

CTP-L1-AP-U-HA-AZ-SH-123364 (ORDER NO. 123364)

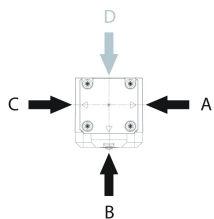
Transponder-coded safety switch CTP-AP, M23

- ▶ Safety switch with guard locking and integrated evaluation electronics
- ▶ Short circuit monitoring
- ▶ 2 safety outputs (semiconductor outputs)
- ▶ Up to category 4 / PL e according to EN ISO 13849-1
- ▶ With plug connector M23
- ▶ Unicode
- ▶ Door monitoring output
- ▶ Approach directions A, B and C (delivery state)



Description

Approach direction



Horizontal

Can be adjusted in 90° steps

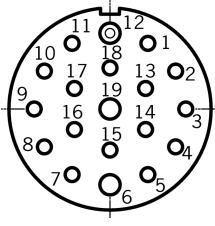
Unicode evaluation

Each actuator is highly coded (unicode). The switch detects only taught-in actuators. Additional actuators can be taught-in. Only the last actuator taught-in is detected.

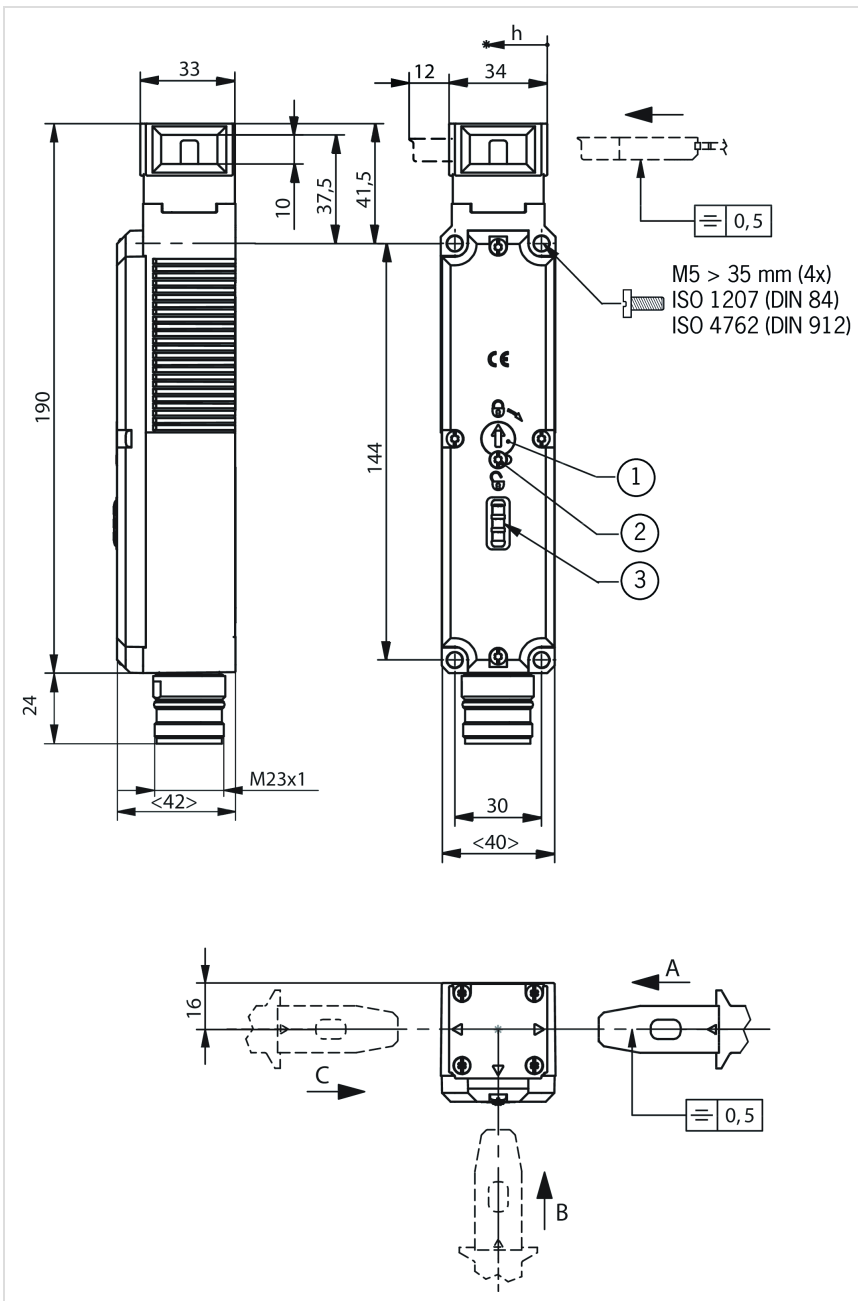
Guard locking type

