

Actuators for safety switches NZ.VZ, NZ.VZ.VS and TZ

- ▶ Two stainless safety screws per actuator
- ▶ Increased overtravel optional
- ▶ Smaller door radii optional
- ▶ Packaging unit 25 pieces optional

Straight actuator

The straight actuator is used on sliding doors or hinged doors with door radii greater than 1000 mm. Safety screws prevent unscrewing of the actuator. The safety screws included can be inserted with a normal tool, but cannot be removed again.

Actuator with overtravel

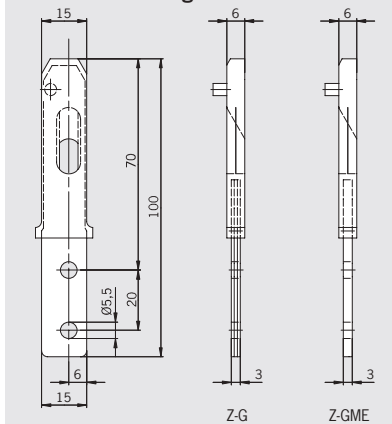
- ▶ 4 mm for doors with normal play
- ▶ 16 mm for doors with large play (optional)

Hinged actuator

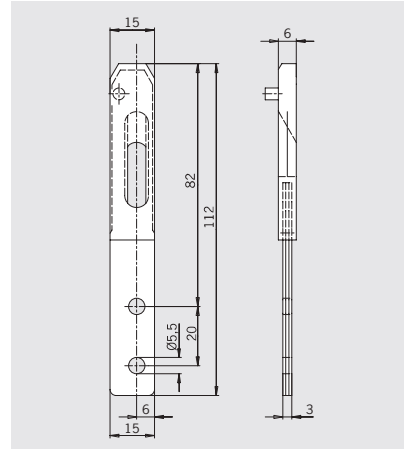
For door radii less than 1000 mm a hinged actuator should be used. The spring action movement of the actuator prevents damage due to the actuator jamming in the actuating head. Depending on the movement of the safety guard, the actuator must be selected for left/right or top/bottom.

Actuator Z-G and Z-GME straight
Overtravel 4 mm

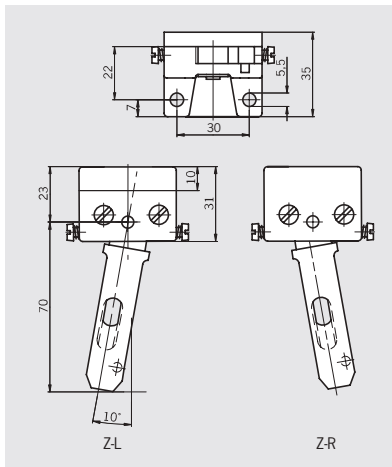
Dimension drawings



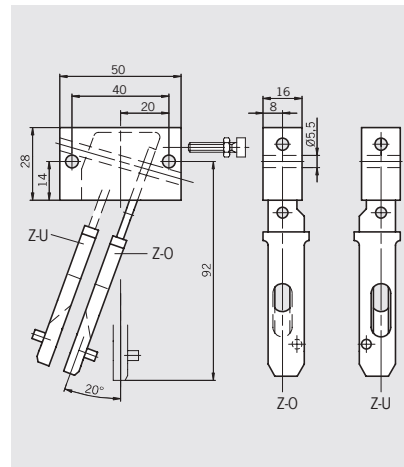
Actuator Z-GN straight
Overtravel 16 mm



Hinged actuator Z-R/Z-LL
Safety guard hinged on the right/left



Hinged actuator Z-U/Z-O
Safety guard hinged at bottom/top

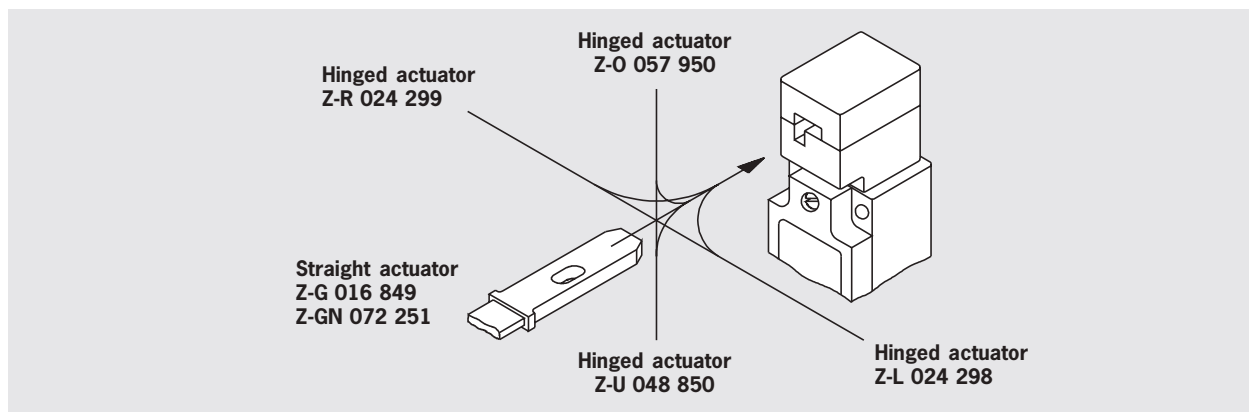


Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator straight	Z-G 4 mm overtravel incl. 2 safety screws M5 x 10	≥ 1000	1 ea.	016 849 ACTUATOR-Z-G
	Z-GME 4 mm overtravel, made of solid stainless steel incl. 2 safety screws M5x10	≥ 1000	25 ea.	074 411 ACTUATOR-Z-G/V25
	Z-GN 16 mm overtravel incl. 2 safety screws M5x10	≥ 1000	1 ea.	072 251 ACTUATOR-Z-GN
Hinged actuator	Z-R Safety guard hinged on the left incl. 2 safety screws M5 x 16	≥ 400	1 ea.	024 299 HINGED ACTUATOR-Z-R
	Z-L Safety guard hinged on the right incl. 2 safety screws M5 x 16	≥ 400	25 ea.	074 412 HINGED ACTUATOR-Z-R/V25
	Z-U Safety guard hinged at bottom incl. 2 safety screws M5 x 25	≥ 165	1 ea.	024 298 HINGED ACTUATOR-Z-L
	Z-O Safety guard hinged at top incl. 2 safety screws M5 x 25	≥ 165	25 ea.	074 413 HINGED ACTUATOR-Z-L/V25
	Z-U Safety guard hinged at bottom incl. 2 safety screws M5 x 25	≥ 165	1 ea.	048 850 HINGED ACTUATOR-Z-U
	Z-O Safety guard hinged at top incl. 2 safety screws M5 x 25	≥ 165	25 ea.	074 414 HINGED ACTUATOR-Z-U/V25
			1 ea.	057 950 HINGED ACTUATOR-Z-O
			25 ea.	074 415 HINGED ACTUATOR-Z-O/V25

