Selection table for accessories

Actuators

Insertion funnels

Mountingplates/mounting brackets

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
	BHA12	Plug connector; 12-pin

Cable glands

LED displays

Miscellaneous

Bolts for safety guards

Actuators	Insertion funnels	Mounting plates/ mounting brackets	Plug connectors					Cable glands	LED displays	Miscella-neous	Bolts		Page
			SGLF	SR6	SR11	RC18	BHA12				Metal	Plastic	
●													88 - 96
	●												97
		●											98 / 99
			●										99
				●									100
					●								100
						●							101 / 102
							●						103
								●					104
									●				104
										●			105 - 107
											●		108 - 113
												●	114

Actuators for safety switches NM.VZ

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

Straight actuator
The straight actuator is used on sliding doors or hinged doors with door radii greater than 150 mm. Safety screws prevent unscrewing of the actuator.

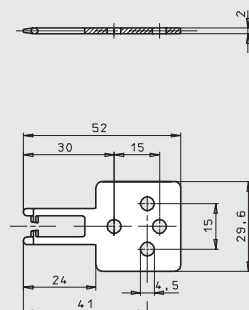**Actuator with rubber bush**
For flexible mounting of the actuator.

Screws made of stainless steel
The safety screws included can be inserted with a normal tool, but cannot be removed again.
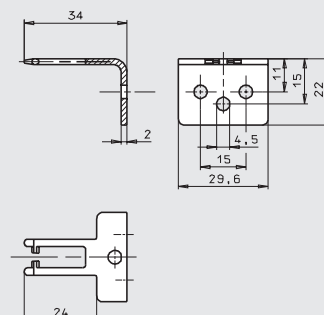
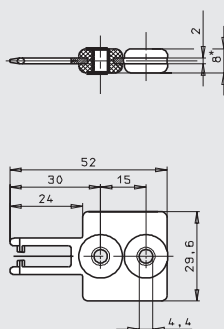**Actuator M-G straight**
Overtravel 4 mm

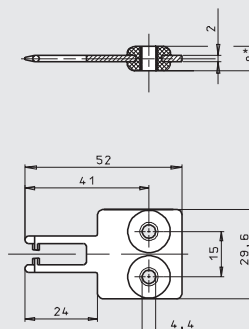**Dimension drawings**

Actuator M-W bent
Overtravel 4 mm

Actuator M-GT straight
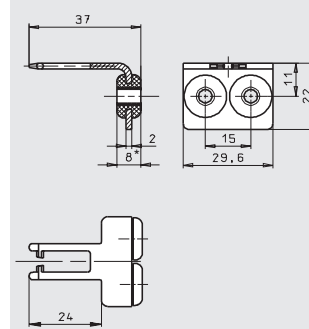Longitudinal rubber bush, overtravel 4 mm

Actuator M-GQ straight
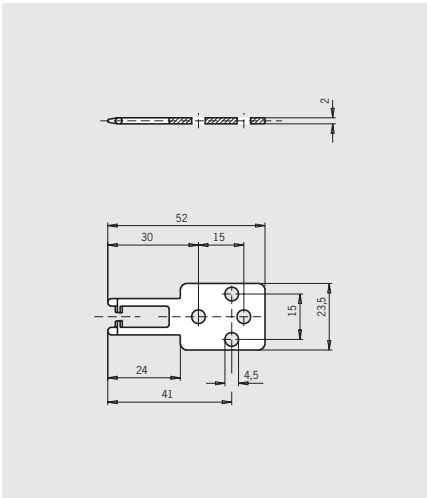Transverse rubber bush, overtravel 4 mm

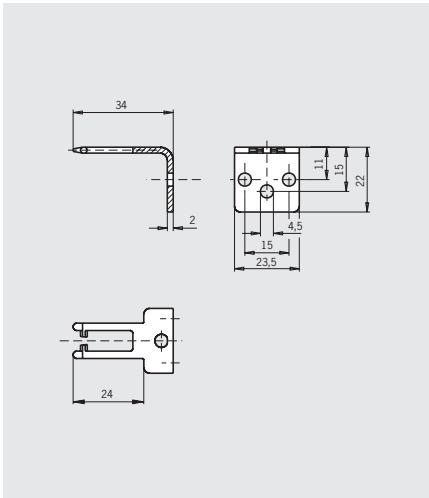**Actuator M-WT bent**
Rubber bush, overtravel 4 mm

Ordering table

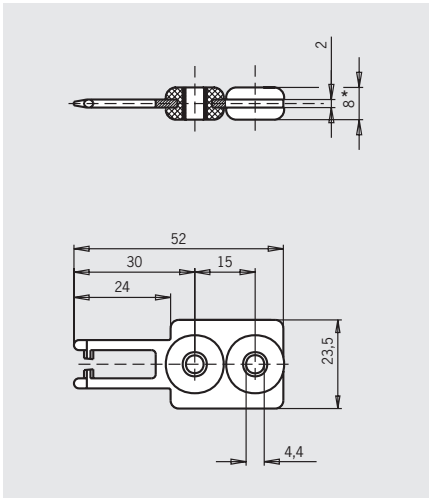| Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator straight	**M-G** 4 mm overtravel incl. 2 safety screws M4 x 14		1 ea.	**074076** ACTUATOR-M-G
Actuator bent	**M-W** 4 mm overtravel incl. 2 safety screws M5x10		1 ea.	**074077** ACTUATOR-M-W
Actuator straight longitudinal rubber bush	**M-GT** 4 mm overtravel incl. 2 safety screws M4 x 14		1 ea.	**074078** ACTUATOR-M-GT
Actuator straight transverse rubber bush	**M-GQ** 4 mm overtravel incl. 2 safety screws M4 x 14		1 ea.	**074079** ACTUATOR-M-GQ
Actuator bent rubber bush	**M-WT** 4 mm overtravel incl. 2 safety screws M4 x 14		1 ea.	**074080** ACTUATOR-M-WT

Actuator M-GS straight
Narrow, overtravel 4 mm

Actuator M-WS bent
Narrow, overtravel 4 mm

Actuator M-GTS straight
Rubber bush, narrow, overtravel 4 mm

Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator straight narrow	**M-GS** 4 mm overtravel incl. 2 safety screws M4 x 14		1 ea.	**074128** ACTUATOR-M-GS
Actuator bent narrow	**M-WS** 4 mm overtravel incl. 2 safety screws M5x10		1 ea.	**074129** ACTUATOR-M-WS
Actuator straight, narrow rubber bush	**M-GTS** 4 mm overtravel incl. 2 safety screws M4 x 14		1 ea.	**074130** ACTUATOR-M-GTS

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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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)
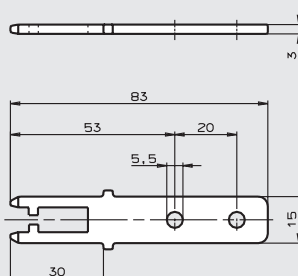
Actuator with rubber bush
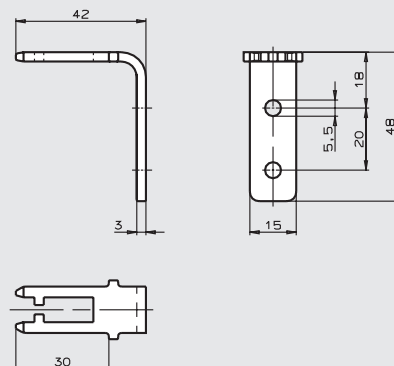For flexible mounting of the actuator.

Screws made of stainless steel
The safety screws included can be inserted with a normal tool, but cannot be removed again.
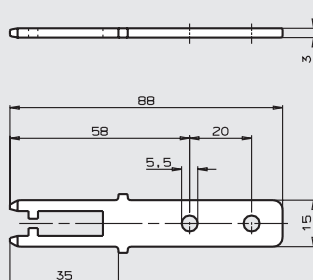
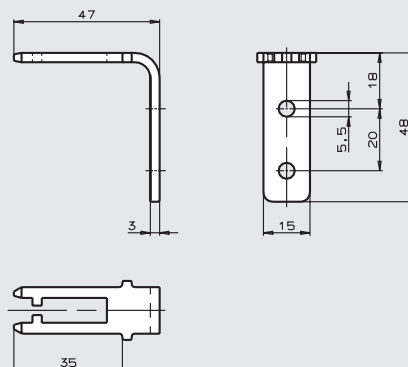**Actuator P-G straight**
Overtravel 2 mm

Dimension drawings

Actuator P-W bent
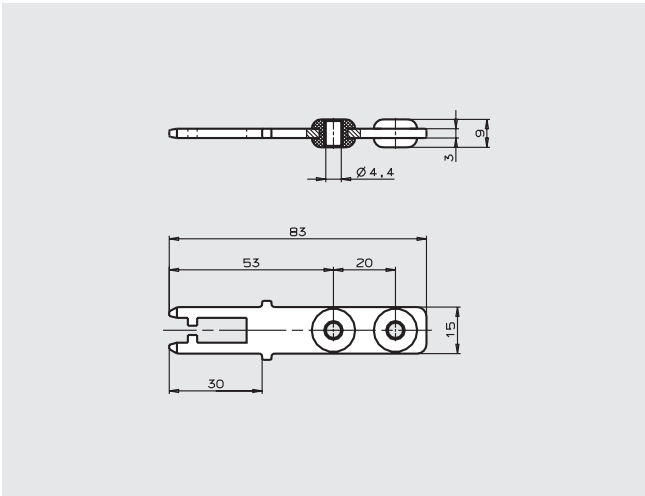Overtravel 2 mm

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.	**059226** ACTUATOR-P-G
Actuator bent	**P-W** Overtravel 2 mm incl. 2 safety screws M5 x 10	1000	1 ea.	**059227** ACTUATOR-P-W
Actuator straight overtravel	**P-GN** Overtravel 7 mm incl. 2 safety screws M5 x 10	1000	1 ea.	**074570** ACTUATOR-P-GN
Actuator bent overtravel	**P-WN** Overtravel 7 mm incl. 2 safety screws M5 x 10	1000	1 ea.	**074571** ACTUATOR-P-WN

Actuator P-GT straight
Rubber bush, overtravel 2 mm

Actuator P-WT bent
Rubber bush, overtravel 2 mm
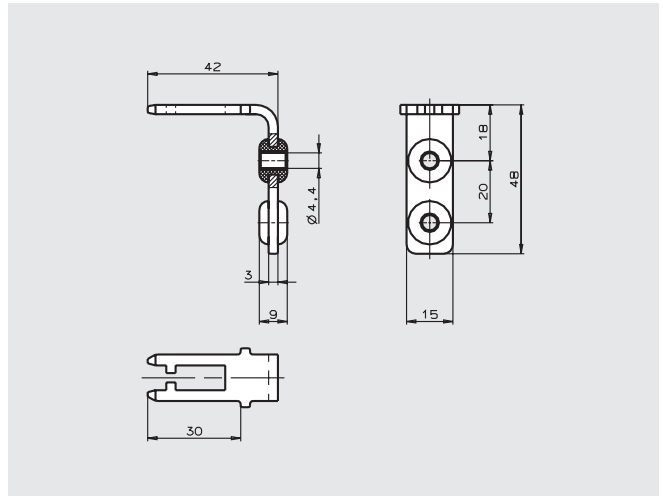
Actuator P-GNT straight
Rubber bush, overtravel 7 mm

