

Actuators for safety switches NX/TX

- ▶ Actuators made of stainless steel
- ▶ Two stainless safety screws per actuator
- ▶ With rubber bush

Straight actuator

The straight actuator is used on sliding doors or hinged doors with door radii greater than 300 mm. Safety screws prevent unscrewing of the actuator.

Actuator with overtravel

- ▶ 2 mm for doors with normal play
- ▶ 7 mm for doors with large play (optional)

Actuators with rubber bushings

For flexible mounting of the actuator.

Hinged actuator

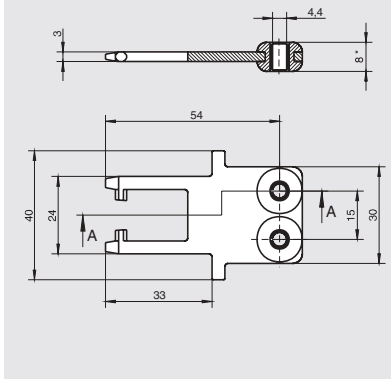
For door radii less than 300 mm a hinged actuator should be used. The spring action movement of the actuator prevents damage due to the actuator jamming in the actuating head. Depending on the movement of the safety guard, the actuator must be selected for left/right or top/bottom.

Screws made of stainless steel

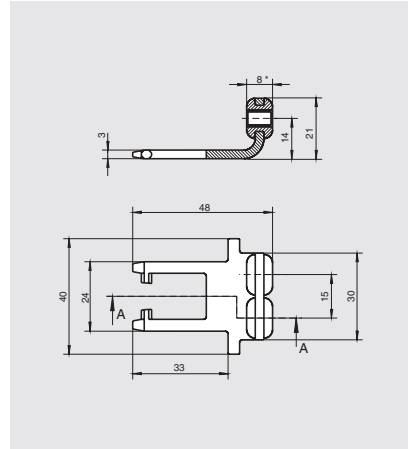
The safety screws included can be inserted with a normal tool, but cannot be removed again.

Actuator X-GQ straight
Rubber bush, overtravel 2 mm

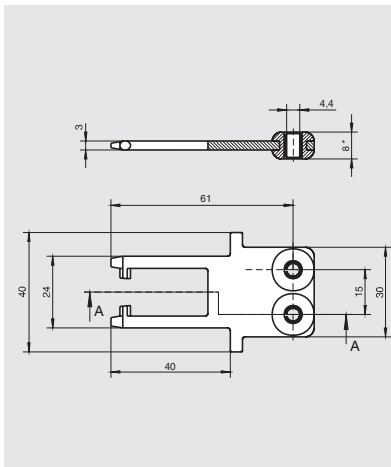
Dimension drawings



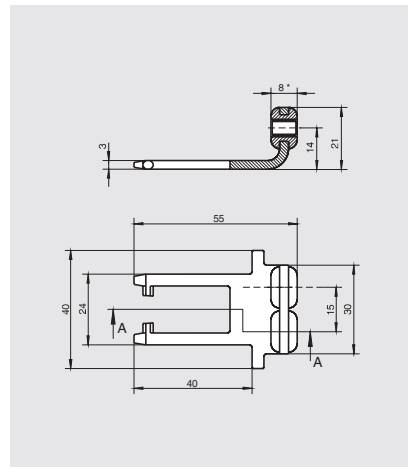
Actuator X-WQ bent
Rubber bush, overtravel 2 mm



