

Selection table for accessories

Actuators													
	Insertion funnels												
		Montageplatten/Montagewinkel											
			Connection										
			SGLF				Plug connector; M12; 4-pin						
				SR6			Plug connector; 6-pin + PE						
					SR11		Plug connector; 11-pin + PE						
						RC18	Plug connector; 18-pin + PE						
							Cable glands						
										LED displays			
											Miscellaneous		
												Bolts for safety guards	
Actuators	Insertion funnels	Mounting plates/ mounting brackets	Plug connectors				Cable glands	LED displays	Miscellaneous	Bolts		Page	
			SGLF	SR6	SR11	RC18				Metal	Plastic		
•												74 - 82	
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		•										84 / 85	
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Actuators for safety switches NP/GP/TP

- ▶ Actuators made of stainless steel
- ▶ Two stainless safety screws per actuator
- ▶ Actuators with optional rubber bushings

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.

Actuator with overtravel

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

Actuator with rubber bush

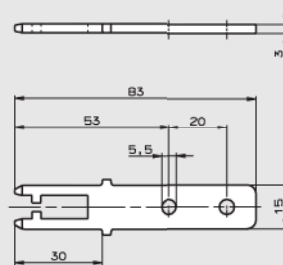
For flexible mounting of the actuator.

Screws made of stainless steel

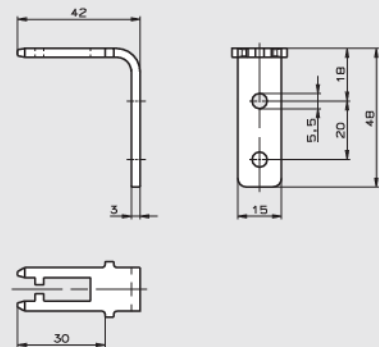
The safety screws included can be inserted with a normal tool, but cannot be removed again.

Actuator P-G straight
Overtravel 2 mm

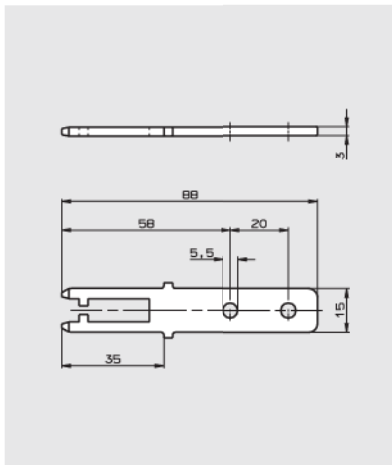
Dimension drawings



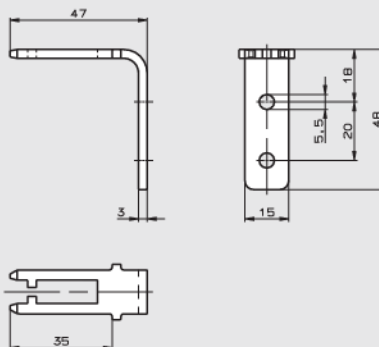
Actuator P-W bent
Overtravel 2 mm



Actuator P-GN straight
Overtravel 7 mm



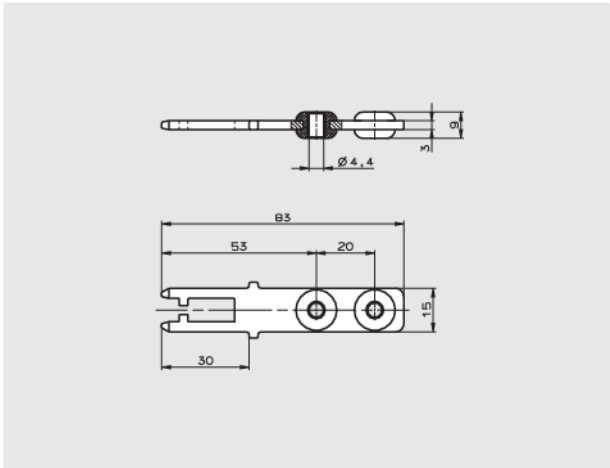
Actuator P-WN bent
Overtravel 7 mm



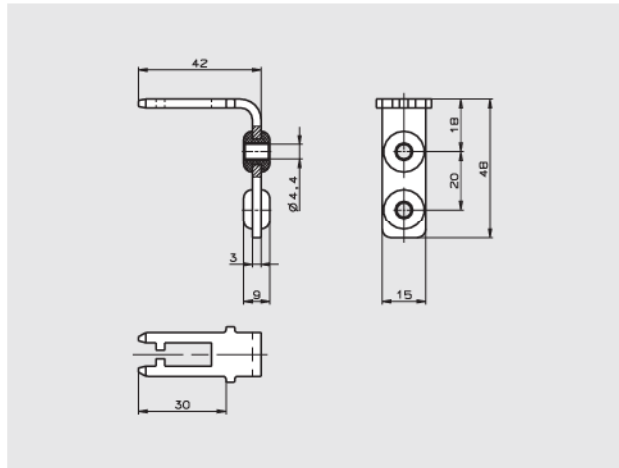
Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator straight	P-G Overtravel 2 mm incl. 2 safety screws M5 x 10	1000	1 ea.	059 226 ACTUATOR-P-G
Actuator bent	P-W Overtravel 2 mm incl. 2 safety screws M5 x 10	1000	1 ea.	059 227 ACTUATOR-P-W
Actuator straight overtravel	P-GN Overtravel 7 mm incl. 2 safety screws M5 x 10	1000	1 ea.	074 570 ACTUATOR-P-GN
Actuator bent overtravel	P-WN Overtravel 7 mm incl. 2 safety screws M5 x 10	1000	1 ea.	074 571 ACTUATOR-P-WN