Actuator P-WNT bent
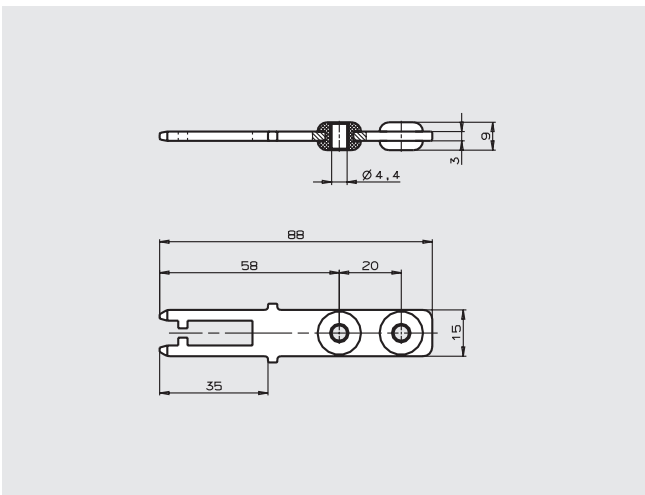Rubber bush, overtravel 7 mm
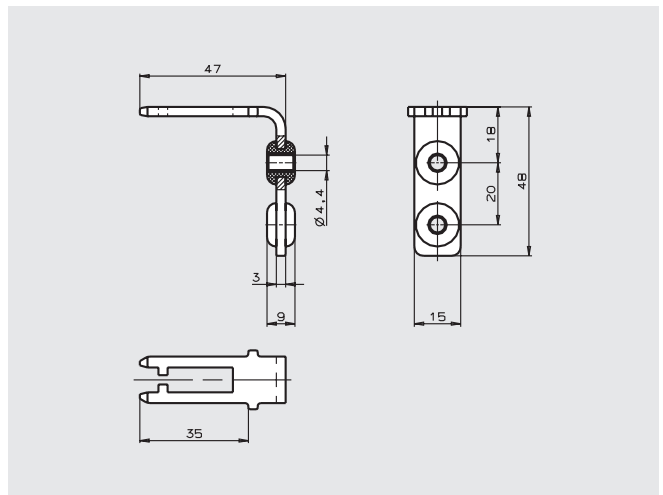
Ordering table

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.	**070046** ACTUATOR-P-GT
Actuator bent rubber bush	**P-WT** Overtravel 2 mm incl. 2 safety screws M4 x 14	1000	1 ea.	**070038** ACTUATOR-P-WT
Actuator straight rubber bush, overtravel	**P-GNT** Overtravel 7 mm incl. 2 safety screws M4 x 14	1000	1 ea.	**074576** ACTUATOR-P-GNT
Actuator bent rubber bush, overtravel	**P-WNT** Overtravel 7 mm incl. 2 safety screws M4 x 14	1000	1 ea.	**074577** ACTUATOR-P-WNT

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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Hinged actuators for safety switches NP/GP/TP

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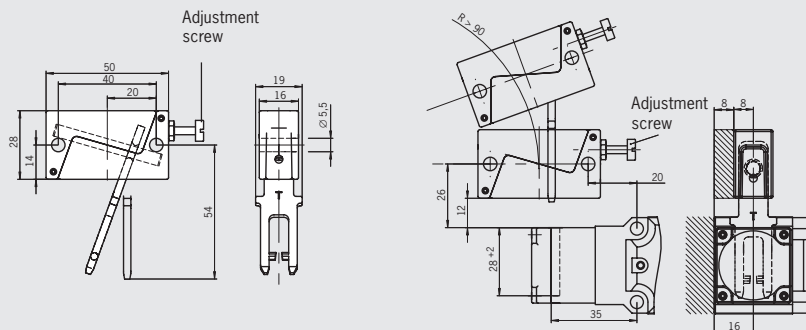▶ **For top and bottom hinged doors**
▶ **For right and left hinged doors**

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

Dimension drawings

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.	**070050** 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.	**059440** HINGED ACTUATOR P-LR

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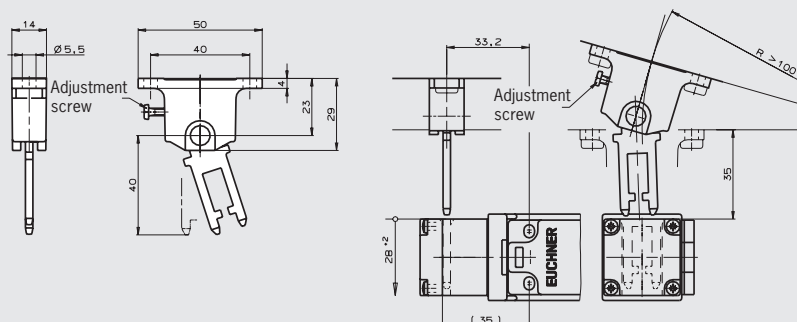Safety guard hinged at top/bottom, overtravel 7 mm

Hinged actuator P-LRN
Safety guard hinged on left/right, overtravel 7 mm
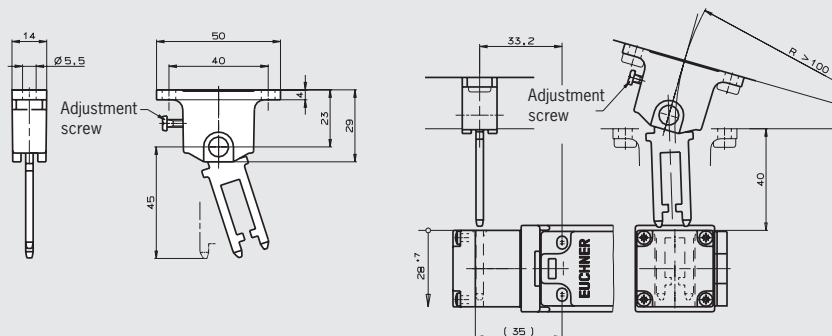
Ordering table
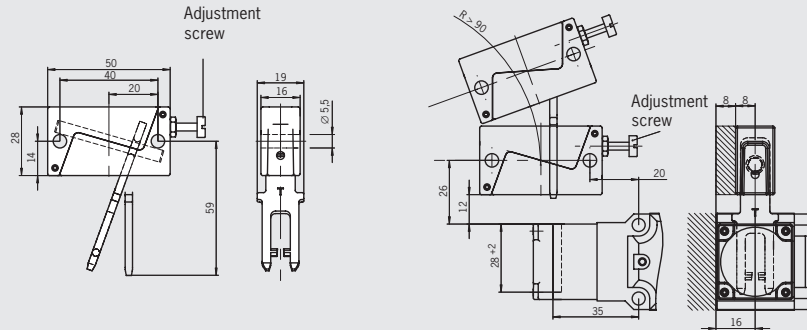
Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Hinged actuator	**P-OUN** For top and bottom hinged doors overtravel 7 mm incl. 2 safety screws M5 x 25	90	1 ea.	**074572** HINGED ACTUATOR P-OUN
	P-LRN For left and right hinged doors overtravel 7 mm incl. 2 safety screws M5 x 10	100	1 ea.	**074573** HINGED ACTUATOR P-LRN

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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Actuators for safety switches SGA/SGP/STA/STP/STM

▶ **Two stainless safety screws per actuator**
▶ **Actuators with and without rubber bushings**

Note
Type S actuators must not be used in conjunction with insertion funnels.
L actuators must be used for insertion funnels.

Straight actuator
Suitable for a maximum tensile force of 2500 N for STP, or 3000 B for STA
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.
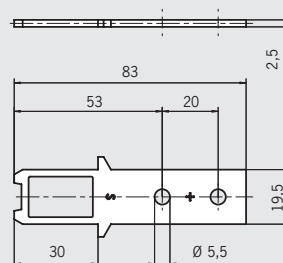
Bent actuator
Suitable for a maximum tensile force of 1500 N.
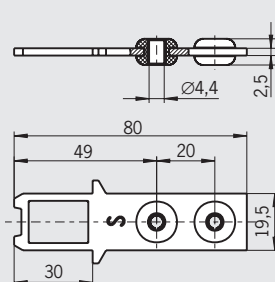
Screws made of stainless steel
The safety screws included can be inserted with a normal tool, but cannot be removed again.

Standard actuator S, straight (dimensionally compatible with actuator P-G for TP)
without rubber bush, overtravel 5 mm

Dimension drawings

Standard actuator S, straight
with rubber bush, overtravel 5 mm

Standard actuator S, bent
with rubber bush, overtravel 5 mm
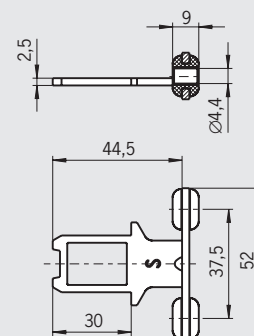
Actuator L, straight, for insertion funnel
with rubber bush, overtravel 5 mm
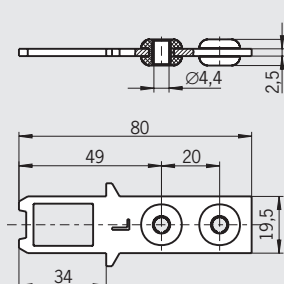
Actuator L, bent, for insertion funnel
with rubber bush, overtravel 5 mm
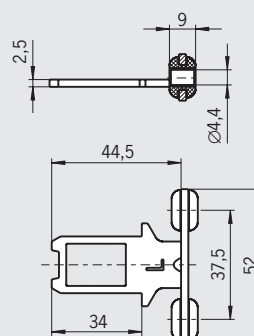
Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Actuator S straight	**S-G-SN-C2115** without rubber bush, overtravel 5 mm incl. 2 safety screws M5 x 10	300	1 ea.	**097861** ACTUATOR S-G-SN-C2115
	S-GT-SN with rubber bush, overtravel 5 mm incl. 2 safety screws M4 x 14	300	1 ea.	**095738** ACTUATOR S-GT-SN
Actuator S bent	**S-WQ-SN** with rubber bush, overtravel 5 mm incl. 2 safety screws M4 x 14	300	1 ea.	**095740** ACTUATOR S-WQ-SN
Actuator L straight	**S-GT-LN** with rubber bush, overtravel 5 mm incl. 2 safety screws M4 x 14	300	1 ea.	**095739** ACTUATOR S-GT-LN
Actuator L bent	**S-WQ-LN** with rubber bush, overtravel 5 mm incl. 2 safety screws M4 x 14	300	1 ea.	**095741** ACTUATOR S-WQ-LN

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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Hinged actuators for safety switches SGA/SGP/STA/STP/STM

▶ **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 S-OU-SN
Safety guard hinged at top/bottom, overtravel 5 mm

Dimension drawings
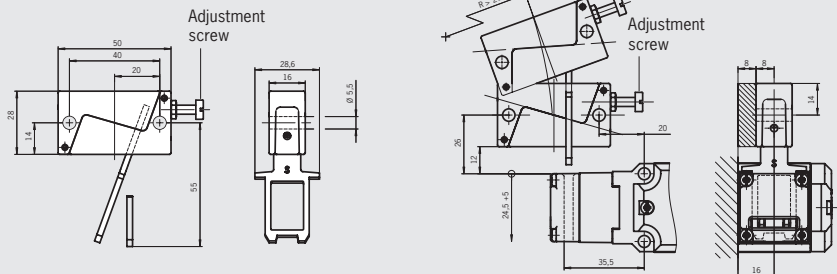
Hinged actuator S-LR-SN
Safety guard hinged on left/right, overtravel 5 mm
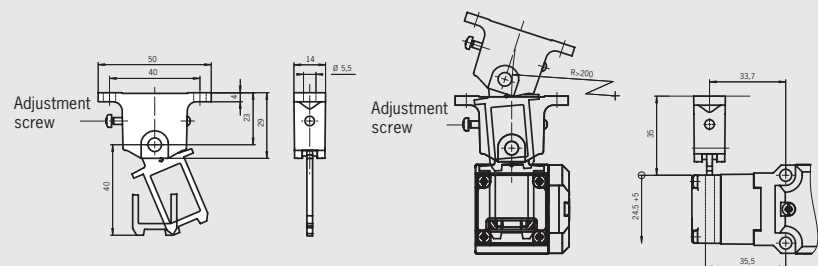
Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Hinged actuator	**S-OU-SN** For top and bottom hinged doors overtravel 5 mm incl. 2 safety screws M5 x 25	200	1 ea.	**095315** HINGED ACTUATOR-S-OU-SN
	S-LR-SN For left and right hinged doors overtravel 5 mm incl. 2 safety screws M5 x 10	200	1 ea.	**096838** HINGED ACTUATOR-S-LR-SN

