

## ITEM 136675 CTP-L1-AP-U-HA-AZ-SA-EX-136675

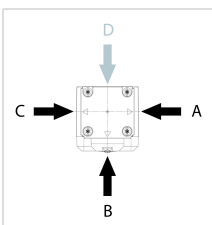
Description	Technical data	Accessories	Downloads
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### Features

- › ATEX version
- › Suitable for usage in zone 2 and 22 (gases and dusts)
- › Safety switch with guard locking and 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
- › Door monitoring output
- › Diagnostics output OL
- › Approach direction A, B and C (default setting on delivery)

### Approach direction



› Figure

Horizontal  
Can be adjusted in 90° steps

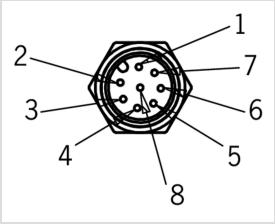


### Unicode evaluation

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
	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	OL	Guard locking monitoring 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		
Switch head cover		Die-cast zinc
Safety switch housing		Fiber glass reinforced thermoplastic
Weight		
	Net	0,78 kg
Ambient temperature		
	At $U_B = 24V DC$	-20 ... +55 °C
Degree of protection		IP65/IP67 <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		Closed-circuit current principle
Locking force $F_{max}$		3900 N
Locking force $F_{Zh}$		3000 N <b>[2]</b>
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 <b>[3]</b>
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 <b>[4]</b>
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]
<b>Safety outputs FO1A / FO1B</b>	
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 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 OL</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

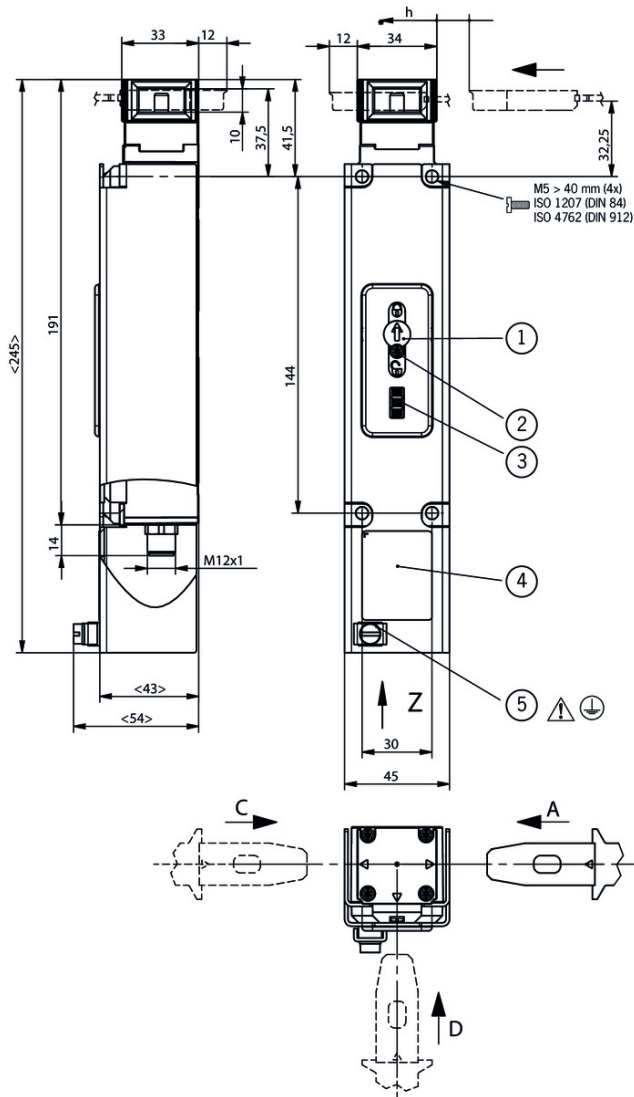
Explosion protection	
incl. cover	II3G Ex nA IIB T4 Gc X / II3D Ex tc IIIC T110°C Dc X
For the approval according to UL the following applies	Operation only with UL class 2 power supply, or equivalent measures see operating instructions

## Reliability values acc. to EN ISO 13849-1

Performance Level	PL e
Category	4
PFH <sub>D</sub>	4.1 x 10 <sup>-9</sup>
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

