2/SVB²⁾	207496		T3-6-SOND*/N/SVB-SW¹⁾	908096		
	T3-2-SOND*/I2/SVB-SW²⁾	207497		T3-6-SOND*/Z¹⁾	907918		
	T3-2-SOND*/N/SVB¹⁾	907892					
	T3-2-SOND*/N/SVB-SW¹⁾	908092		T3-7-SOND*/E¹⁾	907856		
	T3-2-SOND*/Z¹⁾	907914		T3-7-SOND*/EZ¹⁾	907878		
				T3-7-SOND*/Z¹⁾	907919		
	T3-3-SOND*/E¹⁾	907852		T3-8-SOND*/E¹⁾	907857		
	T3-3-SOND*/EA/SVB¹⁾	907863		T3-8-SOND*/EZ¹⁾	907879		
	T3-3-SOND*/EA/SVB-SW¹⁾	908082		T3-8-SOND*/Z¹⁾	907920		
	T3-3-SOND*/EZ¹⁾	907874					
	T3-3-SOND*/I2²⁾	207498		T3-9-SOND*/E¹⁾	907858		
	T3-3-SOND*/I2/SVB²⁾	207499		T3-9-SOND*/EZ¹⁾	907880		
	T3-3-SOND*/I2/SVB-SW²⁾	207500		T3-9-SOND*/Z¹⁾	907921		
	T3-3-SOND*/N/SVB¹⁾	907893					
	T3-3-SOND*/N/SVB-SW¹⁾	908093		T3-10-SOND*/E¹⁾	907859		
	T3-3-SOND*/Z¹⁾	907915		T3-10-SOND*/EZ¹⁾	907881		
				T3-10-SOND*/Z¹⁾	907922		
	T3-4-SOND*/E¹⁾	907853		T3-11-SOND*/E¹⁾	907860		
	T3-4-SOND*/EA/SVB¹⁾	907864		T3-11-SOND*/EZ¹⁾	907882		
	T3-4-SOND*/EA/SVB-SW¹⁾	908083		T3-11-SOND*/Z¹⁾	907923		
	T3-4-SOND*/EZ¹⁾	907875					
	T3-4-SOND*/I2²⁾	207501					
	T3-4-SOND*/I2/SVB²⁾	207502					
	T3-4-SOND*/I2/SVB-SW²⁾	207503					
	T3-4-SOND*/N/SVB¹⁾	907894					
	T3-4-SOND*/N/SVB-SW¹⁾	908094					
	T3-4-SOND*/Z¹⁾	907916					

Notes

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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

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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*/V/SVB	908007		
	T5-1-SOND*/I5/SVB	207525		T5-5-SOND*/V/SVB-SW	908138		
	T5-1-SOND*/I5/SVB-SW	207526		T5-5-SOND*/Z	908025		
	T5-1-SOND*/V/SVB	908003					
	T5-1-SOND*/V/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*/V/SVB	908008		
	T5-2-SOND*/EA/SVB	907988		T5-6-SOND*/V/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*/V/SVB	908004		T5-7-SOND*/EA/SVB-SW	908132		
	T5-2-SOND*/V/SVB-SW	908135		T5-7-SOND*/V/SVB	908009		
	T5-2-SOND*/Z	908022		T5-7-SOND*/V/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*/V/SVB	908010		
	T5-3-SOND*/I5/SVB-SW	207532		T5-8-SOND*/V/SVB-SW	908141		
	T5-3-SOND*/V/SVB	908005		T5-8-SOND*/Z	908028		
	T5-3-SOND*/V/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*/V/SVB	908006					
	T5-4-SOND*/V/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

T								+	
↑		↑		↑		↑		↑	
Switch size	Number of contact units (2 contacts per contact unit)		Contact sequence number		Mounting form		Accessories		
	Max. units	Contacts max.	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		• 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/SVB ²⁾ • Surface mounting main switch /I.../SVB • Rear mounting main switch /V/SVB ²⁾ • Designs for TM: /E, /EZ, or /IVS		Always specify completely for every order! For TM.../EZ: only +EZ/S... possible		
T0	11	22	sequence number is specified by the supplying factory. Specifying the part no. is enough when placing repeat orders.						
T3	11	22							
T5B	10	20							
T5	10	20							
TM	8	16							

Non-standard contact sequence ordering example

MOELLER 

Binding document for ordering T cam switch combinations for the first time

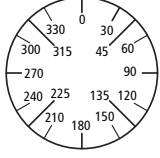
Order No.: 123456	Item: 7	Office: Cologne	Author: HWS
Customer: Sample Company		Customer no.: A4711/2004	Date: 29.2.2004

Quantity: 3	Switching angle:	Part no.:	Number of contacts:	Mounting form:
Euros/unit:	☐ 30 ☐ 45 ☐ 60 ☐ 90	☐ TM ☐ T0 ☐ T3 ☐ T5B ☐ T5	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11	☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22

Max. characters per position	TM-E	TM-EZ	TM-IVS	T0(3)	T5(B)
Degrees	5	5	6	13	13
0.18	8	7	4	8	8
30, 210, 330	6	5	4	6	7
45, 135, 225, 315	5	5	3	5	7
60, 120, 240, 300	5	4	1	4	7
90, 270	4	4	4	8	8
150					

☐ E ☐ EA/SVB ☐ EZ ☐ I... ☐ I.../SVB ☐ IVS ☐ V/SVB ☐ Z ☐ + ST-0 ☐ + _____	☐ EA/SVB-SW ☐ I.../SVB-SW ☐ V/SVB-SW
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Front plate no. FS	Contact units <table border="1" style="width:100%; border-collapse: collapse; text-align: center;"> <tr> <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>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> </tr> <tr> <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> </tr> <tr> <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>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>	1	2	3	4	5	6	7	8	9	10	11	1	3	5	7	9	11	13	15	17	19	21	2	4	6	8	10	12	14	16	18	20	22	23	25	27	29	31	33	35	37	39	41	43	24	26	28	30	32	34	36	38	40	42	44
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Key withdrawability ☒	Part no. for repeat orders (to be filled in by factory) T
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T, TM



Binding document for ordering T cam switch combinations for the first time

Order No.:	Item:	Office:	Name:																																										
Customer:		Customer no.:	Date:																																										
Notes: The number of possible contacts, as well as the possible combinations with mounting forms are shown in the Main Catalogue.	Quantity:	Switching angle:	Part no.:																																										
	Euros/unit:	☐ 30 ☐ 45 ☐ 60 ☐ 90	☐ TM ☐ T0 ☐ T3 ☐ T5B ☐ T5																																										
		Number of contacts:	Mounting form:																																										
		☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11	☐ 12 ☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22																																										
			☐ E ☐ EA/SVB ☐ EZ ☐ I... ☐ I.../SVB ☐ IVS ☐ V/SVB ☐ Z ☐ + _____ ☐ + _____																																										
Max. characters per position <table border="1"> <thead> <tr> <th>Degrees</th> <th>TM-E</th> <th>TM-EZ</th> <th>TM-IVS</th> <th>T0(3)</th> <th>T5(B)</th> </tr> </thead> <tbody> <tr> <td>0.18</td> <td>5</td> <td>5</td> <td>6</td> <td>13</td> <td>13</td> </tr> <tr> <td>30, 210, 330</td> <td>8</td> <td>7</td> <td>4</td> <td>8</td> <td>8</td> </tr> <tr> <td>45, 135, 225, 315</td> <td>6</td> <td>5</td> <td>4</td> <td>6</td> <td>7</td> </tr> <tr> <td>60, 120, 240, 300</td> <td>5</td> <td>5</td> <td>3</td> <td>5</td> <td>7</td> </tr> <tr> <td>90, 270</td> <td>5</td> <td>4</td> <td>1</td> <td>4</td> <td>7</td> </tr> <tr> <td>150</td> <td>4</td> <td>4</td> <td>4</td> <td>8</td> <td>8</td> </tr> </tbody> </table>				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
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Front plate no. FS _____ ☐ Complete rotation ☐ Automatic Spring-return Inscription	Contact units <table border="1"> <thead> <tr> <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> </thead> <tbody> <tr> <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> </tr> <tr> <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> </tr> <tr> <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>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> </tbody> </table>	1	2	3	4	5	6	7	8	9	10	11	1	3	5	7	9	11	13	15	17	19	21	2	4	6	8	10	12	14	16	18	20	22	23	25	27	29	31	33	35	37	39	41	43	24	26	28	30	32	34	36	38	40	42	44																																																																																																																																																																																																																																																																																																																																																																							
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FS-SOND

