

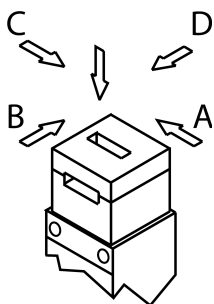
## TP4-4121A024M (Order no. 084139)

### Safety switch TP, cable entry M20 x 1.5, contacts for the door position

- ▶ 3 x cable entry M20 x 1.5
- ▶ Contacts for the door position
- ▶ Auxiliary release
- ▶ Open-circuit current principle



#### Approach direction



Horizontal and vertical

Can be adjusted in 90° steps

Increased overtravel for horizontal approach direction

If increased play is required when the door is closed, an actuator with overtravel is available. With this actuator the door can move slightly in the actuating direction when closed. This is important, for example, if safety doors have a rubber end stop. Using an actuator with overtravel, the continuous pressure from the compressed rubber can be reduced. In this way the load is reduced on the switch head and the door mechanism.


#### Guard locking principle

Open-circuit current (power on to lock): On a guard with guard locking based on the open-circuit current principle, the guard is locked until the power supply to the guard locking solenoid is interrupted.

Unlocking is by spring force. The term electrical guard locking is also used.

#### Switching element

4121 Slow-action switching contact

Contacts for guard locking: 2 positively driven contacts 

Contacts for door monitoring: 1 NC contact 1 NO contact

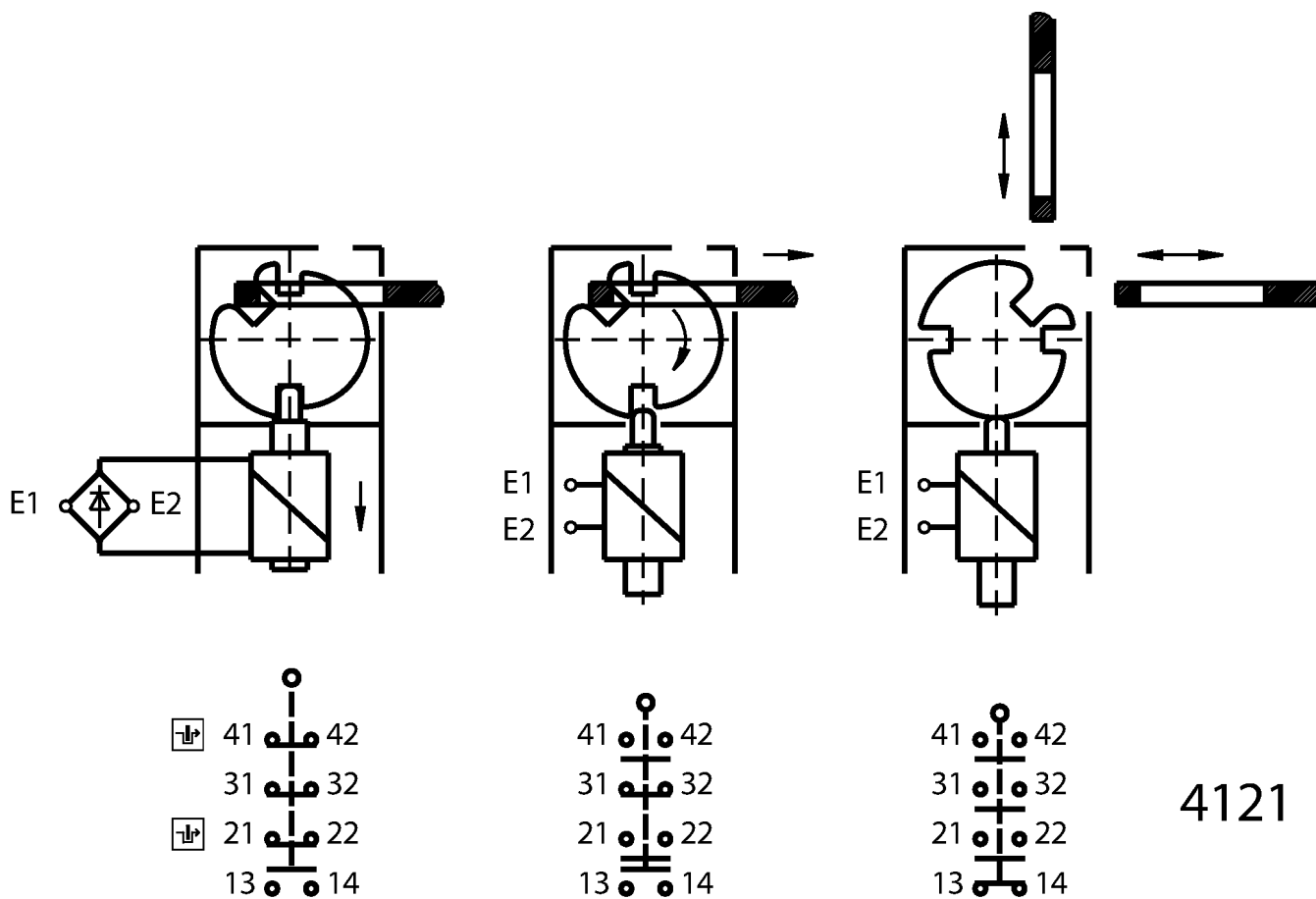
## Auxiliary release

The auxiliary release on the front makes it possible to access the machine if there is a malfunction, e.g. a power failure. Unlocking is performed using a tool or a key. The auxiliary release must be protected against misuse (sealing, lacquer).