CTP-L1 Guard locking actuated by spring force and power-ON released (closed-circuit current principle).

Connector assignment

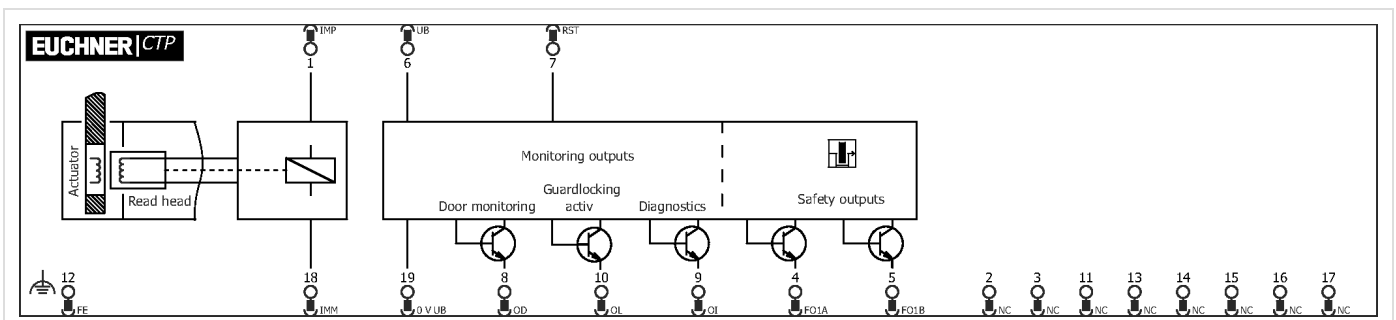
Plug connector (view of connection side)	Pin	Designation	Function	Conductor coloring of connecting cable
	1	IMP	Operating voltage of guard locking solenoid, 24 V DC	VT
	2	-	n.c.	RD
	3	-	n.c.	GY
	4	FO1A	Safety output, channel 1	RD/BU
	5	FO1B	Safety output, channel 2	GN
	6	UB	Operating voltage of AP electronics, 24 V DC	BU
	7	RST	Reset input	GY/PK
	8	OD	Door monitoring output	GN/WH
	9	OI	Diagnostic output	YE/WH
	10	OL	Guard lock monitoring output	GY/WH
	11	-	n.c.	BK
	12	FE	Function earth (must be connected to meet the EMC requirements)	GN/YE
	13	-	n.c.	PK
	14	-	n.c.	BN/GY
	15	-	n.c.	BN/YE
	16	-	n.c.	BN/GN
	17	-	n.c.	WH
	18	IMM	Operating voltage of guard locking solenoid, 0 V	YE
	19	0 V UB	Operating voltage of AP electronics, 0 V	BN

