

## TP4-4121A024MC1787 (ORDER NO. 084160)

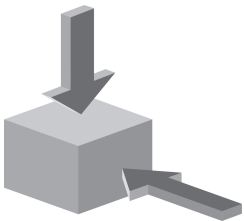
### Safety switch TP with door monitoring contact

- ▶ Auxiliary release on the front
- ▶ With door monitoring 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%

#### LED function display

A function display (2 LEDs, red and green) is available for the following voltage range:

- ▶ AC/DC 24 V +10%, -15%

#### Guard locking type

TP4 Open-circuit current principle, guard locking by applying voltage to the guard locking solenoid. Release by spring force.

## Switching element

4121 Slow-action switching contact 2 NC (⊖) + 1 NC / 1 NO (door monitoring contact)

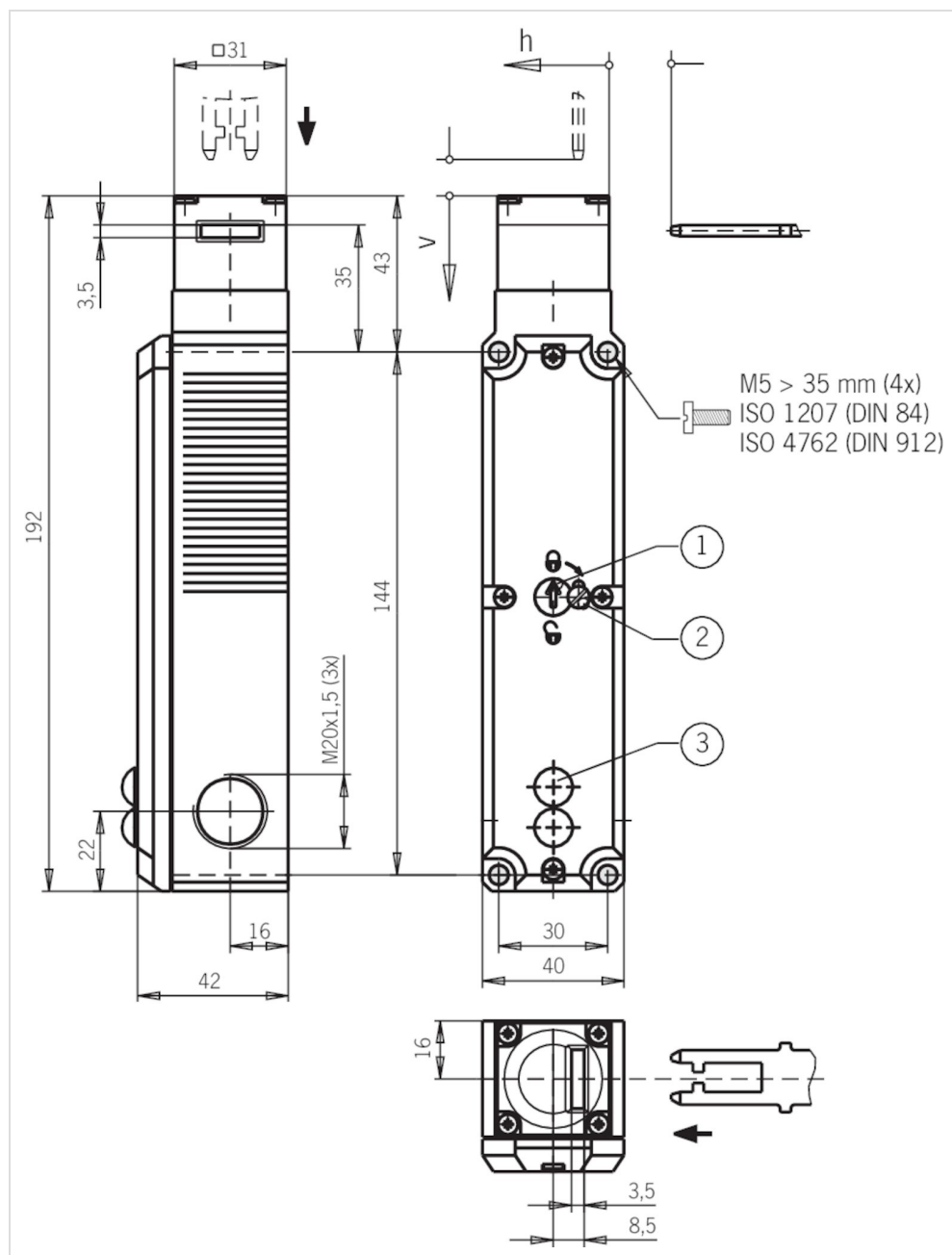
## C1787

The door monitoring contact is designed as a positively driven NC contact.