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Hinged actuators for safety switches SGP/STA/STP/STM

▶ **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 S-OU-LN for insertion funnel
Safety guard hinged at top/bottom, overtravel 5 mm

Dimension drawings
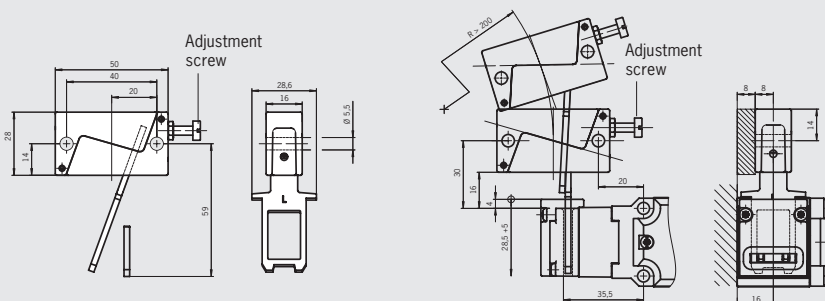
Hinged actuator S-LR-LN for insertion funnel
Safety guard hinged on left/right, overtravel 5 mm
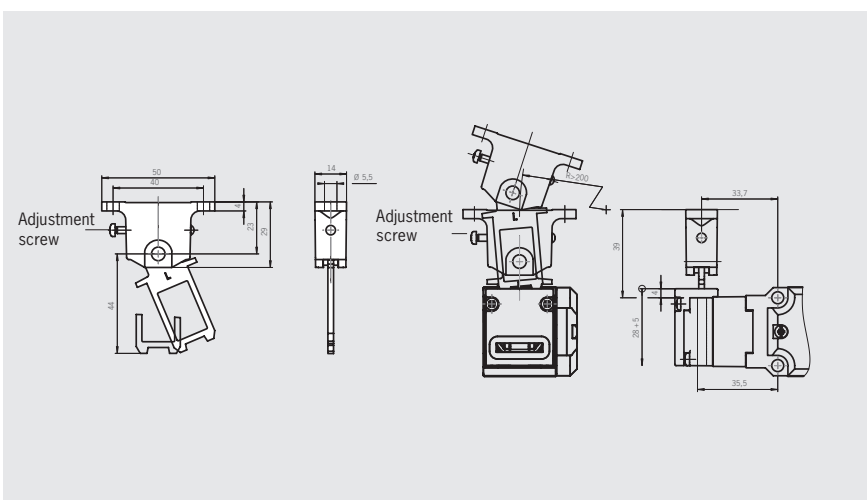
Ordering table

Designation	Version	Min. door radius r [mm]	Packaging unit	Order No.
Hinged actuator	**S-OU-LN** For top and bottom hinged doors overtravel 5 mm incl. 2 safety screws M5 x 25	200	1 ea.	**096697** HINGED ACTUATOR-S-OU-LN
	S-LR-LN For left and right hinged doors overtravel 5 mm incl. 2 safety screws M5 x 10	200	1 ea.	**096844** HINGED ACTUATOR-S-LR-LN

Insertion funnels/adapters

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

Insertion funnel
If an insertion funnel is used, even inexactly 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
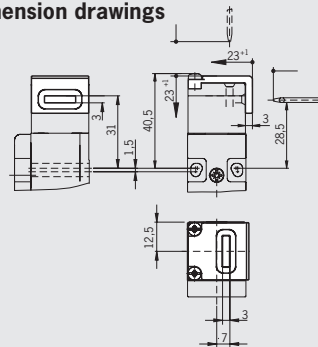
Minimum door radii with insertion funnel
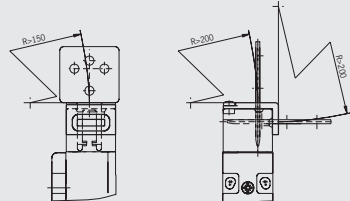
Insertion funnel
For safety switches NP..A/GP/TP..A
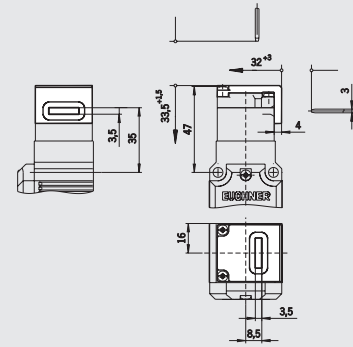
Minimum door radii with insertion funnel
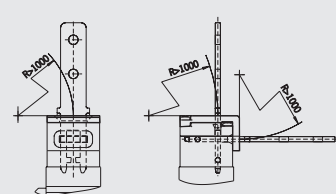
Insertion funnel
For safety switches SGP/STA/STP/STM

Dimension drawings
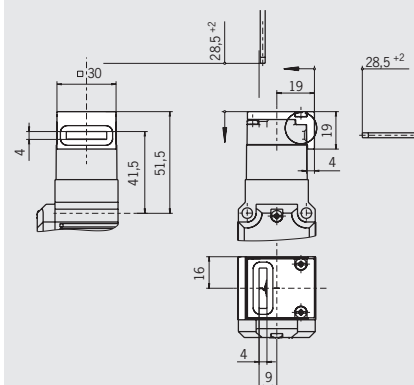
Minimum door radius with insertion funnel
R > 300 mm

Adapter NP-K
For safety switches NP

Adapter NP-K
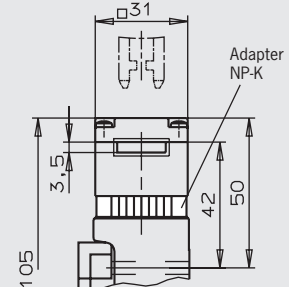
Ordering table

Designation	Version	Use	Order No.
Insertion funnel	Incl. 2 fastening screws	For safety switches NM..VZ	**083565** Insertion funnel M
		For safety switches NP..A/GP/TP..A without adapter	**086237** Insertion funnel NP/GP/TP
		For safety switches SGP/STA/STP/STM	**093157** Insertion funnel STP/STM
Adapter NP-K	Incl. 4 fastening screws	For safety switches NP	**074578** Adapter NP-K

Mounting plates EMP for safety switches TP...A, STA, and STP

▶ **For vertical and horizontal mounting of safety switches TP...A, STA and STP**

The mounting plates are used for fastening safety switches TP...A, STA and STP and actuators to safety guards. The safety switches can be attached vertically and horizontally.
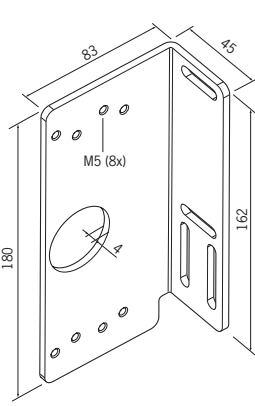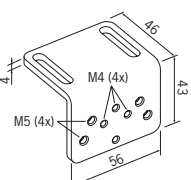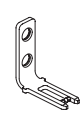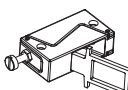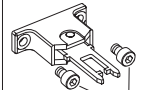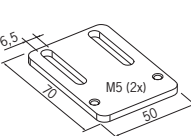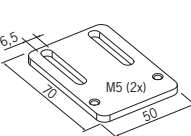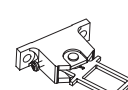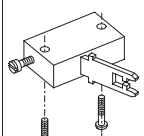
Note

▶ Mounting plate material: St37 galvanized

Mounting example, safety switch vertical

□ 30-50
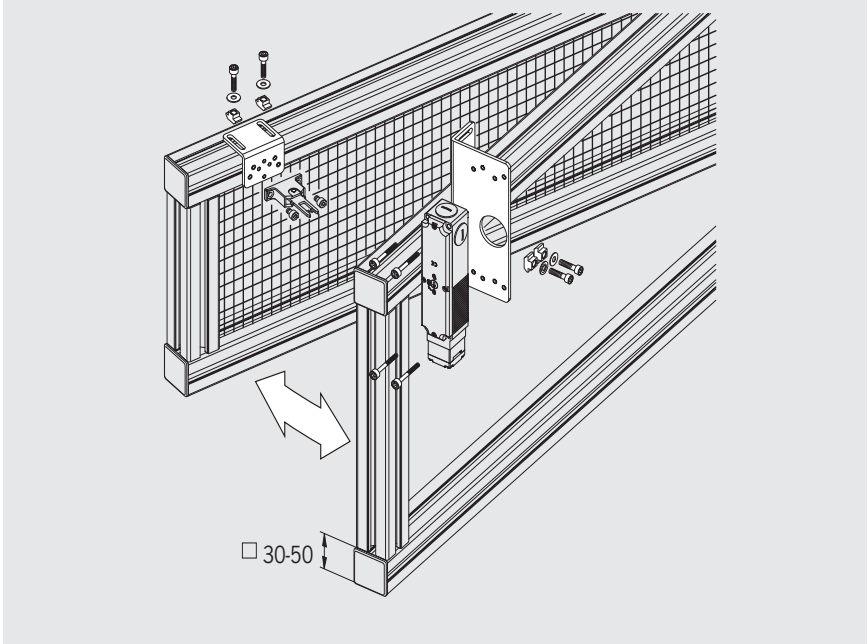
Ordering table

Switch	Installation method switch	Mounting plate switch	Mounting plate actuator	Actuator		Minimum distance hinged axis to switch	
				ST...	TP...A	ST...	TP...A
TP...A... **STA...** **STP...**	**A** Vertical	**093456** EMP-SB	**093457** EMP-B1 M4 (4x) M5 (4x) 46 4 43 56		**070038** **074577** page 91	> 300 mm	> 1000 mm
				095315 **096697** page 95/96	**059440** **074573** M5 x 10 page 92/93	> 200 mm	> 100 mm
	B Horizontal	**093458** EMP-B2 6.5 M5 (2x) 70 50		**096838** **096844** page 95/96	**070050** **074572** M5 x 25 page 92/93	> 200 mm	> 90 mm

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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
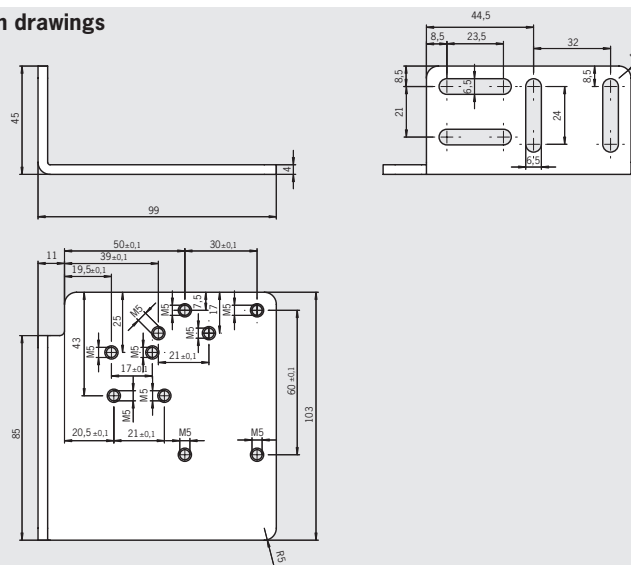
Ordering table

Designation	Use	
Mounting bracket NM, NP	For safety switches series NM and NP...AS horizontal and vertical mounting	**085753** EMP-SC

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 0.34 mm².

