

ITEM 129477 CTP-L1-AP-U-HA-AZ-SII-129477

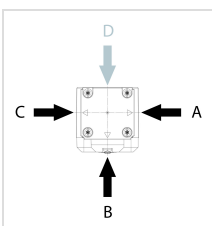
Description	Technical data	Accessories	Downloads
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Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Direct connection to decentralized peripheral systems (e.g. ET200pro)
- › Short circuit monitoring
- › 2 safety outputs (semiconductor outputs)
- › Up to category 4/PL e according to EN ISO 13849-1
- › With 2 plug connectors M12
- › Unicode
- › Door monitoring output
- › Approach direction A, B and C (default setting on delivery)

Approach direction



- › Figure
Horizontal
Can be adjusted in 90° steps

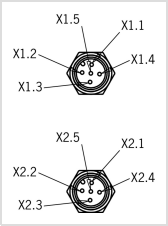


Unicode evaluation

Each actuator is unique. 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 applied and power-ON released (closed-circuit current principle)

Connector assignment

Plug connector (view of connection side)	Pin	Designation	Function	Conductor coloring of connection cable
	X 1.1	UB	Operating voltage of AP electronics, 24 V DC	BN
	X 1.2	FO1A	Safety output, channel 1 	WH
	X 1.3	0 V UB	Operating voltage of AP electronics, 0 V	BU
	X 1.4	FO1B	Safety output, channel 2 	BK
	X 1.5	-	Not used	GY
	X 2.1	-	Not used	BN
	X 2.2	OD	Door monitoring output	WH
	X 2.3	IMM	Control input of guard locking solenoid, 0 V	BU
	X 2.4	IMP	Guard locking solenoid control input, 24 V DC	BK
	X 2.5	-	Not used	GY

Approvals

Mechanical values and environment

Housing material	
Switch head cover	Die-cast zinc
Safety switch housing	Fiber glass reinforced thermoplastic
Weight	
Net	0,42 kg
Ambient temperature	
At $U_B = 24V DC$	-20 ... +55 °C
Degree of protection	IP67 / IP69 / IP69K [1]
Resilience to vibration	In acc. with EN IEC 60947-5-3
Mechanical life	1×10^6
Installation position	Any
Ready delay	max.1 s
Switching frequency	max.0,5 Hz
Connection	2 plug connectors M12, 5-pin + pin 5 not used
Approach speed	20 m/min
Guard locking principle	Closed-circuit current principle
Locking force F_{max}	3900 N
Locking force F_{Zh}	3000 N [2]
Retention force	20 N
Extraction force	20 N
Actuating force	10 N
Overtravel	5 mm

Electrical connection ratings

Test-pulse interval		min.100 ms
Test pulses		max.0,3 ms [3]
Operating voltage DC	U_{UB}	24 V DC -15% ... 15% Reverse polarity protected, regulated, residual ripple < 5%, PELV
Current consumption	I_{UB}	40 mA
	I_{IMP}	400 mA
Utilization category according to EN 60947-5-2	DC-13	24V 150mA [4]
Solenoid operating voltage DC	U_{IMP}	24 V DC -15% ... +10% Reverse polarity protected, regulated, residual ripple < 5%, PELV
Fusing		
External (operating voltage U_B)		0,25 ... 2 A

External (solenoid operating voltage IMP)	0,5 ... 8 A
Rated insulation voltage U_i	max.50 V
Rated impulse withstand voltage U_{imp}	max.0,5 kV
Power consumption	6 W
EMC protection requirements	In acc. with EN IEC 60947-5-3
Solenoid duty cycle	100 %
Degree of contamination (external, according to EN 60947-1)	3
Safety class EN IEC 61140	III
Switching load According to UL	24V DC, class 2 [5]
Safety outputs FO1A / FO1B	
Type of output	2 semiconductor outputs, p-switching, short circuit-proof
Switching current Per safety output FO1A / FO1B	1 ... 150 mA
Output voltage HIGH $U(FO1A) / U(FO1B)$	$U_B - 1,5 \dots U_B$ V DC
LOW $U(FO1A) / U(FO1B)$	0 ... 1 V DC
Off-state current I_r	max.0,25 mA
Switch-on time	max.400 ms
Discrepancy time Both safety outputs	In acc. with EN IEC 60947-5-3 max.10 ms
Monitoring output OD	
Type of output	p-switching, short circuit-proof
Switching current	1 ... 50 mA
Output voltage	$0,8 \times U_B \dots U_B$ V DC