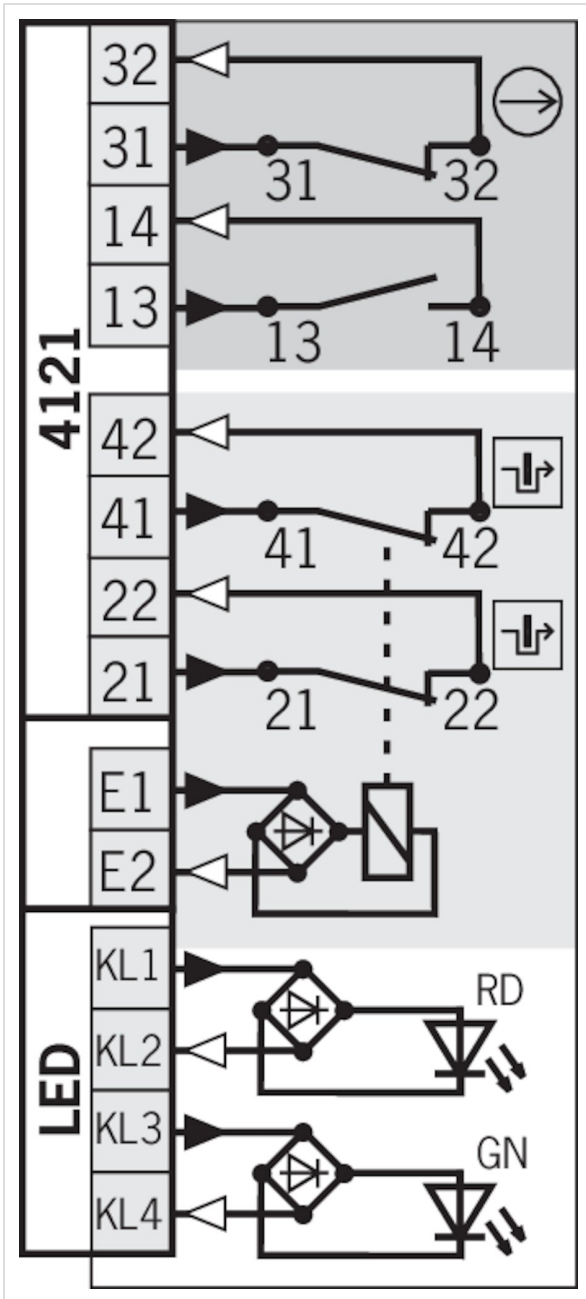
## Auxiliary release



Is used for releasing the guard locking with the aid of a tool. To protect against tampering, the auxiliary release is sealed with sealing lacquer.

