

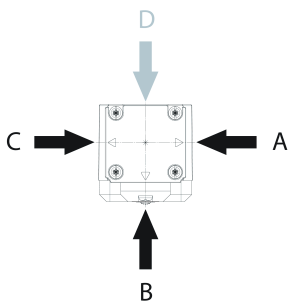
CTP-L1-AP-U-HA-AZ-SA-EX-129512 (Order no. 129512)

Transponder-coded safety switch CTP-AP, M12, ATEX

- ▶ ATEX version
- ▶ Suitable for use in zones 2 and 22 (gases and dusts)
- ▶ 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 OD
- ▶ Diagnostics output OI
- ▶ Approach directions A, B and C (delivery state)



Approach direction



Horizontal

Can be adjusted in 90° steps

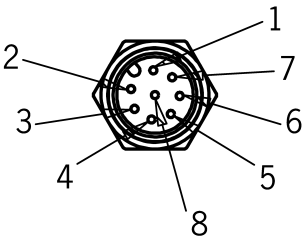
Unicode evaluation

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.

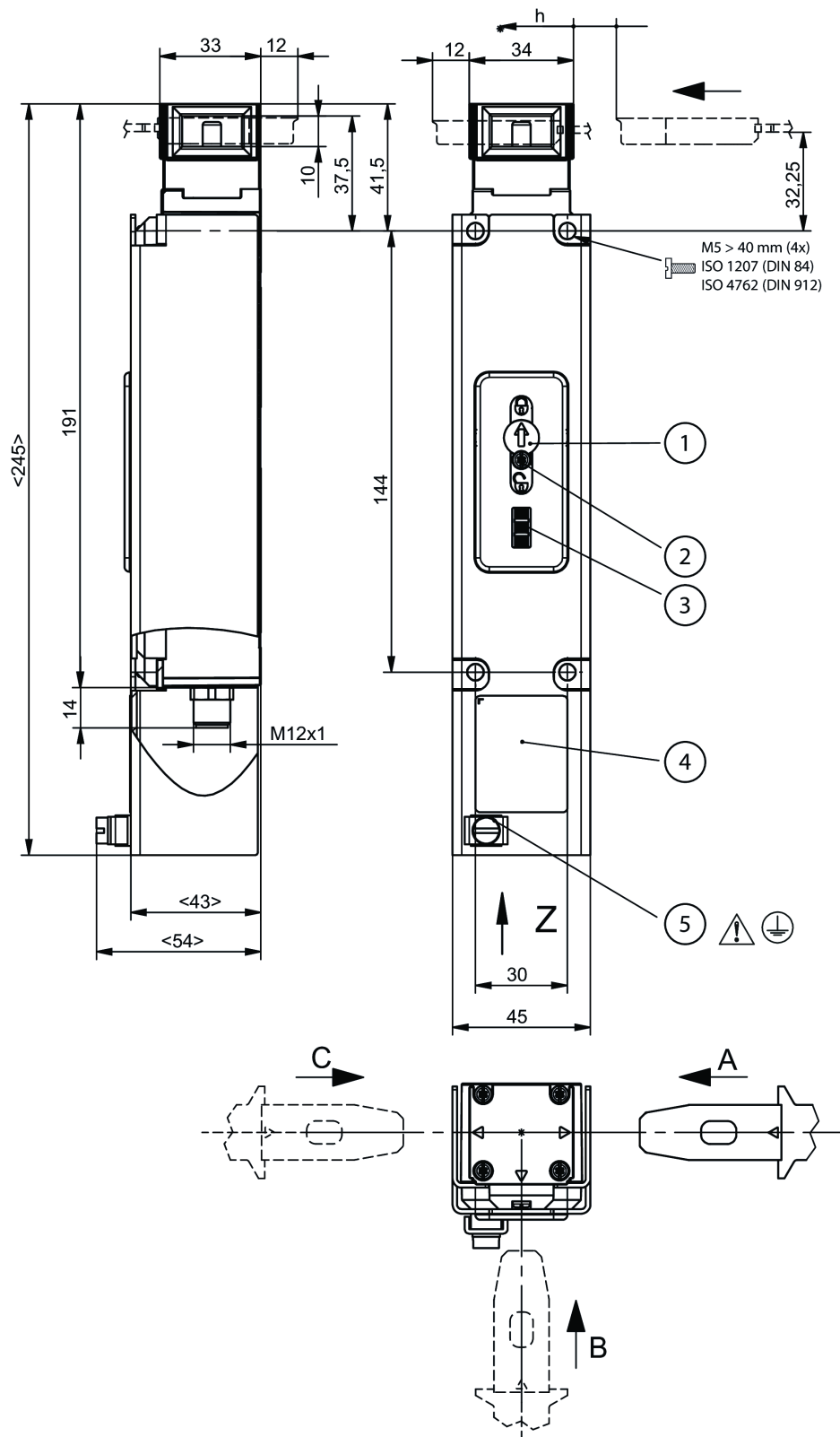
Guard locking type

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

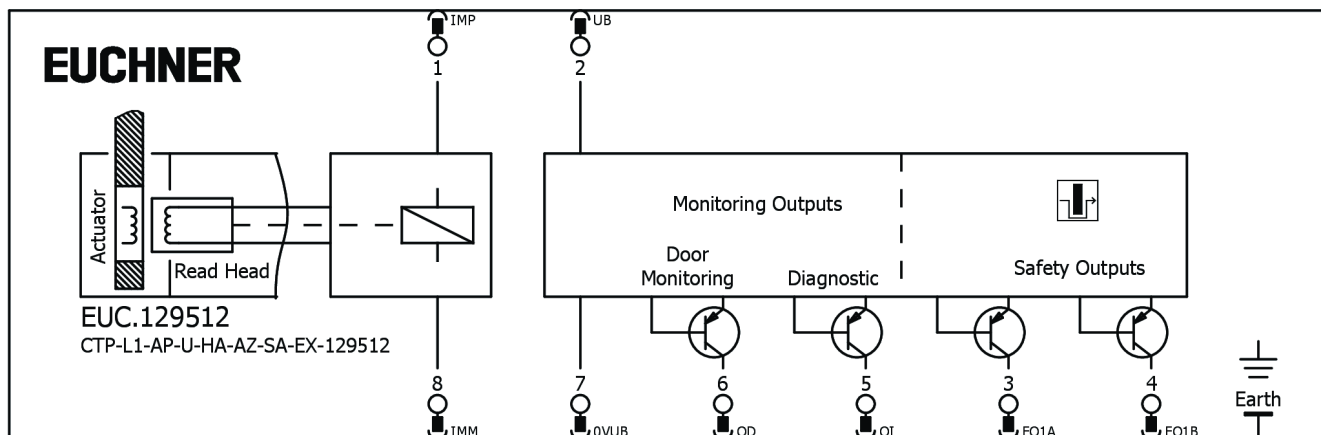
Dimensional drawings



- 1 Auxiliary release
- 2 Locking screw
- 3 LEDs
- 4 Protective plate
- 5

Grounding terminal – for preventing electrostatic charging. Ground switch via cable. Cable cross-section 4...6 mm²

Connection examples



Technical data

Approvals



Workspace

Repeat accuracy R

according to EN 60947-5-2 10 %

Electrical connection values

Fuse

external (operating voltage U_B) 0.25 ... 8 A

external (solenoid operating voltage
IMP) 0.5 ... 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 24 V 150 mA

(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_{IMP} 400 mA

I_{UB} 40 mA

Test pulse duration max. 0.3 ms
(Applies to a load with $C \leq 30$ nF and $R \leq 20$ kohm)

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 $0.8 \times U_B \dots U_B$ V DC

Switching current 1 ... 50 mA

Safety outputs FO1A / FO1B

Output type 2 semiconductor outputs, p-switching, short circuit-proof

Output voltage

LOW $U(FO1A) / U(FO1B)$ 0 ... 1 V DC

HIGH $U(FO1A) / U(FO1B)$ $U_B - 1.5 \dots U_B$ 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

Approach speed 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

Mechanical life 1×10^6

Overtravel	5 mm
Retention force	20 N