Plug connector SGLF with cable
M12 plug, 4-pin

Dimension drawings

Wiring diagram
(view of connection side)

1	BN
2	WH
4	BK
3	BU
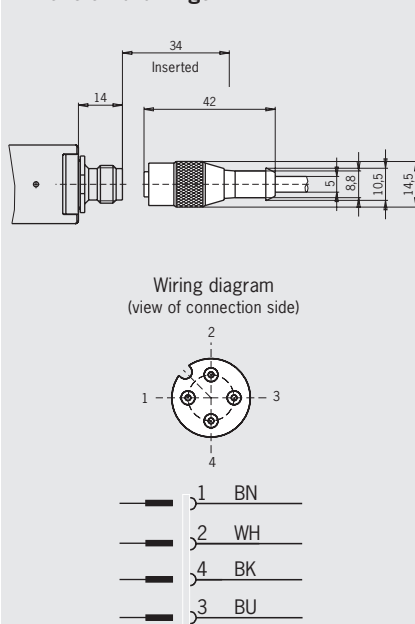
Plug connector SWLF with cable
M12 plug, 4-pin

Wiring diagram
(view of connection side)

1	BN
2	WH
4	BK
3	BU
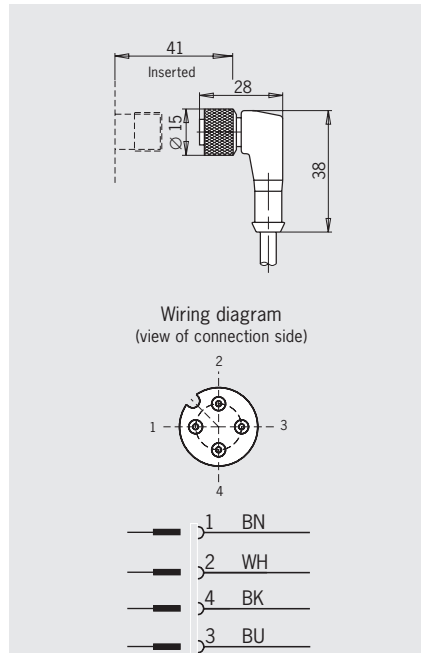
Ordering table

Designation	Number of pins	Version	Cable length
			5 m
SGLF	4	Female plug M12 for male plug SM4	**035613** SGLF4-5000P
SWLF	4	Female plug M12 bent for male plug SM4	**035618** SWLF4-5000P

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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
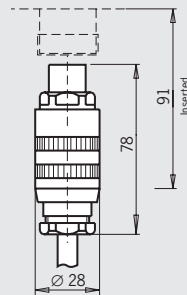
View of connection side, socket

Female plug SR6 WF angled
6-pin + PE
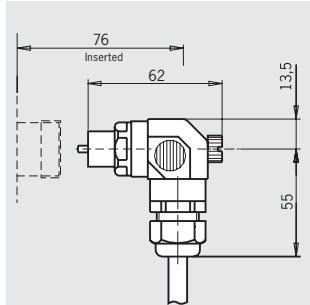
View of connection side, socket

Male socket SR6 AM
6-pin + PE

View of connection side, plug

Female plug SR11 EF
11-pin + PE
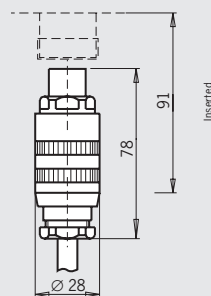
View of connection side, socket

Female plug SR11 WF angled
11-pin + PE
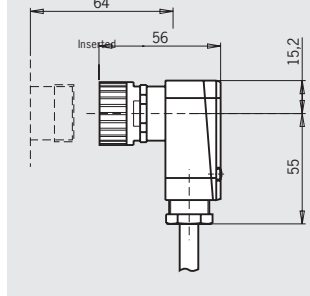
View of connection side, socket

Male socket SR11 AM
11-pin + PE
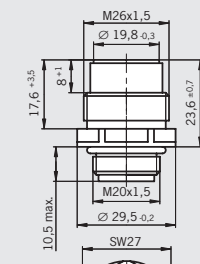
View of connection side, plug

Ordering table

Designation	Version	Cable				
		None	**5 m**	**10 m**	**15 m**	**25 m**
SR6 [1] 6-pin + PE	**EF** Female plug	013176 SR6EF	077632 SR6EF-5000	077633 SR6EF-10000	077634 SR6EF-15000	–
	WF Female plug angled	024999 SR6WF	077638 SR6WF-5000	077639 SR6WF-10000	077640 SR6WF-15000	–
	K Coding shells	013178 SR6K	–	–	–	–
	AM Male socket, connection M20 x 1.5	087180 SR6AM2-M20	–	–	–	–
SR11 [1] 11-pin + PE	**EF** Female plug	070859 SR11EF	077629 SR11EF-5000	077630 SR11EF-10000	077631 SR11EF-15000	094749 SR11EF-25000
	WF Female plug angled	054773 SR11WF	077635 SR11WF-5000	077636 SR11WF-10000	077637 SR11WF-15000	–
	AM Male socket, connection M20 x 1.5	091296 SR11AM2-M20	–	–	–	–
SR6 and SR11	**Socket crimp contacts** Wire cross-section 0.5 - 1.5 mm	071260 SRF	–	–	–	–
	Pin crimp contacts Wire cross-section 0.5 - 1.5 mm	071261 SRM	–	–	–	–

1) Crimp contacts supplied.   For information on crimp contacts see page 115.

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Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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 smo-
ke in case of fire.
Wire cross-section 0.5 mm² or 1.0 mm².

Female plug RC18..C1825
18-pin + PE (for cable diameter 10 ... 14 mm)

Dimension drawings
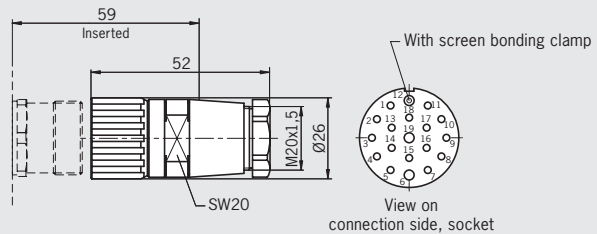
Female plug RC18..C1825
angled 18-pin + PE (for cable diameter 10 ... 14 mm)
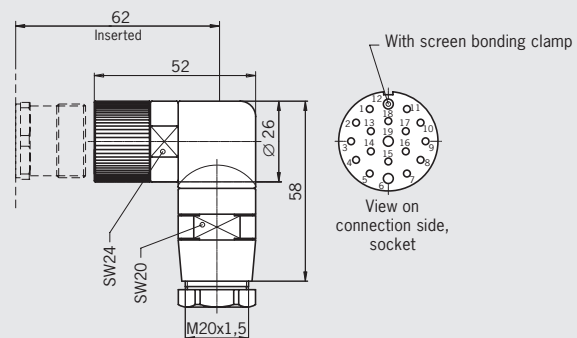
Ordering table

Designation	Version	Without cable
RC18 [1] 18-pin + PE	**EF-C1825** Female plug	**077025** RC18EF-C1825
	WF-C1825 Female plug angled	**077026** RC18WF-C1825
	Replacement socket crimp contacts Wire cross-section 16 x 0.38 - 0.5 mm² 3 x 0.75 - 1 mm²	**094310** Pin crimp contact RCM-C1825

1) Crimp contacts are included.   For information on crimp contacts see page 115.
2) Plug connector RC18 on the switches STP/STA not aligned.

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Accessories

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Female plug RC18..C1825 with cable
18-pin + PE / 19-pinPUR

Dimension drawings
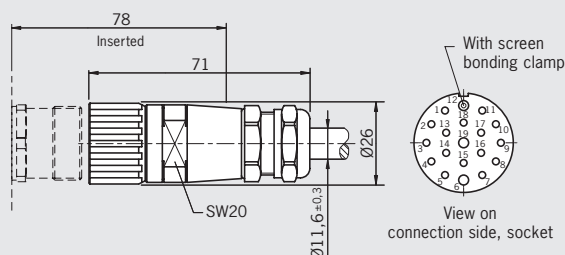
Female plug RC18..C1825 with cable halogen-free
18-pin + PE
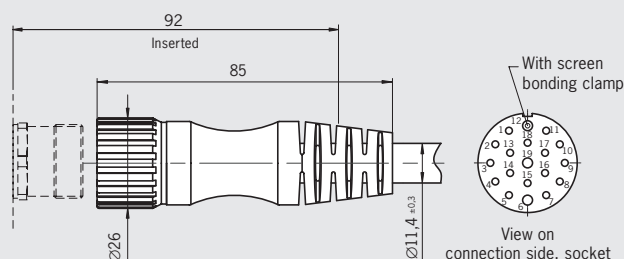
Pin assignment plug RC18 with cable and option C1825

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	1.5 m	3 m	6 m	8 m	10 m	15 m	20 m	25 m	30 m
RC18 18-pin + PE with cable	EF-C1825 Buchsenstecker	092761 RC18EF1,5M-C1825	092816 RC18EF3M-C1825	077014 RC18EF6M-C1825	077015 RC18EF8M-C1825	092898 RC18EF10M-C1825	077016 RC18EF15M-C1825	092726 RC18EF20M-C1825	092727 RC18EF25M-C1825	095993 RC18EF30M-C1825
RC18 18-pin + PE with cable halogen-free	EFF-C1825 Buchsenstecker	092883 RC18EF1,5MF-C1825	092884 RC18EF3MF-C1825	092885 RC18EF6MF-C1825	092886 RC18EF8MF-C1825	092887 RC18EF10MF-C1825	092888 RC18EF15MF-C1825	092889 RC18EF20MF-C1825	092890 RC18EF25MF-C1825	–

Ordering table female plug RC18 with cable PUR, 19-pin, separately numbered cores, black (Numbering as per the pin number)

Version	1,5 m	3 m	6 m	10 m	15 m	20 m	25 m
RC18 Female plug 19-pin with cable PUR	110301 C-M23F19-PU01,5-MA-110301	110302 C-M23F19-PU03,0-MA-110302	110303 C-M23F19-PU06,0-MA-110303	110304 C-M23F19-PU10,0-MA-110304	110305 C-M23F19-PU15,0-MA-110305	110306 C-M23F19-PU20,0-MA-110306	110307 C-M23F19-PU25,0-MA-110307

* Core cross-section as connection cable on left.