Selection table for actuators

Actuator						
Actuator straight Z-G 016 849 overtravel 4 mm						
Actuator straight Z-GN 072 251 overtravel 16 mm						
Hinged actuator Z-L 024 298						
Hinged actuator Z-R 024 299						
Hinged actuator Z-U 048 850						
Hinged actuator Z-O 057 950						



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

Plug connectors SS4, C16-1, RC12 and solenoid plugs

For safety switches series NZ and TZ

- ▶ Plugs and sockets
- ▶ Dummy plug
- ▶ Solenoid plugs

Blanking plug

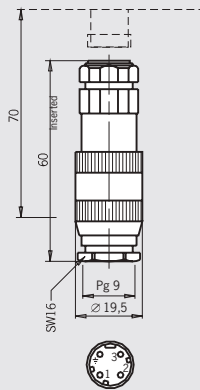
To cover the socket for the enabling switch on the safety switch TZ with socket RC12.

Plug connector for solenoid locking NZ.VZ.VS

- ▶ Without rectifier
For the connection of DC.
- ▶ With rectifier
For the connection of AC 110 V - AC 230 V.

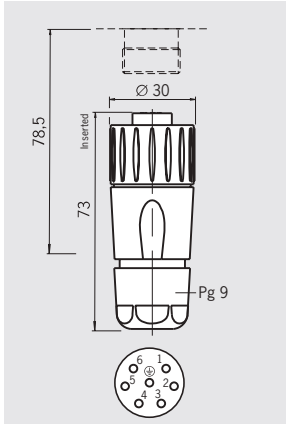
Male plug SS4
3-pin + PE

Dimension drawings



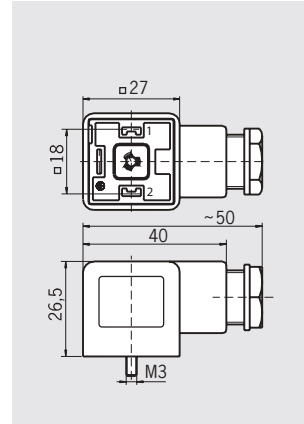
View of connection side, plug

Female plug C16-1
6-pin + PE

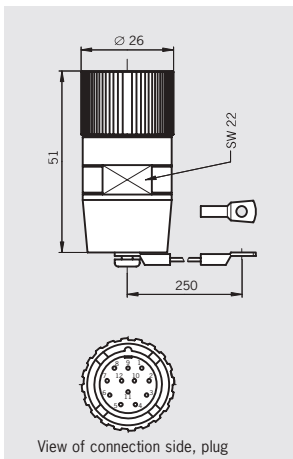


View of connection side, socket

Solenoid plug NZ.VZ.VS
2-pin + PE

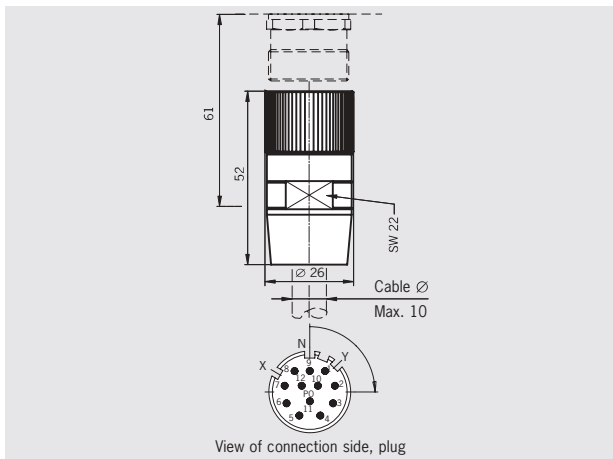


Blanking plug RC12
12-pin



View of connection side, plug

Male plug RC12
12-pin



View of connection side, plug

Ordering table

Designation	Version	Order No.
SS4 3-pin + PE	Male plug to socket BD4	002 787 SS4
C16-1 ¹⁾ 6-pin + PE	Female plug	043 861 Cable socket 6 + PE
RC12 ¹⁾ 12-pin	Male connector	073 294 RC-12P1N8A8096
	Blanking plug without bridges	073 293 RC-12P1N8A8300
Solenoid plug NZ.VZ.VS 2-pin + PE	For DC without rectifier	028 345 Plug connector for solenoid locking
	For AC with rectifier AC 110 V - AC 230 V	028 338 Plug connector with rectifier for solenoid locking

For information on crimp contacts see page 124.

1) Crimp contacts are included.

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

Plug connectors SR6 and SR11

For safety switches series NZ and TZ

- ▶ Plugs and sockets
- ▶ Crimp contacts
- ▶ 90° angled optional
- ▶ Cable optional
- ▶ Coding shells

Angled plug connector

On plug connectors with cables the direction of the cable exit can be chosen. On plug connectors without cables the direction can be adjusted.

Male socket

For fitting in safety switches.

Coding shells

Two coding shells and screws. If used only matching connectors can be mated.

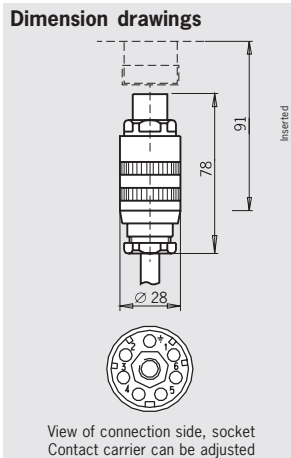
Cable (optional)

Cable sleeve PUR, color gray, wire cross-section 1.0 mm².

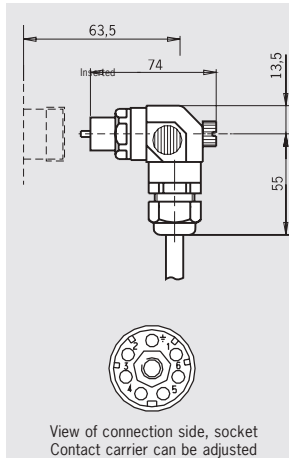
Pin assignment for plug with cable

SR6		SR11	
Pin	Wire	Pin	Wire
1	1	1	1
2	2	2	2
3	3	3	3
4	4	4	4
5	5	5	5
6	6	6	6
y	7	7	7
		8	8
		9	9
		10	10
		11	11
		⊕	12