Shock and vibration resistance	Acc. to EN IEC 60947-5-3
Degree of protection	IP65/IP66 (When inserted and secured)
Ambient temperature	
with $U_B = 24 \text{ V DC}$	-20 ... +55 °C

Material

Safety switch housing	Reinforced thermoplastic
Switch head cover	Die-cast zinc

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	-	4.1×10^{-9}	4	20 y

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

Miscellaneous

Explosion protection in accordance with ATEX Directive 2024/34/EU	II3G Ex ec IIC T4 Gc X / II3D Ex tc IIIC T110°C Dc X
Notices for UL approval	Operation only with UL Class 2 power supply or equivalent measures; see operating instructions

Downloads

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

<https://www.euchner.de/en-us/a/129512/?#downloads-tab>

Ordering data

Ordernumber	129512
Item designation	CTP-L1-AP-U-HA-AZ-SA-EX-129512
Gross weight	0,99kg
Customs tariff number	85365019000
ECLASS	27-27-24-05 Safety-related transponder switch with guardlocking

Accessories

Actuator

Hinged actuator for safety switch CTP-EX, ATEX



166340
A-C-H-RL-LS-EX-166340

- ▶ Hinged actuator for doors hinged on the left
- ▶ ATEX version
- ▶ Suitable for use in zones 2 and 22 (gases and dusts)
- ▶ Two safety screws included



166341
A-C-H-RR-LS-EX-166341

- ▶ Hinged actuator for doors hinged on the right
- ▶ ATEX version
- ▶ Suitable for use in zones 2 and 22 (gases and dusts)
- ▶ Two safety screws included

Straight actuator for safety switch CTP-EX, ATEX



136826
A-C-H-G-LS-EX-136826

- ▶ ATEX version
- ▶ Suitable for use in zones 2 and 22 (gases and dusts)
- ▶ Straight actuator
- ▶ Two safety screws included

Connection material

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

Lockout bar CTP/CTA



123411

AE-L-C-H-123411

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

Metal bolt

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

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