Operating distance

Repeat accuracy R According to EN 60947-5-2	10 %
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Miscellaneous

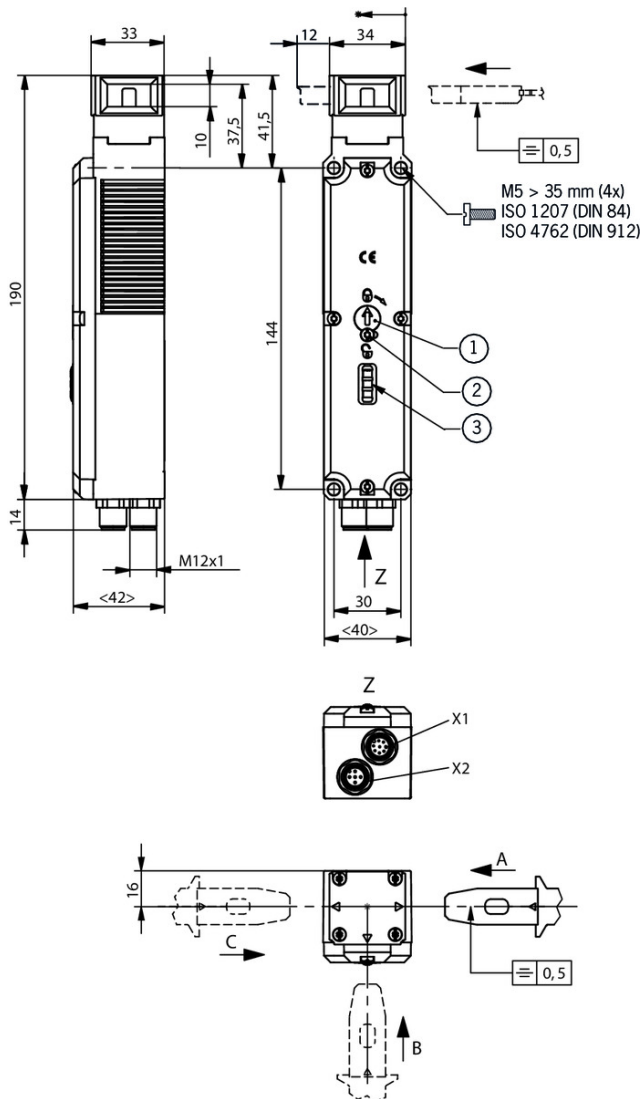
For the approval according to UL the following applies	Operation only with UL class 2 power supply, or equivalent measures see operating instructions
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Reliability values acc. to EN ISO 13849-1

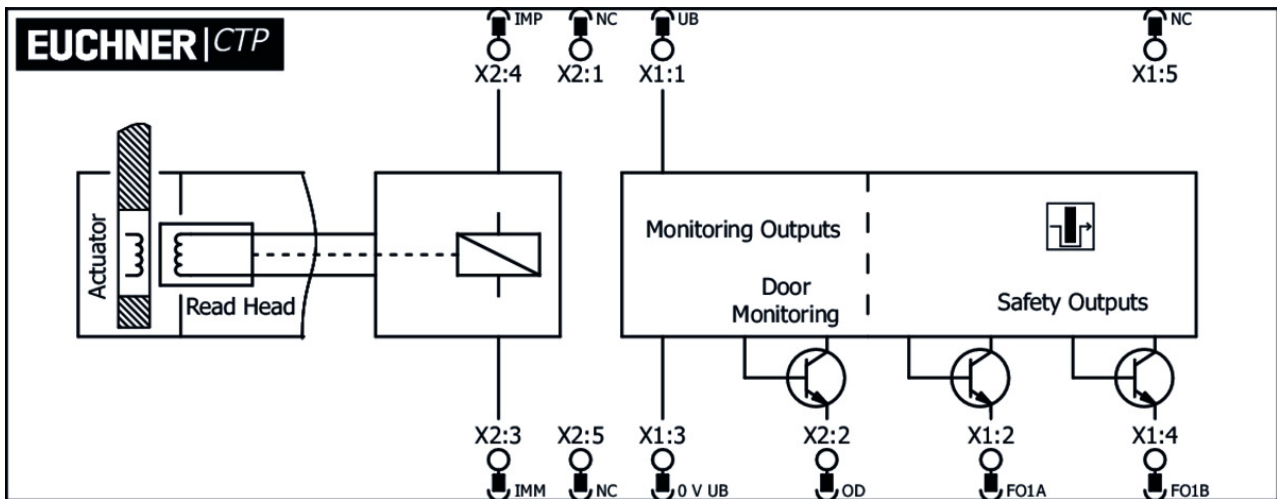
Performance Level	PL e
Category	4
PFH _D	4.1×10^{-9}
Mission time	20 y

