

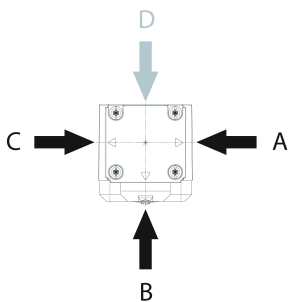
CTP-L1-AP-U-HA-AZ-SA-124225 (Order no. 124225)

Transponder-coded safety switch CTP-AP, M12

- ▶ 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 M12
- ▶ Unicode
- ▶ Door monitoring output
- ▶ Approach directions A, B and C (delivery state)



Approach direction



Horizontal

Can be adjusted in 90° steps

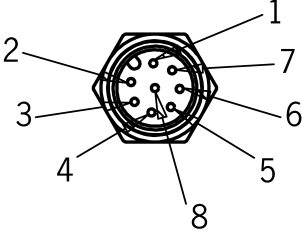
Unicode evaluation

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.

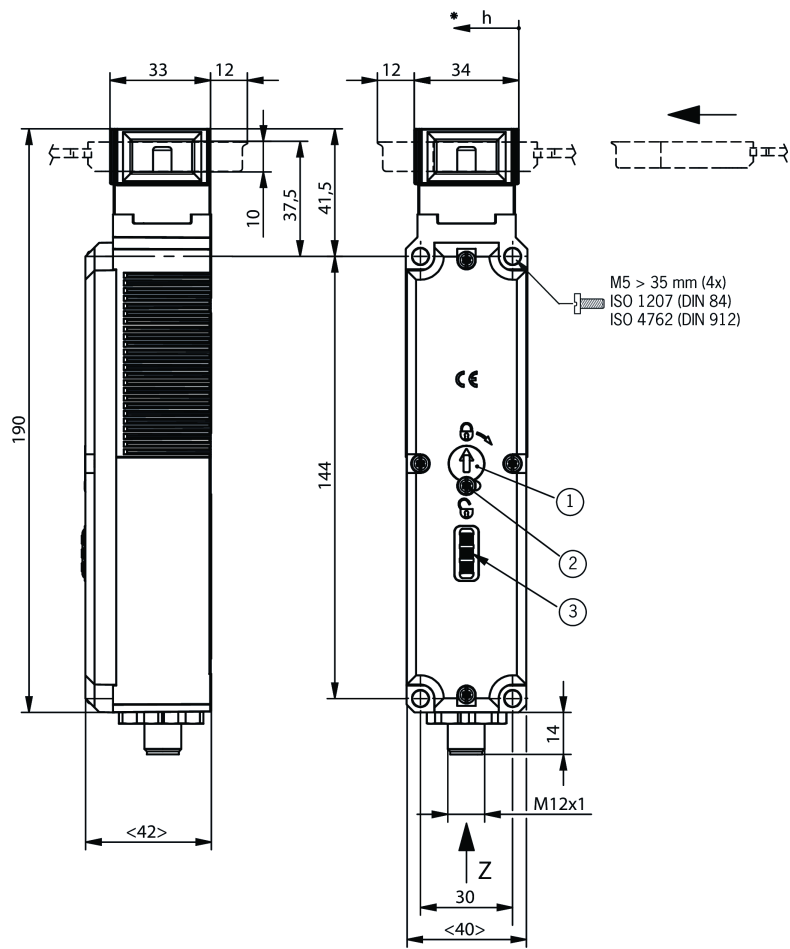
Guard locking type

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

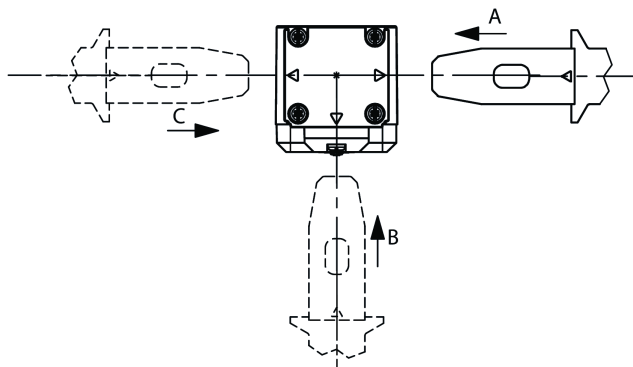
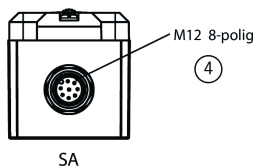
Connector assignment