102   Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Plug connector BHA12 with cable

| Female plug with cable
12-pin | Extension cable
12-pin |

Dimension drawings

Cable length L
Female plug
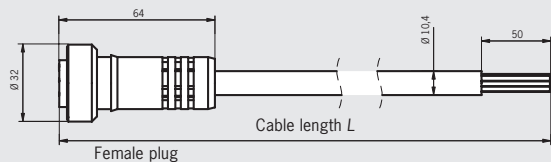
Cable length L
Female plug · Male plug
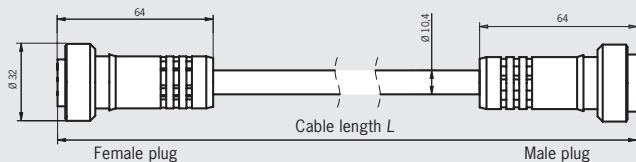
Pin assignment (Wire cross-section 0.82 mm² / 18 AWG)

12-pin

View of connection side, socket
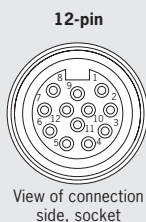
Pin	Wire color
1	OG
2	BU
3	WH/BK
4	RD/BK
5	GN/BK
6	OG/BK
7	BU/BK
8	BK/WH
9	GN/YE
10	RD
11	WH
12	BK

Ordering table

Version	Number of pins	Material	Cable length L [mm]								
			910	1800	3600	6000	9100	12100	15200	18200	24300
Female plug with cable	12	PVC	-	100959	100960	100961	100962	103158	103159	103160	-
		PUR	-	100966	100967	102522	102523	102524	102525	102526	-
Extension cable	12	PVC	-	-	100963	100964	100965	-	-	-	-
		PUR	-	102527	100968	-	-	-	-	-	-

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Cable glands

▶ **M16 x 1.5**
▶ **M20 x 1.5**

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

Item	Thread	Cable-Ø [mm]	A [mm]	B [mm]	E [mm]	SW [mm]
EKP.16/05	M16 x 1.5	5 - 10	28	8	22	20
EKP.16/05	M20 x 1.5	6 - 12	28	11	27	24
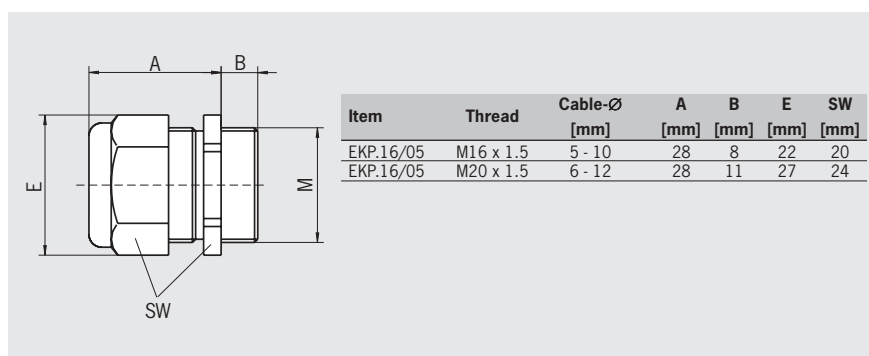
Ordering table

Thread	Version	Material	
		Metal	Plastic
M16 x 1.5	Cable diameter 5 – 10 mm	–	**084572** EKPM16/05
M20 x 1.5	Cable diameter 6 – 12 mm	–	**086233** 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
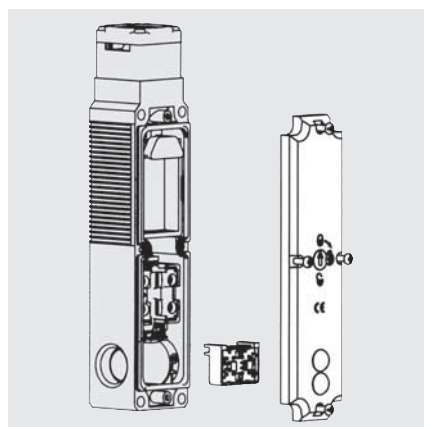
Built-in LED
For safety switches GP/TP/STP/STA
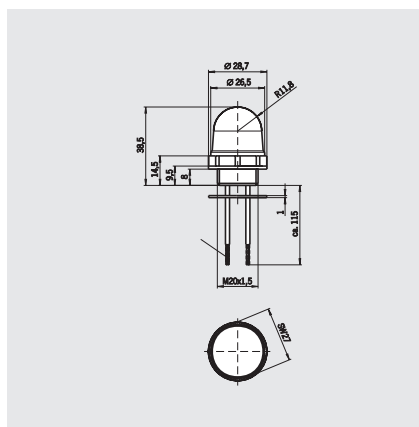
Ordering table

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.	**093752** LED set TP
		For safety switches STP	1 ea.	**098035** 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.	**087423** 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.	**095510** LED-F M20x1.5

Miscellaneous accessories

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

Lockout bar

With the safety door open, can be slid into the actuating head on a switch with separate actuator (NP/GP/TP/STA/STP) instead of an actuator. Removal can be prevented using a commercially available padlock (max. 3 ea.). For the protection of people in areas with a possible hazard.

Lockout bar
For safety switches NP/GP/TP
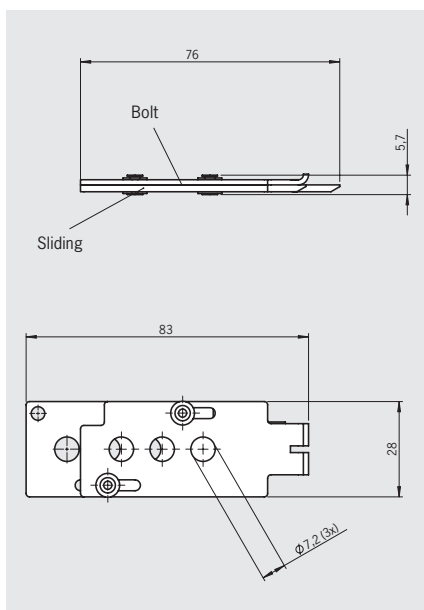
Lockout bar
For safety switches SGA/SGP/STA/STP
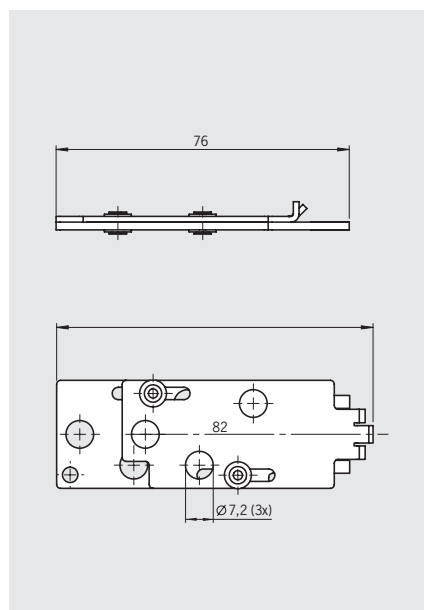
Latch spring

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. 070046).

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

Latch spring for increased retention force
For safety switches NP/GP/TP

Maßzeichnungen

Installation example

Lock
For safety switches TP/STP

Blade
Locked
Marking

Unlocked

Ordering table

Designation	Version	Use	Order No.
Lockout bar	3 holes	For safety switches NP/GP/TP	**096105** Lockout bar TP
		For safety switches SGA/SGP/STA/STP	**105701** Lockout bar STP
Latch spring		For safety switches NP/GP/TP	**076501** Latch spring NP/TP
Lock	Unique locking (unique key needed to open)	For safety switches TP/STP	**084177** Lock TP
	Identical locking (unique key needed to open)	For safety switches TP/STP	**086236** Lock TP
	Identical locking (unique key needed to open) Key can only be removed in locked position	For safety switches TP/STP	**109212** Lock TP identical locking C2293
	Replacement key (2 ea.) for identical locking	For safety switches TP/STP/SGP-TW	**099434** Replacement key for identical locking TP

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Miscellaneous accessories

▸ **Emergency unlocking for safety switches TP/STP**
▸ **Emergency unlocking for safety switches STA**
▸ **Emergency unlocking with automatic reset for safety switches TP/STP**
▸ **Handle for escape release**
▸ **Triangular key for safety switches TK**

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.

Release
Is used for manual unlocking of the guard locking. The integrated spring automatically resets the release to the locked state.
Attention: Prior to mounting, the locking screw for the mechanical release must be removed.

Handle for escape release
Can be mounted on all escape release actuator shafts C1993 for safety switches TP, STP and STA for easier use.

Emergency unlocking
For safety switches TP/STP

Dimension drawings

Emergency unlocking
For safety switches STA

Emergency unlocking with automatic reset
For safety switches TP/STP
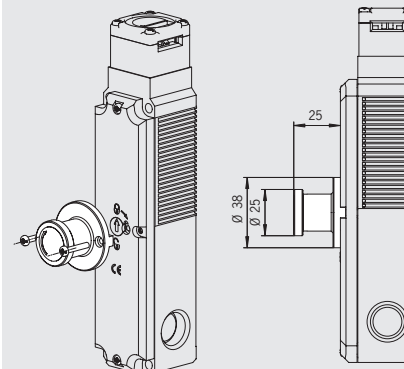
Handle for escape release
For safety switch STA
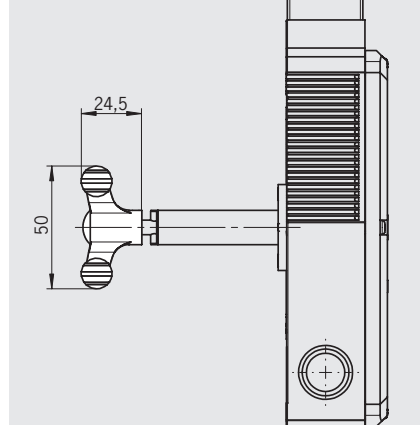
Ordering table

Designation	Version	Use	Order No.
Emergency unlocking	Incl. 2 screws M3 x 17	For safety switches TP/STP	**099877** Emergency unlocking TP/STP
	Incl. 2 screws M3 x 17	For safety switches STA	**099876** Emergency unlocking STA
Emergency unlocking with automatic reset	Incl. 2 screws M3 x 17	For safety switches TP/STP	**103110** Emergency unlocking with automatic reset TP/STP
Handle for escape release		for safety switch STA	**105329** FE-Griff
Triangular key	DIN 22417 M5 100 mm	For safety switches TK	**103057** Triangular key

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

Miscellaneous accessories

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

Wire front release (latching)
Flexible routing of the pull rope permits release of the guard locking in inaccessible 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.

Replacementscrews
For mounting actuating heads (not safety screws).

Front wire release (bowden)
For safety switches TP/STP
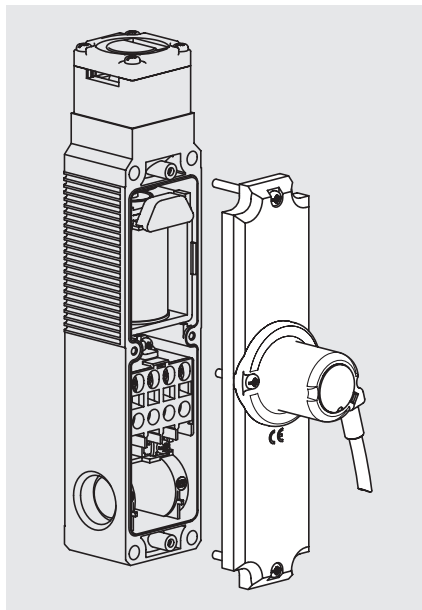
Handle for front wire release
For safety switches TP/STP
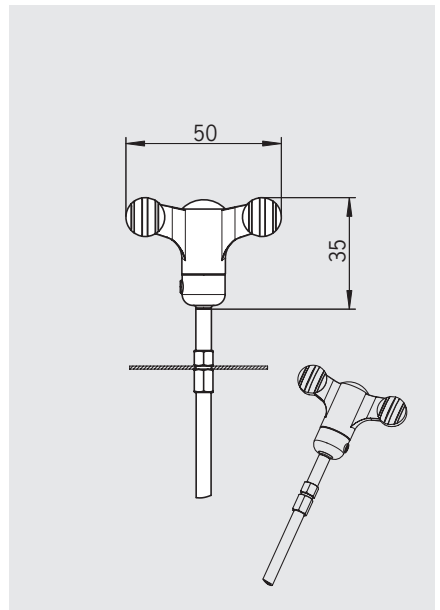
Ordering table