- [1] Screwed tight plug connector/mating component
- [2] $F_{zh} = F_{max}/1.3$ Depending on the actuator used
- [3] Applies for a load with $C \leq 30nF$ and $R \leq 20k\Omega$
- [4] Caution: outputs must be protected with a free-wheeling diode in case of inductive loads
- [5] Alternatively see operating instructions

Dimension drawing



Wiring diagram



Actuator

✓ Bent actuator for safety switches CTP



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

✓ Features

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



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

✓ Features

- › Actuator bent at bottom
- › Two safety screws included

✓ Hinged actuator for safety switch CTP



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

✓ Features

- › Hinged actuator for doors hinged at the top
- › Two safety screws included



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

✓ Features

- › Hinged actuator for doors hinged at the bottom
- › Two safety screws included



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

✓ Features

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

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

✓ Features



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

▼ Straight actuator for safety switch CTP



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

- ▼ Features
- › Straight actuator
 - › Two safety screws included

Function expansion

▼ Lockout mechanism CTP



123411 AE-L-C-H-123411

- ▼ Features
- › Prevents unintentional closing of the door
 - › Can be secured with padlocks

▼ Lock for auxiliary release for safety switches CTP/TP/STP



109212 SCHLOSS TP GLEICHSCHLIESSEND C2293

- ▼ Features
- › Identical locking
 - › Key can be removed only in “locked” position



086236 SCHLOSS TP GLEICHSCHLIESSEND

- ▼ Features
- › Identical locking
 - › Key removable in “unlocked” and “locked” positions



084177 SCHLOSS TP VERSCHIEDENSCHLIESSEND

- ▼ Features
- › Lock unique locking
 - › Key removable in “unlocked” and “locked” positions

▼ Release with automatic reset for safety switches CTP/TP/STP



103110 ENTRIEGELUNG RUECKSTELLEND TP/STP

▼ Emergency unlocking for safety switches CTP/TP/STP



099877 NOTENTSPERRUNG TP/STP

▼ Wire front release



098314 AE-B-A1-04,0-098314

✓ Features

- › Can be used as escape release or emergency unlocking
- › No automatic return
- › Sheath length 4 m (rope length 6 m)



125582 AE-B-A1-06,0-125582

✓ Features

- › Can be used as escape release or emergency unlocking
- › No automatic return
- › Rope length 6 m (without sheath)



097747 AE-B-A1-02,0-F-097747

✓ Features

- › Can be used as escape release or emergency unlocking
- › automatic return
- › Sheath length 2 m (rope length 6 m)



124770 AE-B-A1-06,0-F-124770

✓ Features

- › Can be used as escape release or emergency unlocking
- › automatic return
- › Rope length 6 m (without sheath)



098313 AE-B-A1-03,0-098313

✓ Features

- › Can be used as escape release or emergency unlocking
- › No automatic return
- › Sheath length 3 m (rope length 6 m)



111233 AE-B-A1-03,0-F-111233

✓ Features

- › Can be used as escape release or emergency unlocking
- › automatic return
- › Sheath length 3 m (rope length 6 m)



096230 AE-B-A1-02,0-096230

✓ Features

- › Can be used as escape release or emergency unlocking
- › No automatic return
- › Sheath length 2 m (rope length 6 m)

✓ Handle for wire front release



099795 AY-HDL-099795

✓ Features

- › Suitable for all wire front releases

124204 AY-HDL-124204



- ✓ Features
 - › Suitable for all wire front releases

Mounting accessories

- ✓ Mounting plates EMP-SB for safety switches CTP, TP...A, STA, STP and TX



- 093456** EMP-SB
 - ✓ Features
 - › For vertical and horizontal mounting of safety switches TP...A, STA, STP and TX