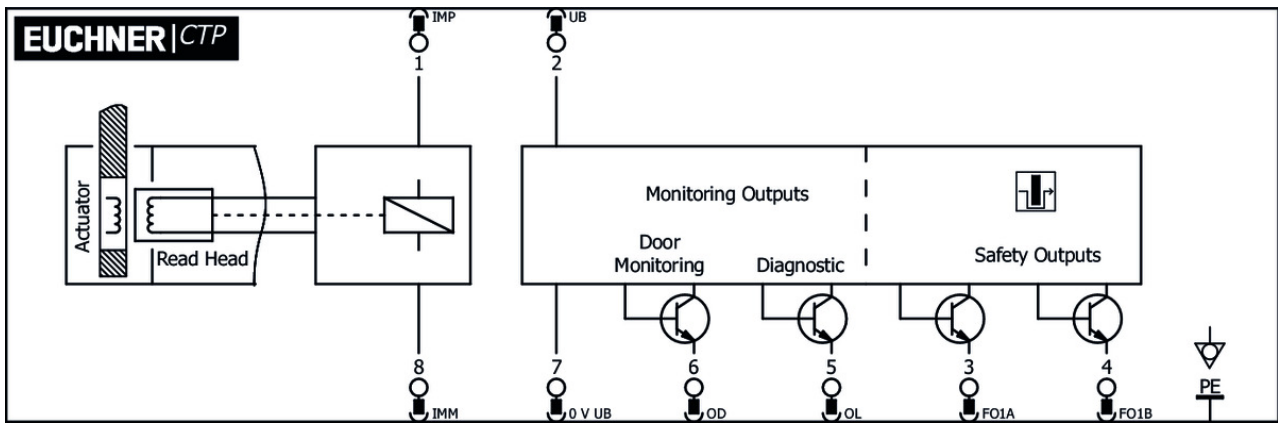
### Dimension drawing



### Legende

- 1 Auxiliary release
- 2 Locking screw
- 3 LEDs
- 4 Protective plate
- 5 Grounding terminal - for preventing electrostatic charging. Ground switch via cable. Cable cross-section 4...6 mm<sup>2</sup>

## Wiring diagram



## Actuator

- ✓ Straight actuator for safety switch CTP, ATEX



**136826** A-C-H-G-LS-EX-136826

### ✓ Features

- › ATEX version
- › Suitable for usage in zone 2 and 22 (gases and dusts)
- › 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

## Connection material

- ✓ 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

## Instructions

### ▼ Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CTP-AP-...-EX Uni-/Multicode

	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CTP-AP-...-EX Uni-/Multicode	2127610	03-05/18		2.4 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur avec interverrouillage CTP-AP-...-EX uni-/multicode	2127610	03-05/18		2.4 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder con bloqueo CTP-AP-...-EX Unicode/Multicode	2127610	03-05/18		2.4 MB
Operating Instructions Transponder-Coded Safety Switch With Guard Locking CTP-AP-...-EX Unicode/Multicode	2127610	03-05/18		2.4 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder con meccanismo di ritenuta CTP-AP-...-EX Uni-/Multicode	2127610	03-05/18		2.4 MB

### ▼ Sicherheitsinformation CTP-AP-...-EX














	Doc. no.	Version	Language	Download
Sicherheitsinformation CTP-AP-...-EX	136824	01-11/16		0.7 MB
Información de seguridad CTP-AP-...-EX				
Information de sécurité CTP-AP-...-EX				
Informazioni sulla sicurezza CTP-AP-...-EX				
Safety Information CTP-AP-...-EX				

## Catalogs

### ▼ ATEX - Sicherheitsschalter für explosionsgefährdete Bereiche ATEX - Safety switches for potentially explosive atmospheres ATEX - Interrupteurs de sécurité pour atmosphères explosibles ATEX - Interruptores de seguridad para uso en atmósferas potencialmente explosivas







	Doc. no.	Version	Language	Download
ATEX - Sicherheitsschalter für explosionsgefährdete Bereiche	136804	03-04/17		1.5 MB
ATEX - Interrupteurs de sécurité pour atmosphères explosibles	136806	03-04/17		1.5 MB



ATEX - Interruptores de seguridad para uso en atmósferas potencialmente explosivas	136807	03-04/17		 1.5 MB
ATEX - Safety switches for potentially explosive atmospheres	136805	03-04/17		 1.0 MB
<p> <b>Transpondercodierte Sicherheitsschalter - Verriegelungseinrichtungen und Zuhaltungen</b>  <b>Transponder-coded safety switches - Interlocking devices and guard locking devices</b>  <b>Interruptores de seguridad con codificación por transponder - Dispositivos de enclavamiento y bloqueos</b>  <b>Interrupteurs de sécurité à codage par transpondeur - Dispositifs de verrouillage et interverrouillages</b></p>				
	<b>Doc. no.</b>	<b>Version</b>	<b>Language</b>	<b>Download</b>
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

	<b>Doc. no.</b>	<b>Version</b>	<b>Language</b>	<b>Download</b>
EU-Konformitätserklärung Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità EU declaration of conformity	2127608	03-01/17	    	 0.3 MB