Actuator X-GNQ straight
Rubber bush, overtravel 7 mm



Actuator X-WNQ bent
Rubber bush, overtravel 7 mm



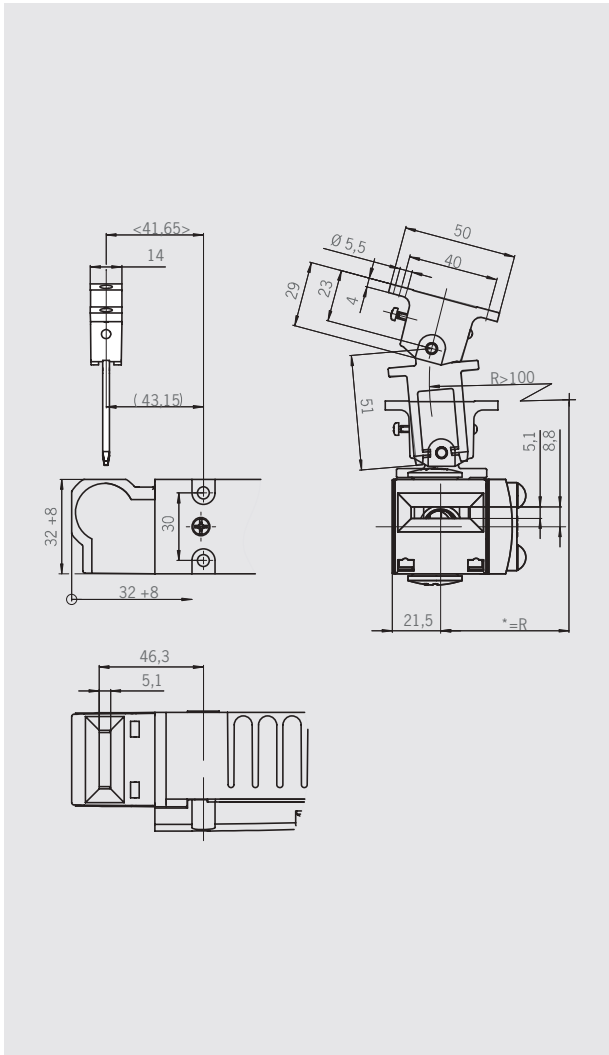
Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator straight rubber bush	X-GQ Overtravel 2 mm incl. 2 safety screws M4 x 14	300	1 ea.	079 739 ACTUATOR-X-GQ
Actuator bent rubber bush	X-WQ Overtravel 2 mm incl. 2 safety screws M4 x 14	300	1 ea.	079 740 ACTUATOR-X-WQ
Actuator straight rubber bush, overtravel	X-GNQ Overtravel 7 mm incl. 2 safety screws M4 x 14	440	1 ea.	079 741 ACTUATOR-X-GNQ
Actuator bent rubber bush, overtravel	X-WNQ Overtravel 7 mm incl. 2 safety screws M4 x 14	440	1 ea.	079 742 ACTUATOR-X-WNQ

* The dimension 8 relates to the fitted state

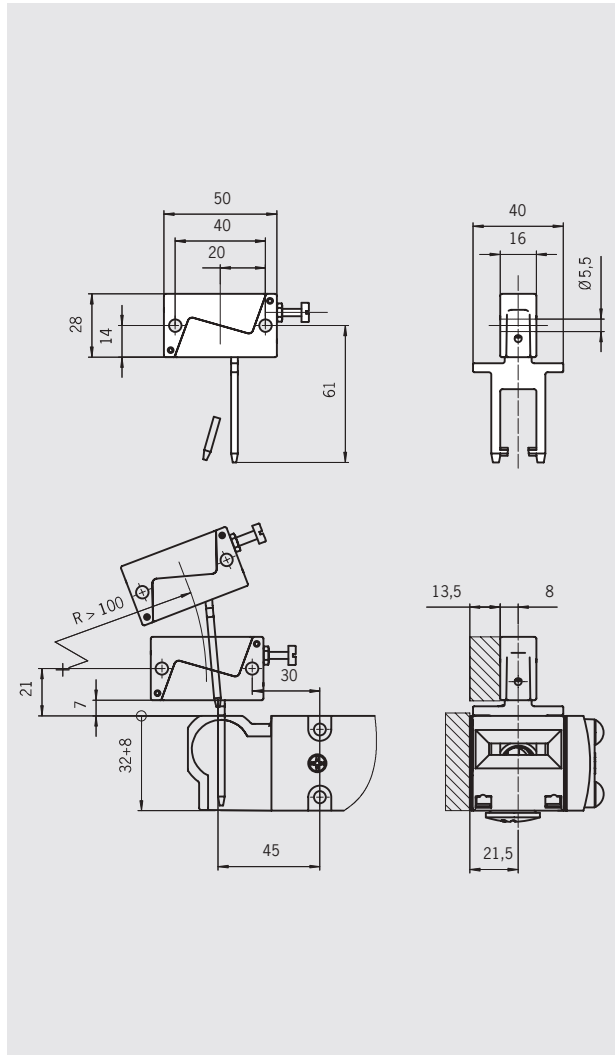
Hinged actuator X-LR-N

Safety guard hinged on the right/left



Hinged actuator X-OU-N

Safety guard hinged at bottom/top



Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Hinged actuator	X-LR-N Safety guard hinged on the right or left incl. 2 safety screws M5 x 10	≥ 100	1 ea.	098 082 HINGED ACTUATOR-X-LR-N
	X-OU-N Safety guard hinged at top or bottom incl. 2 safety screws M5 x 10	≥ 100	1 ea.	097 906 HINGED ACTUATOR-X-OU-N