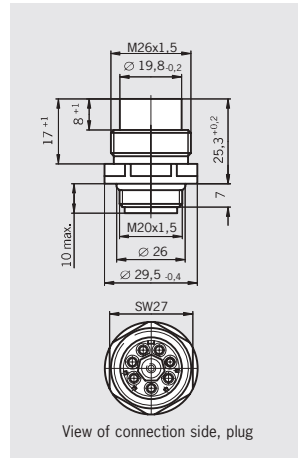
Female plug SR6 EF 6-pin + PE



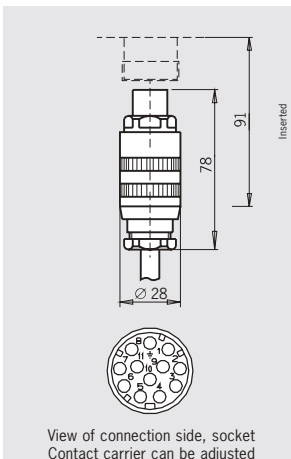
Female plug SR6 WF angled 6-pin + PE



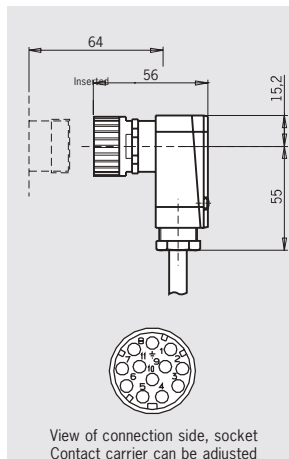
Male socket SR6 AM 6-pin + PE



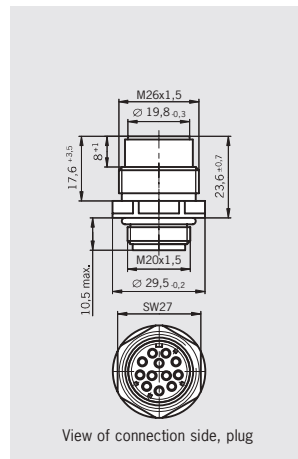
Female plug SR11 EF 11-pin + PE



Female plug SR11 WF angled 11-pin + PE



Male socket SR11 AM 11-pin + PE



Ordering table

Designation	Version	Cable					
		None	5 m	10 m	15 m	20 m	25 m
SR6 ¹⁾ 6-pin + PE	EF Female plug	013 176 SR6EF	077 632 SR6EF-5000	077 633 SR6EF-10000	077 634 SR6EF-15000	098 128 SR6EF-20000	-
	WF Female plug angled	024 999 SR6WF	077 638 SR6WF-5000	077 639 SR6WF-10000	077 640 SR6WF-15000	-	-
	K Coding shells	013 178 SR6K	-	-	-	-	-
	AM Male socket, connection M20 x 1.5	087 180 SR6AM2-M20	-	-	-	-	-
SR11 ¹⁾ 11-pin + PE	EF Female plug	070 859 SR11EF	077 629 SR11EF-5000	077 630 SR11EF-10000	077 631 SR11EF-15000	096 632 SR11EF-20000	094 749 SR11EF-25000
	WF Female plug angled	054 773 SR11WF	077 635 SR11WF-5000	077 636 SR11WF-10000	077 637 SR11WF-15000	-	-
	AM Male socket, connection M20 x 1.5	091 296 SR11AM2-M20	-	-	-	-	-
SR6 and SR11	Socket crimp contact Wire cross-section 0.5 - 1.5 mm	071 260 SRF	-	-	-	-	-
	Pin crimp contacts Wire cross-section 0.5 - 1.5 mm	071 261 SRM	-	-	-	-	-

For information on crimp contacts see page 124.

1) Crimp contacts are included.

Plug connectors RC18 and RC18 with option C1825

For safety switches TZ

- ▶ 90° angled optional
- ▶ Cable optional
- ▶ Halogen-free cable optional

Crimp contacts

With 19 crimp pins for wire cross-section 0.75 - 1.00 mm².

Option C1825

With 16 crimp pins for wire cross-section 0.38 - 0.5 mm² and 3 pins for wire cross-section 0.75 - 1.0 mm² for control of the interlocking solenoid. This plug is easier to connect.

Important: only for switch with option C1825.

Plug connector angled (optional)

On plug connectors with cables the direction of the cable exit can be chosen on left/right. On plug connectors without cables the direction can be adjusted.

Cable (optional)

Cable sleeve PUR, color black, wire cross-section 0.5 mm² or 1.0 mm².

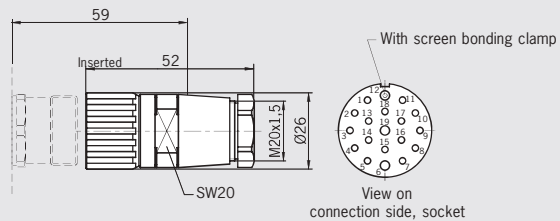
Cable halogen-free (optional)

Cable sleeve PUR, color black, halogen-free, silicone-free. Reduction of toxic gases and smoke in case of fire.

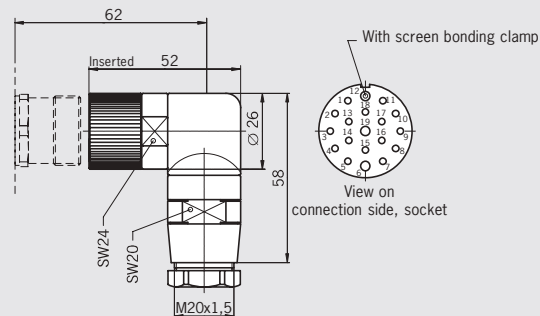
Wire cross-section 0.5 mm² or 1.0 mm².

Female plug RC18 / RC18..C1825 18-pin + PE

Dimension drawings



Female plug RC18 / RC18..C1825 angled 18-pin + PE



Ordering table

Designation	Version	Without cable
RC18 ²⁾ 18-pin + PE	EF Female plug ¹⁾	074 616 RC18EF
	WF Female plug angled ¹⁾	074 617 RC18WF
	Replacement socket crimp contacts¹⁾ Wire cross-section 19 x 0.75 - 1 mm ²	094 309 Pin crimp contact RCM
	EF-C1825 Female plug	077 025 RC18EF-C1825
	WF-C1825 Female plug angled	077 026 RC187WF-C1825
	Replacement socket crimp contacts Wire cross-section 16 x 0.38 - 0.5 mm ² 3 x 0.75 - 1 mm ²	094 310 Pin crimp contact RCM-C1825

For information on crimp contacts see page 124.

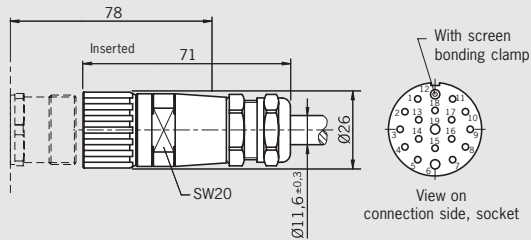
1) Suitable for safety switches TZ without option C1825.

2) Crimp contacts are included.