Designation	Version	Use	Order No.
Front wire release (latching) pre-assembled incl. cover and pull wire	Length 3 m (2 m sheathed)	For safety switches TP	**096230** BW-TP-C-2000
	Length 4 m (3 m sheathed)	For safety switches TP	**098313** BW-TP-C-3000
	Length 5 m (4 m sheathed)	For safety switches TP	**098314** BW-TP-C-4000
	Length 3 m (2 m sheathed)	For safety switches STP	**097952** BW-STP-C-2000
Handle for wire front release		For safety switches TP/STP	**099795** 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...	**073457** 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...	**073455** M5x10/V100
	M4 x 14	For all actuators in series NM..VZ	**074063** M4x14/V100
	M4 x 14 Material: stainless steel	For actuators straight/bent/hinged with bush of series NP..., GP... and TP...	**086232** M4x14/V100
	PL3x30	Cap screws for series NP...A, GP... and TP...A	**075532** PL3x30/V100
	PL3x26	Cap screws for series NM..AL, NM..AG, NM..AK, NM..AV and NM..VZ	**085576** PL3x26/V100
	PL3x8	Cap screws for series NM..HB, NM..KB, NM..RB and NM..WO	**085577** PL3x8/V100
Replacement screws VPE: 100 ea. (not safety screws)	PL3x30 Material: stainless steel	Cap screws for series NP...A, GP... and TP...A	**082237** PL3x30/V100
	PL3x38	Cap screws for series NP...K and TP...K	**076755** PL3x38/V100

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For safety precautions see page 160
For technical data see page 117

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Bolts for safety guards for safety switches NM

▶ **For left or right hinged doors**

Bolt for safety switches NM..VZ

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
▶ Bolt with detent mechanism in opened position
▶ Through hole on the bolt permits attachment of padlocks

Notes
▶ Actuator and switch bracket included
▶ Please order safety switch separately

Dimension drawings

For M6 screw (also suitable for M5)

Guard

For M5 screw

For M4 screw (2 screws M4 x 30 included)

For M6 screw (also suitable for M5)

Guard frame made of aluminum section

Guard frame made of aluminum section

Right hinged door

Section A-A

A-A 2:1

Bolt latches in open position
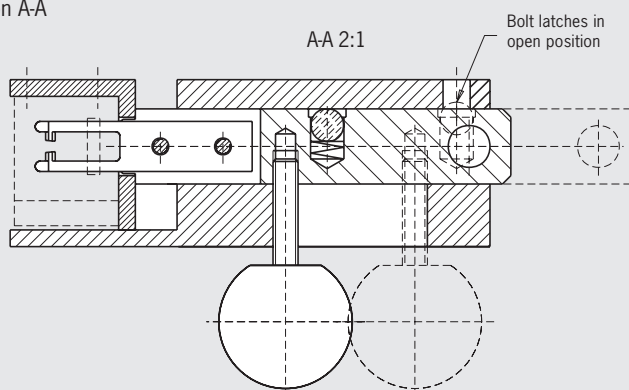
Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt NM	**None**	For right or left hinged doors Actuator and switch bracket included	**077233** Bolt NM
Switch bracket NM		Separate	**077245** Switch bracket NM
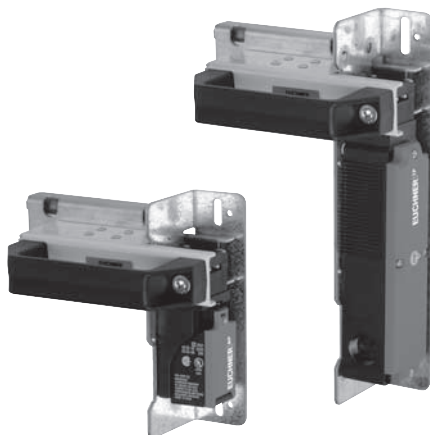
EUCHNER

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

▸ **For left or right hinged doors**

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

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

Dimension drawings

Approach direction

Detail A

After adjustment connect positively

NP: 28,5
TP: 34,5

Guard frame (40 x40)

Door hinged on the left

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt 0 NP/TP	**None**	For right or left hinged doors (also for GP)	**073535** Bolt 0 NP/TP
Bolt 1 NP/TP	**1 x detent mechanism closed**	For right or left hinged doors (also for GP)	**073536** Bolt 1 NP/TP
Switch bracket NP		Separate	**073538** Switch bracket NP
Switch bracket TP		Separate (also for GP)	**073539** Switch bracket TP

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Bolt for safety guards for safety switches GP and TP

▶ **Lever for escape release from the danger area (optional)**

Special features
(only for bolt TP-AF and TP-CF with escape release)
▶ Bolt with detent mechanism
The bolt latches in open position to prevent unintended closing
▶ Lever for escape release from the danger area

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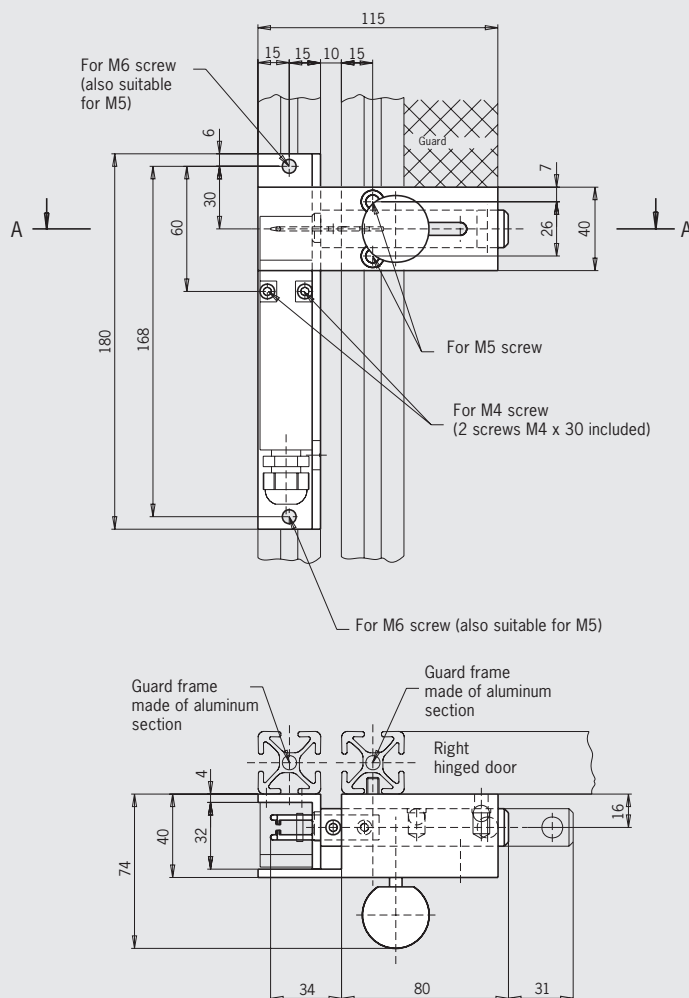▶ Easily fitted to standard aluminum profiles and machine covers by screw connection
▶ Distinctive yellow color for easy recognition
▶ Robust version for heavy doors
▶ No additional door handle necessary
▶ Slot on the bolt permits attachment of padlocks

Notes
▶ The bolts are suitable only for the series **TP…A** and **GP**
▶ Actuator included
▶ Please order safety switch separately

Bolt for safety switches GP…/TP…A/TP..A.-C1743/TP…A.-C1993

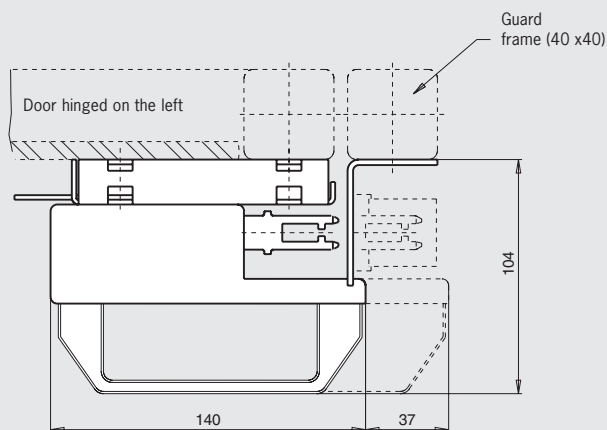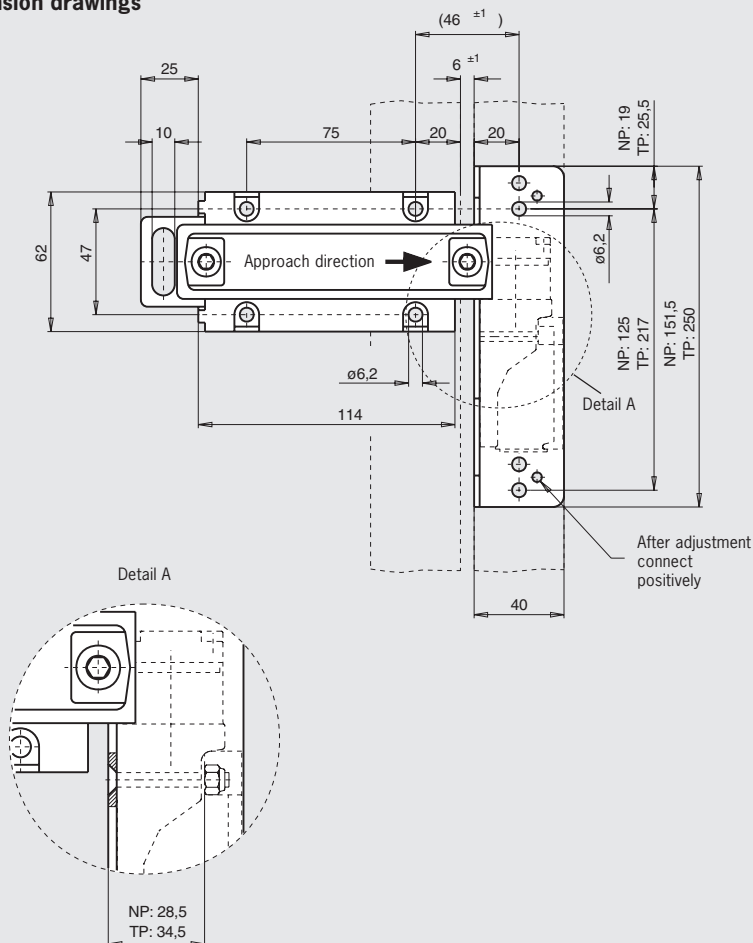**Dimension drawings** (here: shown with escape release)

Safety switch TP…
Approach direction A

1) Bolt with detent mechanism (only for bolt TP-AF and TP-CF with escape release):
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 TP-AF	**Detent knob**	For right hinged doors with escape release	**086186** Bolt TP-AF
Bolt TP-CF	**Detent knob**	For left hinged doors with escape release	**086188** Bolt TP-CF
Bolt TP-A	**None**	For right hinged doors without escape release (also for GP)	**084430** Bolt TP-A
Bolt TP-C	**None**	For left hinged doors without escape release (also for GP)	**084432** Bolt TP-C

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Bolt for safety guards for safety switches GP and TP

- ▶ **Material: die-cast aluminum**
- ▶ **Lever for escape release from the danger area (optional)**
- ▶ **For doors hinged on the right or left**

Bolt for safety switch GP…/TP…A/TP..A.-C1743/TP…A.-C1993

Dimension drawings (here: shown with escape release)

For M6 screw

For M6 screw

160

40

15

20

20

38

30

76,8

35

144

305

283

58
Opening

Release knob [1]