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
 ≥ 2 Characters

4 mm
3 mm

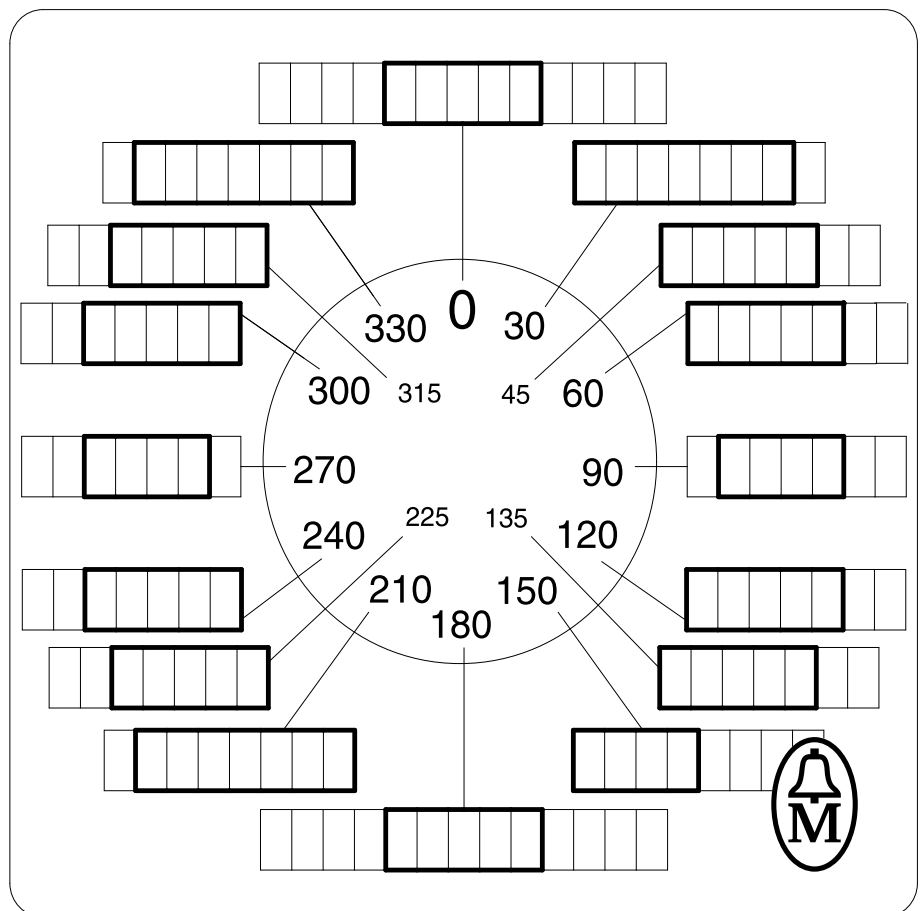
☐ **FS-SOND-P3 (T5B, T5)**

Letter height

 ≤ 2 Characters
 ≥ 2 Characters

8 mm
5 mm

☐ **FS-SOND-TM-E**
☐ **FS-SOND-TM-EZ**
 ≤ 2 Characters approx.
 ≥ 2 Characters

3.5 mm
3 mm


For P1 and P3, fill out positions 270° and 0° only

Max. possible number of characters

Position

Degrees	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)

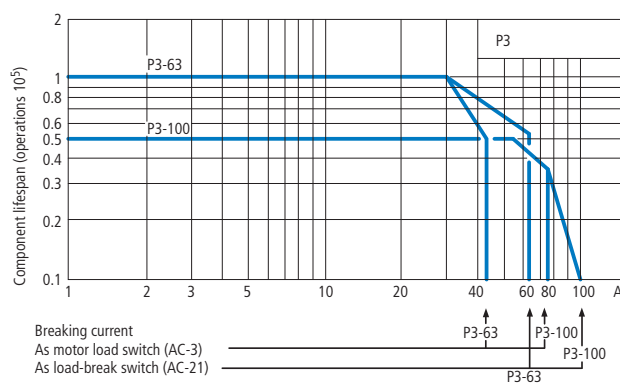
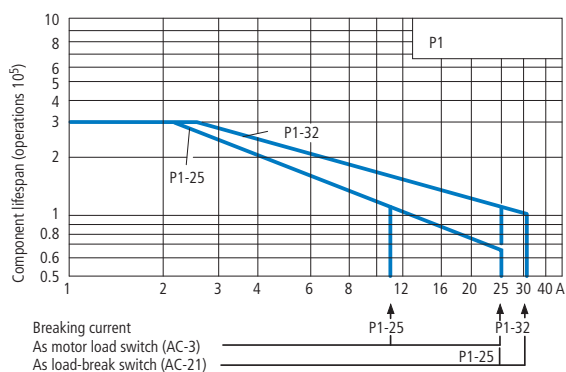
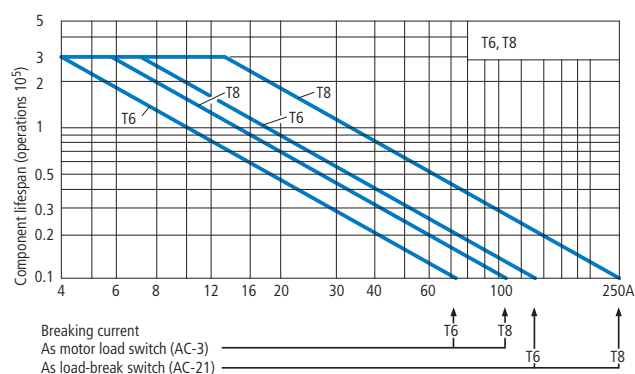
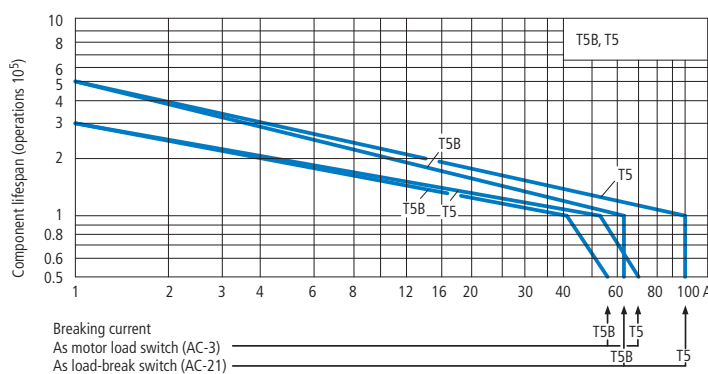
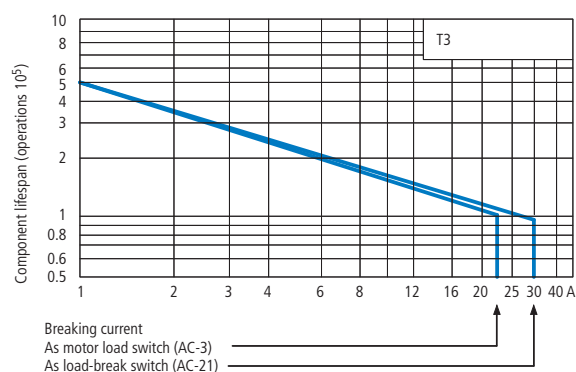
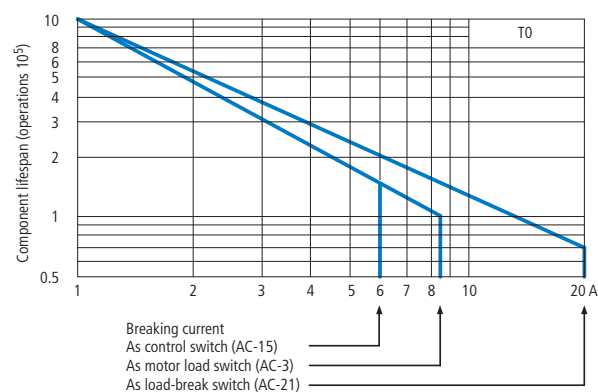
FS.....