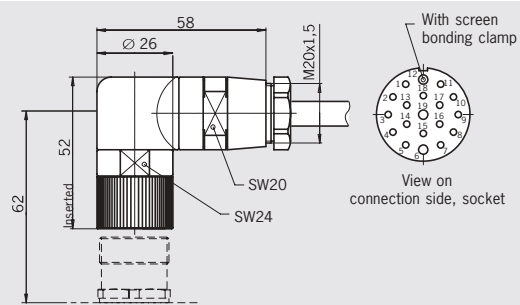
For safety precautions see page 164
For technical data see page 139

Female plug RC18 / RC18..C1825 with cable 18-pin + PE

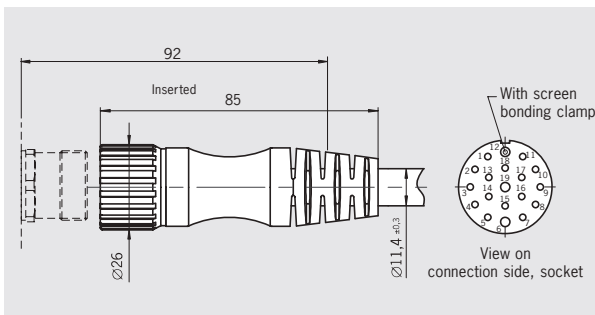
Dimension drawings



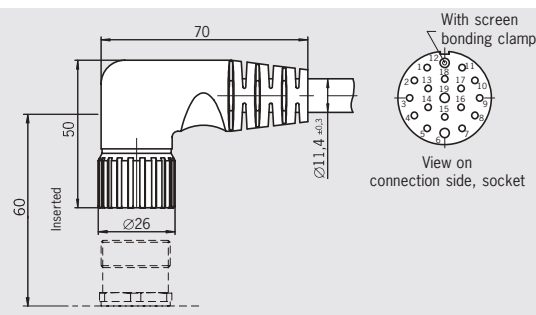
Female plug RC18 / RC18..C1825 angled with cable 18-pin + PE



Female plug RC18 / RC18..C1825 with cable halogen-free 18-pin + PE



Female plug RC18 / RC18..C1825 angled with cable halogen-free 18-pin + PE



Pin assignment plug RC18 with cable and option C1825

Pin	Wire color	Wire cross-section [mm]
1	VT	0.5
2	RD	0.5
3	GY	0.5
4	RD/BU	0.5
5	GN	0.5
6	BU	1.0
7	GY/PK	0.5
8	GN/WH	0.5
9	YE/WH	0.5

10	GY/WH	0.5
11	BK	0.5
12	GN/YE	1.0
13	PK	0.5
14	BN/GY	0.5
15	BN/YE	0.5
16	BN/GN	0.5
17	WH	0.5
18	YE	0.5
19	BN	1.0

Ordering table

Desig.	Version	Cable								
		1.5 m	3 m	6 m	8 m	10 m	15 m	20 m	25 m	30 m
RC18 + PE with cable	EF-C1825 Female plug	092 761 RC18EF1,5MC1825	092 816 RC18EF3MC1825	077 014 RC18EF6MC1825	077 015 RC18EF8MC1825	092 898 RC18EF10MC1825	077 016 RC18EF15MC1825	092 726 RC18EF20MC1825	092 727 RC18EF25MC1825	095 993 RC18EF30MC1825
	WFL-C1825 Female plug angled left	092 906 RC18WF1,5MLC1825	092 908 RC18WF3MLC1825	077 018 RC18WF6MLC1825	077 019 RC18WF8MLC1825	092 901 RC18WF10MLC1825	077 020 RC18WF15MLC1825	092 910 RC18WF20MLC1825	092 912 RC18WF25MLC1825	-
	WFR-C1825 Female plug angled cable exit right	092 907 RC18WF1,5MRC1825	092 909 RC18WF3MRC1825	085 194 RC18WF6MRC1825	085 195 RC18WF8MRC1825	092 902 RC18WF10MRC1825	085 196 RC18WF15MRC1825	092 911 RC18WF20MRC1825	092 913 RC18WF25MRC1825	-
RC18 18-pin + PE with cable halogen- free	EFF-C1825 Female plug	092 883 RC18EF1,5MF-C1825	092 884 RC18EF3MF-C1825	092 885 RC18EF6MF-C1825	092 886 RC18EF8MF-C1825	092 887 RC18EF10MF-C1825	092 888 RC18EF15MF-C1825	092 889 RC18EF20MF-C1825	092 890 RC18EF25MF-C1825	-
	WFLF-C1825 Female plug angled cable exit left	092 891 RC18WF1,5MLF-C1825	092 893 RC18WF3MLF-C1825	092 697 RC18WF2MLF-C1825	092 895 RC18WF8MLF-C1825	092 699 RC18WF10MLF-C1825	092 701 RC18WF15MLF-C1825	092 704 RC18WF20MLF-C1825	092 724 RC18WF25MLF-C1825	-
	WFRF-C1825 Female plug angled cable exit right	092 892 RC18WF1,5MRF-C1825	092 894 RC18WF3MRF-C1825	092 698 RC18WF6MRF-C1825	092 896 RC18WF8MRF-C1825	092 700 RC18WF10MRF-C1825	092 702 RC18WF15MRF-C1825	092 708 RC18WF20MRF-C1825	092 725 RC18WF25MRF-C1825	-

Mounting plates EMP for safety switches TZ

- ▶ For vertical and horizontal mounting of safety switch TZ

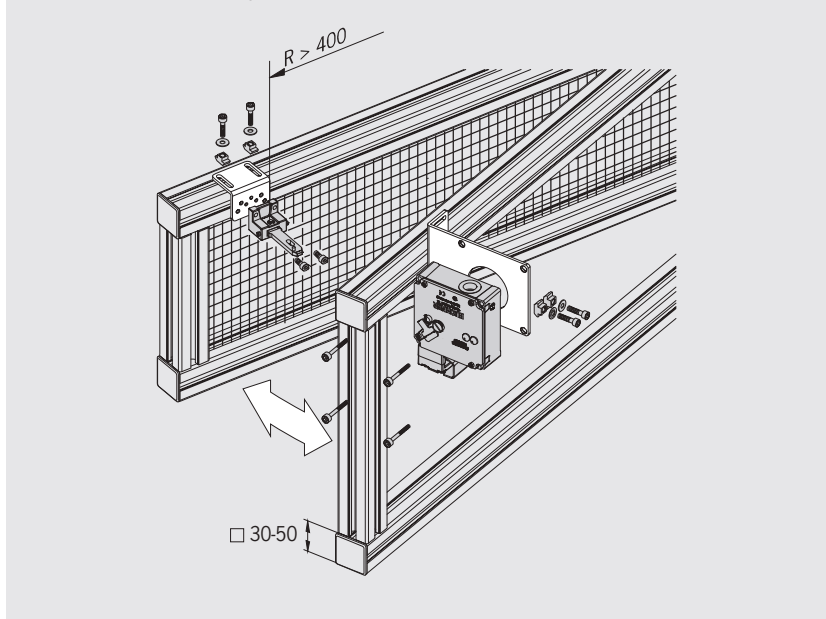
The mounting plates are used for fastening safety switches TZ and actuators to safety guards. The safety switches can be attached horizontally or vertically.

