

CTP-I-AP-U-HA-ZZ-SA-136732 (ORDER NO. 136732)

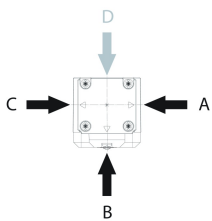
Transponder-coded safety switch CTP-I-AP, M12

- ▶ Safety switch without guard locking, with 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
- ▶ Approach directions A, B and C (delivery state)



Description

Approach direction



Horizontal

Can be adjusted in 90° steps

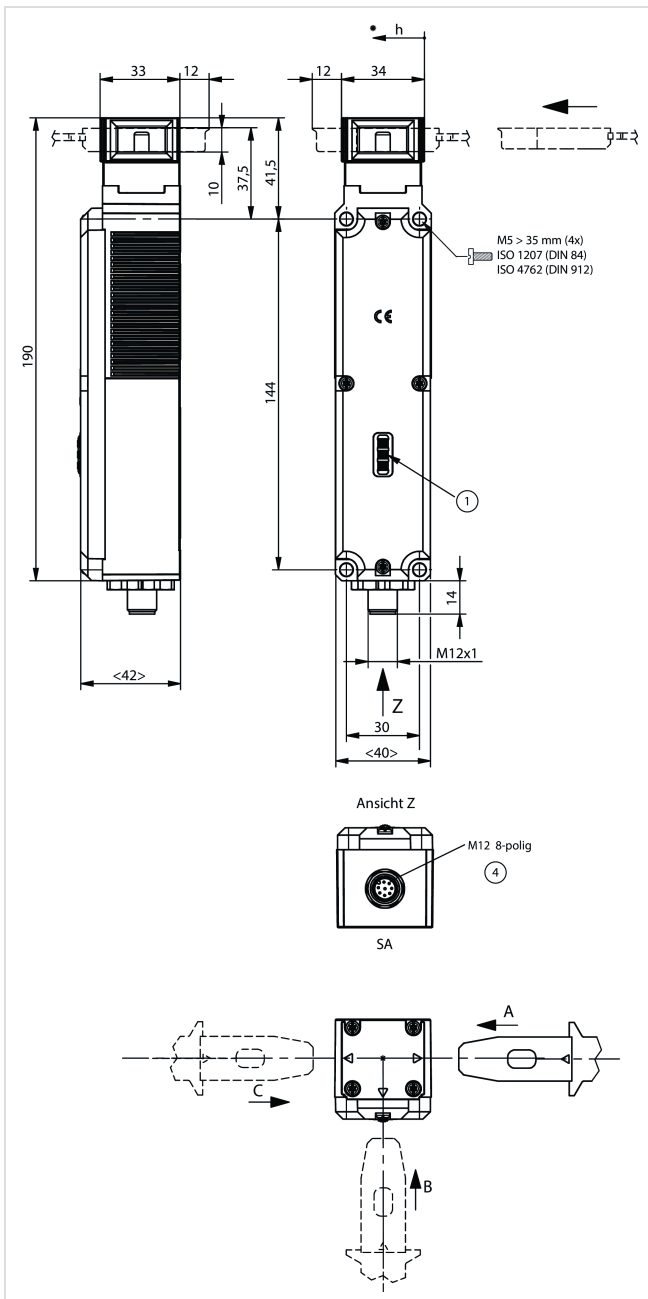
Unicode evaluation

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.