Dimension drawings



- 1 Auxiliary release
- 2 Locking screw
- 3 LEDs

Connection examples



Technical data

Approvals



Work area

Repeat accuracy R

according to EN 60947-5-2 10 %

Electrical connection ratings

Current consumption	
	IUB 40 mA
	IIMP 400 mA
Degree of contamination (external, according to EN 60947-1)	3
EMC protection requirements	according to EN IEC 60947-5-3
Fusing	
external (solenoid operating voltage IMP)	0.5 ... 8 A
external (operating voltage UB)	0.25 ... 8 A
Operating voltage DC	
	UUB 24 V DC -15% ... +15% reverse polarity protected, regulated, residual ripple < 5%, PELV
Power consumption	6 W
Rated impulse withstand voltage U_{imp}	0.5 kV
Rated insulation voltage U_i	50 V
Safety class	
	EN IEC 61140 III
Solenoid duty cycle	100 %
Solenoid operating voltage DC	
	UIMP 24 V DC -15% ... +10% reverse polarity protected, regulated, residual ripple < 5%, PELV
Switching load	
	according to UL 24V DC, Class 2 (alternatively, see operating instructions)
Test pulse interval	min. 100 ms
Test pulses	max. 0.3 ms (Applies to a load with $C \leq 30$ nF and $R \leq 20$ kohm)
Utilization category	
	DC-13 24V 150mA (Caution: outputs must be protected with a free-wheeling diode in case of inductive loads)
Monitoring output OD, OI, OL	
Output type	p-switching, short circuit-proof
Output voltage	0.8xUB ... UB V DC
Switching current	1 ... 50 mA
Safety outputs FO1A / FO1B	
Discrepancy time	
	both safety outputs max. 10 ms according to EN IEC 60947-5-3
Off-state current I_r	max. 0.25 mA
Output type	2 semiconductor outputs, p-switching, short circuit-proof
Output voltage	
	HIGH U(FO1A) / U(FO1B) UB-1.5 ... UB V DC
	LOW U(FO1A) / U(FO1B) 0 ... 1 V DC
Switching current	
	per safety output FO1A / FO1B 1 ... 150 mA
Turn-on time	max. 400 ms

Mechanical values and environment

Actuating force	10 N
Ambient temperature	at UB = 24V DC -20 ... +55 °C
Approach speed	max. 20 m/min
Connection	1 plug connector M23, 19-pin, RC18
Degree of protection	IP67 (screwed tight plug connector/mating component)
Extraction force	20 N
Guard locking principle	Closed-circuit current principle
Installation orientation	any
Locking force F_{max}	3900 N
Locking force F_{Zh}	3000 N ($F_{Zh} = F_{max}/1.3$, depending on the actuator used)
Material	
	Switch head cover Die-cast zinc
	Safety switch housing reinforced thermoplastic
Mechanical life	1×10^6
Overtravel	5 mm
Ready delay	max. 1 s
Retention force	20 N
Shock and vibration resistance	according to EN 60947-5-3
Switching frequency	max. 0.5 Hz

Reliability values according to EN ISO 13849-1

Category	4
Mission time	20 y
Performance Level	PL e
PFHd	4.1×10^{-9}

Miscellaneous

The following applies to the approval according to UL Operation only with UL Class 2 power supply or equivalent measures; see operating instructions