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
	Enclosed	°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	1.6
	AB 25 % DF	x I _e	2	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		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	1.1	1.8	4.5	7.5
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)	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)	1 x (1.5 - 25) 2 x (1.5 - 6)
Terminal screw			M4	M4	M5	M5
Tightening torque		Nm	1.6	1.6	3	3
Switching capacity						
AC voltage						
Rated making capacity cos φ = 0.35			240	320	800	950
Rated breaking capacity, motor load switch cos φ = 0.35	230 V	A	190	260	640	760
	400/415 V	A	150	300	600	740
	500 V	A	170	290	590	880
	690 V	A	150	250	340	520
Rated operational current 440 V, load-break switch AC-21A			25	32	63	100
AC-3 motor load switch motor rating	230 V	P	5.5	7.5	15	22
	400/415 V	P	7.5	13	30	37
	500 V	P	7.5	18.5	30	45
	690 V	P	7.5	15	30	37
AC-23A motor load switch motor rating	230 V	P	7	8.5	18.5	30
	400/415 V	P	13	15	30	50
	500 V	P	11	18.5	37	65
	690 V	P	11	18.5	30	45
DC voltage						
DC-1, load switch L/R = 1 ms	Rated operational current	I _e	25	32	63	100
	Voltage per contact connected in series	V	60	60	60	60
DC-23A, motor load switch L/R = 15 ms	Rated operational current	I _e	25	25	50	50
	Contacts	Number	1	1	1	1
	48 V	Rated operational current	25	25	50	50
		Contacts	2	2	2	2
	60 V	Rated operational current	25	25	50	50
		Contacts	3	3	3	3
	120 V	Rated operational current	12	12	25	25
		Contacts	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 conductors.





Rating data for approved types ¹⁾ UL File No. E36332				P1-25	P1-32	P3-63	P3-100
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			

Notes¹⁾ Devices for world markets IEC ≙ UL/CSA

UL File No:	UL approved protection types		
E36332	UL/NEMA 3R¹⁾	UL/NEMA 12	UL/NEMA 13
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 conductores.





				P5-125	P5-160	P5-250	P5-315	
Switching capacity								
AC voltage								
Rated making capacity cos φ = 0.35			A	850	1050	1700	2050	
Rated breaking capacity, motor load switch cos φ = 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	A	125	160	250	315
		Contacts	Number	3	3	3	3	
	48 V	Rated operational current	I _e	A	125	160	250	315
		Contacts	Number	3	3	3	3	
	60 V	Rated operational current	I _e	A	125	160	250	315
		Contacts	Number	3	3	3	3	
	120 V	Rated operational current	I _e	A	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 3²⁾ 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
Rated uninterrupted current	I_u	A	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
Flexible without ferrule		AWG	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 60 45 30	90 60 45 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) 2 x (2.5 - 16)	1 x (2.5 - 35) 2 x (2.5 - 16)	1 x 70 2 x 25	1 x 95 2 x 25	150
1 x (1.5 - 25) 2 x (1.5 - 10)	1 x (1.5 - 25) 2 x (1.5 - 10)	1 x 50 2 x 16	1 x 50 2 x 16	120
				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 φ = 0.35			A	130	320	
Rated breaking capacity, Motor load switch cos φ = 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	230 V	P	kW	3	6.5	
Motor load switch AC-3	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	230 V	P	kW	3.5	7.5	
Motor load switch AC-23A	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		



T

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 ≙ 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

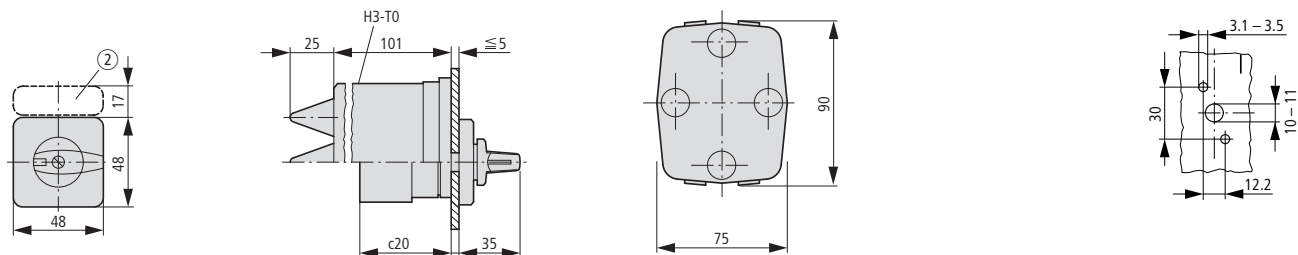


Dimensions

Flush mounting

T0.../E (+ H3-T0)
T3.../E (+ H3-T0)

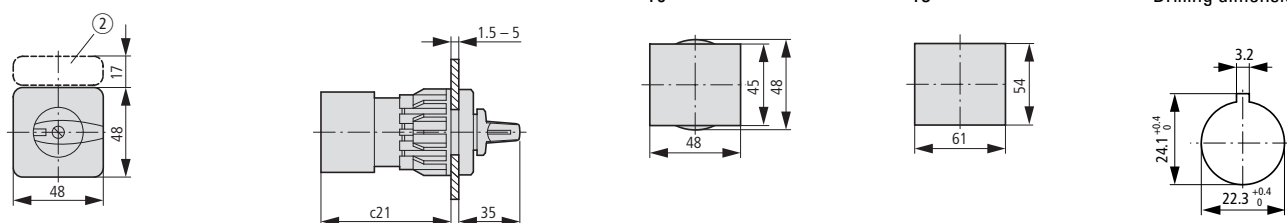
Drilling dimensions



Center mounting

T0.../EZ
T3.../EZ

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

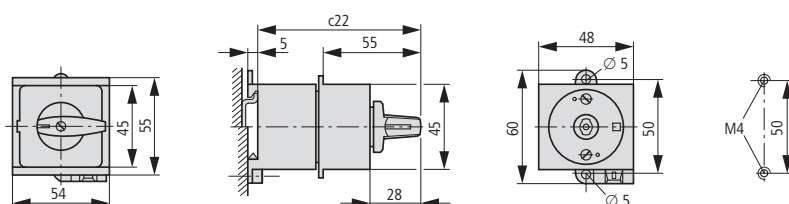
Depth of one contact unit: 11.5 mm

② Not included as standard

Service distribution board mounting

T0.../IVS

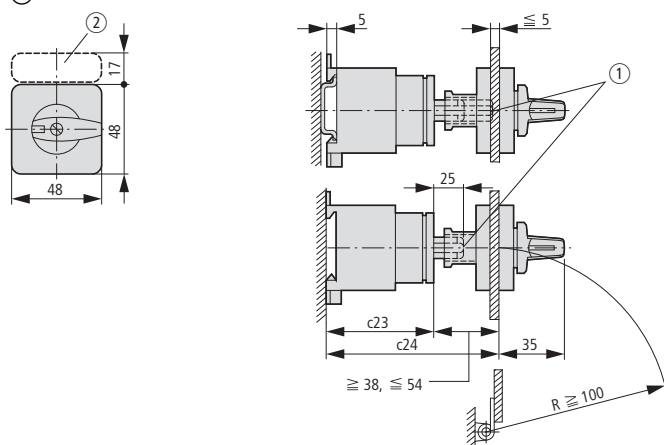
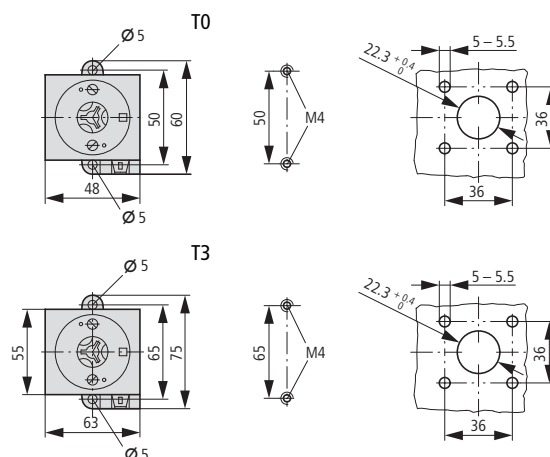
Drilling dimensions base



Rear mounting

T0.../Z
T3.../Z

① Extension with

ZAV-T0 possible,
≤ 4 x 25 = 100 mmDrilling
dimensions
baseDrilling
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	–

