

## TP5-4120A024M (ORDER NO. 084279)

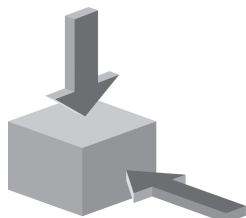
### Safety switch TP with door unlock request contact

- ▶ Auxiliary shutdown feature on the front
- ▶ With door unlock request contact
- ▶ Increased horizontal overtravel



### Description

#### Approach direction



Figure

Horizontal and vertical

Can be adjusted in 90° steps

Increased overtravel for horizontal approach direction

#### Solenoid operating voltage

- ▶ AC/DC 24 V +10%, -15%

#### Guard locking type

TP5 Closed-circuit current principle, guard locking by spring force. Release by applying voltage to the guard locking solenoid.

#### Switching element

4120 Slow-action switching contact 1 NC (→) (door unlock request contact) + 1 NC (→) + 1 NO (solenoid monitoring contact)

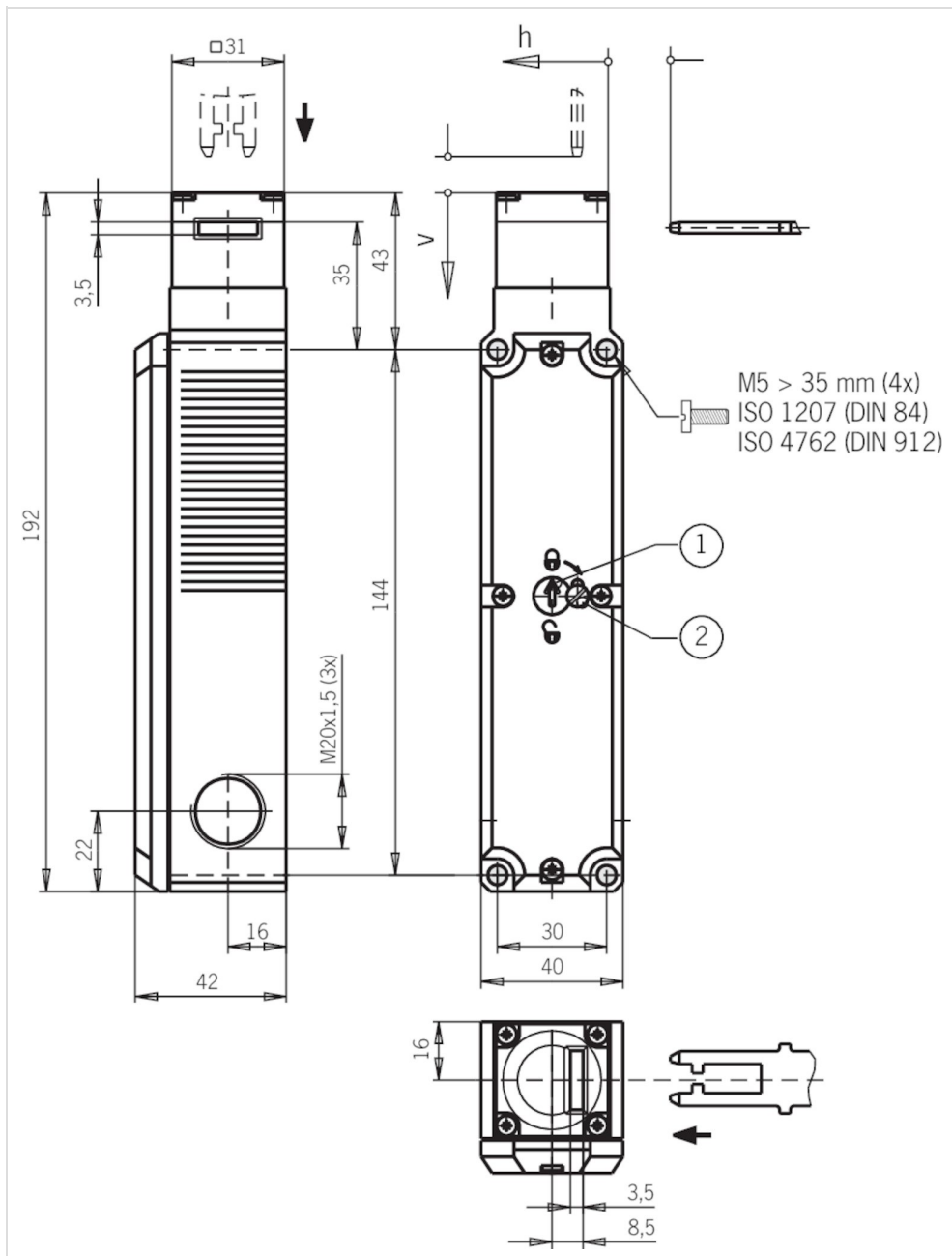
## auxiliary shutdown feature

When actuated, positively driven contacts 21-22 are opened. The guard remains locked. The auxiliary shutdown feature must be sealed to prevent tampering (for example with sealing lacquer).