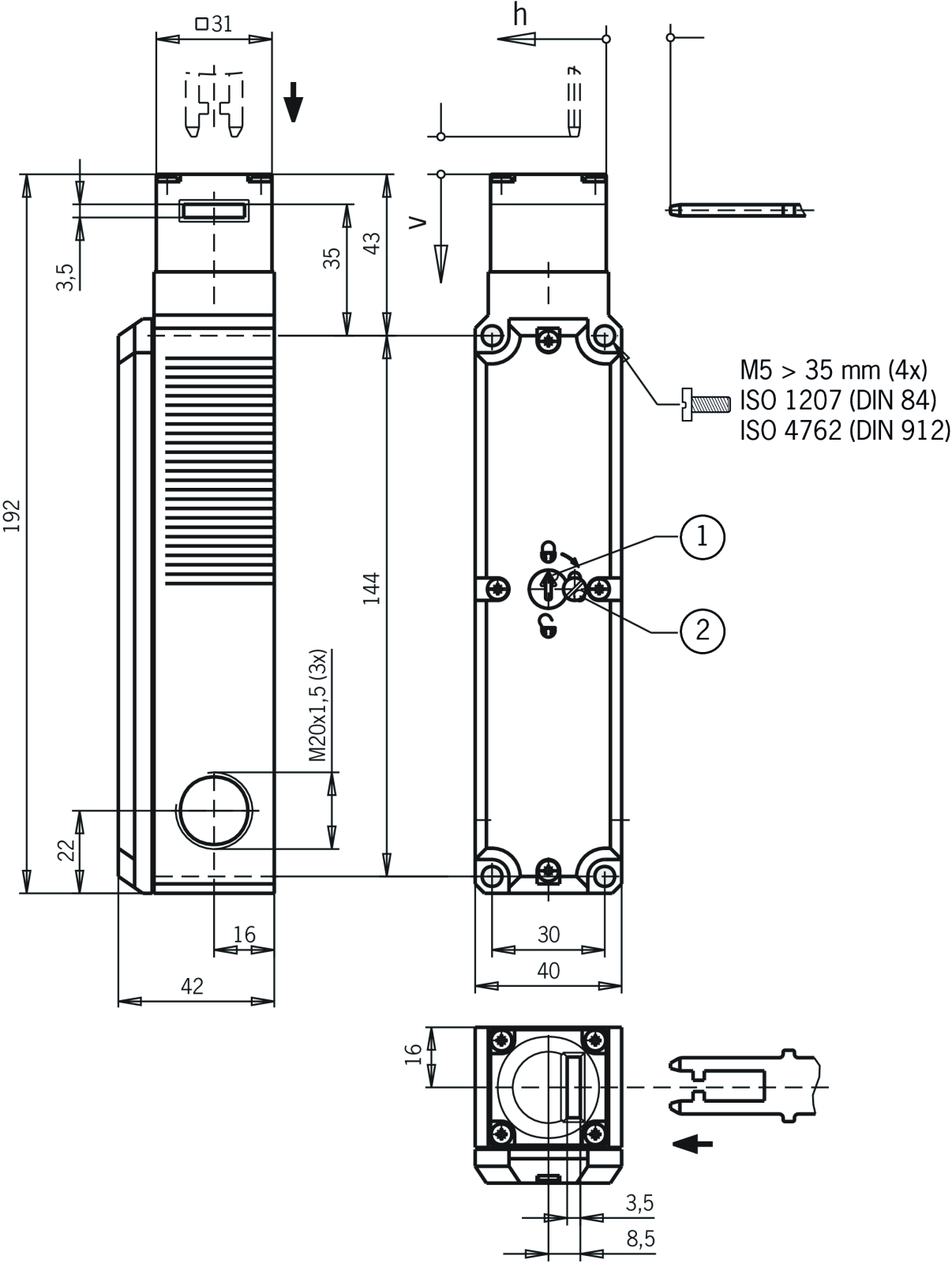
## Accessories required

Actuator is not included.