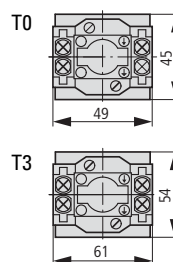
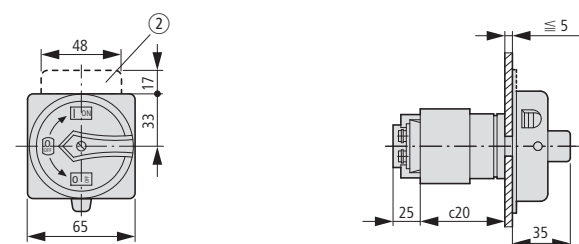
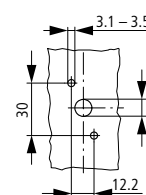
Depth of one contact unit: 9.5 mm

② Not included as standard

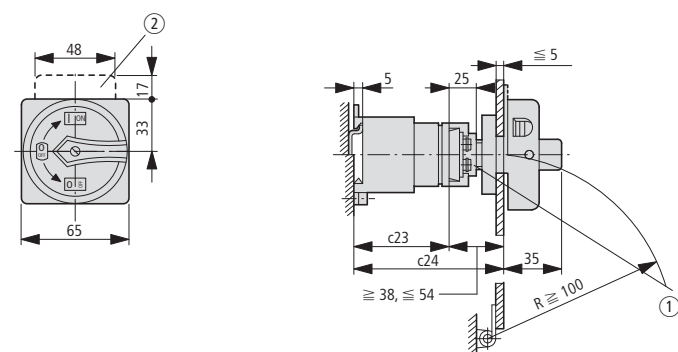
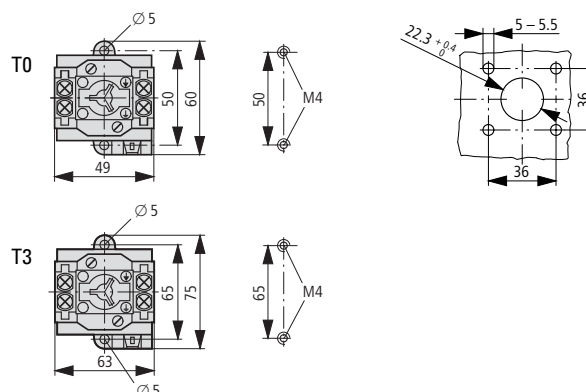
Part no.	c20	c21	c22	c23	c24 ≥/≤	c24 with ≤ 4 ZAV	c25
T3-1...	44	64	80	51	86 – 105	205	79
T3-2...	56	76	92	63	101 – 115	216	79
T3-3...	67	87	103	74	112 – 128	228	101
T3-4...	79	99	115	86	124 – 139	239	101
T3-5...	90	110	126	97	135 – 151	251	–
T3-6...	102	122	138	109	147 – 162	262	–
T3-7...	113	133	149	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/SVBDrilling
dimensions
door

Rear mounting main switches

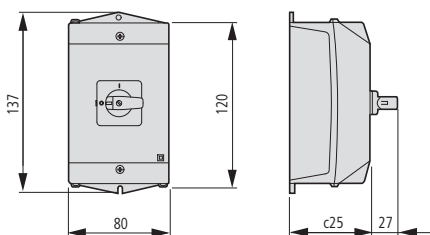
T0.../V/SVB
T3.../V/SVBDrilling
dimensions
baseDrilling
dimensions
door

① Interlock extension possible with ZVV-T0 + ZAV-T0, F 4 x 25 = 100 mm

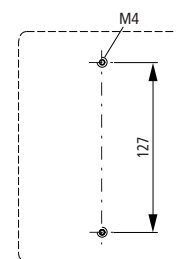
② Not included as standard

Surface mounting

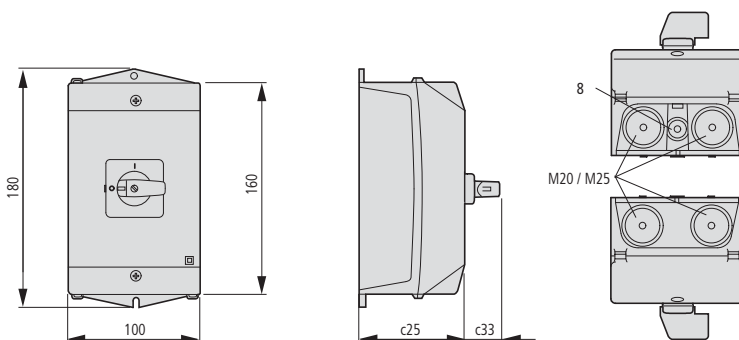
T0.../I1



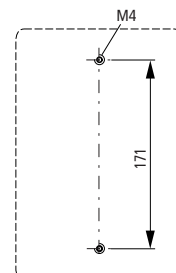
Drilling dimensions
base



T3.../I2

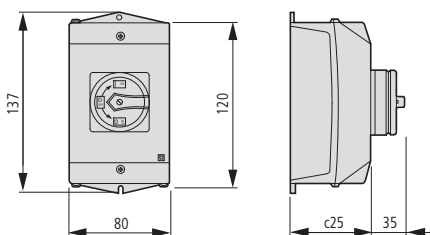


Drilling dimensions
base

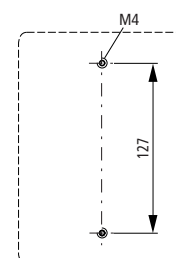


Surface mounting main switches

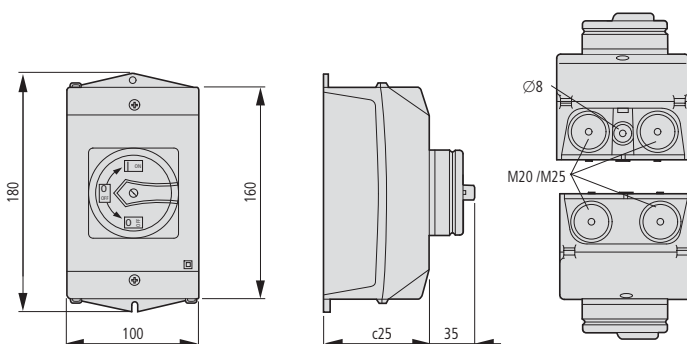
T0.../I1/padlock facility



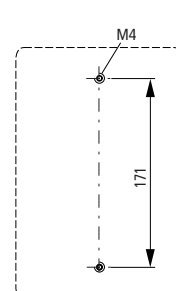
Drilling dimensions
base



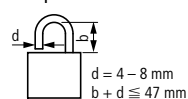
T3.../I2/SVB



Drilling dimensions
base



≤ 3 padlocks

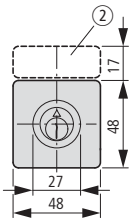


Part no.	c25
T0-1...	75
T0-2...	75
T0-3...	95
T0-4...	95

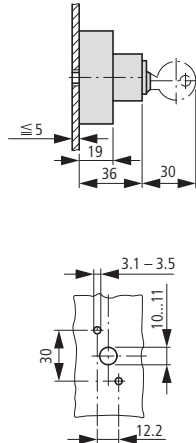
Part no.	c25	c33
T3-1...	80	27
T3-2...	80	27
T3-3...	100	35
T3-4...	100	35
T3-5...	145	35

Key operated lock mechanism

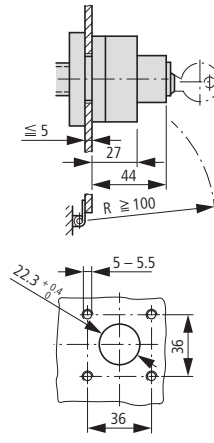
S-T0
S-SOND...-T0



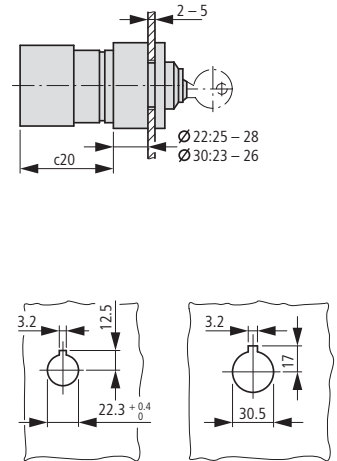
T0.../E(I1) + S-(SOND-)T0
T3.../E(I2) + S-(SOND-)T0