## Dimension drawing

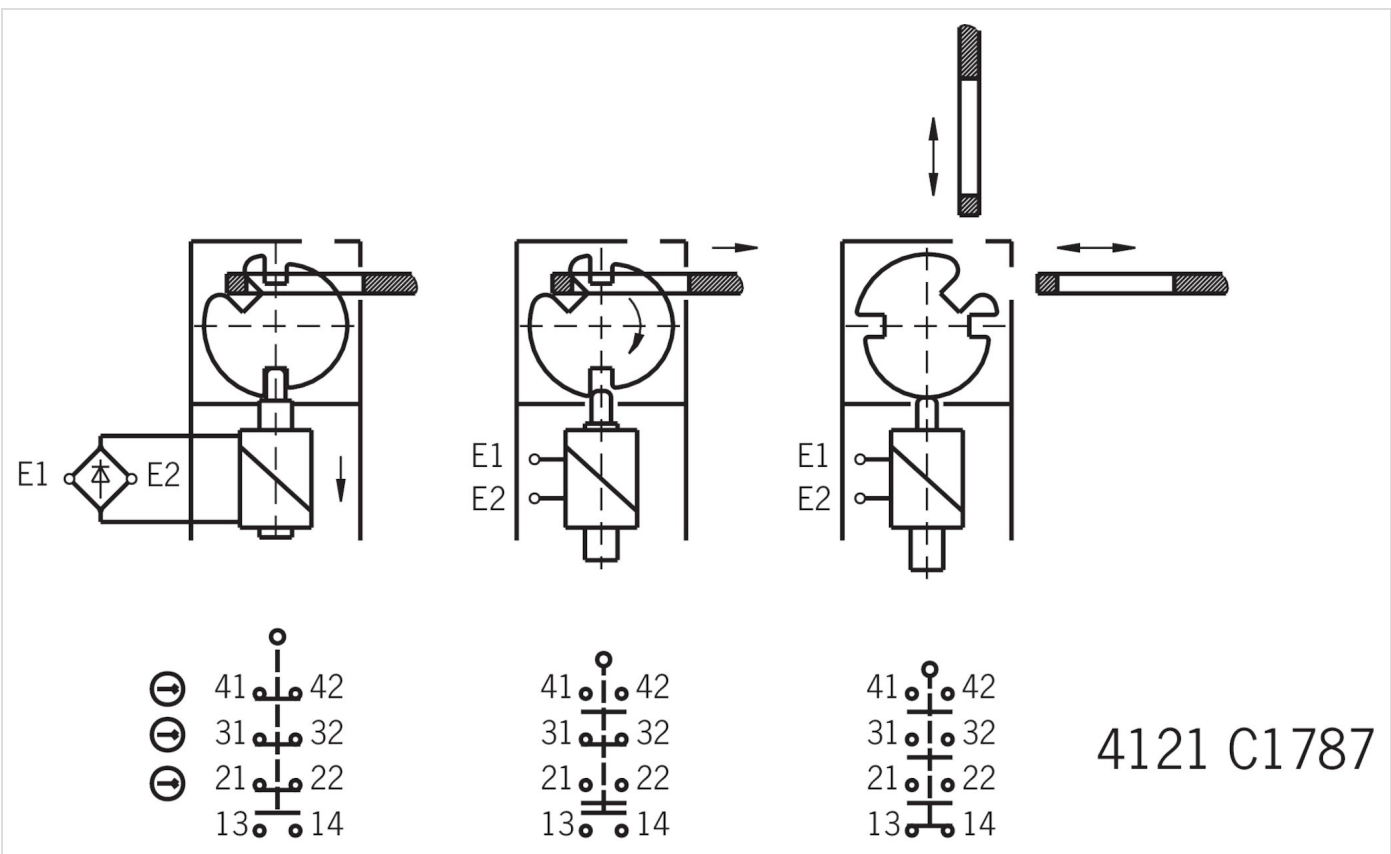


- 1 Auxiliary release
- 2 Locking screw
- 3 LED indicator



-  Solenoid monitoring
-  Door monitoring

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		1 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		3
Number of NO contacts		1
Connection	3 x	M20 x 1.5
Approach speed		max.20 m/min
Actuation frequency		max.1200 1/h
Guard locking principle		Open-circuit current principle
Locking force F <sub>max</sub>		1300 N
Locking force F <sub>Zh</sub>		1000 N
Retention force		10 N
Extraction force		20 N
Actuating force		10 N

### Electrical connection ratings

Thermal rated current I <sub>th</sub>		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 <sub>i</sub>		250 V
Rated impulse withstand voltage U <sub>imp</sub>		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

	Monitoring of guard locking and the safety guard position	
B10 <sub>D</sub>		3 x 10 <sup>6</sup>

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

## In combination with Actuator BETAETIGER-P-GNT

### Mechanical values and environment

Overtravel A B C D E 7 mm

## Accessories

### Actuator

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



**070046**  
BETAETIGER-P-GT

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



**059226**  
BETAETIGER-P-G

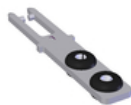
- ▶ Actuators made of stainless steel
- ▶ Two stainless safety screws per actuator

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



**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



**070038**  
BETAETIGER-P-WT

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



**059227**  
BETAETIGER-P-W

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

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



**074577**  
BETAETIGER-P-WNT

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



**074571**  
BETAETIGER-P-WN

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

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



**059440**  
RADIUSBETAETIGER-P-LR

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

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

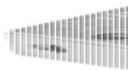


**074573**  
RADIUSBETAETIGER-P-LRN

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

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



**070050**  
RADIUSBETAETIGER-P-OU

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

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



**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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**084432**  
RIEGEL TP-C

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



**084430**  
RIEGEL TP-A

- ▶ Steel bolt
- ▶ For doors hinged on the right
- ▶ 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

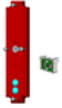
► Suitable for all wire front releases

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

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**086237**  
EINFUEHRTRICHTER-P



**093752**  
TP LED SET

▶ LED set

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Latch spring for increased retention force

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**076501**  
RASTFEDER NP/TP

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

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**086236**  
SCHLOSS TP GLEICHSCHLIESSEND

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



**084177**  
SCHLOSS TP  
VERSCHIEDENSCHLIESSEND

▶ Lock unique 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

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Lockout bar NP/GP/TP

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**096105**  
SPERREINSATZ TP

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

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

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**103110**  
ENTRIEGELUNG RUECKSTELLEND  
TP/STP

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Wire front release



**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)



**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)



**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

## Safety screws M4 x 14, large head

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086232  
M4X14-NIRO/V100

- ▶ Safety screws M4 x 14 (large head)
- ▶ Packaging unit 100 pieces

## 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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