-
- ✓ Mounting plates EMP-B2 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ



- 093458** EMP-B2

-
- ✓ Mounting plates EMP-B1 for actuators for safety switches CTP, TP...A, STA, STP, TX and TZ



- 093457** EMP-B1

-
- ✓ Mounting plates AM-P for safety switches CTP



- 126026** AM-P-126026
 - ✓ Features
 - › For vertical and horizontal mounting of safety switch CTP

Bolt

- ✓ Bolts for safety switches series CTP



- 123653** RIEGEL CTP-AC-123653
 - ✓ Features
 - › Steel bolt
 - › For doors hinged on right and left
 - › Can be locked in open position with padlocks
 - › Actuator included

-
- ✓ Bolt CTP-GFK for safety switch CTP



- 123657** RIEGEL CTP-GFK
 - ✓ Features
 - › Fiber glass reinforced plastic bolt
 - › For doors hinged on the left or right
 - › Can be locked in open position with padlocks
 - › Actuator included

▼ Bolt BTC-CTP-S for safety switch CTP



123659 BTC-CTP-S-TH-00-X

▼ Features

- › Aluminum bolt
 - › For doors hinged on the left or right
 - › Can be locked in open position with padlocks
 - › Actuator included
-

Connection material

▼ Connection cable with 2 plug connectors M12, 5-pin, 20m



119971 C-M12F05-05X034PU20,0-M12M05-119971

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PUR cable
 - › Cable length 20 m
-



100182 C-M12F05-05X034PV20,0-M12M05-100182

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PVC cable
 - › Cable length 20 m
-

▼ Connection cable with 2 plug connectors M12, 5-pin, 10m



119947 C-M12F05-05X034PU10,0-M12M05-119947

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PUR cable
 - › Cable length 10 m
-



100181 C-M12F05-05X034PV10,0-M12M05-100181

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PVC cable
 - › Cable length 10 m
-

▼ Connection cable with 2 plug connectors M12, 5-pin, 5m



119932 C-M12F05-05X034PU05,0-M12M05-119932

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
- › Straight female plug and plug connector
- › PUR cable
- › Cable length 5 m



100180 C-M12F05-05X034PV05,0-M12M05-100180

✓ Features

- › M12 female plug to M12 plug connector, 5-pin
- › Straight female plug and plug connector
- › PVC cable
- › Cable length 5 m

✓ Connection cable with angled plug connector M12, 5-pin, 10m



113187 C-M12F05-05X025PU10,0-MA-113187

✓ Features

- › M12 female plug, 5-pin
- › Angled plug connector
- › PUR cable
- › Cable length 10 m
- › Cable exit A (right)
- › With flying lead



113190 C-M12F05-05X025PU10,0-MA-113190

✓ Features

- › M12 female plug, 5-pin
- › Angled plug connector
- › PUR cable
- › Cable length 10 m
- › Cable exit C (left)
- › With flying lead

✓ M12 extension PUR 5-pin, plug connectors at both ends, 10m



115565 C-M12F05-05X025PU10,0-M12M05-115565

✓ Features

- › M12 female plug, 5-pin (angled) to M12 plug connector (straight)
- › Connectors at both ends
- › PUR cable
- › Cable length 10 m
- › With cable exit A (right)



115566 C-M12F05-05X025PU10,0-M12M05-115566

✓ Features

- › M12 female plug, 5-pin (angled) to M12 plug connector (straight)
- › Connectors at both ends
- › PUR cable
- › Cable length 10 m
- › With cable exit C (left)

✓ Connection cable with straight plug connector M12, 5-pin, 20 m



113682 C-M12F05-05X034PU20,0-MA-113682

✓ Features

- › M12 female plug, 5-pin
- › Straight plug connector

- › PUR cable
 - › Cable length 20 m
 - › With flying lead
-

▼ Connection cable with straight plug connector M12, 5-pin, 10m



113640 C-M12F05-05X034PU10,0-MA-113640

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PUR cable
 - › Cable length 10 m
 - › With flying lead
-