The mounting plate EMP-SA is also suitable for safety switches with escape release from the rear.

Note

- ▶ Mounting plate material: St37 galvanized
- ▶ The mounting plate EMP-SA is also suitable for the safety switches TZ...C1684, TZ...C1815 and TZ...C1828 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
	A Vertical	094 401 EMP-SA 	093 457 EMP-B1 	024 298 024 299 	> 400 mm
	B Horizontal		093 458 EMP-B2 	048 850 057 950 	> 165 mm

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

Bolts for safety guards

- ▶ For safety switches NZ.VZ, NZ.VZ.VS and TZ...
- ▶ Bolt with hand lever
- ▶ For right or left hinged doors



Special features

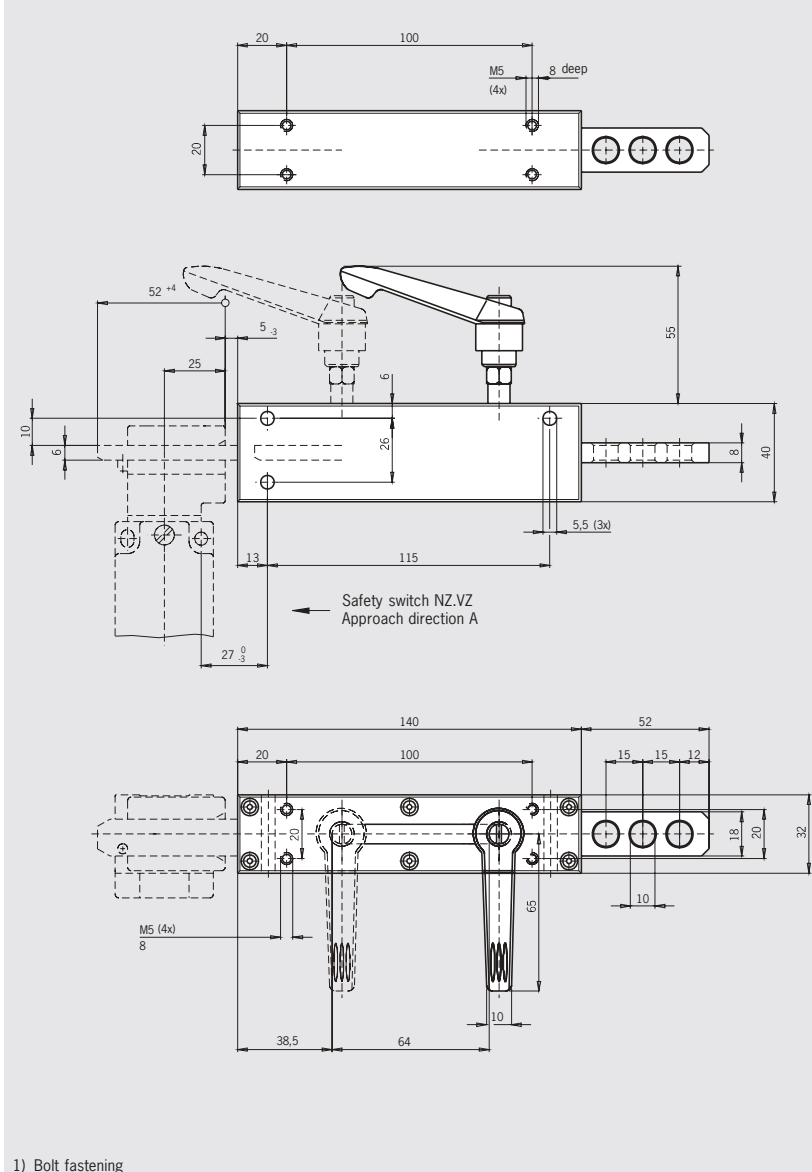
- ▶ The hand lever can be permanently set to 20 rotary positions (in 18° increments)
- ▶ On bolt **NZ/TZ-G1**, actuating pin on bottom
 - ▶ Safety switch fastened as shown in illustration
- ▶ On bolt **NZ/TZ-G2**, actuating pin on top
 - ▶ Safety switch fastened rotated by 180°
- ▶ After the door is opened, the actuator is automatically withdrawn into the bolt by a built-in return spring
 - ▶ The operator is protected
When the door is open there is no risk of injury due to protruding actuator
 - ▶ The actuator is protected
When hinged doors are closed it is ensured that the actuator is not used as an end stop

Features

- ▶ Three holes enable padlocks to be attached

Bolt for safety switches NZ.VZ, NZ.VZ.VS and TZ

Dimension drawings



Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt NZ/TZ-G1	None	For right or left hinged doors, actuating pin on bottom, actuator included	028 358 Bolt NZ/TZ-G1
Bolt NZ/TZ-G2	None	For right or left hinged doors, actuating pin on top, actuator included	028 360 Bolt NZ/TZ-G2

Bolts for safety guards

- ▶ For safety switches NZ.VZ, NZ.VZ.VS and TZ...
- ▶ Bolt with ball handle
- ▶ For right or left hinged doors