Plug connector (view of connection side)	Pin	Designation	Function	Connecting cable conductor coloring
	1	IMP	Operating voltage of guard locking solenoid, 24 V DC	WH
	2	UB	Operating voltage of AP electronics, 24 V DC	BN
	3	FO1A	Safety output, channel 1	GN
	4	FO1B	Safety output, channel 2	YE
	5	OI	Diagnostic output	GY
	6	OD	Door monitoring output	PK
	7	0 V UB	AP electronics operating voltage, 0 V	BU
	8	IMM	Guard locking solenoid operating voltage, 0 V	RD

Dimensional drawings

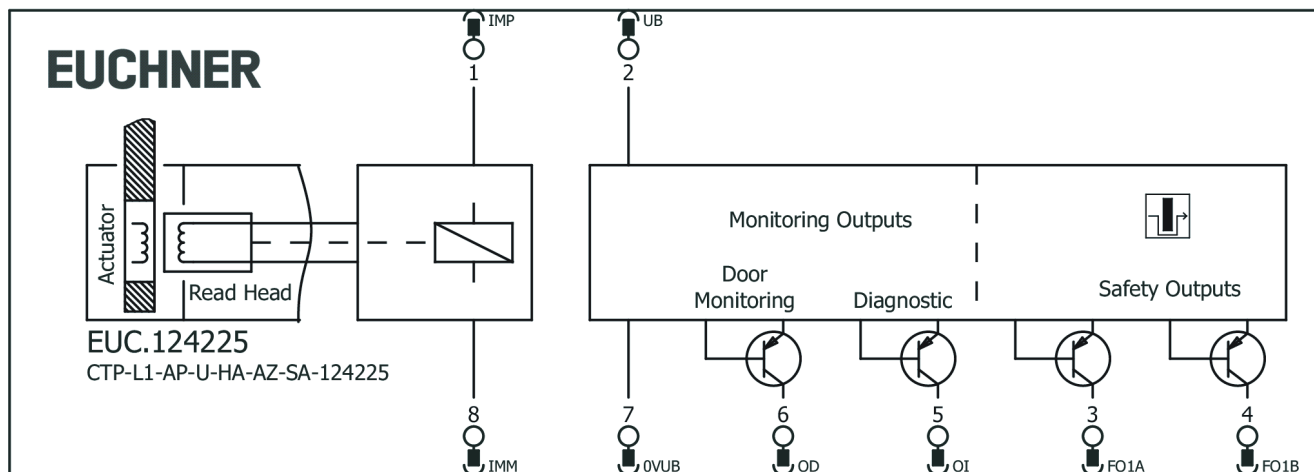


Ansicht Z



- 1 Auxiliary release
- 2 Locking screw
- 3 LEDs
- 4 Plug connector aligned

Connection examples



Technical data

Approvals



Workspace

Repeat accuracy R	10 %
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Electrical connection values

Fuse	
external (solenoid operating voltage IMP)	0.5 ... 8 A
external (operating voltage UB)	0.25 ... 8 A
Power consumption	6 W
Rated insulation voltage U_i	50 V
Rated impulse voltage U_{imp}	0.5 kV
Operating voltage DC	
U_{UB}	24 V DC -15% ... +15% reverse polarity protected, regulated, residual ripple<5%, PELV
EMC protection requirements	Acc. to EN IEC 60947-5-3
Utilization category	
DC-13	24V 150mA (Caution: outputs must be protected with a free-wheeling diode in case of inductive loads)
Solenoid operating voltage DC	
U_{IMP}	24 V DC -15% ... +10% reverse polarity protected, regulated, residual ripple<5%, PELV
Solenoid duty cycle	100 %
Switching load	
according to UL	24V DC, Class 2 (alternatively, see operating instructions)
Safety class	III

Current consumption

I_{UB}	40 mA
I_{IMP}	400 mA

Test pulse duration	max. 0.3 ms (Applies to a load with $C \leq 30\text{nF}$ and $R \leq 20\text{k}\Omega$)
Test pulse interval	min. 100 ms
Degree of contamination (external, according to EN 60947-1)	3

Monitoring output OD, OI

Output type	p-switching, short circuit-proof
Output voltage	$0.8 \times U_B \dots U_B \text{ V DC}$
Switching current	1 ... 50 mA