M5

For M6 screw

30

□40
Safety guard frame

Ø13

Door hinged on the right

108,8

94,3

81,5

155

42

60

1) Bolt with detent mechanism (only for bolt BTC-T/G-S-TH-01-F with escape release):
latches in open position and prevents unintended closing of the bolt.
Unlocked by pressing the knob
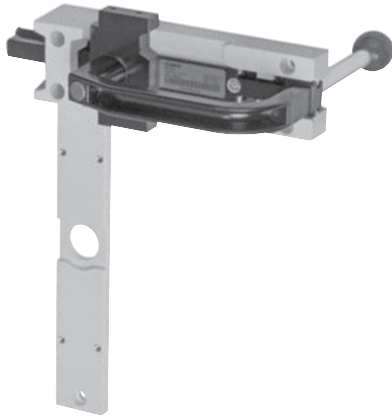
Special features
(only for bolt BTC-T/G-S-TH-01-F with escape release)
- ▶ Bolt with detent mechanism
  The bolt latches in open position to prevent unintended closing of the bolt. Unlocked by pressing the knob
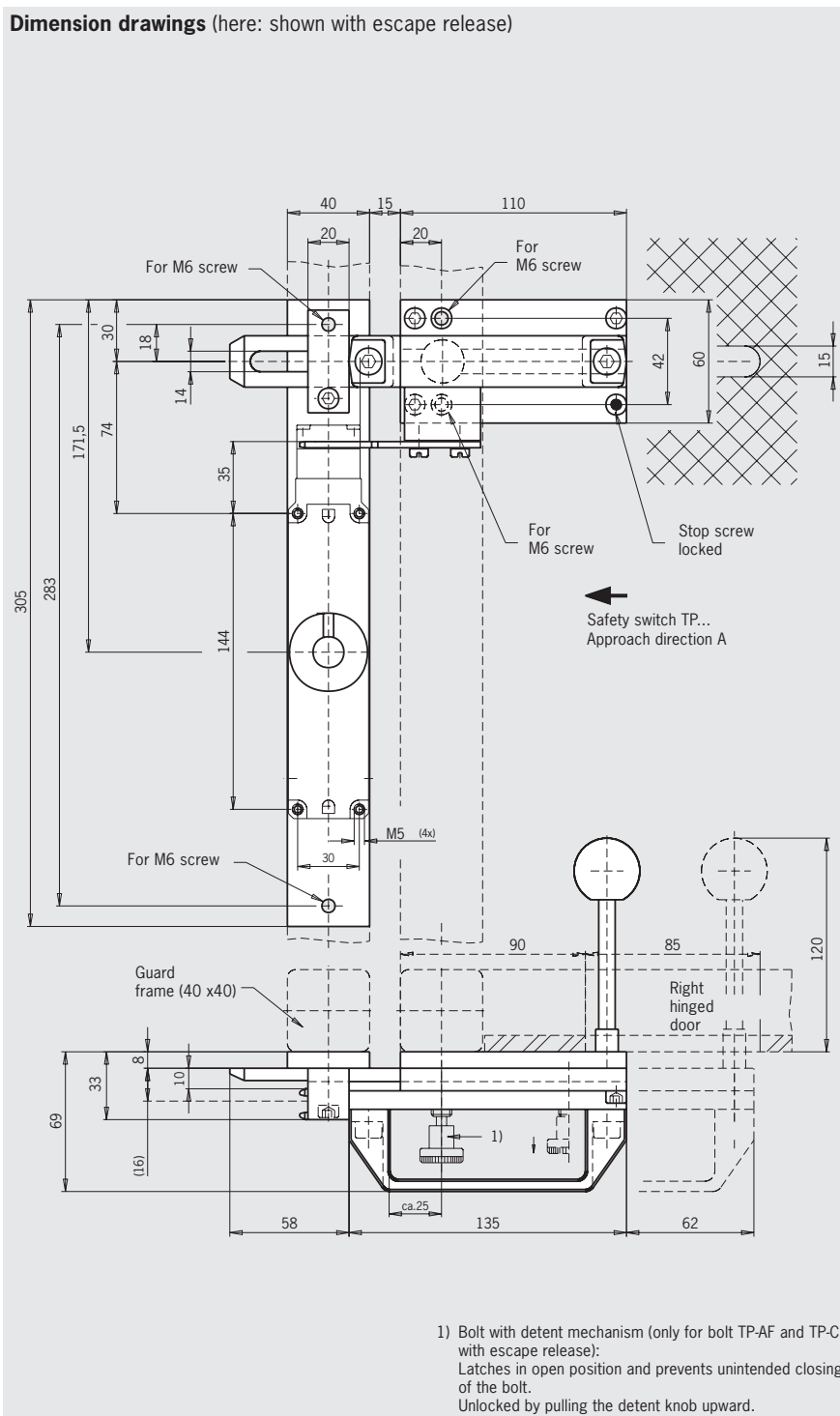- ▶ Lever for escape release from the danger area (optional)

Features
- ▶ Easily fitted to standard aluminum profiles and machine covers with screw connection
- ▶ Distinctive yellow color for easy recognition
- ▶ Robust version for heavy doors
- ▶ No additional door handle necessary

Notes
- ▶ The bolts are only suitable for series **TP…A** und **GP**
- ▶ Actuator included
- ▶ Order safety switch separately

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt **BTC-T/G-S-TH-01-F**	**1 x detent mechanism open**	For doors hinged on the right or left with escape release	**106302** Bolt BTC-T/GP-S-TH-01-F
Bolt **BTC-T/G-S-TH-00-X**	**Without**	For doors hinged on the right or left without escape release	**106301** Bolt BTC-T/GP-S-TH-00-X

For safety precautions see page 160
For technical data see page 117

Bolts for safety guards for safety switches STP/STA/SGP

▸ **Lever for escape release from the danger area (optional)**

Bolts for safety switches series STP.../STA.../SGP...

Dimension drawings (here: shown with escape release)

For M6 screw

For M6 screw

Stop screw locked

For M6 screw

Safety switch STP...
Approach direction C

B

M5 (4x)

For M6 screw

Guard frame (40 x40)

Left hinged door

ca. 25

1) Bolt with detent mechanism (only for bolt STP-AF and STP-CF with escape release):
Latches in open position and prevents unintended closing of the bolt.
Unlocked by pulling the detent knob upward.

Special features
(only for bolt STP-AF and STP-CF with escape release)
▸ Bolt with detent mechanism
The bolt latches in open position to prevent unintended closing
▸ Lever for escape release from the danger area (optional)

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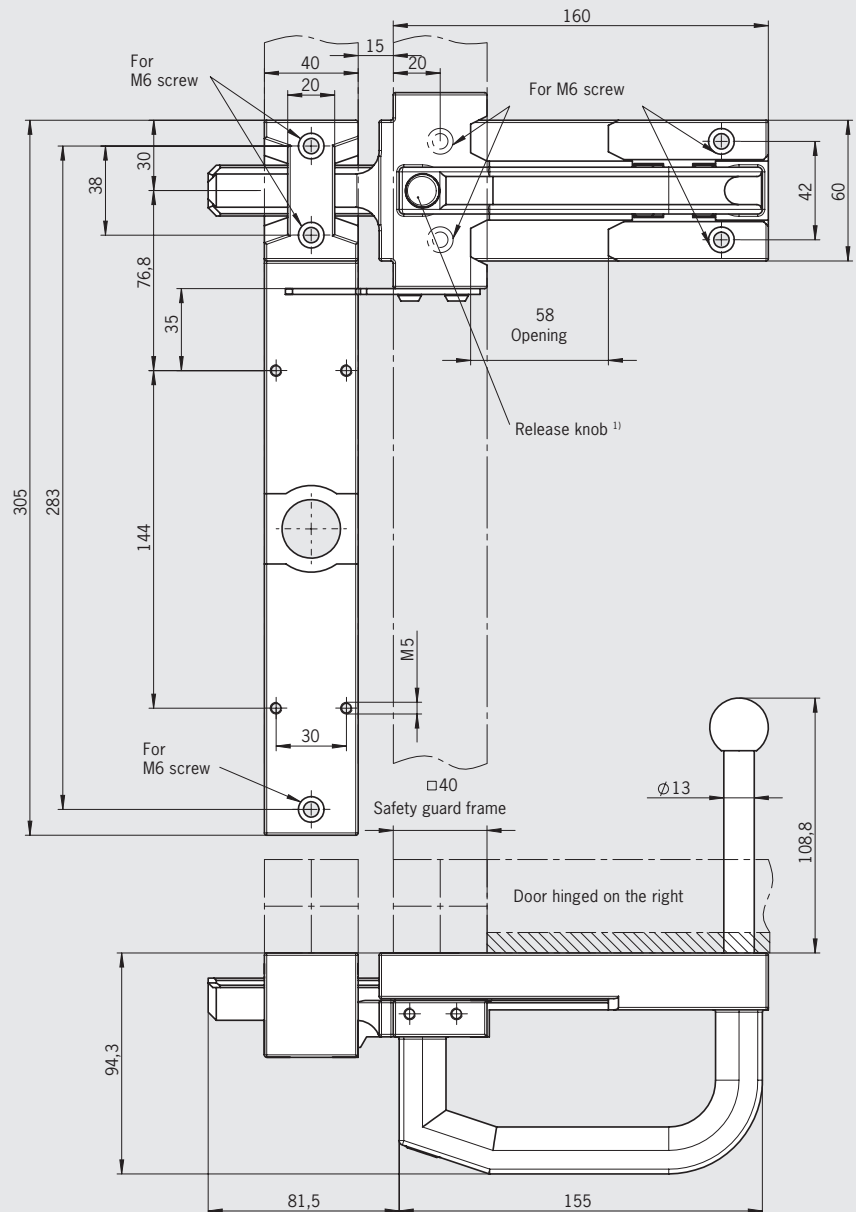▸ Easily fitted to standard aluminum profiles and machine covers by screw connection
▸ Distinctive yellow color for easy recognition
▸ Robust version for heavy doors
▸ No additional door handle necessary
▸ Slot on the bolt permits attachment of padlocks

Notes
▸ The bolts are only suitable for series **STP.../STA.../SGP...**
▸ Actuator included
▸ Please order safety switch separately

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt S-AF	**Detent knob**	For right hinged doors with escape release	**096390** Bolt S-AF
Bolt S-CF	**Detent knob**	For left hinged doors with escape release	**096391** Bolt S-CF
Bolt S-A	**None**	For right hinged doors without escape release	**096384** Bolt S-A
Bolt S-C	**None**	For left hinged doors without escape release	**096385** Bolt S-C

Bolt for safety guards for safety switches STP/STA/SGP/SGA

▶ **Material: die-cast aluminum**
▶ **Lever for escape release from the danger area (optional)**
▶ **For doors hinged on the right or left**

Bolt for safety switch STP.../STA.../SGP.../SGA...