T0.../Z + S-(SOND-)T0
T3.../Z + S-(SOND-)T0

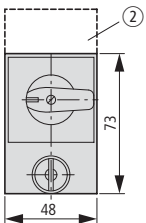


T0.../EZ = T0.../E + EZ-T0 + S-(SOND-)T0
T3.../EZ = T3.../E + EZ-T0 + S-(SOND-)T0

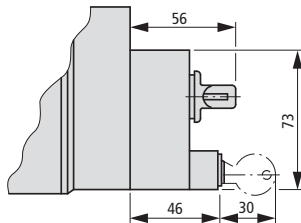


Cylinder lock

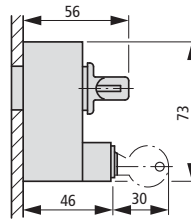
SVA-T3



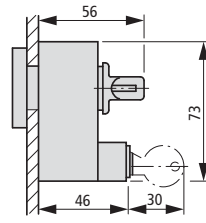
T0.../I1/SVA
T3.../I2/SVA
P1.../I2/SVA



T0.../E/SVA...
T3.../E/SVA...
P1.../E/SVA

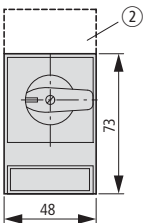


T0.../Z/SVA...
T3.../Z/SVA...
P1.../Z/SVA

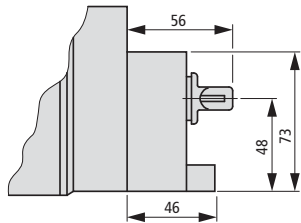


Padlocking feature

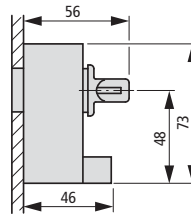
SVC-T3



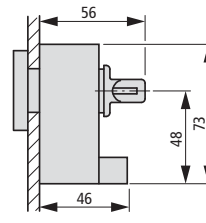
T0.../I1/SVC
T3.../I2/SVC
P1.../I2/SVC



T0.../E/SVC...
T3.../E/SVC...
P1.../E/SVC

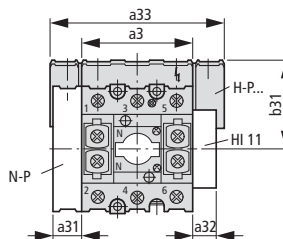
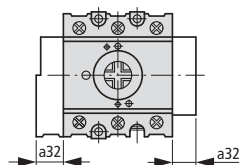
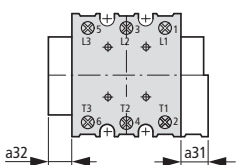