Accessories

Actuator

Bent actuator for safety switch CTP/CTA



122667
A-C-H-W-SST-122667

- ▶ Actuator bent at top
- ▶ Two safety screws included



122668
A-C-H-W-SST-122668

- ▶ Bent actuator, bottom
- ▶ Two safety screws included

Hinged actuator for safety switch CTP/CTA



122675
A-C-H-RO-LS-122675

- ▶ Hinged actuator for top-hinged doors
- ▶ Two safety screws included



122671
A-C-H-RL-LS-122671

- ▶ Hinged actuator for doors hinged on the left
- ▶ Two safety screws included



122672
A-C-H-RR-LS-122672

- ▶ Hinged actuator for doors hinged on the right
- ▶ Two safety screws included



122676
A-C-H-RU-LS-122676

- ▶ Hinged actuator for bottom-hinged doors
- ▶ Two safety screws included

Straight actuator for safety switch CTP/CTA



126015
A-C-H-G-SST-126015

- ▶ Straight actuator
- ▶ Two safety screws included

Connection material

Connecting cable with plug connector M23 with option C1825, 1.5 m, angled



092906
C-M23F19-19XDIFPU01,5-MA-092906

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead
- ▶ Cores color-coded



092907
C-M23F19-19XDIFPU01,5-MA-092907

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 1.5 m, straight



092761
C-M23F19-19XDIFPU01,5-MA-092761

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 1.5 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 10 m, angled



092902
C-M23F19-19XDIFPU10,0-MA-092902

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead



092901
C-M23F19-19XDIFPU10,0-MA-092901

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 10 m, straight



092898
C-M23F19-19XDIFPU10,0-MA-092898

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 15 m, angled



085196
C-M23F19-19XDIFPU15,0-MA-085196

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead



077020
C-M23F19-19XDIFPU15,0-MA-077020

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 15 m, straight



077016
C-M23F19-19XDIFPU15,0-MA-077016

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 15 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 20 m, angled



092910
C-M23F19-19XDIFPU20,0-MA-092910

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead



092911
C-M23F19-19XDIFPU20,0-MA-092911

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 20 m, straight



092726
C-M23F19-19XDIFPU20,0-MA-092726

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 25 m, angled



092912
C-M23F19-19XDIFPU25,0-MA-092912

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead



092913
C-M23F19-19XDIFPU25,0-MA-092913

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 25 m, straight



092727
C-M23F19-19XDIFPU25,0-MA-092727

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 25 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 3 m, angled



092909
C-M23F19-19XDIFPU03,0-MA-092909

- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit A (right)
- ▶ PUR cable
- ▶ Cable length 3 m
- ▶ With flying lead



092908
C-M23F19-19XDIFPU03,0-MA-092908

- ▶ Cores color-coded
- ▶ M23 plug connector, 18-pin + PE
- ▶ Angled plug connector
- ▶ Cable exit C (left)
- ▶ PUR cable
- ▶ Cable length 3 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 3 m, straight



092816
C-M23F19-19XDIFPU03,0-MA-092816

- M23 plug connector, 18-pin + PE
- Straight plug connector
- PUR cable
- Cable length 3 m
- With flying lead
- Cores color-coded

Connecting cable with plug connector M23 with option C1825, 30 m, straight



095993
C-M23F19-19XDIFPU30,0-MA-095993

- M23 plug connector, 18-pin + PE
- Straight plug connector
- PUR cable
- Cable length 30 m
- With flying lead
- Cores color-coded

Connecting cable with plug connector M23 with option C1825, 40 m, straight



102490
C-M23F19-19XDIFPU40,0-MA-102490

- M23 plug connector, 18-pin + PE
- Straight plug connector
- PUR cable
- Cable length 40 m
- With flying lead
- Cores color-coded

Connecting cable with plug connector M23 with option C1825, 6 m, angled



085194
C-M23F19-19XDIFPU06,0-MA-085194

- M23 plug connector, 18-pin + PE
- Angled plug connector
- Cable exit A (right)
- PUR cable
- Cable length 6 m
- With flying lead



077018
C-M23F19-19XDIFPU06,0-MA-077018

- Cores color-coded
- M23 plug connector, 18-pin + PE
- Angled plug connector
- Cable exit C (left)
- PUR cable
- Cable length 6 m
- With flying lead
- Cores color-coded

Connecting cable with plug connector M23 with option C1825, 6 m, straight



077014
C-M23F19-19XDIFPU06,0-MA-077014

- M23 plug connector, 18-pin + PE
- Straight plug connector
- PUR cable
- Cable length 6 m
- With flying lead
- Cores color-coded