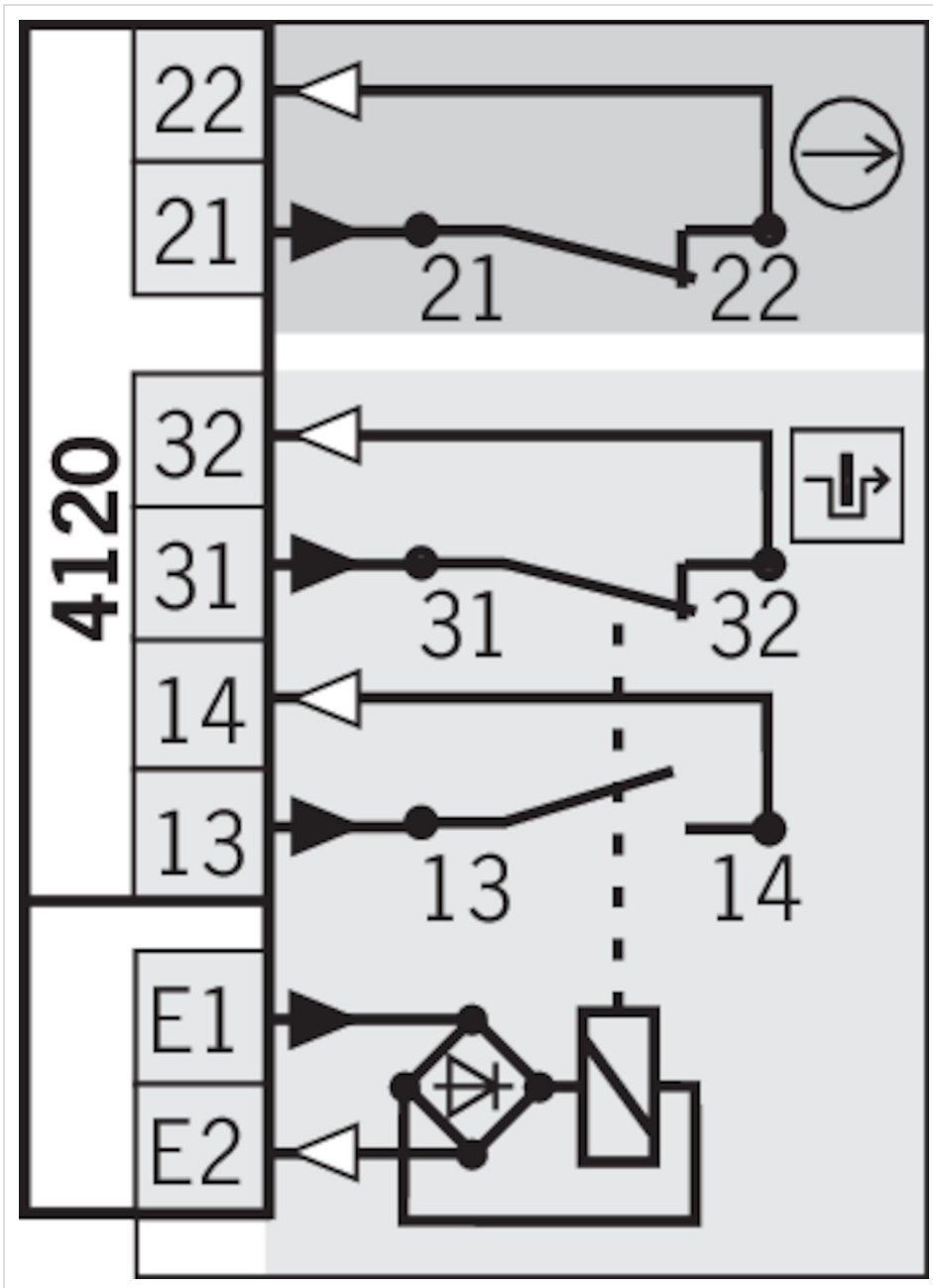
## Door unlock request contact

When the actuator is in the locked state, positively driven contact 21-22 is opened by pulling the guard (6 mm actuator stroke). This forwards a signal to the higher-level PLC. Depending on the control concept, the guard can be unlocked automatically when machine components that were still running have stopped.

