

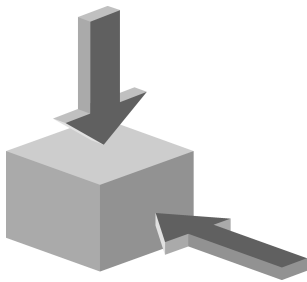
TP4-2131A024M (Rend. sz. 084145)

Safety switch TP with door monitoring contact

- ▶ Auxiliary release on the front
- ▶ With door monitoring contact
- ▶ Increased horizontal overtravel



Approach direction



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

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

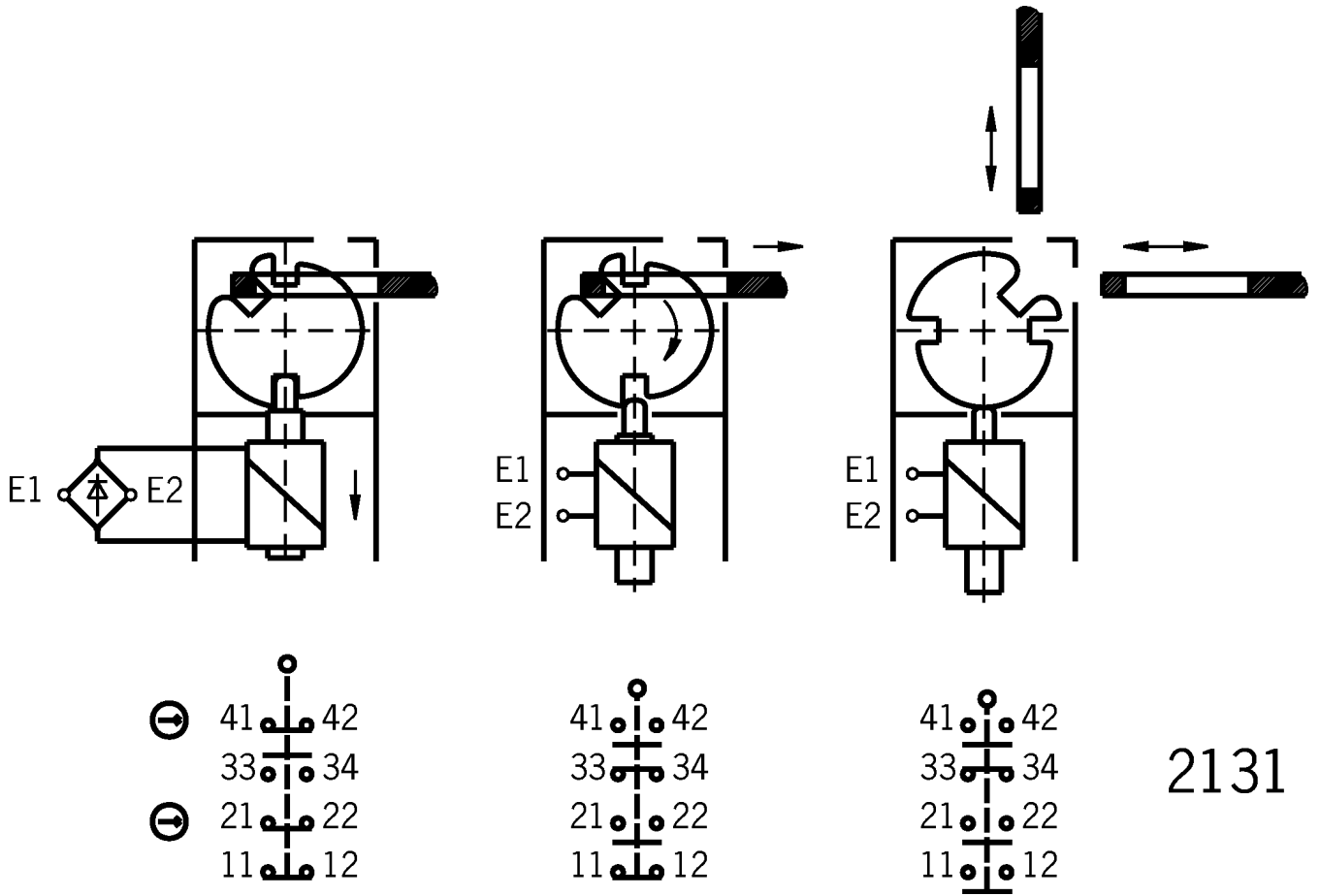
Switching element

2131 Slow-action switching contact 2 NC $\text{\textcircled{\rightarrow}}$ + 1 NO + 1 NC (door monitoring contact)

Auxiliary release

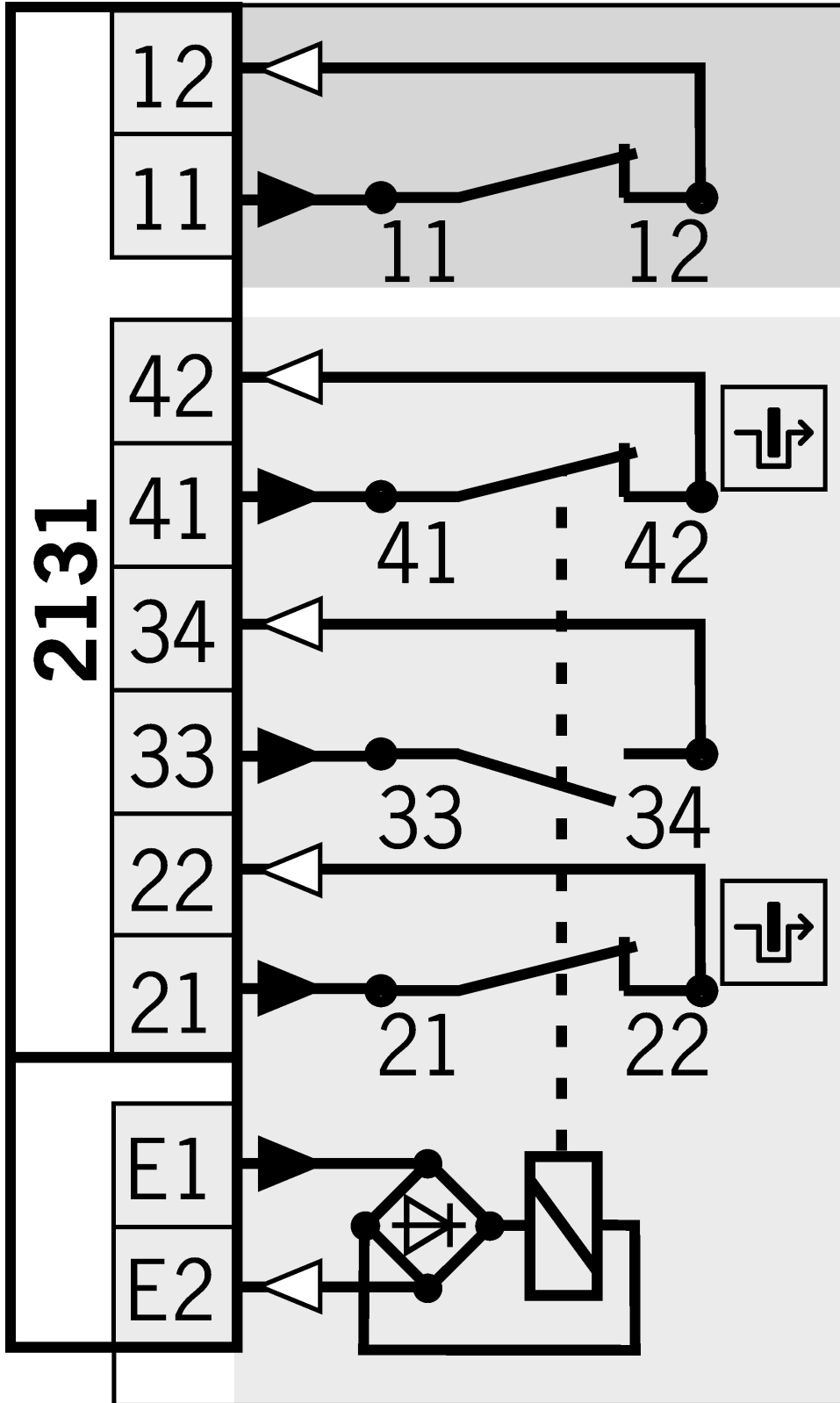
This is used for releasing the guard locking with the aid of a tool. To protect against tampering, the auxiliary release is sealed with sealing lacquer.


Functional drawings




2131

Connection examples



 Door monitoring

 Solenoid monitoring

Műszaki adatok

Approvals



Electrical connection values

Power consumption	8 W
Connection cross section	0.34 ... 1.5 mm ²
Rated insulation voltage U _i	250 V
Rated impulse withstand voltage U _{imp}	2.5 kV
Utilization category	
	AC-15 4 A 230 V
	DC-13 4 A 24 V
Short circuit protection according to IEC 60269-1	4A gG
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 _{th}	4 A

Mechanical values and environment

Approach speed	max. 20 m/min
Connection type	
	3 x M20 x 1.5
Number of door position NC contacts	1
Number of guard lock monitoring 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
Mechanical life	1 x 10 ⁶
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 _D	Mission time
Monitoring of the guard position	3x10 ⁶	20 y
	Important! Values valid at DC-13 100 mA/24V	
Monitoring of guard locking	3x10 ⁶	20 y
	Important! Values valid at DC-13 100 mA/24V	

In combination with actuator ACTUATOR-P-GT

Horizontal overtravel	2 mm
Vertical overtravel	1.5 mm

In combination with actuator ACTUATOR-P-GNT

Horizontal overtravel	7 mm
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Tartozékok

Actuator

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



074576
BETAETIGER-P-GNT

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



074570
BETAETIGER-P-GN

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

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



074577
BETAETIGER-P-WNT

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



074571
BETAETIGER-P-WN

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

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

Bolt

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



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



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



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 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

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



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 accessories

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

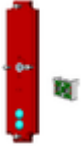
- ▶ suitable for all wire front releases

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



086236

AE-K-A1-IULK1-86236

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



084177

AE-K-A1-DULK1-84177

▶ Lock unique 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)



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)



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)



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)



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)



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)



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)

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