For safety precautions see page 164
For technical data see page 139

Mounting plates EMP for safety switches TX

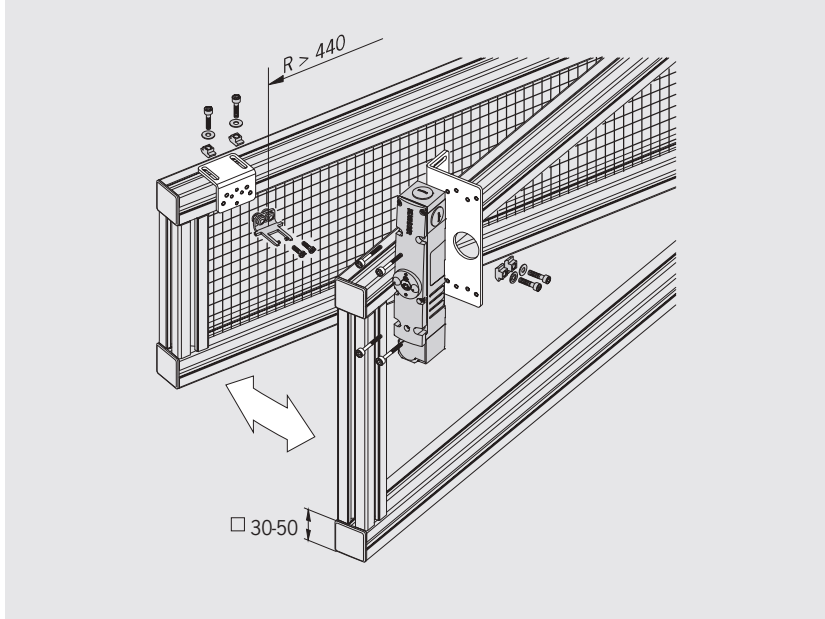
► For vertical mounting of safety switch TX

The mounting plates are used for fastening safety switches TX and actuators to safety guards. The safety switches can be attached vertically.

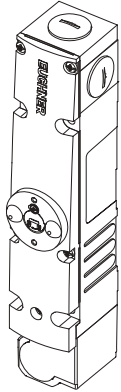
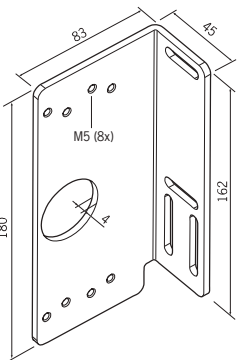
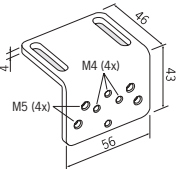
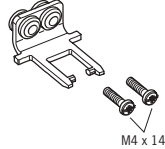
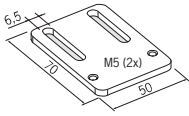
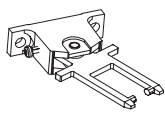
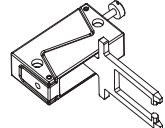
Note

- Mounting plate material: St37 galvanized
- The mounting plate EMP-SB is also suitable for the safety switches TX...C1991 with escape release from the rear.

Mounting example, safety switch vertical



Ordering table

Switch	Installation method switch	Mounting plate switch	Mounting plate actuator	Actuator	Minimum distance hinge axis to switch
TX... 	C Vertical	093 456 EMP-SB 	093 457 EMP-B1 	079 740 079 742  Page 106	> 400 mm
		093 458 EMP-B2 	098 082  Page 107	> 100 mm	
			097 906  Page 107	> 100 mm	

Miscellaneous accessories

- ▶ **Emergency unlocking with manual return for safety switches TX**
- ▶ **Emergency unlocking with automatic return for safety switches TX**
- ▶ **Lock for emergency unlocking with manual return for safety switches TX**

Emergency unlocking

Is used for the manual release of the guard locking without tools. The emergency unlocking mechanism must be returned to the locked state manually. A sealing wire can be fitted to protect against tampering.

Attention: Prior to mounting, the locking screw for the mechanical release must be removed.