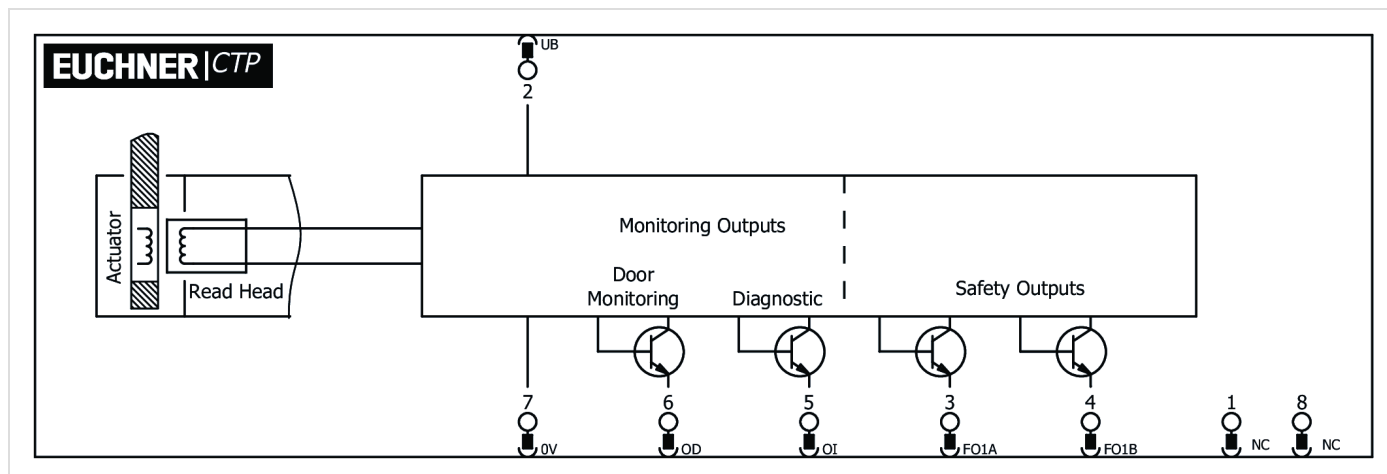
Connector assignment

Plug connector (view of connection side)	Pin	Designation	Function	Connecting cable conductor coloring
	1	n.c.	-	-
	2	UB	Operating voltage of AP electronics, 24 V DC	BN
	3	F01A	Safety output, channel 1	GN
	4	F01B	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	n.c.	-	-

Dimension drawings



Connection examples



Technical data

Approvals



Work area

Repeat accuracy R

according to EN 60947-5-2 10 %

Electrical connection ratings

Current consumption

	I_{UB}	40 mA
Fusing		
	external (operating voltage U_B)	0.25 ... 8 A
Rated insulation voltage U_i		
		50 V
Operating voltage DC		
	U_{UB}	24 V DC -15% ... +15% reverse polarity protected, regulated, residual ripple < 5%, PELV
EMC protection requirements		
		according to EN IEC 60947-5-3
Power consumption		
		1 W
Rated impulse withstand voltage U_{imp}		
		0.5 kV
Safety class		
	EN IEC 61140	III
Utilization category		
	DC-13	24V 150mA (Caution: outputs must be protected with a free-wheeling diode in case of inductive loads)
Switching load		
	according to UL	24V DC, Class 2 (alternatively, see operating instructions)
Test pulses		
		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		
		$0.8 \times U_B$... U_B V DC
Switching current		
		1 ... 50 mA
Safety outputs FO1A / FO1B		
Output type		
		2 semiconductor outputs, p-switching, short circuit-proof
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 voltage		
	LOW $U(FO1A)$ / $U(FO1B)$	0 ... 1 V DC
	HIGH $U(FO1A)$ / $U(FO1B)$	$U_B - 1.5$... U_B V DC
Switching current		
	per safety output FO1A / FO1B	1 ... 150 mA
Turn-on time		
		max. 400 ms

Mechanical values and environment

Ambient temperature

	at $U_B = 24V$ DC	-20 ... +55 °C
Approach speed		max. 20 m/min
Connection		1 plug connector M12, 8-pin
Degree of protection		IP67/IP69/IP69K (screwed tight plug connector/mating component)
Extraction force		20 N
Installation orientation		any
Material		
	Safety switch housing	reinforced thermoplastic
	Switch head cover	Die-cast zinc
Actuating force		10 N
Mechanical life		1 x 10 ⁶
Overtravel		5 mm
Ready delay		max. 1 s
Switching frequency		max. 0.5 Hz
Shock and vibration resistance		according to EN 60947-5-3

Reliability values according to EN ISO 13849-1

Performance Level		PL e
Mission time		20 y
Category		4
PFH _D		4.1 x 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
Detent mechanism	Snap-in bolt

Accessories

Actuator

Bent actuator for safety switch CTP/CTA



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

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



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

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

Hinged actuator for safety switch CTP/CTA



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



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

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, 10m



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

113188

- ▶ M12 female plug, 8-pin



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, 20m



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, 10m



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, 20m



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, 30m



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

- ▶ Cable length 5 m
- ▶ With flying lead

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



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

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



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

- ▶ M12 female plug, 8-pin
- ▶ Straight plug connector
- ▶ PVC 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 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



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



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

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

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