## Dimension drawing

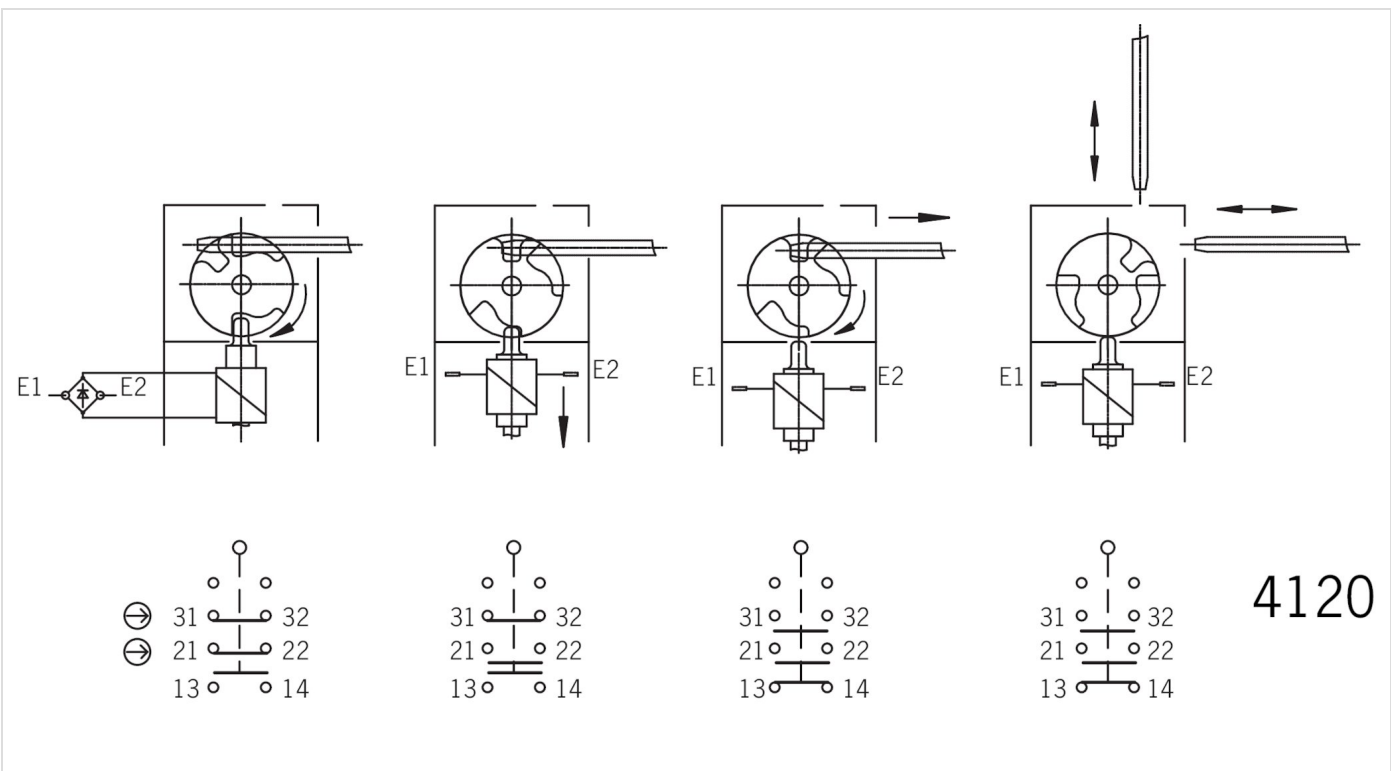


- 1 Auxiliary release
- 2 Locking screw



- Solenoid monitoring
- Door unlock request contact

Switching functions



## Technical data

### Approvals



### Mechanical values and environment

Housing material	Housing Reinforced thermoplastic
Weight	Net 0,5 kg
Ambient temperature	-20 ... 55 °C
Degree of protection	IP67
Mechanical life	0,5 x 10 <sup>6</sup>
Contact material	Silver alloy, gold flashed
Switching principle	Slow-action switching contact
Installation orientation	Any
Number of door position positively driven contacts	2
Number of NO contacts	1
Connection	3 x M20 x 1.5
Approach speed	max.20 m/min
Actuation frequency	max.1200 1/h
Locking force $F_{max}$	800 N
Locking force $F_{Zh}$	600 N
Retention force	10 N
Extraction force	20 N
Actuating force	10 N