Special features

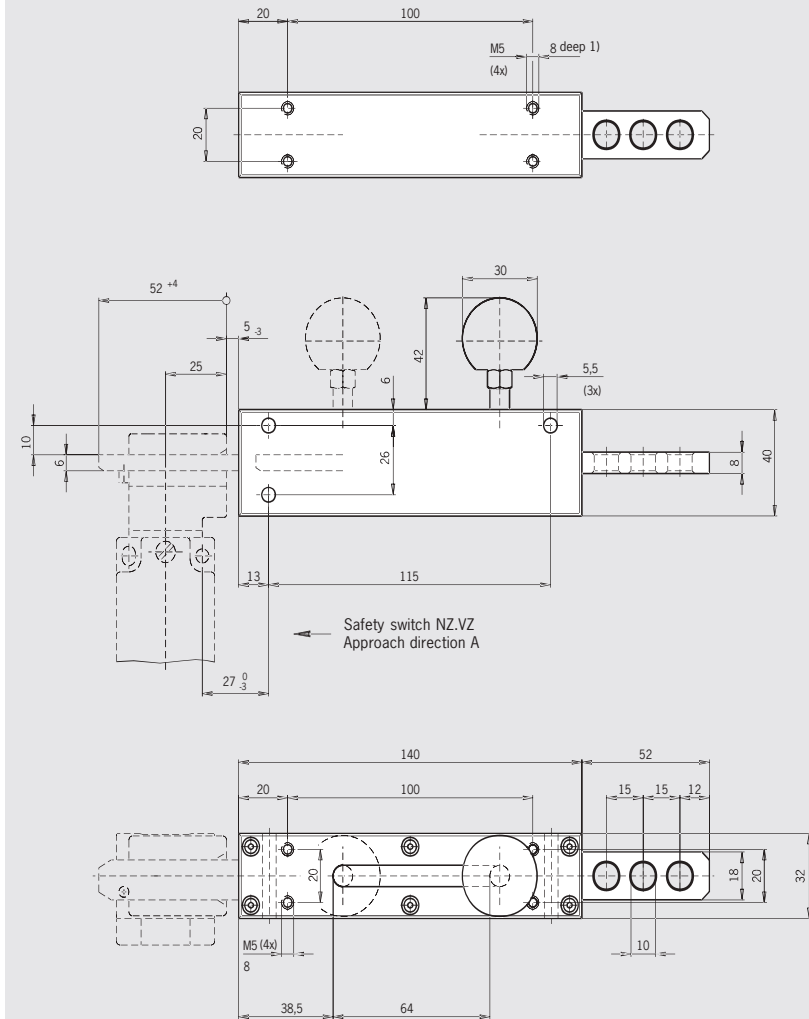
- ▶ On bolt **NZ/TZ-S1**, actuating pin on bottom
 - ▶ Safety switch fastened as shown in illustration
- ▶ On bolt **NZ/TZ-S2**, actuating pin on top
 - ▶ Safety switch fastened rotated by 180°
- ▶ After the door is opened, the actuator is automatically withdrawn into the bolt by a built-in return spring
 - ▶ The operator is protected
When the door is open there is no risk of injury due to protruding actuator
 - ▶ The actuator is protected
When hinged doors are closed it is ensured that the actuator is not used as an end stop

Features

- ▶ Three holes enable padlocks to be attached

Bolt for safety switches NZ.VZ, NZ.VZ.VS and TZ

Dimension drawings



1) Bolt fastening

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt NZ/TZ-S1	None	For right or left hinged doors, actuating pin on bottom, actuator included	028 357 Bolt NZ/TZ-S1
Bolt NZ/TZ-S2	None	For right or left hinged doors, actuating pin on top, actuator included	028 359 Bolt NZ/TZ-S2

Bolts for safety guards

- ▶ For safety switches NZ.VZ, NZ.VZ.VS and TZ...
- ▶ Bolt with knurled knob
- ▶ For right or left hinged doors



Special features

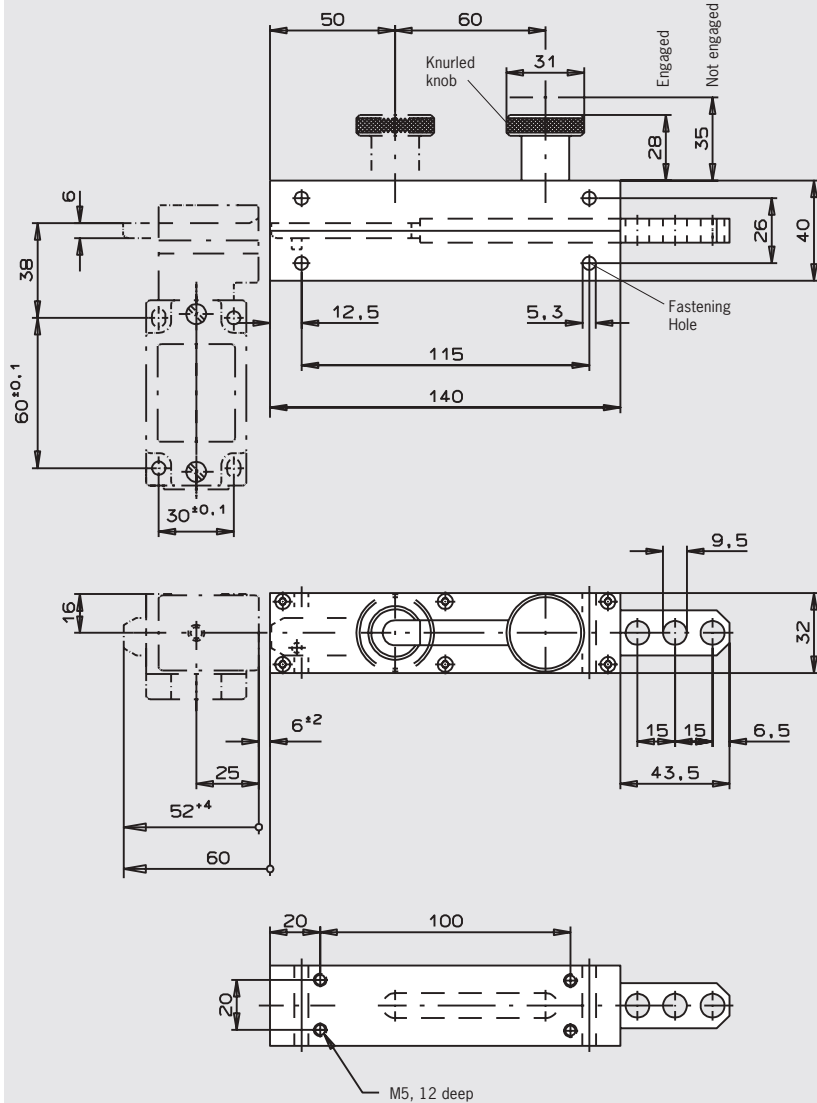
- ▶ Bolt knob engages in open and closed position. The actuator can be inserted in the safety switch by pulling the knurled knob

Features

- ▶ Three holes enable padlocks to be attached

Bolt for safety switches NZ.VZ, NZ.VZ.VS and TZ

Dimension drawings

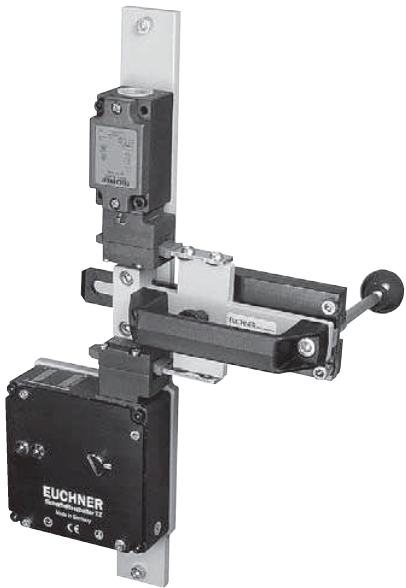


Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt NZ/TZ-Z	Knurled knob	For right or left hinged doors, actuator included	057 770 Bolt NZ/TZ-Z