Connecting cable with plug connector M23 with option C1825, 8 m, angled



077019
C-M23F19-19XDIFPU08,0-MA-077019

- RC18 plug connector, 18-pin + PE
- Angled plug connector
- Cable exit C (left)
- PUR cable
- Cable length 8 m
- With flying lead



085195
C-M23F19-19XDIFPU08,0-MA-085195

- Cores color-coded
- M23 plug connector, 18-pin + PE
- Angled plug connector
- Cable exit A (right)
- PUR cable
- Cable length 8 m

- ▶ Cable length 8 m
- ▶ With flying lead
- ▶ Cores color-coded

Connecting cable with plug connector M23 with option C1825, 8 m, straight



077015
C-M23F19-19XDIFPU08,0-MA-077015

- ▶ M23 plug connector, 18-pin + PE
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 8 m
- ▶ With flying lead
- ▶ Cores color-coded

Female plug RC18, angled, with option C1825



077026
RC18WF-C1825

- ▶ Plug connector M23, angled
- ▶ Number of pins: 19-pin with shield spring

Female plug RC18, straight



074616
RC18EF

- ▶ Plug connector M23, straight
- ▶ Number of pins: 19-pin with shield spring

Female plug RC18, straight, with option C1825



077025
RC18EF-C1825

- ▶ Plug connector M23, straight
- ▶ Number of pins: 19-pin with shield spring

Replacement crimp contacts for female plug RC18

094309
CRIMPKONTAKT BUCHSE RCF

- ▶ 19 crimp sockets
- ▶ Conductor cross-section 19 x 0.75 - 1 mm²
- ▶ For plug connector RC18

Replacement crimp contacts for female plug RC18 with option C1825

094310
CRIMPKONTAKT BUCHSE RCF-C1825

- ▶ 19 crimp sockets
- ▶ Conductor cross-section 16 x 0.25 - 0.5 mm² and 3 x 0.75 - 1 mm²
- ▶ For plug connector RC18..C1825

Function expansion

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



099877
AE-M-A1-99877

Handle for wire front release (bowden)



099795
AY-HDL-099795

- ▶ suitable for all wire front releases



124204
Y-HDL-124204

- ▶ suitable for all wire front releases

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



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



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

Lockout bar CTP/CTA



123411
AE-L-C-H-123411

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

Release with automatic reset for safety switch CTP/CTA/TP/STP/MGB/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)



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)



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)



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)



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)

Metal bolt

Bolt BTC-CTP-S for safety switches CTP, CTA



123659
BTC-CTP-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 switch CTP, CTA

123653
RIEGEL CTP-AC-123653

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

137354
RIEGEL CTP-AC-C2308-137354

- ▶ Steel bolt
- ▶ For doors hinged on the right and left
- ▶ Can be locked in open position with padlocks
- ▶ Actuator included
- ▶ Bolt without door stop, suitable for swing doors

Mounting accessories

Efficient protection against tampering for safety switch mounting



161344
AM-C-SW4-V3-161344

- ▶ Plastic inserts for hexagon socket screws a/f 4
- ▶ Efficient protection against tampering for safety switch mounting
- ▶ The packaging includes inserts for 18 screws



161348
AM-C-SW5-V3-161348

- ▶ Plastic inserts for hexagon socket screws a/f 5
- ▶ Efficient protection against tampering for safety switch mounting
- ▶ The packaging includes inserts for 18 screws

Mounting plates AM-P for safety switch CTP/CTA



126026
AM-P-126026

- ▶ For vertical and horizontal mounting of safety switch CTP/CTA

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

Plastic bolt


Bolt CTP-GFK for safety switch CTP





123657
RIEGEL CTP-GFK


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

Contacts

 EUCHNER GmbH + Co. KG
Kohlhammerstraße 16
70771 Leinfelden-Echterdingen

 +49 711 7597-0

 +49 711 753316

 [info\(at\)euchner.de](mailto:info(at)euchner.de)