Lockout bar

Is used for the manual release of the guard locking. The integrated spring automatically returns the emergency unlocking to the locked state. A sealing wire can be fitted to protect against tampering.

Attention: Prior to mounting, the locking screw for the mechanical release must be removed.

Lock

The lock is used in combination with safety switch TX. The mechanical key release enables authorized personnel to actuate the mechanical release using the related key in certain situations. The unlocking mechanism holds the solenoid in the "unlocked" position.

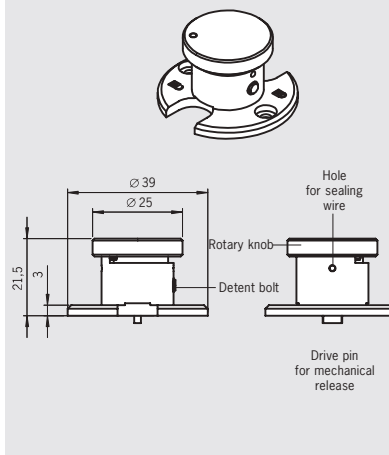
Two screws are used to fix the lock to the cover of the safety switch TX (above the mechanical release).

Attention: Prior to mounting, the locking screw for the mechanical release must be removed.

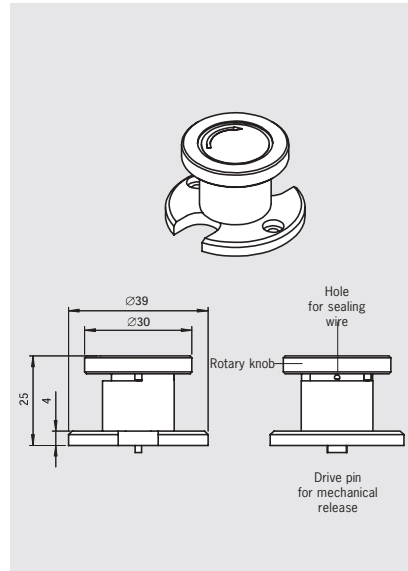
- ▶ Please order safety switch TX separately
- ▶ 2 keys are included
- ▶ Every safety switch of series TX can be upgraded to include a lock