Safety outputs FO1A/FO1B

Output type	2 semiconductor outputs, p-switching, short circuit-proof
Output voltage	
HIGH $U(\text{FO1A}) / U(\text{FO1B})$	$U_B - 1.5 \dots U_B \text{ V DC}$
LOW $U(\text{FO1A}) / U(\text{FO1B})$	0 ... 1 V DC
Discrepancy time	
both safety outputs	max. 10 ms Acc. to EN IEC 60947-5-3
Turn-on time	max. 400 ms
Off-state current I_r	max. 0.25 mA
Switching current	
per safety output FO1A / FO1B	1 ... 150 mA

Mechanical values and environment

Anfahrsgeschwindigkeit	max. 20 m/min
Connection type	1 plug connector M12, 8-pin
Extraction force	20 N
Ready delay	max. 1 s
Actuating force	10 N
Installation orientation	any
Switching frequency	max. 0.5 Hz
Storage temperature	-25 ... 70 °C

Mechanical life	1 x 10 ⁶
Overtravel	5 mm
Retention force	20 N
Shock and vibration resistance	Acc. to EN IEC 60947-5-3
Degree of protection	IP67/IP69/IP69K (In the inserted and screwed tight state)

Ambient temperature

at U_B = 24 V DC -20 ... 55 °C

Material	
Switch head cover	Die-cast zinc
Safety switch housing	Reinforced thermoplastic
Locking force F _{max}	3900 N
Locking force F _{Zh}	3000 N (F _{zh} = F _{max} /1.3, depending on the actuator used)
Guard locking principle	Closed-circuit current principle

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

	PL	Maximum SIL	PFH _D	Category	Mission time
Monitoring of guard locking	PL e	-	4.1x10 ⁻⁹	4	20 y

	PL	Maximum SIL	Category	Mission time
Control of guard locking	Depending on external control of guard locking			20 y

Miscellaneous

Notices for UL approval	Operation only with UL Class 2 power supply or equivalent measures; see operating instructions
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Downloads

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

<https://www.euchner.de/en-us/a/124225/?#downloads-tab>

Ordering data

Ordernumber	124225
Item designation	CTP-L1-AP-U-HA-AZ-SA-124225
Gross weight	0,576kg
Customs tariff number	85365019000
ECLASS	27-27-24-05 Safety-related transponder switch with guardlocking

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



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



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

- ▶ Hinged actuator for top-hinged doors
- ▶ 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 angled plug connector M12, 8-pin, 10 m



113188
C-M12F08-08X025PU10,0-MA-113188

- ▶ M12 female plug, 8-pin
- ▶ Angled plug connector
- ▶ Cable outlet A (right)
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead



113189
C-M12F08-08X025PU10,0-MA-113189

- ▶ M12 female plug, 8-pin
- ▶ Angled plug connector
- ▶ Cable outlet C (left)
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead

Connecting cable with angled plug connector M12, 8-pin, 20 m



120998

C-M12F08-08X025PU20,0-MA-120998

- ▶ M12 female plug, 8-pin
- ▶ Angled plug connector
- ▶ Cable outlet A (right)
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead



120999

C-M12F08-08X025PU20,0-MA-120999

- ▶ M12 female plug, 8-pin
- ▶ Angled plug connector
- ▶ Cable outlet C (left)
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead

Connecting cable with plug connector M12, 8-pin, 10 m



100178

C-M12F08-08X025PV10,0-MA-100178

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 10 m
- ▶ With flying lead



115113

C-M12F08-08X025PU10,0-MA-115113

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 10 m
- ▶ With flying lead

Connecting cable with plug connector M12, 8-pin, 20 m



100179

C-M12F08-08X025PV20,0-MA-100179

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 20 m
- ▶ With flying lead



115114

C-M12F08-08X025PU20,0-MA-115114

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 20 m
- ▶ With flying lead

Connecting cable with plug connector M12, 8-pin, 30 m



115116

C-M12F08-08X025PV30,0-MA-115116

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 30 m
- ▶ With flying lead



115257

C-M12F08-08X025PU30,0-MA-115257

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 30 m
- ▶ With flying lead

Connecting cable with plug connector M12, 8-pin, 5 m



100177

C-M12F08-08X025PV05,0-MA-100177

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PVC cable
- ▶ Cable length 5 m
- ▶ With flying lead



115112

C-M12F08-08X025PU05,0-MA-115112

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PUR cable
- ▶ Cable length 5 m
- ▶ With flying lead

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

AY-HDL-124204

- ▶ suitable for all wire front releases

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 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/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-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