

ITEM 136595 CTP-I1-AP-U-HA-AEC-SA-136595

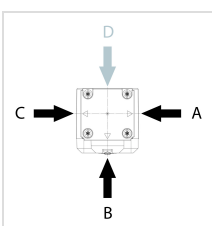
Description	Technical data	Accessories	Downloads
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Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Guard locking suitable for process protection only
- › 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
- › With escape release
- › Door monitoring output
- › Approach directions A, B and C (delivery state)

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.

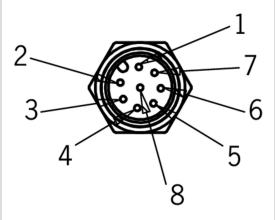
Guard locking type

CTP-II Guard locking actuated by spring force applied and power-ON released (closed-circuit current principle) Guard locking suitable for process protection only.

Escape release

This is used for manual release of guard locking from the danger zone without tools.

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	OL	Guard locking monitoring output	BU
	8	0 V	Operating voltage AP electronics 0 V / guard locking solenoid 0 V	RD

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		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 I_{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
Monitoring output OL	
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

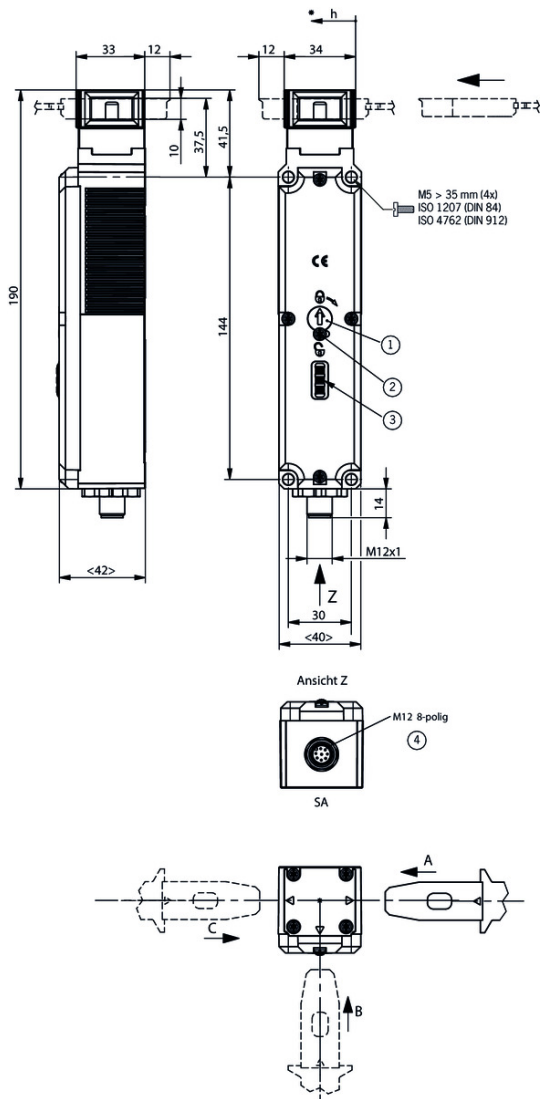
Additional feature	Escape release actuated by pushing
For the approval according to UL the following applies	Operation only with UL class 2 power supply, or equivalent measures see operating instructions

Reliability values acc. to EN ISO 13849-1

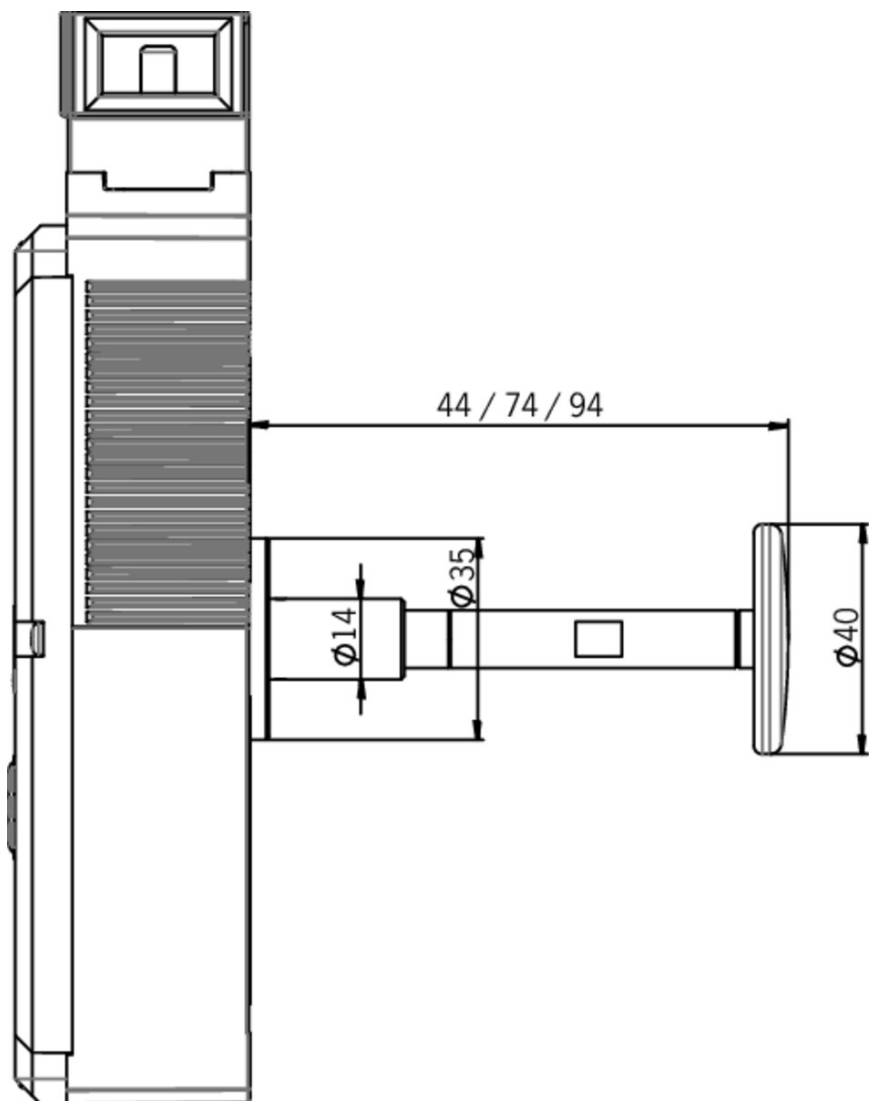
Performance Level	PL e
Category	4
PFH _D	4.1×10^{-9}
Mission time	20 y