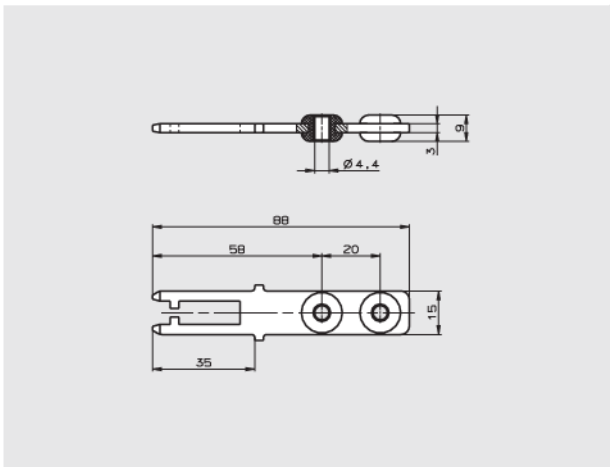
Actuator P-GT straight
Rubber bush, overtravel 2 mm



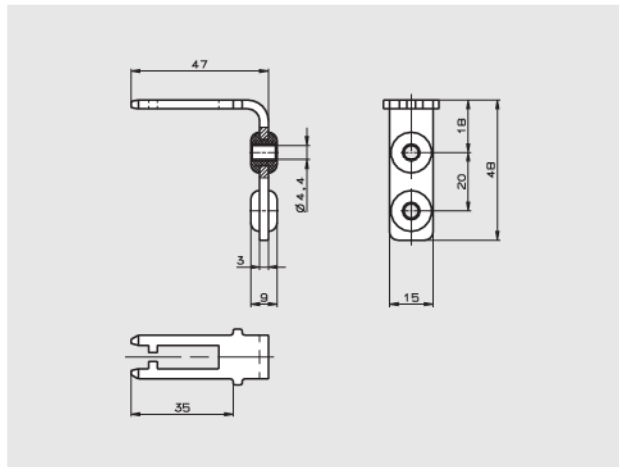
Actuator P-WT bent
Rubber bush, overtravel 2 mm



Actuator P-GNT straight
Rubber bush, overtravel 7 mm



Actuator P-WNT bent
Rubber bush, overtravel 7 mm



Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator straight rubber bush	P-GT Overtravel 2 mm incl. 2 safety screws M4 x 14	1000	1 ea.	070 046 ACTUATOR-P-GT
Actuator bent rubber bush	P-WT Overtravel 2 mm incl. 2 safety screws M4 x 14	1000	1 ea.	070 038 ACTUATOR-P-WT
Actuator straight rubber bush, overtravel	P-GNT Overtravel 7 mm incl. 2 safety screws M4 x 14	1000	1 ea.	074 576 ACTUATOR-P-GNT
Actuator bent rubber bush, overtravel	P-WNT Overtravel 7 mm incl. 2 safety screws M4 x 14	1000	1 ea.	074 577 ACTUATOR-P-WNT

For safety precautions see page 136
For technical data see page 99

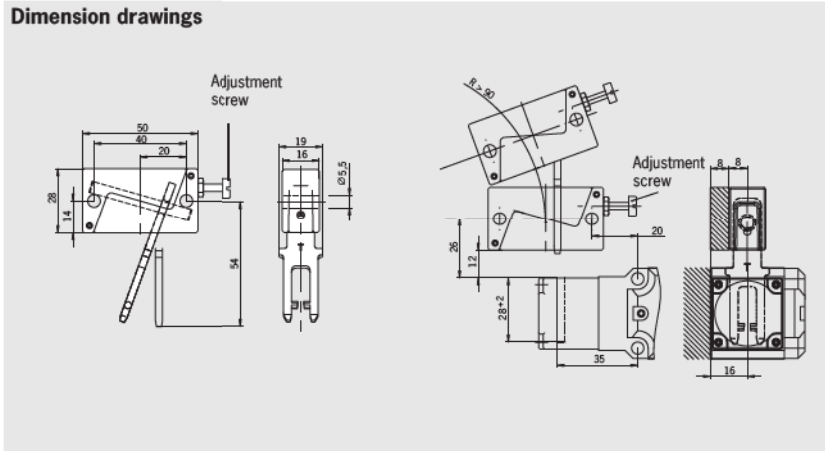
Hinged actuators for safety switches NP/GP/TP

- ▶ Actuators made of stainless steel
- ▶ Two stainless safety screws per actuator
- ▶ For top and bottom hinged doors
- ▶ For right and left hinged doors

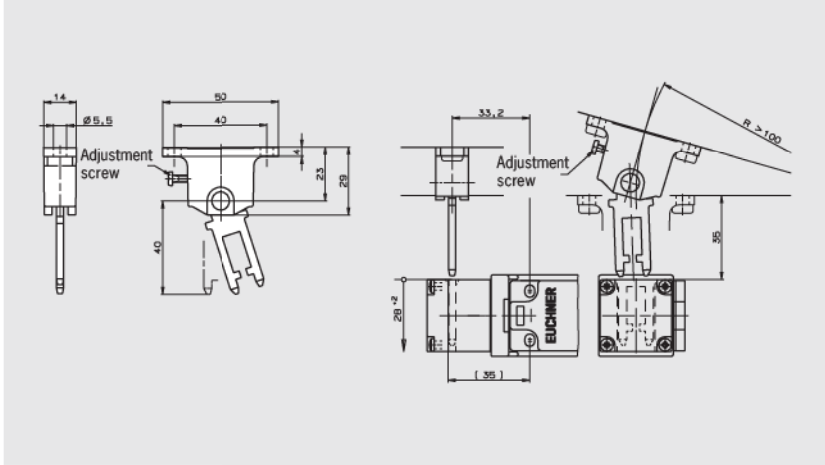
Hinged actuator

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.