Dimension drawings (here: shown with escape release)

For M6 screw
For M6 screw
160
40
15
20
20
30
38
76,8
35
42
60
305
283
144
58 Opening
Release knob [1]
M5
For M6 screw
30
□40
Safety guard frame
Ø13
108,8
Door hinged on the right
94,3
81,5
155

1) Bolt with detent mechanism (only for bolt BTC-ST/G-S-TH-01-F with escape release):
latches in open position and prevents unintended closing of the bolt.
Unlocked by pressing the knob

Special features
(only for bolt BTC-ST/G-S-TH-01-F with escape release)
▶ Bolt with detent mechanism
The bolt latches in open position to prevent unintended closing of the bolt. Unlocked by pressing the knob
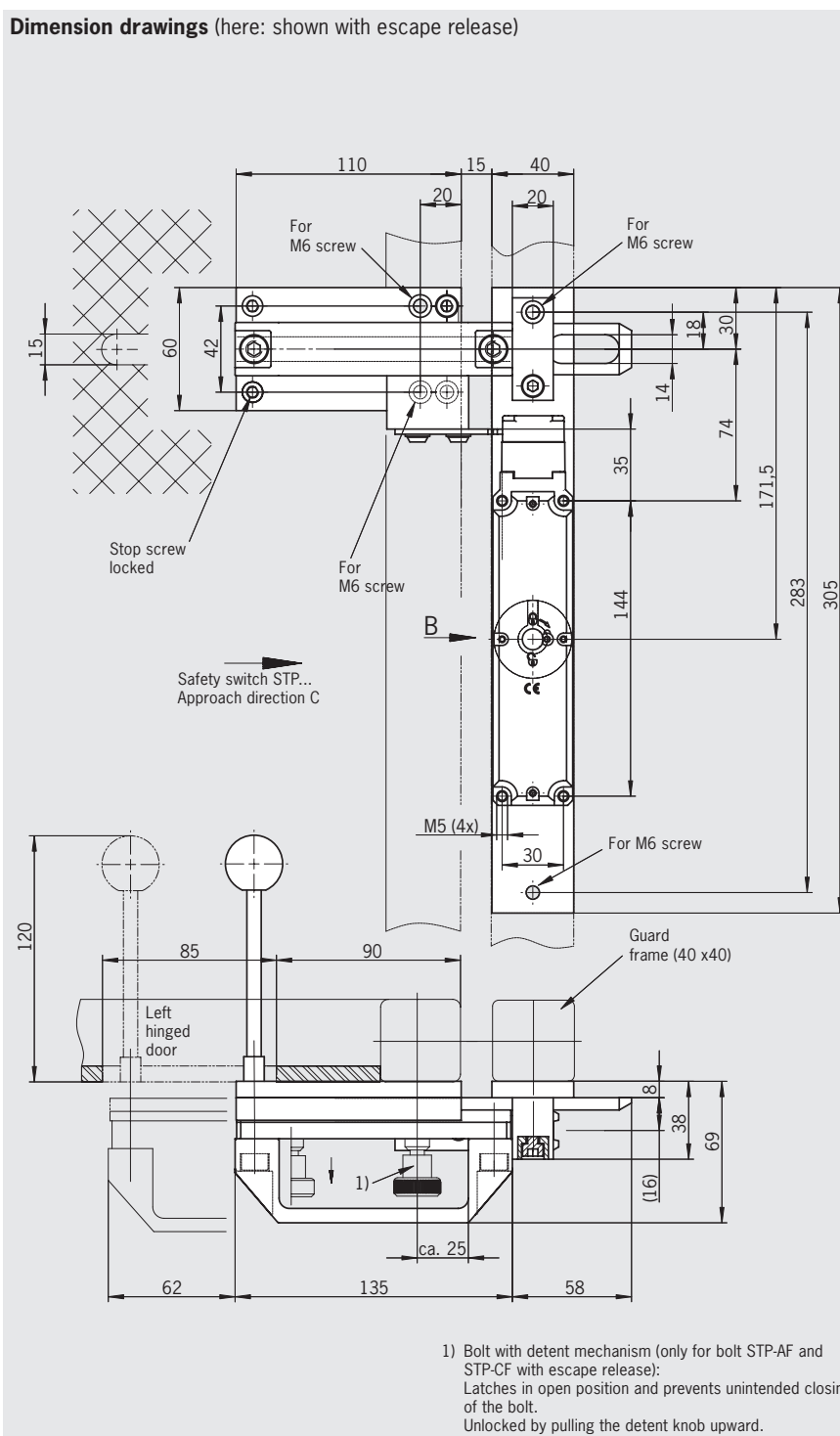▶ Lever for escape release from the danger area (optional)

Features
▶ Easily fitted to standard aluminum profiles and machine covers with screw connection
▶ Distinctive yellow color for easy recognition
▶ Robust version for heavy doors
▶ No additional door handle necessary

Notes
▶ The bolts are only suitable for series **STP.../STA.../SGP.../SGA...**
▶ Actuator included
▶ Order safety switch separately

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt **BTC-ST/G-S-TH-01-F**	**1 x detent mechanism open**	For doors hinged on the right or left with escape release	**106285** Bolt BTC-ST/G-S-TH-01-F
Bolt **BTC-ST/G-S-TH-00-X**	**Without**	For doors hinged on the right or left without escape release	**106284** Bolt BTC-ST/G-S-TH-00-X

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Bolt for safety guards for safety switches GP, SGP, TP, STA and STP

- ▶ Material: reinforced plastic
- ▶ Lever for escape release from the danger area
- ▶ For left or right hinged doors

Bolt for safety switches GP.../TP...A/TP..A.-C1743/TP...A.-C1993

Dimension drawings (here: shown with escape release)

Safety switch TP...
Approach direction A

M5 (4x)

For M6 screw

Door gap 15 mm

Guard frame (40 x40)

Door radius >200

Right hinged door

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

Special features

- ▶ Bolt with detent mechanism (only for bolts with escape release)
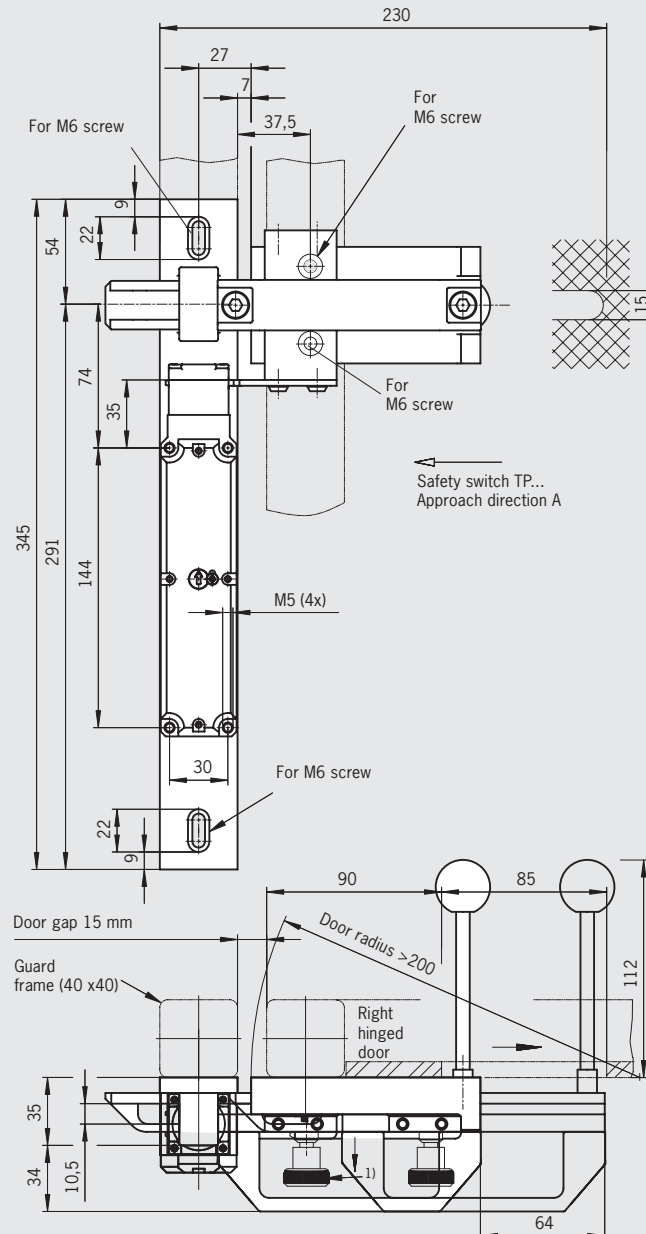 The bolt latches in open position to prevent unintended closing

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

Notes

- ▶ Functions only in conjunction with switch bracket **TP-GFK**
- ▶ Actuator included
- ▶ Please order safety switch separately
- ▶ Order switch bracket separately

Ordering table

Designation	Detent mechanism	Version	Order No.
Bolt TP-GFK-F	Detent knob	For right or left hinged doors with escape release (also for GP)	**097602** Bolt TP-GFK-F
Bolt TP-GFK	without	For right or left hinged doors without escape release (also for GP)	**096616** Bolt TP-GFK
Bolt STP-GFK	without	For right or left hinged doors without escape release (also for SGP/STA)	**098121** Bolt STP-GFK
Switch bracket TP-GFK		Separate (also for GP/SGP/STP/STA)	**096613** Switch bracket TP-GFK

Subject to technical modifications; no responsibility is accepted for the accuracy of this information.

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List of plug connector suppliers

We provide no guarantee for the completeness and correctness of the ordering data given. The data was valid in October 2004. The related manufacturers reserve the right to make changes without notice. The plug connectors and accessories listed are also available from other manufacturers.

▶ **Plug connectors and accessories**

Type	Version	Manufacturer's designation	
SVM5 5 pins	Female plug M12	**99-0436-57-05** Cable socket	Binder www.binder-connector.de
	Female flange connector M12	**09-3442-700-05** Flange connector with wires	
	Dummy plug M12	**08-2425-000-000** Protective cap for socket with retaining strap	
CE5 3 pins + N + PE	Mating connector (socket)	**CEE plug as per CEE standard**	
C16-1 6 pins + PE	Female flange connector	**T3107 500** Female receptacle	Amphenol-Tuchel www.amphenol-tuchel.com
	Female crimp contacts for C16-1, VPE 100 pcs.	**VN02 016 0002 (1)** Single contact, silver, 0.5-1.5 mm^2	
	Dummy plug	**T6483 000** Protective cap for female receptacle	
HAN10 10 pins + PE	Flange connector 1 cable exit	**19 20 010 0251** Socket housing 1 cable exit	Harting www.harting.com
	Socket contacts (installation for flange socket)	**09 20 010 3101** Socket contact insert crimp connection	
	Socket contacts for crimping	**09 33 000 6220** Socket crimp contacts 0.5 mm^2	
	Dummy plug	**09 20 010 5425** Cover	
RC17-Y coded 17-pin	Female flange connector, solder for male plug RC17Y)	**RC-17S1Y122000** Flange plug connector 17-pin	Coninvers www.coninvers.com
	Blanking plug	**RC-17P1N8A83NN** Protective cap for socket with retaining strap	

▶ **Crimp and extraction tools**

For plug connectors	Function	Manufacturer's designation	
SR6 and SR11	Crimp tool	**932 507-002** XZC 0701	Hirschmann www.hirschmann.com
	Extraction tool	**931 812-001** XWA 164	
C16-1	Crimp tool	**TA0500 + TA0000163 + TA0002016001** Crimp pliers, jaws and contact receptacle	Amphenol-Tuchel www.amphenol-tuchel.com
	Extraction tool	**FG 0300 1461** Extraction tool	
RC12	Crimp tool	**RC-Z 2378** Crimp pliers for machined contacts	Coninvers www.coninvers.com
	Extraction tool	**RC-Z 2097** Extraction tool/insertion tool	
RC18	Crimp tool	**RC-Z 2378** Crimp pliers for machined contacts	
	Extraction tool	**RC-Z 2274** Extraction tool	
VP19	Crimp tool	**T98143 DAK 83S-30 / 11-7576T3** Insertion tool	Litton/Veam www.littonveam.com
	Extraction tool	**46592-MT50 / 11-7576T3** Removal tool	
UT23	Crimp tool	**Y16RCM** Crimping tool for machined contacts	Burndy www.burndy.com
	Extraction tool	**RX2025GE1** Extraction tool	
TB24	Crimp tool	**WT10-04** Crimp tool	Thomas & Betts www.tnb.com
	Extraction tool	**TRT16** Contact removal tool	

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