T0.../Z/SVC...
T3.../Z/SVC...
P1.../Z/SVC

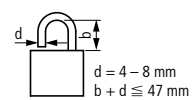


Modules

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

Flush mounting T5(B)../E

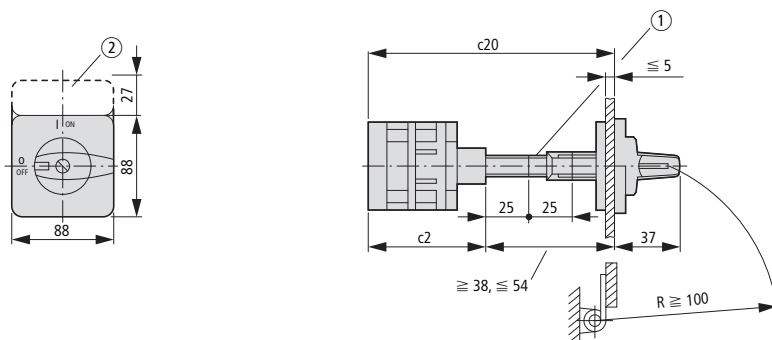
Drilling dimensions door



Rear mounting T5(B)../Z

Drilling dimensions base

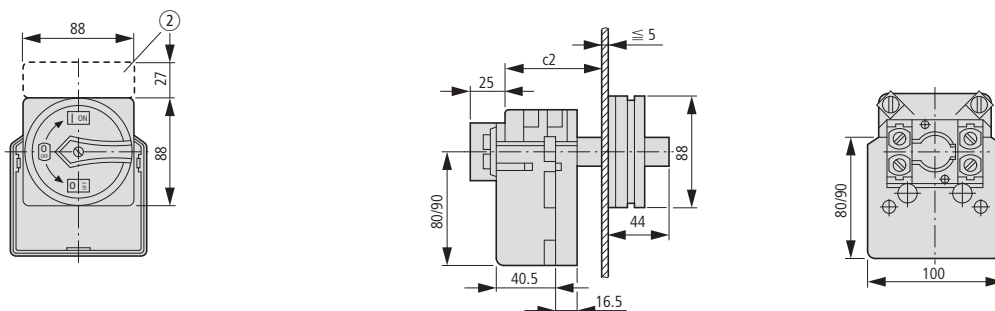
Drilling dimensions door



① Shaft extension possible with ZAV-P3 F 4 x 25 = 100 mm

Flush mounting main switches T5(B)../EA/SVB

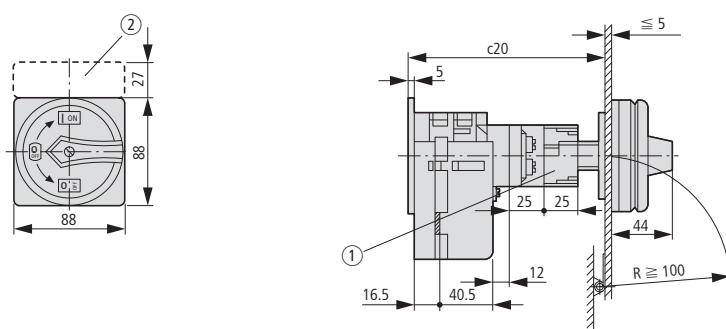
Drilling dimensions door



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	—	—

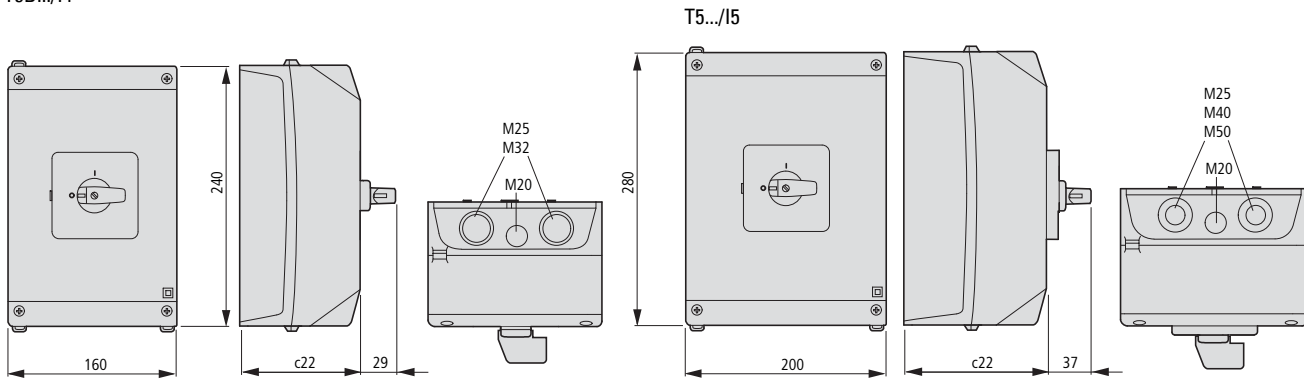
Depth of one contact unit: 16.5 mm

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

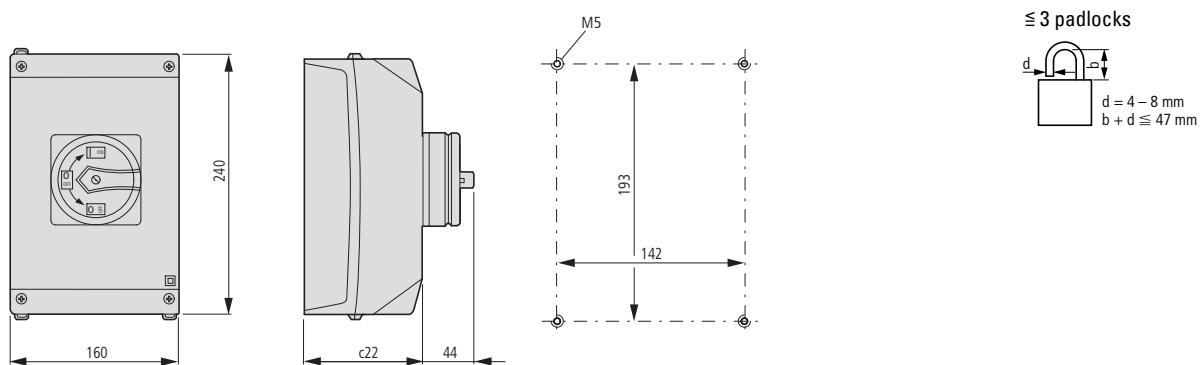
Surface mounting T5B.../I4



Surface mounting main switches

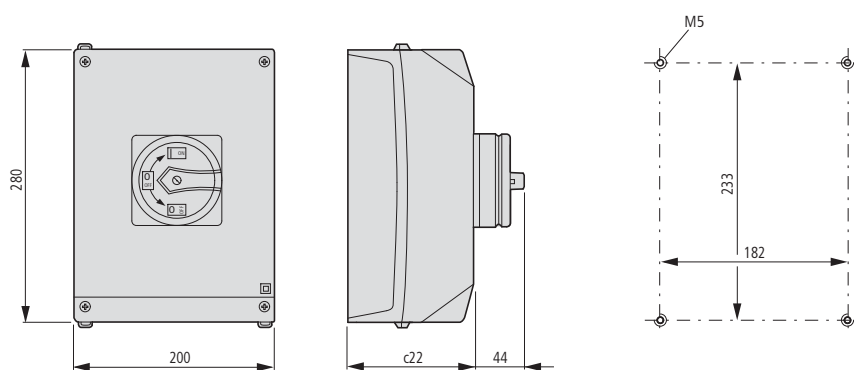
T5B.../I4/SVB

Drilling dimensions



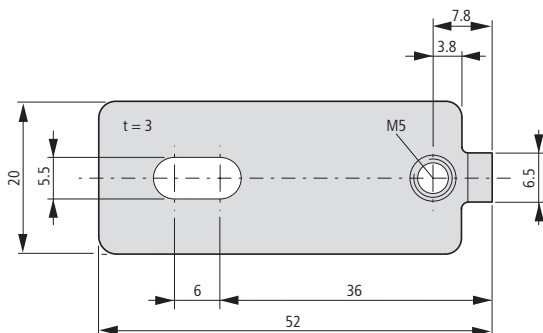
T5.../I5/SVB

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

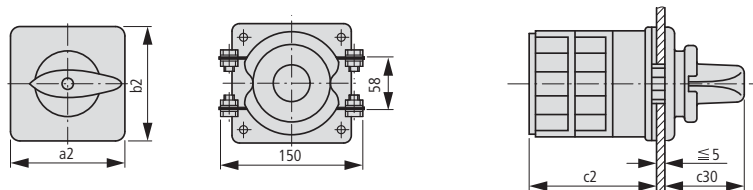
Depth of one contact unit: 16.5 mm

Cam switches T5B and T5 have identical designs,
only their contacts are different

Flush mounting

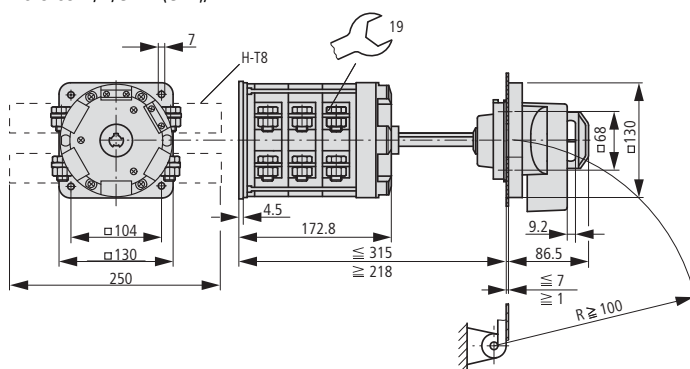
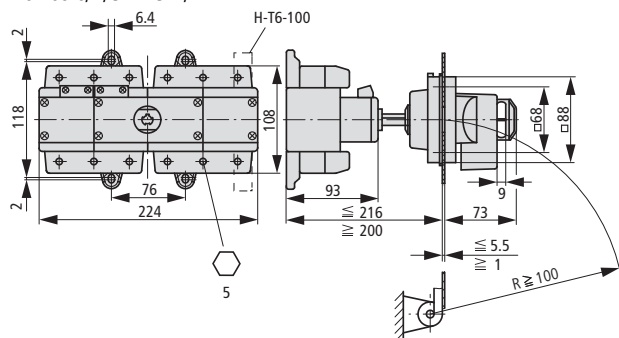
T6-3-8212/E/HI12

T8-3-8212/E/HI12



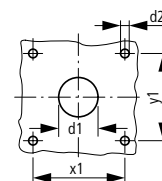
T6-160-6/V/SVB-SW/HI11

T8-8342/V/SVB-(SW)/HI11



Part no.	a2	b2	c2	c30	d1	d2	x1	y1
T6-3-8212/E/HI12	88	88	152	44	Ø 26 – 30	Ø 6.0	68	68
T8-3-8212/E/HI12	130	130	173	62	Ø 22 – 25	Ø 7.0	104	104
T8-3-8342/V/SVB-(SW)/HI11	—	—	—	—	Ø 26 – 30	Ø 7.0	68	68

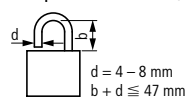
Drilling dimensions door



T6: 4 M5 x 20

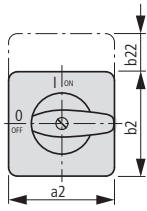
T8: 4 M6 x 20

≤ 3 padlocks for T.../SVB



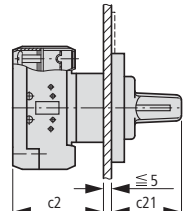
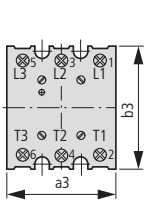
Flush mounting

P.../E

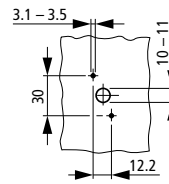


Center mounting

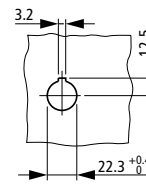
P1.../EZ



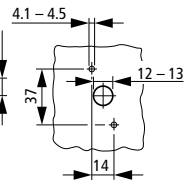
P1.../EZ = c2 + 5 mm

Drilling dimensions
door
P1.../E

P1.../EZ

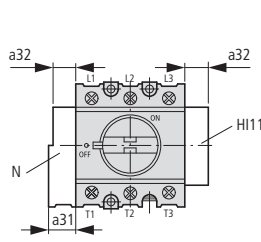
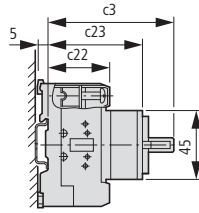
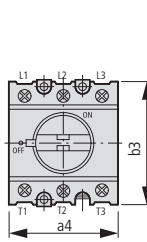


P3.../E

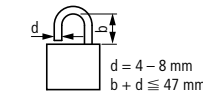


Service distribution board flush mounting

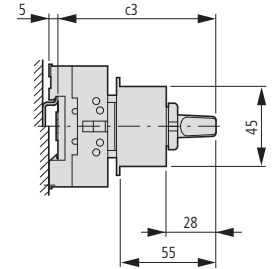
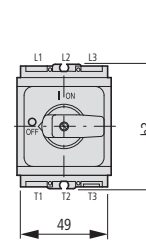
P3.../IVS



≤ 3 padlocks

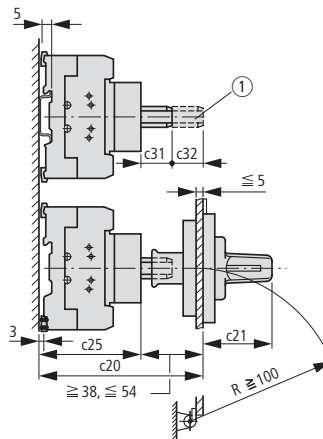
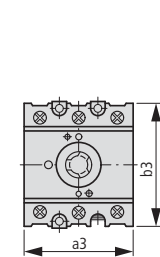
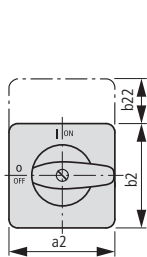
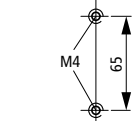
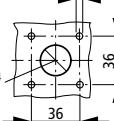


P1.../IVS

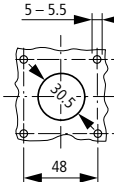
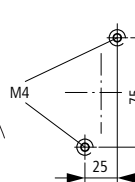