Hinged actuator P-OU
Safety guard hinged at top/bottom, overtravel 2 mm



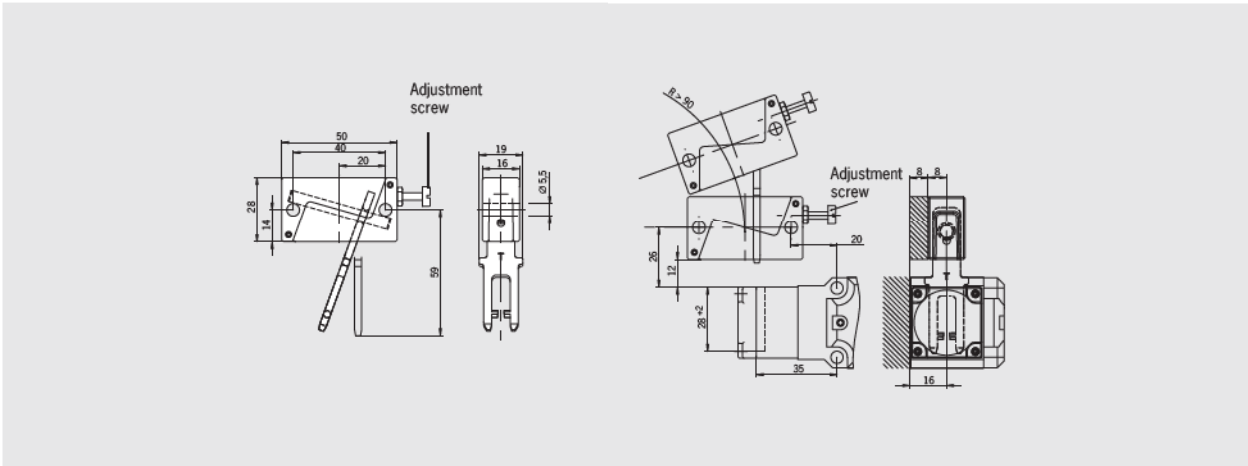
Hinged actuator P-LR
Safety guard hinged on left/right, overtravel 2 mm



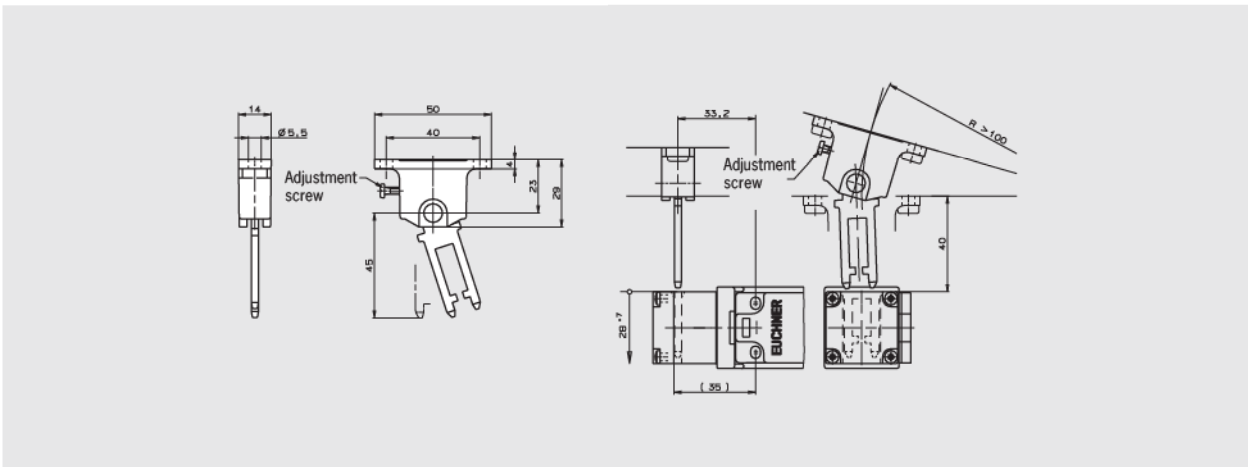
Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Hinged actuator	P-OU For top and bottom hinged doors overtravel 2 mm incl. 2 safety screws M5 x 25	90	1 ea.	070 050 HINGED ACTUATOR P-OU
	P-LR For left and right hinged doors overtravel 2 mm incl. 2 safety screws M5 x 10	100	1 ea.	059 440 HINGED ACTUATOR P-LR

Hinged actuator P-OUN
Safety guard hinged at top/bottom, overtravel 7 mm



Hinged actuator P-LRN
Safety guard hinged on left/right, overtravel 7 mm



Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Hinged actuator	P-OUN For top and bottom hinged doors overtravel 7 mm incl. 2 safety screws M5 x 25	90	1 ea.	074 572 HINGED ACTUATOR P-OUN
	P-LRN For left and right hinged doors overtravel 7 mm incl. 2 safety screws M5 x 10	100	1 ea.	074 573 HINGED ACTUATOR P-LRN

Insertion funnels/adapters

- ▶ **Insertion funnel**
- ▶ **Adapter NP-K**

Insertion funnel

If an insertion funnel is used, even in exactly positioned actuators are inserted reliably in the actuating head due to the large opening aperture, thus protecting the safety switch against mechanical influences.

- ▶ Cannot be used in conjunction with TP safety switches with increased overtravel from top
- ▶ The insertion funnel for TP can only be used in conjunction with an actuator with long overtravel
- ▶ The insertion funnel for STP can only be used in conjunction with an actuator for insertion funnel

Adapter NP-K

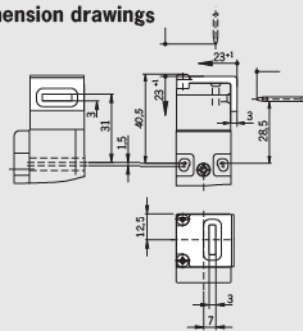
The adapter NP-K is used for top entry overtravel applications for the NP series.

