

ITEM 157111 CTP-L1-AP-U-HA-AZS-SA-157111

Description	Technical data	Accessories	Downloads
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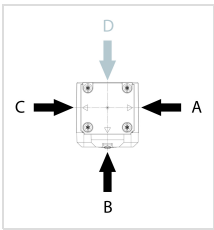
Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Version with stainless-steel components
- › ECOLAB certificate
- › Short circuit monitoring
- › Two 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)

Medium-resistant stainless-steel version

Robust, tough and largely media resistant. Critical components such as plugs, cover screws and guide bushes, etc., consist of high-quality inox steel.

Approach direction



► Figure
Horizontal
Can be adjusted in 180° 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 connecting cable
	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	Operating voltage of AP electronics 0 V	BU
	8	IMM	Operating voltage of guard locking solenoid 0 V	RD

Approvals

Mechanical values and environment

Housing material		
	Metal material	Stainless steel
	Safety switch housing	Fiber glass reinforced thermoplastic
Weight		
	Net	0,47 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		1 plug connector M12, 8-pin
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
Monitoring output OI	
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 %

Miscellaneous

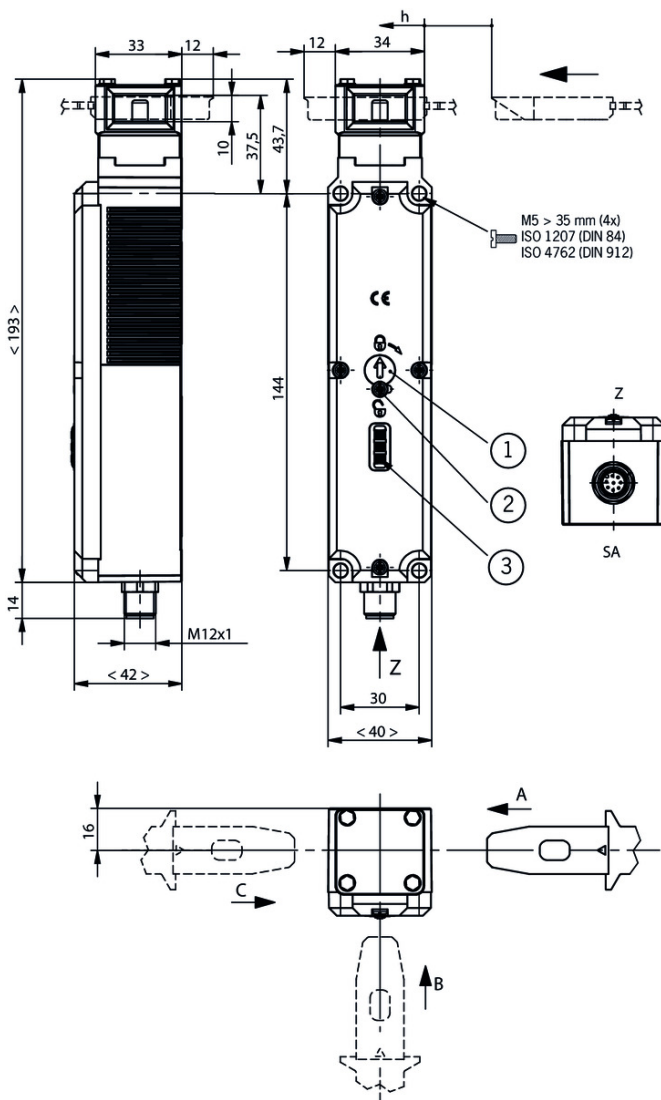
For the approval according to UL the following applies	Operation only with UL class 2 power supply, or equivalent measures see operating instructions
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Reliability values acc. to EN ISO 13849-1

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

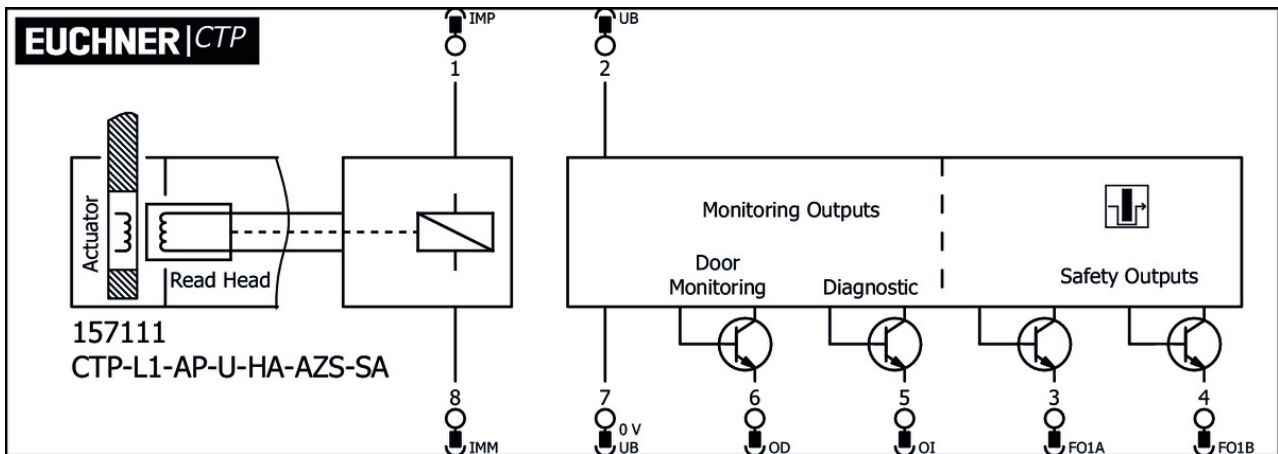
Dimension drawing



Legende

- 1 Auxiliary release
- 2 Locking screw
- 3 LEDs

Wiring diagram



Function expansion

Lockout mechanism CTP



123411 AE-L-C-H-123411

Features

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

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



093457 EMP-B1

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



093458 EMP-B2

Connection material

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



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

▼ Features

- › 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

▼ Features

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

▼ Connection cable with angled plug connector M12, 8-pin, 10m



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

▼ Features

- › 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

▼ Features

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

▼ Connection cable with plug connector M12, 8-pin, 5m



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

▼ Features

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



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

▼ Features

- › M12 female plug, 8-pin
- › Straight plug connector

- › PVC cable
 - › Cable length 5 m
 - › With flying lead
-

▼ Connection cable with plug connector M12, 8-pin, 10m



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

▼ Features

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



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

▼ Features

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

▼ Connection cable with plug connector M12, 8-pin, 20m



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

▼ Features

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



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

▼ Features

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

▼ Connection cable with plug connector M12, 8-pin, 30m



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

▼ Features

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



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

▼ Features

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

Bolt

▼ 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

Actuator

▼ Straight actuator for stainless-steel safety switch CTP



157696 A-C-H-G-SSS-157696

▼ Features















- › Stainless-steel version
- › Straight actuator
- › Two safety screws included

Instructions

▼ Bezpečnostní informace CTP (-AR/-AP)







	Doc. no.	Version	Language	Download
Sicherheitsinformation CTP (-AR/-AP)	2138087	02-11/17		0.7 MB
Safety Information CTP (-AR/-AP)				
Información de seguridad CTP (-AR/-AP)				
Information de sécurité CTP (-AR/-AP)				
Informazioni sulla sicurezza 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

▼ Návod k použití Bezpečnostní spínač s kódovaným transpondérem CTP-AP Unicode/Multicode

	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
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
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

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