

**ITEM 127798 CTP-LBI-AP-U-HA-AZ-SA-127798**

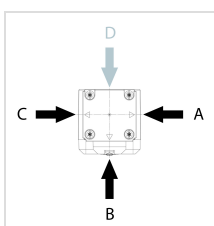
Description	Technical data	Accessories	Downloads
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**Features**

- › Safety switch with guard locking and integrated evaluation electronics
- › Short circuit monitoring
- › 2 safety outputs (semiconductor outputs)
- › Bistable guard locking
- › Up to category 4/PL e according to EN ISO 13849-1
- › With plug connector 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.

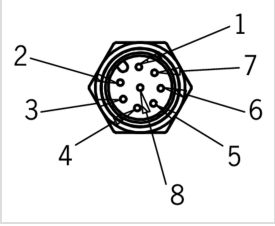


## Guard locking type

**CTP-LBI** Guard locking operated by means of input signal.

This type of guard locking has a function to prevent

- › persons from unintentionally locking themselves inside if the safety door is open in case of a power failure or if the machine is switched off.
- › the deactivation of the activated guard locking in case of a power failure.

## Connector assignment

Plug connector (view of connection side)	Pin	Designation	Function	Conductor coloring of connection 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	Diagnostics output	GY
	6	OD	Door monitoring output	PK
	7	OL	Guard locking monitoring output	BU
	8	0 V UB	Control input of 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 <b>[1]</b>
Resilience to vibration		In acc. with EN IEC 60947-5-3
Mechanical life		$1 \times 10^6$
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		BiState
Locking force $F_{max}$		3900 N
Locking force $F_{Zh}$		3000 N <b>[2]</b>
Retention force		5 N
Extraction force		10 N
Actuating force		8 N
Overtravel		5 mm

### Electrical connection ratings

Operating voltage DC		
	$U_{UB}$	24 V DC -15% ... 15% Reverse polarity protected, regulated, residual ripple < 5%, PELV
Current consumption		
	$I_{UB}$ (IMP=LOW)	40 mA
	$I_{IMP}$ (IMP = HIGH)	20 mA
	$I_{UB}$ (IMP=HIGH)	440 mA
Utilization category according to EN 60947-5-2		
	DC-13	24V 150mA <b>[3]</b>
Fusing		
	External (operating voltage $U_B$ )	0,5 ... 8 A
Rated insulation voltage $U_i$		max.50 V
Rated impulse withstand voltage $U_{imp}$		max.0,5 kV
Power consumption		1,7 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
Control voltage		
	$U_{IMP}$ (HIGH)	15 ... 24 V
	$U_{IMP}$ (LOW)	0 ... 5 V

Safety class	EN IEC 61140 III
Switching load	According to UL 24V DC, class 2 [4]
<b>Safety outputs FO1A / FO1B</b>	
Test pulses	max.0,3 ms [5]
Test-pulse interval	min.100 ms
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)	UB-1,5 ... UB V DC
Low U(FO1A) / U(FO1B)	0 ... 1 V DC
Off-state current I <sub>r</sub>	max.0,25 mA
Switch-on time	max.400 ms
Discrepancy time	
Both safety outputs	In acc. with EN IEC 60947-5-3max.10 ms
<b>Monitoring output OL</b>	
Type of output	p-switching, short circuit-proof
Switching current	1 ... 50 mA
Output voltage	0,8xUB ... UB V DC
<b>Monitoring output OD</b>	
Type of output	p-switching, short circuit-proof
Switching current	1 ... 50 mA
Output voltage	0,8xUB ... UB V DC
<b>Monitoring output OI</b>	
Type of output	p-switching, short circuit-proof
Switching current	1 ... 50 mA
Output voltage	0,8xUB ... UB 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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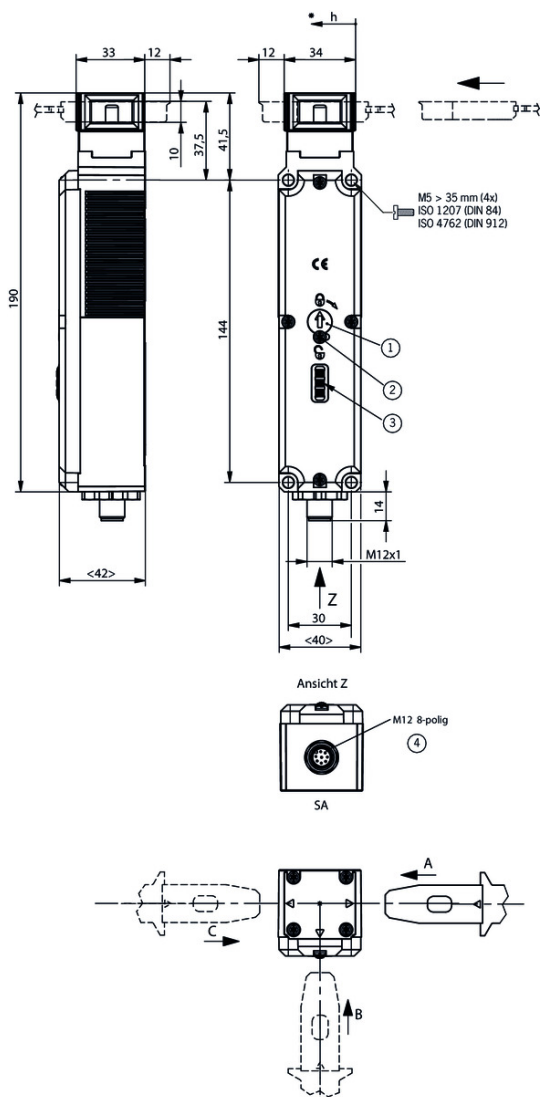
## Reliability values acc. to EN ISO 13849-1