- ▶ The adapter **cannot** be used for safety switches of the GP/TP series
- ▶ 4 screws 3 x 38 (not safety screws) are supplied

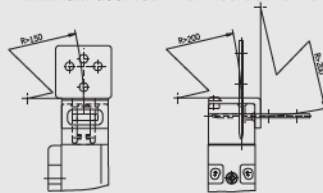
Insertion funnel

For safety switches NM..VZ

Dimension drawings

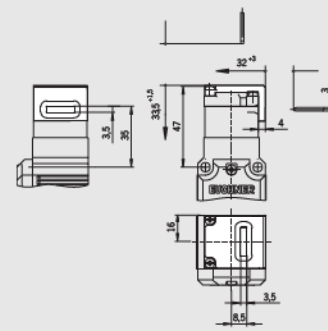


Minimum door radii with insertion funnel

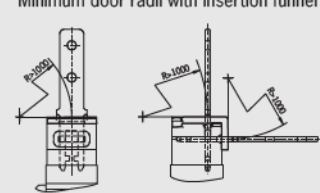


Insertion funnel

For safety switches NP..A/GP/TP..A



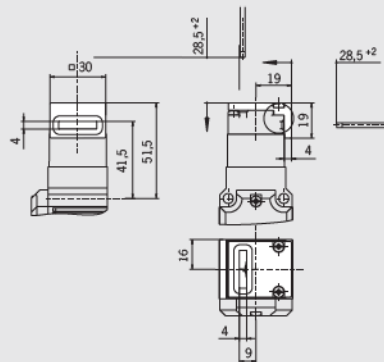
Minimum door radii with insertion funnel



Insertion funnel

For safety switches SGP/STA/STP/STM

Dimension drawings

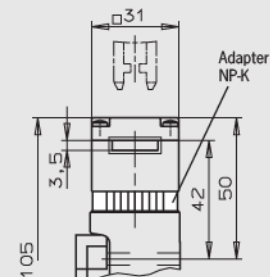


Minimum door radius with insertion funnel

R > 300 mm

Adapter NP-K

For safety switches NP



Ordering table

Designation	Version	Use	Order No.
Insertion funnel	Incl. 2 fastening screws	For safety switches NM..VZ	083 565 Insertion funnel M
		For safety switches NP..A/GP/TP..A without adapter	086 237 Insertion funnel NP/GP/TP
		For safety switches SGP/STA/STP/STM	093 157 Insertion funnel STP/STM
Adapter NP-K	Incl. 4 fastening screws	For safety switches NP	074 578 Adapter NP-K

Mounting bracket for safety switches NM and NP...AS

- ▶ For vertical and horizontal mounting of safety switches NM and NP...AS

The mounting bracket is used for fastening safety switches NM and NP...AS to safety guards. The safety switches can be attached horizontally or vertically.

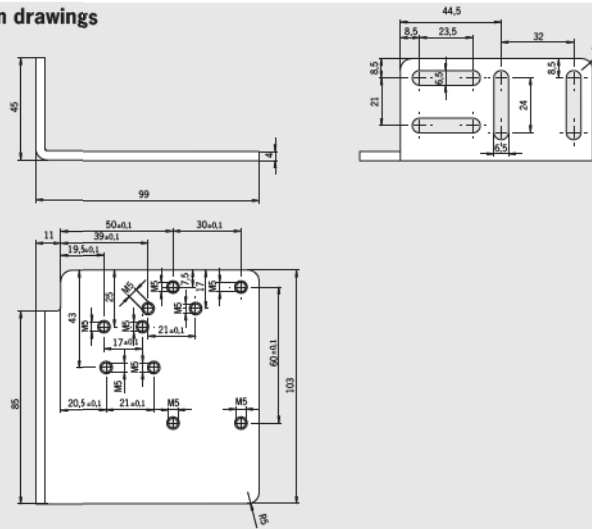
Notes

- ▶ Mounting plate material: St37 galvanized

Mounting bracket

For safety switches series NM and NP...AS

Dimension drawings



Ordering table

Designation	Use	
Mounting bracket NM, NP	For safety switches series NM and NP...AS horizontal and vertical mounting	085 753 Mounting bracket NM, NP

Plug connector M12

- ▶ Plug connector M12 with cable
- ▶ 90° angled optional

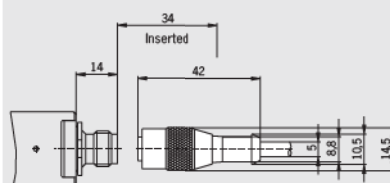
Cable

Cable sleeve PUR, color black, halogen-free, flame retardant. Reduction of toxic gases and smoke in case of fire. Wire cross-section 0.25 mm².

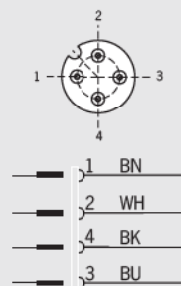
Plug connector SGLF with cable

M12 plug, 4-pin

Dimension drawings

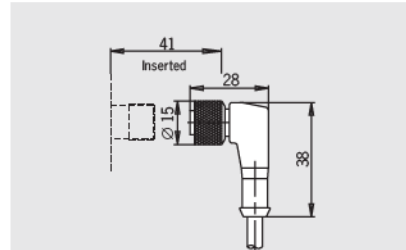


Wiring diagram (view of connection side)

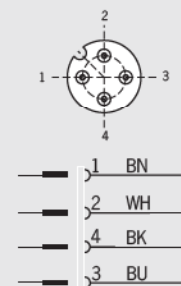


Plug connector SWLF with cable

M12 plug, 4-pin



Wiring diagram (view of connection side)



Ordering table

Designation	Number of pins	Version	Cable length
			5 m
SGLF	4	Female plug M12 for male plug SM4	035 613 SGLF4-5000P
SWLF	4	Female plug M12 bent for male plug SM4	035 618 SWLF4-5000P

Plug connectors SR6 and SR11

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

Angled plug connector

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

Male socket

For fitting in safety switches.

Coding shells

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

Cable (optional)

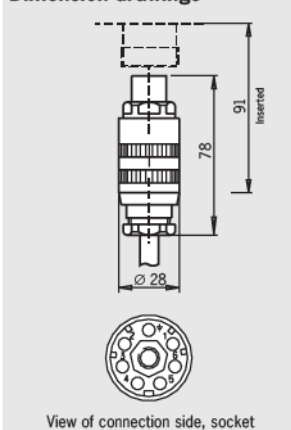
Cable sleeve PUR, color gray, wire cross-section 1.0 mm² (individual lines numbered).