## Electrical connection ratings

Thermal rated current $I_{th}$	4 A
Utilization category acc. to EN 60947-5-1	
	AC-15 4A 230V
	DC-13 4A 24V
Solenoid operating voltage	
	AC/DC 24 V -15% ... +10%
Short circuit protection according to IEC 60269-1	4A gG
Rated insulation voltage $U_i$	250 V
Rated impulse withstand voltage $U_{imp}$	2,5 kV
Switching voltage	
	Min. at 10mA 12 V
Switching current	
	Min. at 24V 1 mA
Connection rating	8 W
Solenoid duty cycle	100 %
Connection cross-section	0,34 ... 1,5 mm <sup>2</sup>

## Reliability values according to EN ISO 13849-1

	<b>Monitoring of guard locking and the safety guard position</b>
$B10_D$	$3 \times 10^6$
	<b>Control of the guard locking</b>
Category	Depending on external control of guard locking
Performance Level	Depending on external control of guard locking
$PFH_D$	Depending on external control of guard locking

## In combination with Actuator BETAETIGER-P-GNT

### Mechanical values and environment

Overtravel A B C D E	7 mm
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## In combination with Actuator BETAETIGER-P-GT

### Mechanical values and environment

Overtravel A B C D E	2 mm
Overtravel K L M N	1,5 mm

## Accessories

### Actuator

#### Actuators for safety switches NP/GP/TP



059226  
BETAETIGER-P-G

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



**070046**  
BETAETIGER-P-GT

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

### Actuators for safety switches NP/GP/TP, increased overtravel

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**074570**  
BETAETIGER-P-GN

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



**074576**  
BETAETIGER-P-GNT

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

### Bent actuator for safety switches NP/GP/TP

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**059227**  
BETAETIGER-P-W

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



**070038**  
BETAETIGER-P-WT

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

### Bent actuator for safety switches NP/GP/TP, increased overtravel

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**074571**  
BETAETIGER-P-WN

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



**074577**  
BETAETIGER-P-WNT

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

### Hinged actuator left/right for safety switches NP/GP/TP

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**059440**  
RADIUSBETAETIGER-P-LR

- ▶ Actuators made of stainless steel
- ▶ Two stainless safety screws per actuator
- ▶ For doors hinged on the right or left

### Hinged actuator left/right for safety switches NP/GP/TP, increased overtravel

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**074573**

- ▶ Actuators made of stainless steel

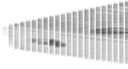


RADIUSBETAETIGER-P-LRN

- ▶ Two stainless safety screws per actuator
- ▶ For doors hinged on the right or left

## Hinged actuator top/bottom for safety switches NP/GP/TP

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**070050**  
RADIUSBETAETIGER-P-OU

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

## Hinged actuator top/bottom for safety switches NP/GP/TP, increased overtravel

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**074572**  
RADIUSBETAETIGER-P-OUN

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

Bolt

## Bolt 0 NP/TP for safety switches NP, GP and TP

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**073535**  
RIEGEL 0 NP/TP OHNE RASTUNG

- ▶ Steel bolt
- ▶ For doors hinged on the left or right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

## Bolt 1 NP/TP for safety switches NP, GP and TP

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**073536**  
RIEGEL 1 NP/TP 1X RASTUNG ZU

- ▶ Steel bolt
- ▶ For doors hinged on the left or right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included
- ▶ Detent mechanism closed position

## Bolt BTC-T/GP... without escape release for safety switches GP and TP

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**106301**  
BTC-T/GP-S-TH-00-X

- ▶ Aluminum bolt
- ▶ For doors hinged on the left or right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

## Bolt BTM-UNIP-S... for safety switches TP, STP, STA and CTP

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**159951**  
BTM-UNIP-S-TH-00-X-159951

- ▶ Steel bolt
- ▶ For doors hinged on the left or right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator not included

## Bolt TP-GFK for safety switches TP and GP

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**096616**  
RIEGEL TP-GFK

- ▶ Fiber glass reinforced plastic bolt
- ▶ For doors hinged on the left or right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