Emergency unlocking For safety switches TX

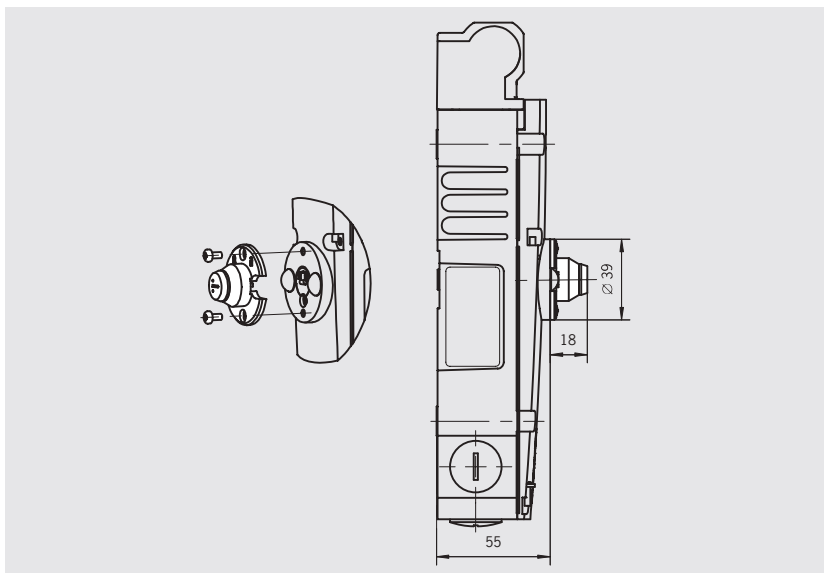
Dimension drawings



Mechanical release For safety switches TX



Lock For safety switches TX

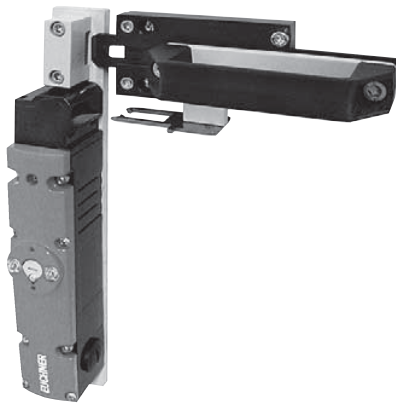


Ordering table

Designation	Version	Use	Order No.
Emergency unlocking	Incl. 2 screws M3 x 6	For safety switches TX	094 771 Emergency unlocking TX
Mechanical release	Incl. 2 screws M3 x 6	For safety switches TX	094 773 Mechanical release TX
Lead seal kit		For emergency unlocking TX and mechanical release TX	087 256 Lead seal kit
Lock	Unique (unique key needed to open)	For safety switches TX	079 796 Lock TX
	Identical (identical locks)	For safety switches TX	079 795 Lock TX
	Replacement key (2 ea.) for identical lock	For safety switches TX	077 206 Replacement key TX

Bolts for safety guards

- ▶ For safety switches TX and NX
- ▶ For right or left hinged doors

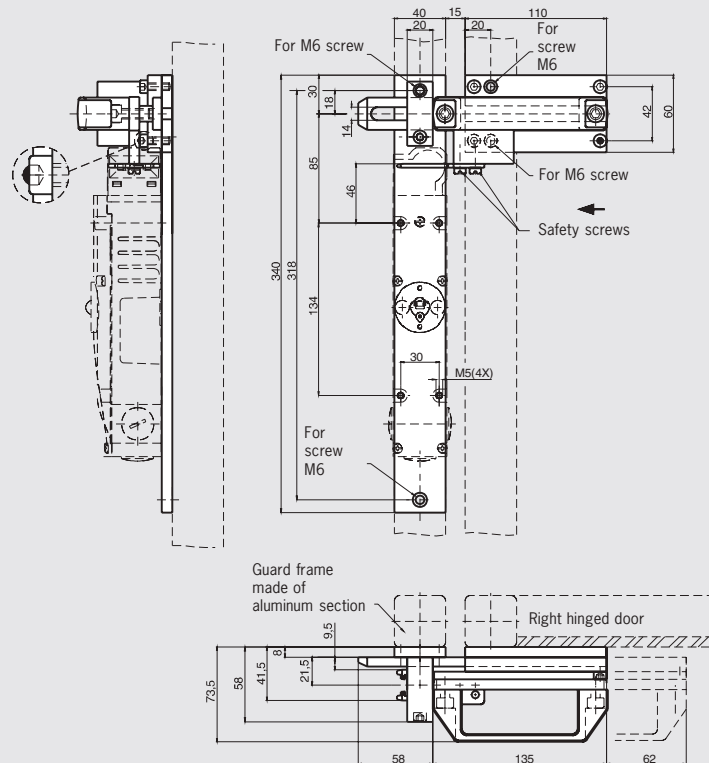


Features

- ▶ Easily fitted to standard aluminum profiles and machine covers by screw connection
- ▶ Distinctive yellow color for easy recognition
- ▶ No additional door handle necessary
- ▶ Slot on the bolt tongue permits attachment of padlocks

Bolt for safety switches series TX and NX

Dimension drawings



Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt TX-A	None	Without escape release, for right hinged doors actuator and switch bracket included	082 990 Bolt TX-A
Bolt TX-C	None	Without escape release, for left hinged doors actuator and switch bracket included	082 991 Bolt TX-C

Bolts for safety guards

- ▶ For safety switches TX...C1991 with escape release
- ▶ For right or left hinged doors