Bolts for safety guards

- ▶ For safety switches NZ.VZ, TZ...C1684, TZ...C1815 and TZ...C1828
- ▶ Lever for escape release from the danger area
- ▶ For 2 safety switches on one bolt (NZ and TZ)
- ▶ For right or left hinged doors



Special features

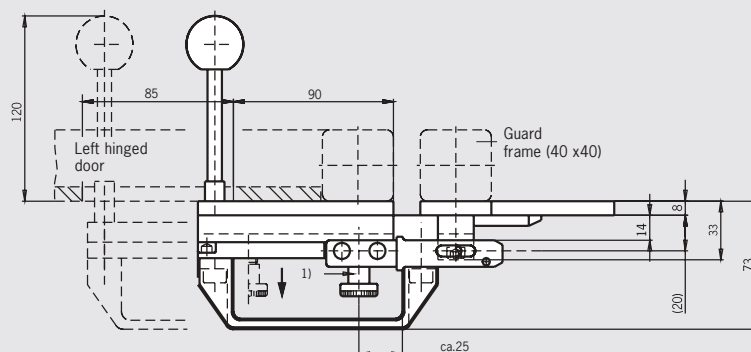
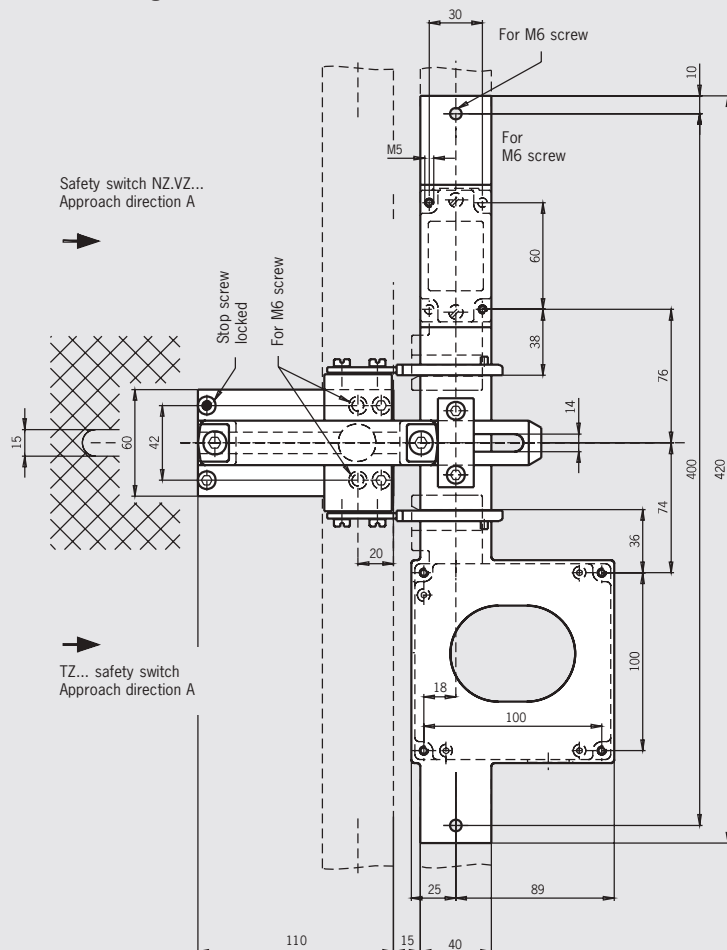
- ▶ One bolt for 2 safety switches (NZ and TZ with guard locking)
 - ▶ High control category (e. g. category 4) is achieved
- ▶ Bolt with detent mechanism
 - ▶ The bolt latches in open position to prevent unintended closing

Features

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

Bolt for 2 safety switches NZ.VZ on one bolt

Dimension drawings



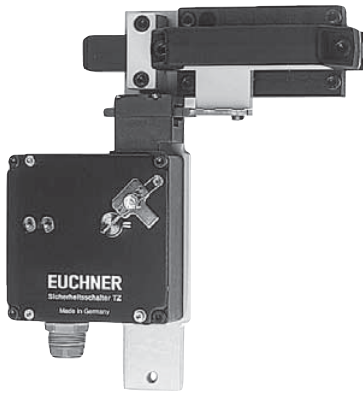
1) Bolt with detent mechanism:
Latches in open position and prevents unintended closing of the bolt.
Unlocked by pulling the detent knob upward.

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt NZ/TZ-ACF	Detent knob	For right or left hinged doors, 2 safety switches on one bolt, escape release from the danger area, actuator included	083 900 Bolt NZ/TZ-ACF

Bolts for safety guards

- ▶ For safety switches TZ
- ▶ Optional stainless steel bolt, 1.4301
- ▶ For right or left hinged doors



Features

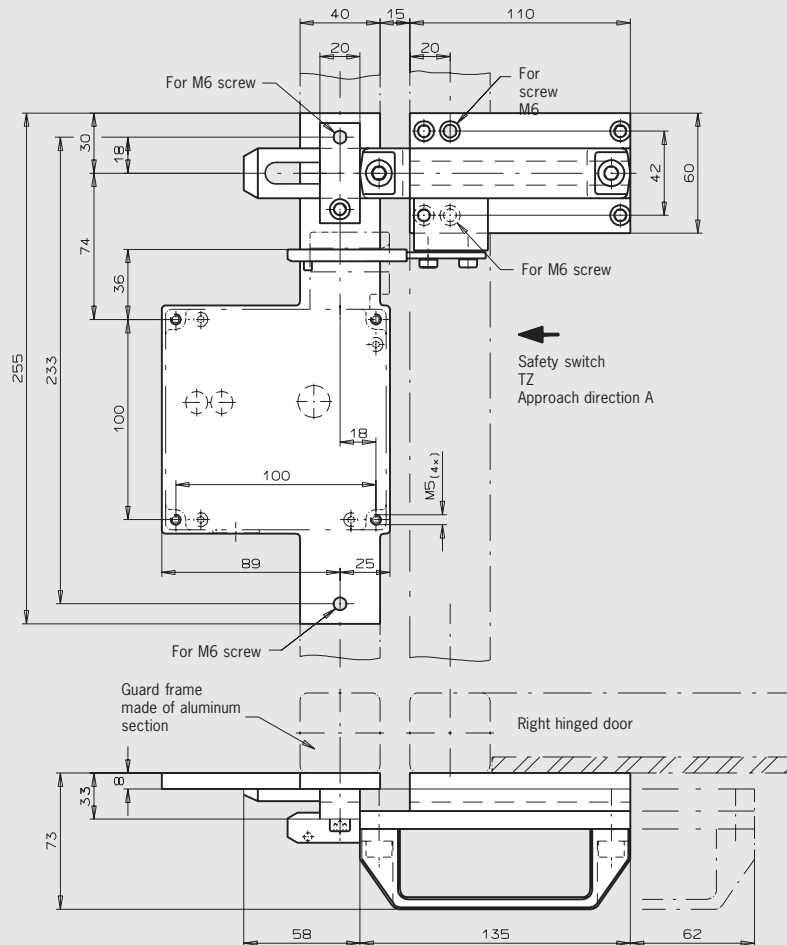
- ▶ Easily fitted to standard aluminum profiles and machine covers by screw connection
- ▶ Easy to use
- ▶ Distinctive yellow color for easy recognition
- ▶ Robust version for heavy doors
- ▶ No additional door handle necessary
- ▶ Slot on the bolt permits attachment of padlocks