▼ Connection cable with straight plug connector M12, 5-pin, 5m



113620 C-M12F05-05X034PU05,0-MA-113620

▼ Features

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



100183 C-M12F05-05X034PV05,0-MA-100183

▼ Features

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

▼ Connection cable with plug connector M12, 5-pin, 10m



100184 C-M12F05-05X034PV10,0-MA-100184

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PVC cable
 - › Cable length 10 m
 - › With flying lead
-

▼ Connection cable with plug connector M12, 5-pin, 20m



100185 C-M12F05-05X034PV20,0-MA-100185

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PVC cable
 - › Cable length 20 m
 - › With flying lead
-

- Connection cable with straight plug connector M12, 5-pin, 30 m



122784 C-M12F05-05X034PU30,0-MA-122784

Features

- M12 female plug, 5-pin
- Straight plug connector
- PUR cable
- Cable length 30 m
- With flying lead

- Y-distributor M12 with connection cable, 5-pin



124516 AC-YD-V0,2-SBB-124516

Features

- Y-distributor M12 with connection cable, 5-pin
- Straight plug connector
- PVC cable
- Cable length 0.29 m





Instructions

- Bezpečnostní informace CTP (-AR/-AP)

	Doc. no.	Version	Language	Download
Sicherheitsinformation CTP (-AR/-AP)	2138087	02-11/17		0.7 MB
Información de seguridad CTP (-AR/-AP)				
Information de sécurité CTP (-AR/-AP)				
Informazioni sulla sicurezza CTP (-AR/-AP)				
Safety Information CTP (-AR/-AP)				
Bezpečnostní informace CTP (-AR/-AP)	2138087	02-11/17		0.2 MB
安全情報 CTP (-AR/-AP)	2138087	02-11/17		0.3 MB
Informação de segurança CTP (-AR/-AP)	2138087	02-11/17		0.2 MB
Информация о безопасности CTP (-AR/-AP)	2138087	02-11/17		0.3 MB
Güvenlik bilgisi CTP (-AR/-AP)	2138087	02-11/17		0.3 MB
安全信息 CTP (-AR/-AP)	2138087	02-11/17		0.3 MB








- 操作指示書トランスポンダー型コード化安全スイッチ ガードロック内蔵CTP-AP ユニコード/マルチコード

	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CTP-AP Uni-/Multicode	2124217	05-05/18		4.2 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur avec interverrouillage CTP-AP uni-/multicode	2124217	05-05/18		4.2 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder con bloqueo CTP-AP Unicode/Multicode	2124217	05-05/18		4.2 MB

操作指示書トランスポンダー型コード化安全スイッチ ガードロック内蔵CTP-AP ユニコード/マルチコード	2124217	05-05/18		 4.5 MB
Návod k použití Bezpečnostní spínač s kódovaným transpondérem CTP-AP Unicode/Multicode	2124217	05-05/18		 4.4 MB
Operating instructions Transponder-Coded Safety Switch With Guard Locking CTP-AP Unicode/Multicode	2124217	05-05/18		 4.2 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder con meccanismo di ritenuta CTP-AP Uni-/Multicode	2124217	05-05/18		 4.2 MB







Catalogs

- Transpondercodierte Sicherheitsschalter - Verriegelungseinrichtungen und Zuhaltungen
 Transponder-coded safety switches - Interlocking devices and guard locking devices
 Interruptores de seguridad con codificación por transponder - Dispositivos de enclavamiento y
 bloqueos Interrupteurs de sécurité à codage par transpondeur - Dispositifs de verrouillage et
 interverrouillages

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Transpondercodierte Sicherheitsschalter - Verriegelungseinrichtungen und Zuhaltungen	127594	02-01/18		 5.2 MB
Interrupteurs de sécurité à codage par transpondeur - Dispositifs de verrouillage et interverrouillages	137558	02-01/18		 5.2 MB
Interruptores de seguridad con codificación por transponder - Dispositivos de enclavamiento y bloqueos	137560	02-01/18		 5.2 MB
Transponder-coded safety switches - Interlocking devices and guard locking devices	127595	02-01/18		 5.1 MB

Declaration of conformity

- EU-Konformitätserklärung

	Doc. no.	Version	Language	Download
EU-Konformitätserklärung EU declaration of conformity Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità	2123042	06-08/18	    	 0.4 MB