## Functional drawings

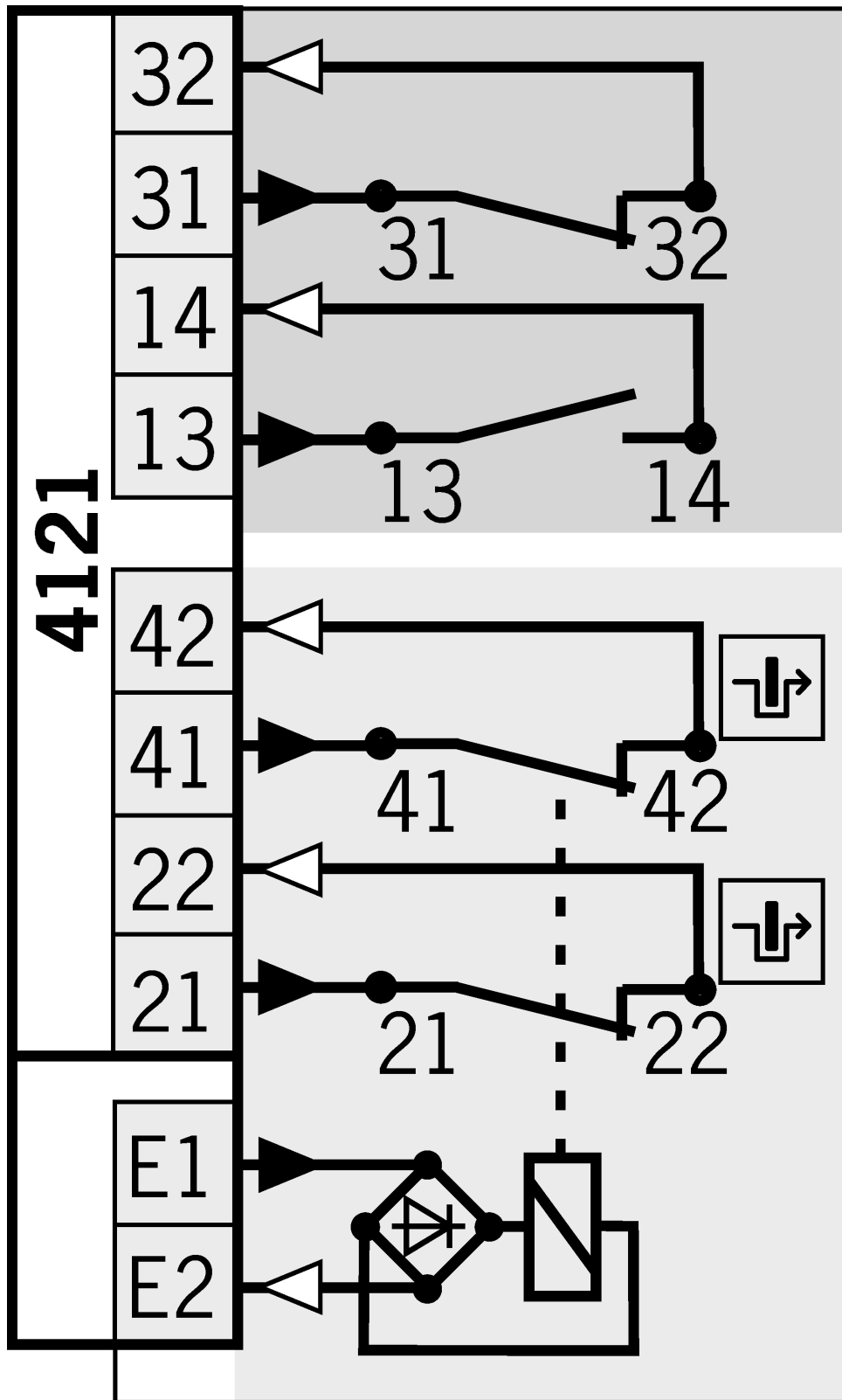


**Dimensional drawings**



- 1 Auxiliary release
- 2 Locking screw

Connection examples



square\_grey\_dark.eps Door monitoring

square\_grey\_light.eps Solenoid monitoring

## Technical data

### Approvals



### Electrical connection values

Fuse	max. 4 A gG	
Power consumption	8 W	
Connection cross section	0.34 ... 1.5 mm <sup>2</sup>	
Rated insulation voltage U <sub>i</sub>	250 V	
Rated impulse voltage U <sub>imp</sub>	2.5 kV	
Utilization category		
	AC-15	4 A 230 V
	DC-13	4 A 24 V
Solenoid operating voltage		
	AC/DC	24 V -15% ... +10%
Solenoid duty cycle	100 %	
Switching voltage		
	min. at 10 mA	12 V
Switching current		
	min. at 24 V	1 mA
thermal rated current I <sub>th</sub>	4 A	

### Mechanical values and environment

Anfahrgeschwindigkeit	max. 20 m/min	
Connection type		
	3 x	M20 x 1.5
Number of door position NC contacts	1	
Number of door position NO contacts	1	
Number of guard lock monitoring positively driven contacts	2	
Extraction force	20 N	

Actuation frequency	max. 1200 1/h
Actuating force	10 N
Installation orientation	any
Storage temperature	-25 ... 70 °C
Mechanical life	1 x 10 <sup>6</sup>
Retention force	10 N
Switching principle	Slow-action switching contact
Degree of protection	IP67
Ambient temperature	-20 ... 55 °C
Material	
	Housing Reinforced thermoplastic
	Contact Silver alloy, gold flashed
Locking force $F_{max}$	1300 N
Locking force $F_{Zh}$	1000 N
Guard locking principle	Open-circuit current principle

## Characteristic values according to EN ISO 13849-1 and EN IEC 62061

	B10 <sub>D</sub>	Mission time
Monitoring of guard locking	3x10 <sup>6</sup>	20 y
	Important! Values valid at DC-13 100 mA/24V	

## In combination with actuator ACTUATOR-P-GNT

Horizontal overtravel	7 mm
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## In combination with actuator ACTUATOR-P-GT

Horizontal overtravel	2 mm
Vertical overtravel	1.5 mm

## Downloads

All documentation for this material can be found on our website:

<https://www.euchner.de/en-us/a/084139/?#downloads-tab>

**Ordering data**

Ordernumber	084139
Item designation	TP4-4121A024M
Gross weight	0,451kg
Customs tariff number	85365019000
ECLASS	27-27-26-03 Safety switch with guard control