Version in stainless steel 1.4301

- ▶ Suitable for use in the chemical and foodstuff industries
- ▶ Screw material stainless steel V2A
- ▶ Handle material polypropylene
- ▶ Slide strip material polyethylene

Bolts for safety switches series TZ

Dimension drawings



Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt TZ-A	None	For right hinged doors actuator and switch bracket included	057 736 Bolt TZ-A
Bolt TZ-C	None	For left hinged doors actuator and switch bracket included	057 737 Bolt TZ-C
Bolt TZ-A-NIRO	None	For right hinged doors, bolt made of bade of stainless steel 1.4301, actuator and switch bracket included	079 798 Bolt TZ-A-NIRO
Bolt TZ-C-NIRO	None	For left hinged doors, bolt made of bade of stainless steel 1.4301, actuator and switch bracket included	079 799 Bolt TZ-C-NIRO
Bolt TZ-A-NIRO-C2101	None	For right hinged doors, bolt made of bade of stainless steel 1.4301, screws made of stainless steel V2A, handle and slide strips made of stainless steel 1.4301, actuator and switch bracket included (similar to figure)	096 057 Bolt TZ-A-NIRO-C2101
Bolt TZ-C-NIRO-C2101	None	For left hinged doors, bolt made of bade of stainless steel 1.4301, screws made of stainless steel V2A, handle and slide strips made of stainless steel 1.4301, actuator and switch bracket included (similar to figure)	096 058 Bolt TZ-C-NIRO-C2101

Accessories for bolts

- ▶ Adapter NZ/TZ... for safety switches NZ.../TZ... for Bosch EcoSafe 45x45 and 30x30
- ▶ Replacement handle for EUCHNER bolts

Adapter NZ/TZ

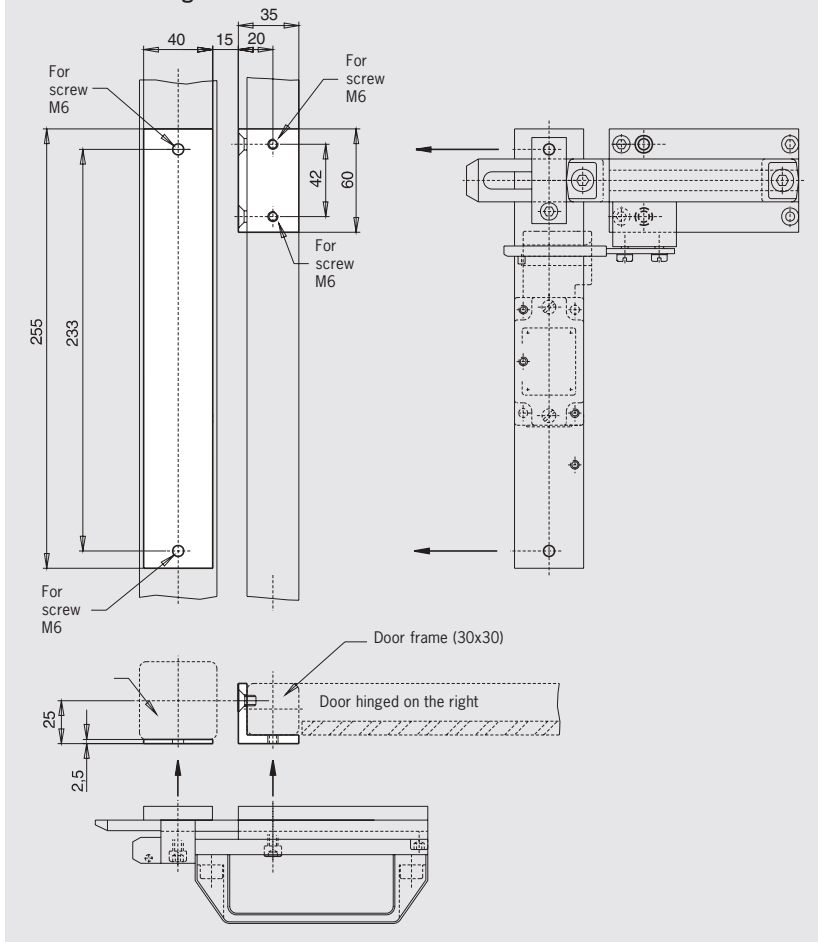
Using the adapter set the **NZ...** and **TZ...** bolts can be fastened to aluminum profiles (Bosch EcoSafe)

The adapter set is only suitable for protection cross-beams 45x45 mm in combination with safety doors 30x30 mm

- ▶ Simple screw mounting
- ▶ Symmetrical design for doors hinged on the right or left

Adapter NZ/TZ...

Dimension drawings

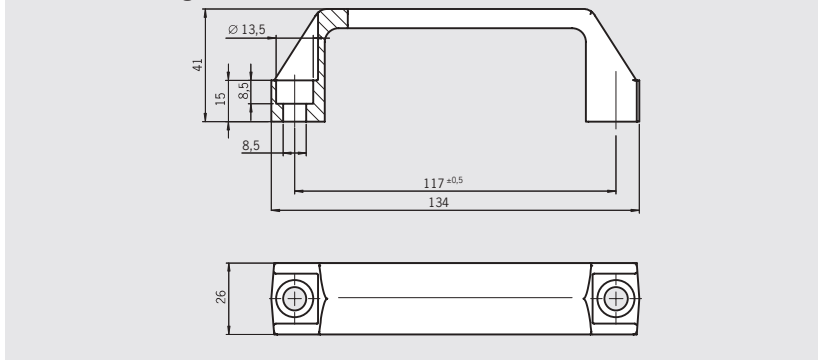


Replacement handle

- ▶ Material: plastic, reinforced polypropylene (PP)
- ▶ Color: black, mat
- ▶ Temperature resistance up to 100 °C

Adapter NZ/TZ...


Dimension drawings




Ordering table


Designation	Version	Order No.
Adapter NZ/TZ 45/30	Incl. 4 fastening screws for elbow adapter	079 033 Adapter NZ/TZ 45/30
Bolt handle/V5	Packaging unit 5 pieces, screws not included	093 500 Bolt handle/V5


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	