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
⊕	7	7	7
		8	8
		9	9
		10	10
		11	11
		⊕	12

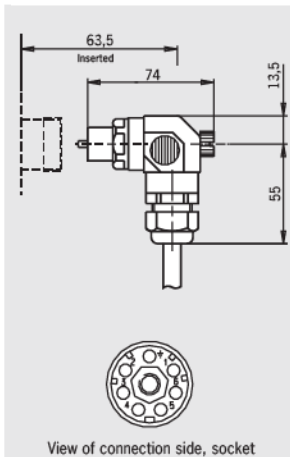
Female plug SR6 EF
6-pin + PE

Dimension drawings



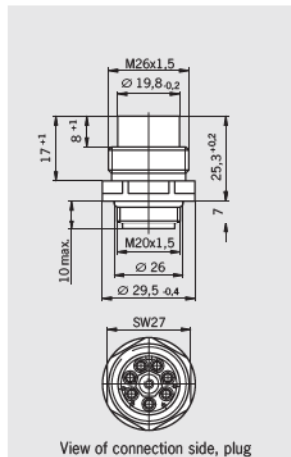
View of connection side, socket

Female plug SR6 WF angled
6-pin + PE



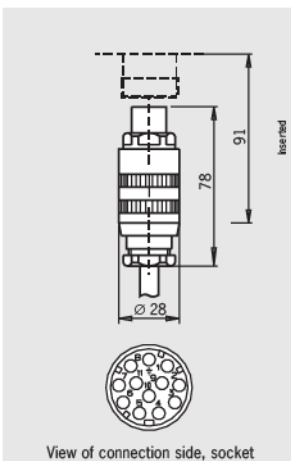
View of connection side, socket

Male socket SR6 AM
6-pin + PE



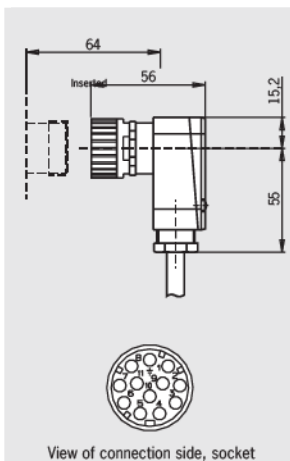
View of connection side, plug

Female plug SR11 EF
11-pin + PE



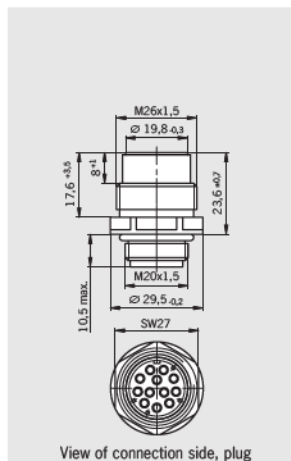
View of connection side, socket

Female plug SR11 WF angled
11-pin + PE



View of connection side, socket

Male socket SR11 AM
11-pin + PE



View of connection side, plug

Ordering table

Designation	Version	Cable				
		None	5 m	10 m	15 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	-
	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	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 contacts 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	-	-	-	-

1) Crimp contacts supplied. For information on crimp contacts see page 98.

Plug connectors RC18

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

Crimp contacts

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

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)

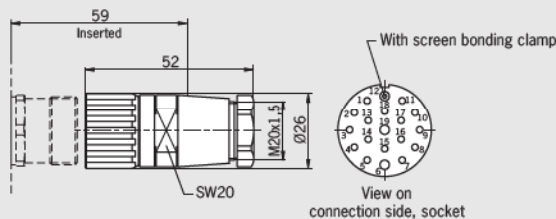
Cable sleeve PUR, color black, halogen-free, silicone-free. Reduction of toxic gases and smoke in case of fire.

Wire cross-section 0.5 mm² or 1.0 mm².

Female plug RC18..C1825

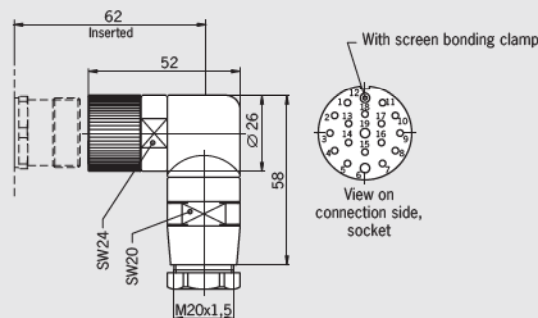
18-pin + PE

Maßzeichnungen



Female plug RC18..C1825

angled 18-pin + PE



Ordering table

Designation	Version	Without cable
RC18 ²⁾ 18-pin + PE	EF-C1825 Female plug	077 025 RC18EF-C1825
	WF-C1825 Female plug angled	077 026 RC18WF-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

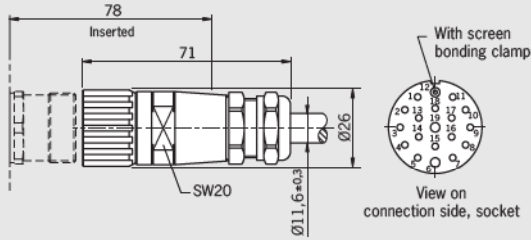
For information on crimp contacts see page 98.

2) Crimp contacts are included.

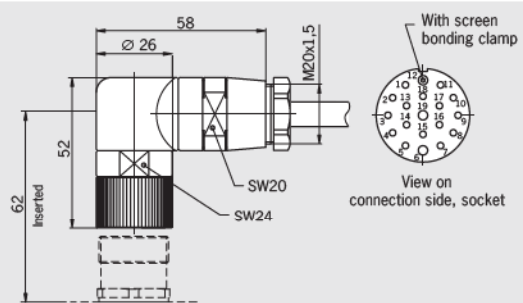
For safety precautions see page 136
For technical data see page 99

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

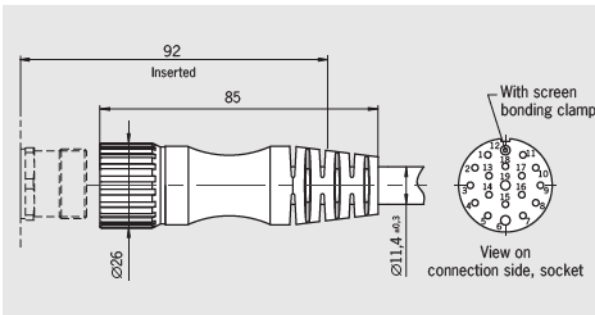
Dimension drawings



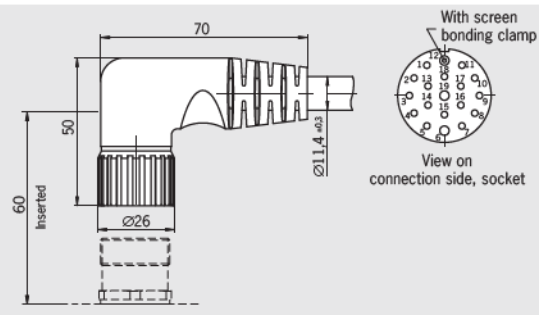
Female plug RC18 / RC18..C1825 angled
with cable 18-pin + PE