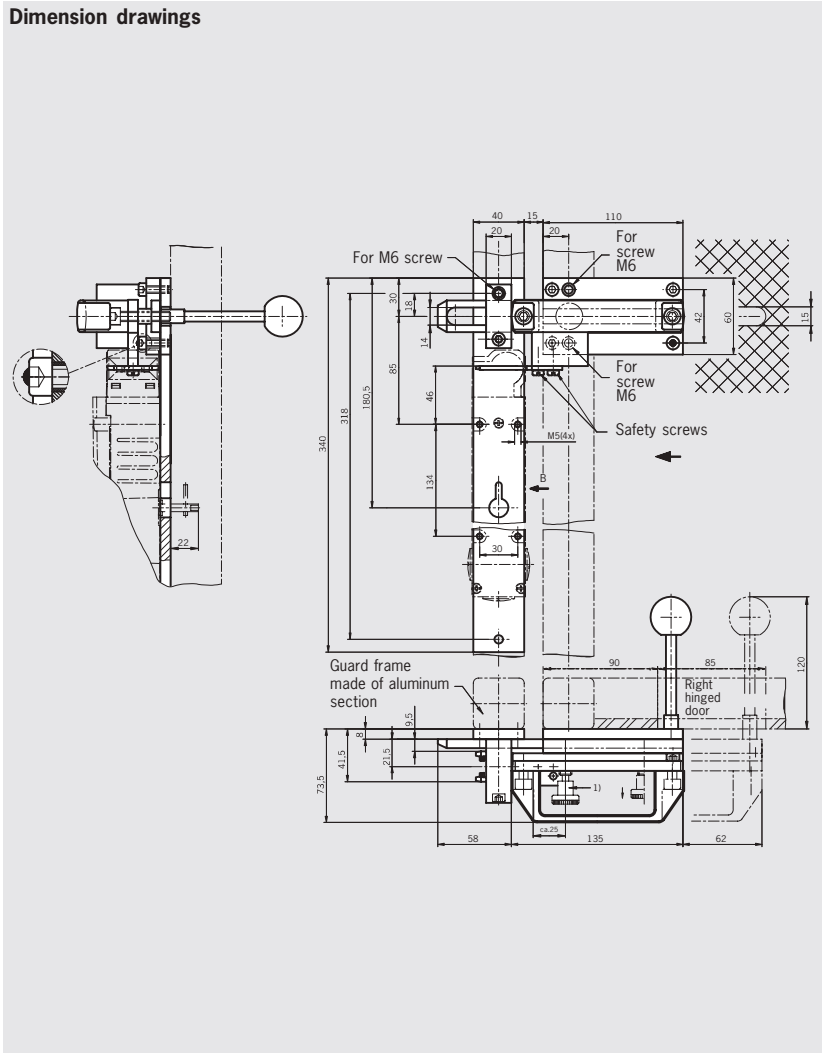


Features

- ▶ Easily fitted to standard aluminum profiles and machine covers by screw connection
- ▶ Distinctive yellow color for easy recognition
- ▶ No additional door handle necessary
- ▶ Slot on the bolt tongue permits attachment of padlocks

Bolts for safety switches series TX...C1991 with escape release

Dimension drawings





Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt TX-AF	Detent knob	With escape release, for right hinged doors actuator and switch bracket included	085 392 Bolt TX-AF
Bolt TX-CF	Detent knob	With escape release, for left hinged doors actuator and switch bracket included	085 393 Bolt TX-CF


For safety precautions see page 164
For technical data see page 139


Accessories for safety switches


Solenoid plug 		
Parameter	Value	Unit
Housing material	Plastic	
Number of pins	3 (2 + PE)	
Nominal voltage max.	240	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 65	
Connection	Pillar terminals and tab terminals	


SS4 		
Parameter	Value	Unit
Housing material	Brass matt chromium plated	
Number of pins	4 (3 + PE)	
Cable diameter	6 - 8	mm
Nominal voltage max.	250	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 67	
Connection	Soldered connections	

SR6 		
Parameter	Value	Unit
Housing material	Plastic	
Number of pins	7 (6 + PE)	
Cable diameter	7 - 9	mm
Nominal voltage max.	250	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 65	
Connection	Crimp contacts 0.5 to 1.5 mm ²	

SR11 		
Parameter	Value	Unit
Housing material	Plastic	
Number of pins	12 (11 + PE)	
Cable diameter	8 - 10	mm
Nominal voltage max.	50	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 65	
Connection	Crimp contacts 0.5 to 1.5 mm ²	

RC18 		
Parameter	Value	Unit
Housing material	Metal	
Number of pins	19 (18 + PE)	
Cable diameter	10 - 14	mm
Nominal voltage max.	32	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 65	
Connection	19 crimp contacts 0.75 to 1.0 mm ²	

RC18..C1825 		
Parameter	Value	Unit
Housing material	Metal	
Number of pins	19 (18 + PE)	
Cable diameter	10 - 14	mm
Nominal voltage max.	32	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 65	
Connection	16 crimp contacts 0.38 to 0.5 mm ² 3 crimp contacts 0.75 to 1.0 mm ²	

M12 with cable (SGLF, SWLF) 		
Parameter	Value	Unit
Housing material	Metal / plastic	
Number of pins	5	
Nominal voltage max.	30	V AC/DC
Degree of protection according to IEC 60529 (inserted)	IP 68	
Connection	5 open cable ends	