<b>Guard lock monitoring</b>	
Mission time	20 y
Category	4

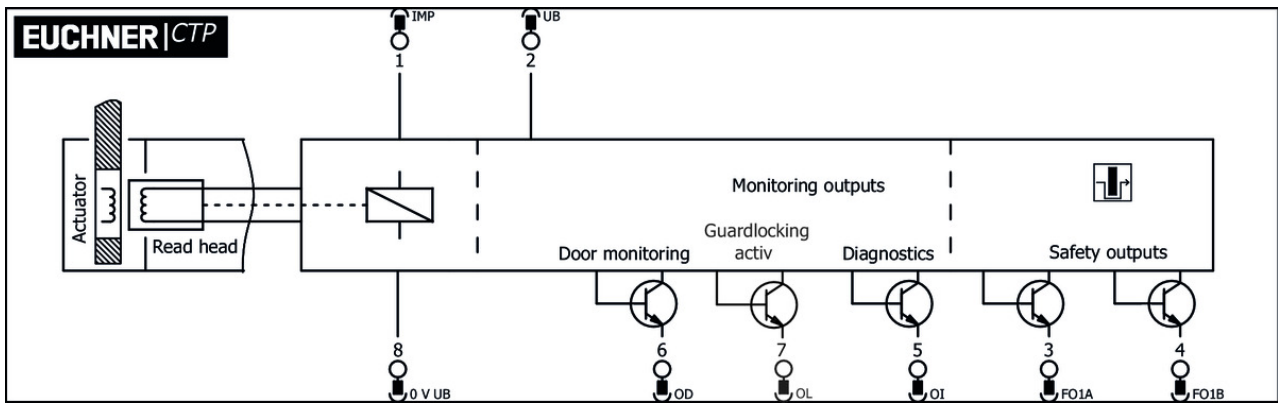
Performance Level	PL e
PFH <sub>D</sub>	$4.1 \times 10^{-9}$
	<b>Guard locking control</b>
Mission time	20 y
Category	B
Performance Level	PL b
PFH <sub>D</sub>	$2.1 \times 10^{-9}$

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

### 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

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▼ Straight actuator for safety switch CTP



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

▼ Features

- › Straight actuator
  - › Two safety screws included
- 

Function expansion

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▼ 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
- 



**084177** SCHLOSS TP VERSCHIEDENSCHLIESSEND

▼ Features

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



**086236** SCHLOSS TP GLEICHSCHLIESSEND

▼ Features

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

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



**103110** ENTRIEGELUNG RUECKSTELLEND TP/STP

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▼ Emergency unlocking for safety switches CTP/TP/STP



**099877** NOTENTSPERRUNG TP/STP

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▼ 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

✓ Wire front release



**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)



**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)



**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)



**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)



**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)



**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)



**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)



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## Mounting accessories

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- ▼ 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

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- ▼ Mounting plates AM-P for safety switches CTP



**126026** AM-P-126026

- ▼ Features

- › For vertical and horizontal mounting of safety switch CTP

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## Connection material

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- ▼ 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

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▼ 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

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▼ 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

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## 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

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▼ 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

#### ▼ 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

## Instructions

#### ▼ Betriebsanleitung Transpondercodierter Sicherheitsschalter CTP-LBI-AP Uni-/Multicode



	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter CTP-LBI-AP Uni-/Multicode	2136918	03-05/18		3.7 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur CTP-LBI-AP uni-/multicode	2136918	03-05/18		3.7 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder CTP-LBI-AP Unicode/Multicode	2136918	03-05/18		3.7 MB
Operating Instructions Transponder-Coded Safety Switch CTP-LBI-AP Unicode/Multicode	2136918	03-05/18		3.7 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder CTP-LBI-AP Uni-/Multicode	2136918	03-05/18		3.7 MB


#### ▼ Safety Information CET/CTP (-AR/-AP)




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Sicherheitsinformation CET/CTP (-AR/-AP)	137238	01-08/16		0.7 MB
Safety Information CET/CTP (-AR/-AP)				
Información de seguridad CET/CTP (-AR/-AP)				
Information de sécurité CET/CTP (-AR/-AP)				
Informazioni sulla sicurezza CET/CTP (-AR/-AP)				

## 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

 Eingeschlossen ausgeschlossen – der neue Sicherheitsschalter CTP-BI






	Doc. no.	Version	Language	Download
Eingeschlossen ausgeschlossen – der neue Sicherheitsschalter CTP-BI No chance of getting locked-in – the new safety switch CTP-BI	137349	02-07/18	 	 0.4 MB

 Imposible quedarse encerrado: el nuevo CTP-BI

	Doc. no.	Version	Language	Download
Imposible quedarse encerrado: el nuevo CTP-BI Enfermement exclu – le nouveau CTP-BI	137534	02-07/18	 	 0.4 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