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

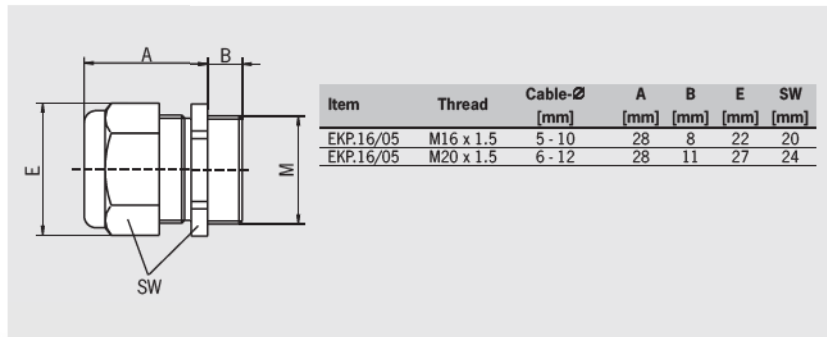
Desig.	Version	Cable								
		1.5 m	3 m	6 m	8 m	10 m	15 m	20 m	25 m	30 m
RC18 + PE with cable	EF-C1825 Female plug	092 761 RC18EF1,5MC1825	092 816 RC18EF3MC1825	077 014 RC18EF6MC1825	077 015 RC18EF8MC1825	092 898 RC18EF10MC1825	077 016 RC18EF15MC1825	092 726 RC18EF20MC1825	092 727 RC18EF25MC1825	095 993 RC18EF30MC1825
	WFL-C1825 Female plug angled left	092 906 RC18WF1,5MLC1825	092 908 RC18WF3MLC1825	077 018 RC18WFGMLC1825	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 RC18WFGMRC1825	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 RC18WFGMRF-C1825	092 896 RC18WF8MRF-C1825	092 700 RC18WF10MRF-C1825	092 702 RC18WF15MRF-C1825	092 708 RC18WF20MRF-C1825	092 725 RC18WF25MRF-C1825	-

Cable glands

- ▶ M16 x 1.5
- ▶ M20 x 1.5

Cable glands

Suitable for various cable diameters. Versions available in plastic and metal.



Ordering table

Thread	Version	Material	
		Metal	Plastic
M16 x 1.5	Cable diameter 5 – 10 mm	-	084 572 EKPM16/05
		-	086 233 EKPM20/06
M20 x 1.5	Cable diameter 6 – 12 mm	-	086 233 EKPM20/06
		-	086 233 EKPM20/06

LED displays for safety switches GP/ TP and STP

- ▶ LED set
- ▶ Built-in LED

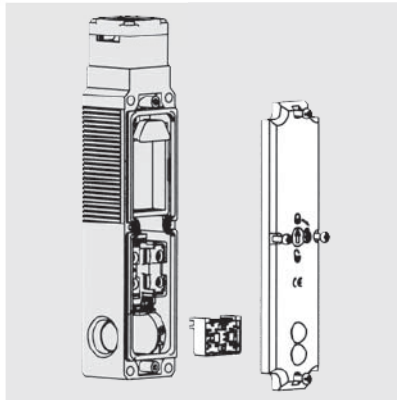
LED set

Consisting of cover with lamp caps, LED module with rectifier and two LEDs (green/red). For retrofitting safety switches TP and STP with an LED display.
Operating voltage AC/DC 24 V +10%, -15%.

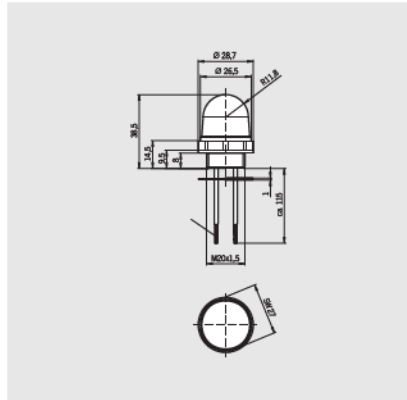
Built-in LED

The built-in LED is suitable for direct installation in one of the M20 x 1.5 threads of the three cable entries of the safety switches GP/TP/STP. The built-in LED indicates to the user whether the switch is locked or whether the door is open/closed.
The switching element can be wired individually.
Operating voltage DC 24 V +10%, -15%.

LED set
For safety switches TP/STP



Built-in LED
For safety switches GP/TP/STP/STA



Ordering table

Designation	Version	Use	Packaging unit	Order No.
LED set	Incl. cover with lamp caps and LED module with rectifier and 2 LEDs (red/green)	For safety switches TP	1 ea.	093 752 LED set TP
		For safety switches STP	1 ea.	098 035 LED set STP
Built-in LED (IP65)	Color red for cable entry M20 x 1.5, with seal light radiation to side	For safety switches GP/TP/STA/STP	1 ea.	087 423 LED M20x1.5
	Color red for cable entry M20 x 1.5, with seal light radiation to front	For safety switches GP/TP/STA/STP	1 ea.	095 510 LED-F M20x1.5

Miscellaneous accessories

- ▶ **Latch spring for increased retention force**
- ▶ **Lockout bar**
- ▶ **Lock for mechanical release**

Latch spring

Provides an increased retention force of approx. 30N for the safety switches NP and GP or TP in unlocked condition.

May only be used in conjunction with the straight actuator with rubber bush (Order No. 070 046).