## Bolt TP/GP... for safety switches GP and TP

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**084430**  
RIEGEL TP-A

- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included



**084432**  
RIEGEL TP-C

- ▶ Steel bolt
- ▶ For doors hinged on the left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included

## Connection material

## Cable glands M20x1.5, cable Ø 6-12 mm

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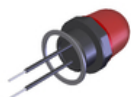


**086233**  
EKPM20/06 086233

## Function expansion

### Built-in LED, light shines to front

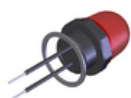
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**095510**  
EINBAULEUCHTE LED-F M20X1,5

### Built-in LED, light shines to side

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**087423**  
EINBAULEUCHTE LED M20X1,5

## Emergency unlocking for safety switches CTP/TP/STP

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**099877**  
NOTENTSPERRUNG TP/STP

## Handle for escape release for safety switches TP/STP/STA

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**105329**  
FE-GRIFF

## Handle for wire front release

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**099795**  
AY-HDL-099795

► Suitable for all wire front releases

## Insertion funnel for safety switches NP..A/GP/TP..A

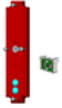
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**086237**  
EINFUEHRTRICHTER-P

## LED set

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**093752**  
TP LED SET

▶ LED set

## Latch spring for increased retention force

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**076501**  
RASTFEDER NP/TP

## Lock for auxiliary release for safety switches CTP/TP/STP

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**084177**  
SCHLOSS TP  
VERSCHIEDENSCHLIESSEND

▶ Lock unique locking  
▶ Key removable in "unlocked" and "locked" positions



**086236**  
SCHLOSS TP GLEICHSCHLIESSEND

▶ Identical locking  
▶ Key removable in "unlocked" and "locked" positions



**109212**  
SCHLOSS TP GLEICHSCHLIESSEND  
C2293

▶ Identical locking  
▶ Key can be removed only in "unlocked" position



**121917**  
SCHLOSS TP GLEICHSCHLIESSEND  
C2416

▶ Identical locking  
▶ Key removable in "locked" position

## Lockout bar NP/GP/TP

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**096105**  
SPERREINSATZ TP

▶ Prevents unintentional closing of the door  
▶ Can be secured with padlocks

## Release with automatic reset for safety switches CTP/TP/STP

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**103110**  
ENTRIEGELUNG RUECKSTELLEND  
TP/STP

## Wire front release



**096230**  
AE-B-A1-02,0-096230

- ▶ Can be used as escape release or emergency release
- ▶ No automatic return
- ▶ Sheath length 2 m (rope length 6 m)



**098313**  
AE-B-A1-03,0-098313

- ▶ Can be used as escape release or emergency release
- ▶ No automatic return
- ▶ Sheath length 3 m (rope length 6 m)



**098314**  
AE-B-A1-04,0-098314

- ▶ Can be used as escape release or emergency release
- ▶ No automatic return
- ▶ Sheath length 4 m (rope length 6 m)



**097747**  
AE-B-A1-02,0-F-097747

- ▶ Can be used as escape release or emergency release
- ▶ Automatic return
- ▶ Sheath length 2 m (rope length 6 m)



**111233**  
AE-B-A1-03,0-F-111233

- ▶ Can be used as escape release or emergency release
- ▶ Automatic return
- ▶ Sheath length 3 m (rope length 6 m)



**124770**  
AE-B-A1-06,0-F-124770

- ▶ Can be used as escape release or emergency release
- ▶ Automatic return
- ▶ Rope length 6 m (without sheath)



**125582**  
AE-B-A1-06,0-125582

- ▶ Can be used as escape release or emergency release
- ▶ No automatic return
- ▶ Rope length 6 m (without sheath)

## Mounting accessories

## Mounting plates EMP-B1 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ

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093457  
EMP-B1

## Mounting plates EMP-B2 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ

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093458  
EMP-B2

## Mounting plates EMP-SB for safety switches CTP, TP...A, STA, STP and TX

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093456  
EMP-SB

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

## Switch bracket CTP/TP/STP GFK

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096613  
SCHALTERAUFNAHME TP/STP GFK

- ▶ Switch bracket made of fiber glass reinforced plastic
- ▶ For doors hinged on the left or right

## Switch bracket for bolt NP/TP

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073539  
SCHALTERAUFNAHME TP

- ▶ Switch bracket made of steel
- ▶ For doors hinged on the left or right

## Contacts

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