## Accessories

### Actuator

#### Actuator for safety switch NP/GP/TP, increased overtravel



**074570**

BETAETIGER-P-GN

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



**074576**

BETAETIGER-P-GNT

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

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



**059226**

BETAETIGER-P-G

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



**070046**

BETAETIGER-P-GT

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

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



**059227**

BETAETIGER-P-W

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



**070038**

BETAETIGER-P-WT

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

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



**074571**

BETAETIGER-P-WN

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



**074577**

BETAETIGER-P-WNT

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

#### Hinged actuator, left/right, for safety switch NP/GP/TP



**059440**

RADIUSBETAETIGER-P-LR

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

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



**074573**

RADIUSBETAETIGER-P-LRN

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

## Hinged actuator, top/bottom, for safety switch NP/GP/TP



**070050**  
RADIUSBETAETIGER-P-OU

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

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



**074572**  
RADIUSBETAETIGER-P-OUN

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

## Connection material

Cable glands M20x1.5, cable Ø 6–12 mm



**086233**  
EKPM20/06 086233

## Function expansion

Built-in LED, light shines to front



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

Built-in LED, light shines to side



**087423**  
EINBAULEUCHTE LED M20X1,5

## Emergency release for safety switch CTP/CTA/TP/STP/MGB2



**099877**  
AE-M-A1-99877

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



**105329**  
FE-GRIFF

## Handle for wire front release (bowden)



**099795**  
AY-HDL-099795

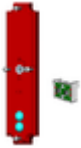
- ▶ suitable for all wire front releases

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



**086237**  
EINFUEHRTRICHTER-P

## LED set



**093752**

TP LED SET

▶ LED set

## Latch spring for increased retention force

**076501**

RASTFEDER NP/TP

## Lock for auxiliary release for safety switch CTP/CTA/TP/STP



**084177**

AE-K-A1-DULK1-84177

▶ Lock unique locking  
▶ Key removable in “unlocked” and “locked” positions



**086236**

AE-K-A1-IULK1-86236

▶ Identical locking  
▶ Key removable in “unlocked” and “locked” positions



**109212**

AE-K-A1-IUK2-109212

▶ Identical locking  
▶ Key can be removed only in “unlocked” position



**121917**

AE-K-A1-ILK1-121917

▶ Identical locking  
▶ Key removable in “locked” position

## Lockout bar NP/GP/TP



**096105**

SPERREINSATZ TP

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

## Release with automatic reset for safety switch CTP/CTA/TP/STP/MGB2/MGBS



**103110**

AE-R-A1-103110

## Wire front release (bowden)



**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)



**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)



**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)



**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)



**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)



**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)

## Metal bolt

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



**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, CTP and CTA



**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 for safety switches GP and TP



**084430**  
RIEGEL TP-A

- ▶ Bolt for safety switches GP and TP
- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ Suitable for a door gap of approx. 15 mm



**084432**  
RIEGEL TP-C

- ▶ Bolt for safety switches GP and TP...A
- ▶ Steel bolt
- ▶ For doors hinged on the left
- ▶ Suitable for a door gap of approx. 15 mm

## Bolt for safety switches NP, GP and TP



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

- ▶ Bolt for safety switches NP... and TP...A
- ▶ Steel bolt
- ▶ For doors hinged on the left or right
- ▶ Suitable for a door gap of approx. 6 mm



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

- ▶ Bolt for safety switches NP...AS, TP...A and GP
- ▶ Steel bolt
- ▶ For doors hinged on the left or right
- ▶ Suitable for a door gap of approx. 15 mm

## Mounting accessories

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



**093457**  
EMP-B1

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



**093458**  
EMP-B2

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



**093456**  
EMP-SB

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

## Switch bracket CTP/TP/STP GFK



**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



**073539**

SCHALTERAUFNAHME TP

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

## Plastic bolt

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



**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