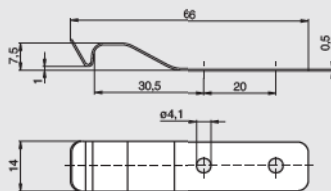
Lockout bar

With the safety door open, can be slid into the actuating head on a switch with separate actuator (NP/GP/TP) instead of an actuator. Removal can be prevented using a commercially available padlock (max. 2 ea.). For the protection of people in areas with a possible hazard.

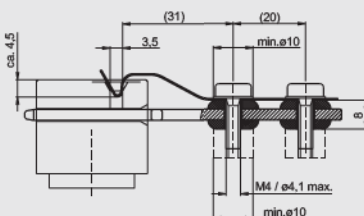
Latch spring for increased retention force

For safety switches NP/GP/TP

Dimension drawings

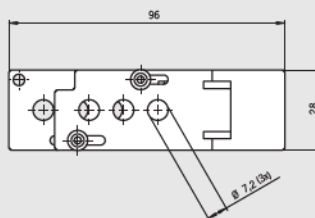
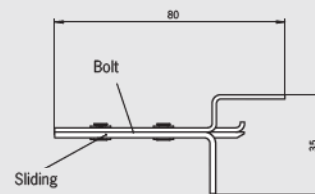


Installation example



Lockout bar

For safety switches NP/GP/TP



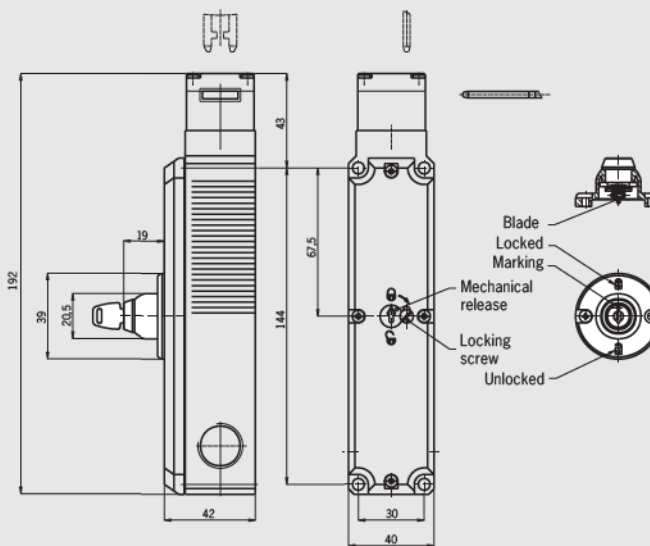
Lock

The lock is used in combination with safety switch TP/STP. 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 TP/STP (above the mechanical release).

- ▶ Order safety switch TP/STP separately
- ▶ 2 keys are included
- ▶ Every safety switch of the series TP/STP can be upgraded to include a lock

Lock

For safety switches TP/STP



Ordering table

Designation	Version	Use	Order No.
Lockout bar	2 holes	For safety switches NP/GP/TP	096 105 Lockout bar
Latch spring		For safety switches NP/GP/TP	076 501 Latch spring NP/TP
Lock	Unique locking (unique key needed to open)	For safety switches TP/STP	084 177 Lock TP
	Identical locking (identical locks)	For safety switches TP/STP	086 236 Lock TP
	Replacement key (2 ea.) for identical locking	For safety switches TP/STP/SGP-TW	099 434 Replacement key for identical TP

Miscellaneous accessories

- ▶ **Wire front release (bowden)**
- ▶ **Handle for wire front release (bowden)**
- ▶ **Safety screws**
- ▶ **Replacement screws**

Wire front release (bowden)

Flexible routing of the cabling rope permits release of the guard locking in all installation situations.

- ▶ Use as emergency unlocking in the case of inaccessible mounting of the safety switch.
- ▶ Use as escape release for release of the guard locking from within the danger area.
- ▶ Can be retrofitted on all safety switches series TP/STP.

Safety screws

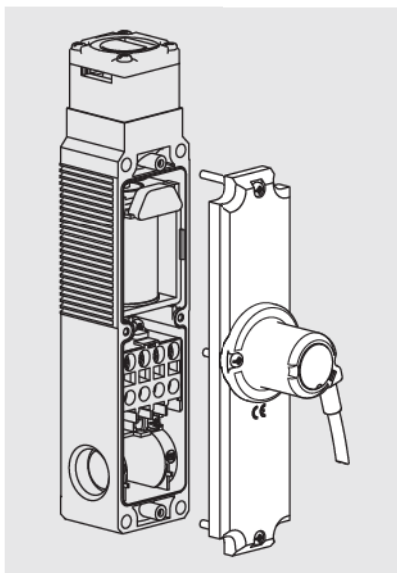
To prevent unscrewing of actuators and actuating heads. The screws can be tightened using a normal tool, but cannot be removed again.

Replacement screws

For mounting actuating heads (not safety screws).

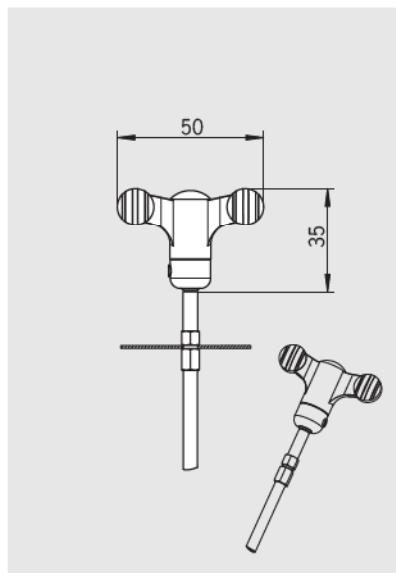
Front wire release (bowden)