Rear mounting

P.../Z

Drilling dimensions
base
P1.../ZDrilling dimensions
door
P1.../Z

P3.../Z



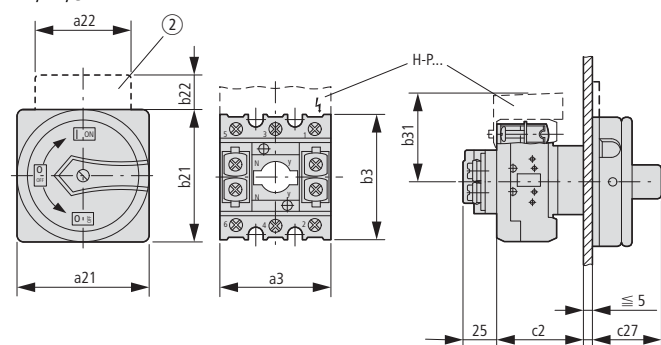
① Shaft extension with ZAV-... possible ≤ 4 x 25 = 100 mm

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 ≥/≤	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

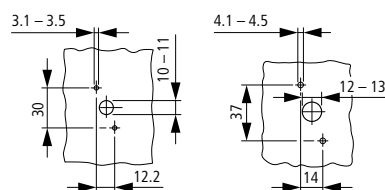
Flush mounting main switches

P.../EA/SVB


Drilling dimensions
door

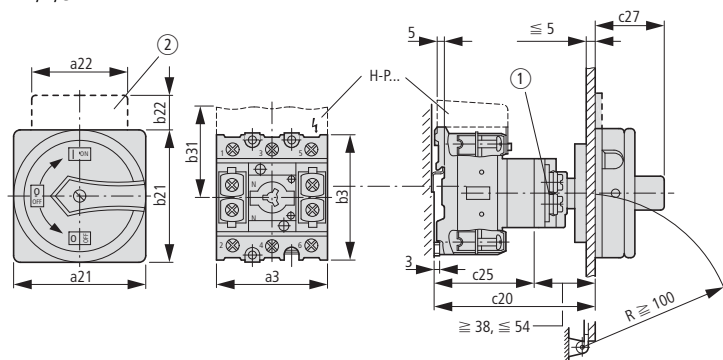
P1...

P3



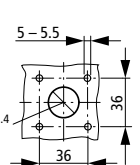
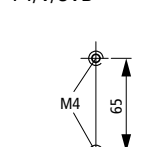
Rear mounting main switches

P.../V/SVB

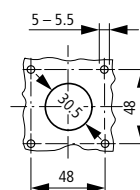
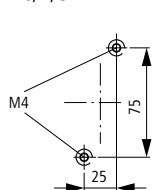

Drilling dimensions
base

Drilling dimensions
door

P1/V/SVB



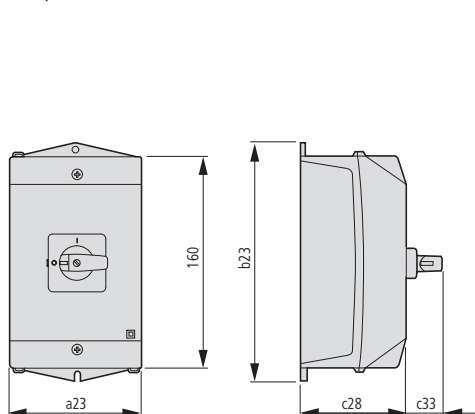
P3/V/SVB


① Interlock extension with ZVV-...+ZAV... possible $\leq 4 \times 25 = 100$ mm

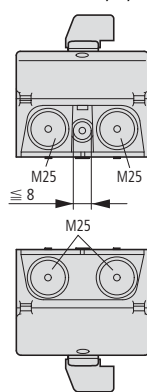
② Not included as standard

Surface mounting

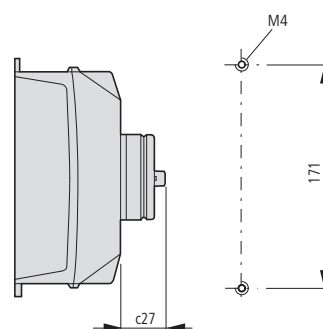
P1.../I2



Surface mounting main switches/ safety switches

P1.../I2/SVB
P1.../I2/SI


Drilling dimensions

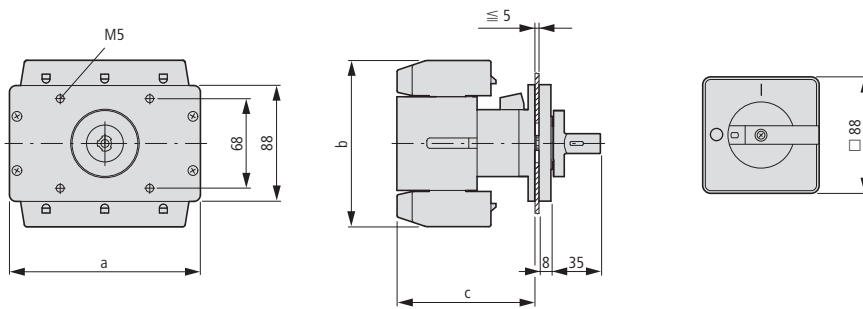


Part no.	a2	a3	a4	a21	a22	a23	a31	a32	a33	b2	b3	b21	b22	b23	b24	b31
P1.../I2	48	49	53.5	65	48	100	15	15	83	48	70	65	17	180	35.5	49

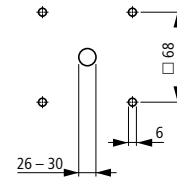
Part no.	c2	c3	c20 $\geq/\leq$	c20 with ≤ 4 ZAV/ZVV	c21	c22	c23	c24	c25	c27	c28	c31	c32	c33
P1...	59	86	96 - 112	212	35	32	65	68	58	35	80	25	25	27

Flush mounting

P5.../E

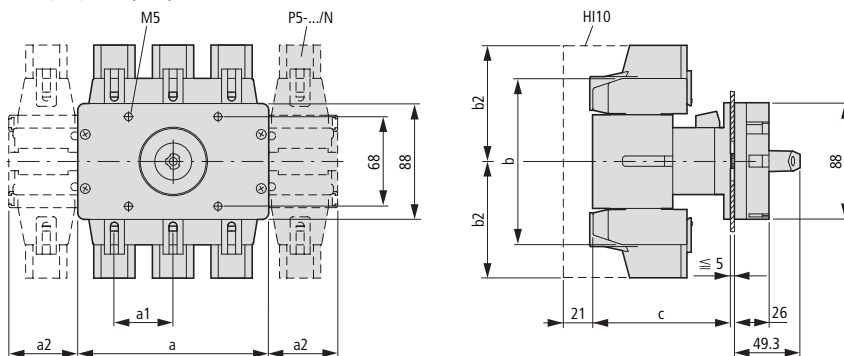


Drilling dimensions



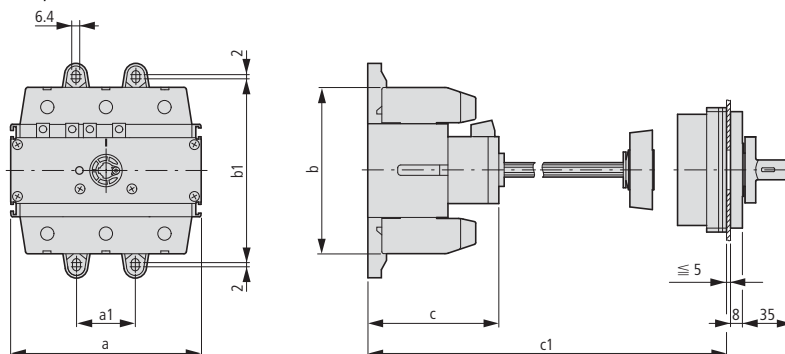
Flush mounting main switches

P5.../EA/SVB-(SW)