- [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

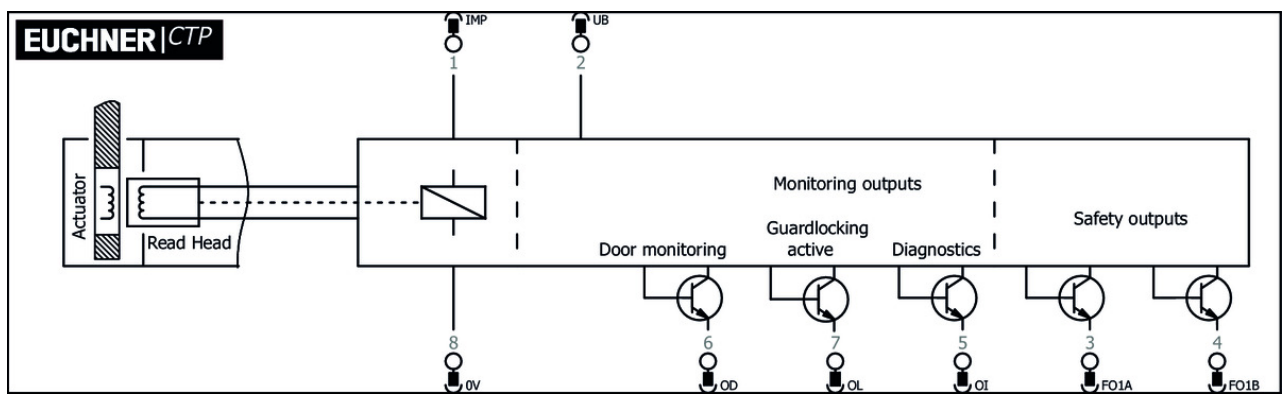
Dimension drawing



Dimension drawing



Wiring diagram



Actuator

✓ Bent actuator for safety switches CTP



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

✓ Features

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



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

✓ Features

- › Actuator bent at top
- › 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



122666 A-C-H-G-SST-122666

✓ Features

- › Straight actuator
- › Two safety screws included



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
-

▼ Emergency unlocking for safety switches CTP/TP/STP



099877 NOTENTSPERRUNG TP/STP

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



103110 ENTRIEGELUNG RUECKSTELLEND TP/STP

▼ Wire front release



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)
-



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)



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)



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)



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)

✓ Handle for wire front release



124204 AY-HDL-124204

✓ Features

- › Suitable for all wire front releases



099795 AY-HDL-099795

✓ 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

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

▼ Bolts with escape release for safety switch CTP



123655 RIEGEL CTP-ACF-123655

▼ Features

- › Steel bolt
 - › Lever for escape release from the danger area
 - › For doors hinged on right and left
 - › Detent knob in open position
 - › Can be locked in open position with padlocks
 - › Actuator included
-

▼ Bolt CTP-GFK-F with escape release for safety switch CTP



123658 RIEGEL CTP-GFK-F

▼ Features

- › Fiber glass reinforced plastic bolt
 - › For doors hinged on the left or right
 - › Lever for escape release from the danger area
 - › Detent knob in open position
 - › Can be locked in open position with padlocks
 - › Actuator included
-

▼ Bolt BTC-CTP with escape release for safety switch CTP



123660 BTC-CTP-S-TH-01-F

▼ Features

- › Aluminum bolt

- › For doors hinged on the left or right
- › Lever for escape release from the danger area
- › Pushbutton in open position
- › Can be locked in open position with padlocks
- › Actuator included

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 プロセス保護用ガード・ロック内蔵CTP-I.-AP ユニコード/マルチコード

	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung für den Prozessschutz CTP-I.-AP Uni-/Multicode	2126290	04-05/18		3.2 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur avec interverrouillage pour protection du process CTP-I.-AP uni-/multicode	2126290	04-05/18		3.3 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder con bloqueo para la protección de procesos CTP-I.-AP Unicode/Multicode	2126290	04-05/18		3.2 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 プロセス保護用ガード・ロック内蔵CTP-I.-AP ユニコード/マルチコード	2126290	04-05/18		3.6 MB
Operating Instructions Transponder-Coded Safety Switch with Guard Locking for Process Protection CTP-I.-AP Unicode/Multicode	2126290	04-05/18		3.2 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder con meccanismo di ritenuta per la protezione del processo CTP-I.-AP Uni-/Multicode	2126290	04-05/18		3.2 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

	Doc. no.	Version	Language	Download
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