For safety switches TP/STP



Handle for front wire release

For safety switches TP/STP

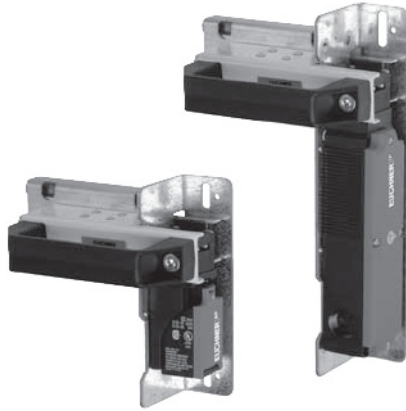


Ordering table

Designation	Version	Use	Order No.
Front wire release (bowden) pre-assembled incl. cover and pull wire	Length 3 m (2 m sheathed)	For safety switches TP	096 230 BW-TP-C-2000
	Length 4 m (3 m sheathed)	For safety switches TP	098 313 BW-TP-C-3000
	Length 5 m (4 m sheathed)	For safety switches TP	098 314 BW-TP-C-4000
	Length 3 m (2 m sheathed)	For safety switches STP	097 952 BW-STP-C-2000
Handle for wire front release		For safety switches TP/STP	099 795 BW handle
Safety screws VPE: 100 ea.	M5 x 25	For hinged actuators for top and bottom hinged doors of series NM..VZ, NP..., GP... and TP...	073 457 M5x25/V100
	M5 x 10 Material: stainless steel	For actuators straight/bent/hinged actuators for right and left hung doors of series NM..VZ, NP..., GP... and TP...	073 455 M5x10/V100
	M4 x 14	For all actuators in series NM..VZ	074 063 M4x14/V100
	M4 x 14 Material: stainless steel	For actuators straight/bent/hinged with bush of series NP..., GP... and TP...	086 232 M4x14/V100
	PL3x30	Cap screws for series NP...A, GP... and TP...A	075 532 PL3x30/V100
	PL3x26	Cap screws for series NM..AL, NM..AG, NM..AK, NM..AV and NM..VZ	085 576 PL3x26/V100
Replacement screws VPE: 100 ea. (not safety screws)	PL3x30 Material: stainless steel	Cap screws for series NP...A, GP... and TP...A	082 237 PL3x30/V100
	PL3x38	Cap screws for series NP...K and TP...K	076 755 PL3x38/V100

Bolt for safety guards for safety switches NP, GP and TP

- ▶ For left or right hinged doors



Features

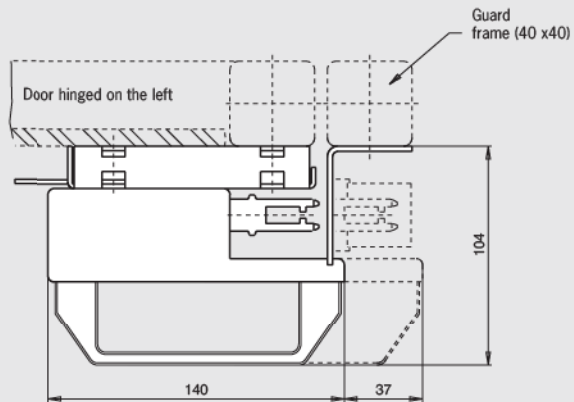
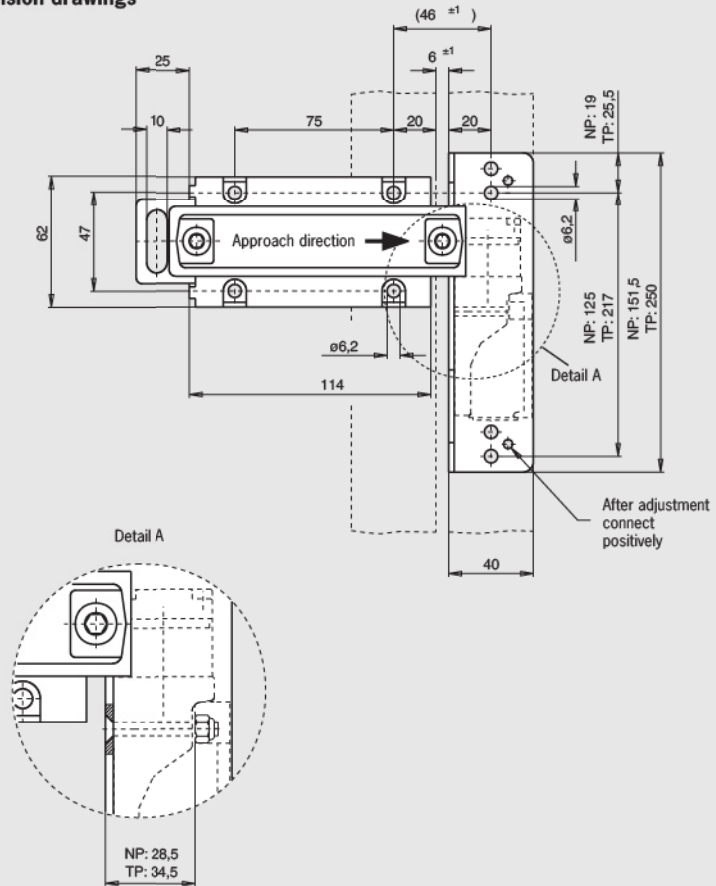
- ▶ Easily fitted to standard aluminum profiles and machine covers by screw connection
- ▶ Distinctive yellow color for easy recognition
- ▶ Symmetrical design for doors hinged on the right or left
- ▶ No additional door handle necessary
- ▶ Automatic detent mechanism when bolt is moved to the locked position (only available on **bolt 1 NP/TP** version)
- ▶ Detent mechanism prevents unintentional opening of the hinged door
- ▶ Slot on the bolt permits attachment of padlocks
- ▶ Identical bolt for safety switches series **NP...AS** and **TP...A**

Notes

- ▶ Switch bracket **NP** is suitable only for the series **NP...AS**
- ▶ Switch bracket **TP** is suitable only for the series **TP...A** and GP
- ▶ Actuator included
- ▶ Please order safety switch and switch bracket separately

Bolt for safety switches NP..AS/GP.../TP...A

Dimension drawings



Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt 0 NP/TP	None	For right or left hinged doors (also for GP)	073 535 Bolt 0 NP/TP
Bolt 1 NP/TP	1 x detent mechanism closed	For right or left hinged doors (also for GP)	073 536 Bolt 1 NP/TP
Switch bracket NP		Separate	073 538 Switch bracket NP
Switch bracket TP		Separate (also for GP)	073 539 Switch bracket TP