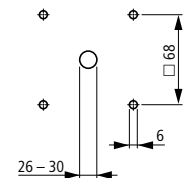


Rear mounting

P5.../Z

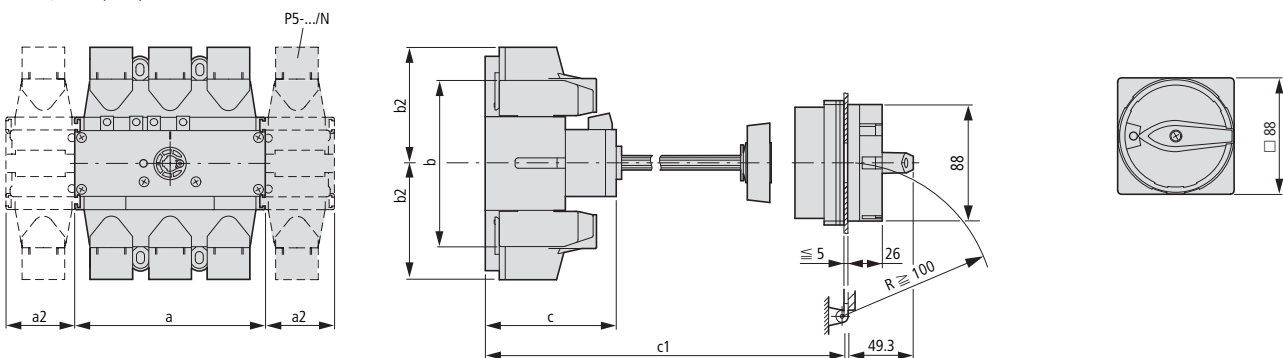


Drilling dimensions

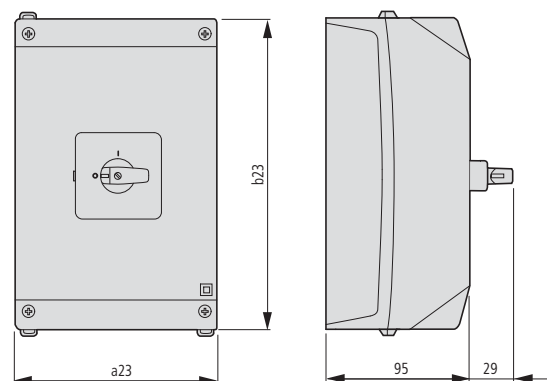


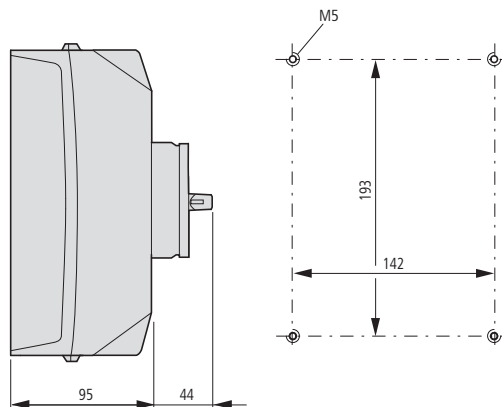
Rear mounting main switches

P5.../SVB-(SW)

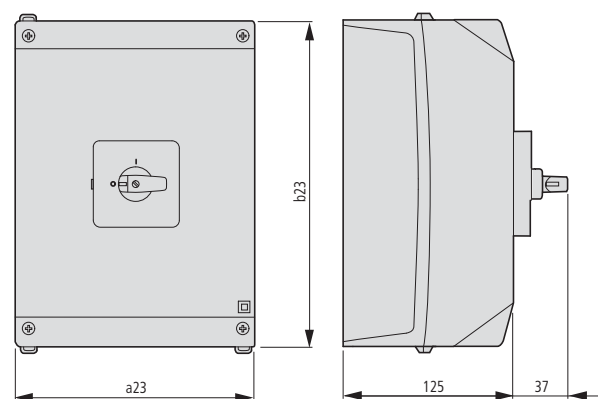


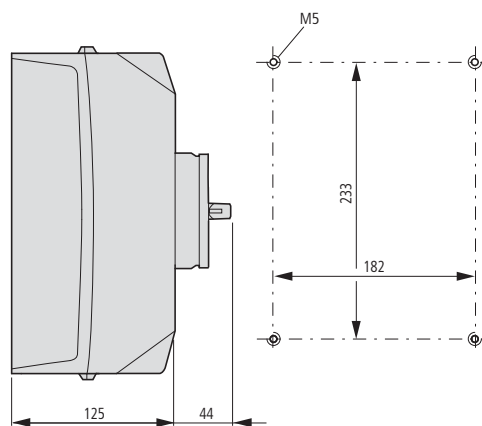
Part no.	a	a1	a2	b	b1	b2	c	c1
P5-125/160	112	36	38	108	120	76	91	≥ 130 ≤ 287
P5-250/315	145	44	52.5	126	144	88	98	≥ 140 ≤ 280

Surface mounting
P3-63/I4

Surface mounting main switches/safety switches
P3-63/I4/SVB
P3-63/I4/SI
T5B-.../I4/SI

Drilling dimensions

Surface mounting

P3-100/I5


Surface mounting main switches/safety switches
P3-100/I5/SVB
P3-100/I5/SI
T5-.../I5/SI

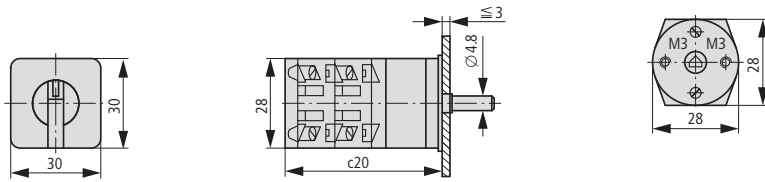
Drilling dimensions


Part no.	a2	a3	a4	a21	a22	a23	a31	a32	a33	b2	b3	b21	b22	b23	b24	b31
P3-63/I4	87	72	71.5	87	87	160	18	15	114	87	83	87	27	240	35.5	60
P3-100/I5	87	72	71.5	87	87	200	18	15	114	87	83	87	27	280	35.5	60

Part no.	c2	c3	c20 $\cong/\cong$	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

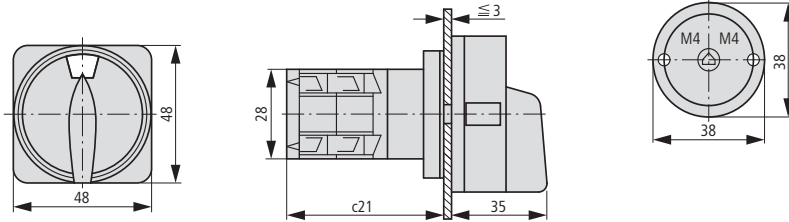


Drilling dimensions

Control circuit isolators

for 2 padlocks $\varnothing$ 4 mm or 1 padlock $\varnothing$ 6 mm

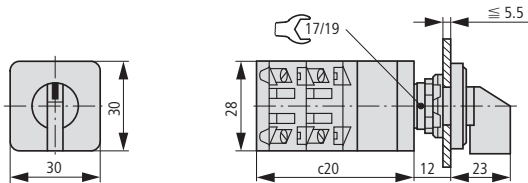
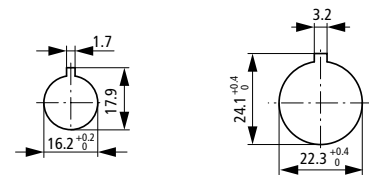
TM-.../E/SVB-(SW)



Drilling dimensions

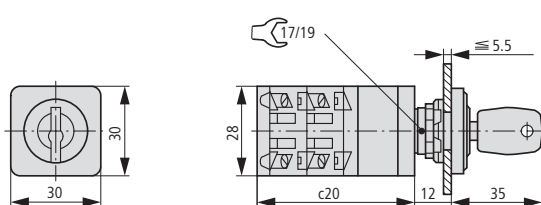
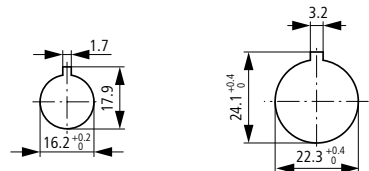
Center mounting

TM-.../EZ

Drilling dimensions¹⁾

Center mounting with key operation

TM-...+EZ/S-..

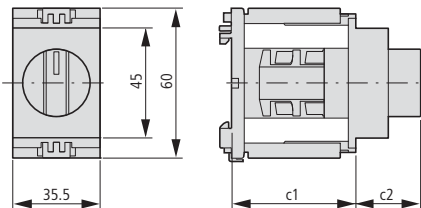
Drilling dimensions¹⁾

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

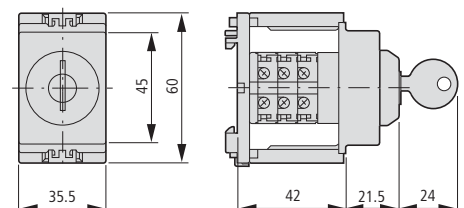
TM-.../IVS



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