

## ITEM 110203 CET1-AR-CRA-AH-50X-SH-110203

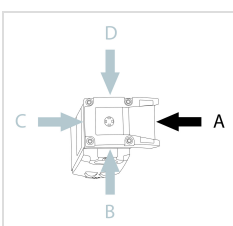
Description	Technical data	Accessories	Downloads
-------------	----------------	-------------	-----------



### Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Locking force up to 6500 N
- › Up to 20 switches in series
- › Short circuit monitoring
- › 2 safety outputs (semiconductor outputs)
- › Up to category 4/PL e according to EN ISO 13849-1
- › With plug connector M23 (RC18)
- › Unicode
- › Teach-in input
- › Approach direction A (default setting on delivery)

### Approach direction



› Figure  
Horizontal

Can be adjusted in 90° steps

---

## Safety switch

The device may be operated only in conjunction with the actuator CET-A-....

**Important:** The actuator must be ordered separately.

---

## 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.

---

## Solenoid operating voltage

› DC 24 V +10% -15%

---

## Guard locking type

**CET1 Closed-circuit current principle**, guard locking by spring force.

Release by applying voltage to the guard locking solenoid.

---

## LED function display

**LED State** Status LED

**LED DIA** Diagnostic LED

**LED 1 rd** freely configurable

**LED 2 gn** freely configurable

---

## Additional connections

**OUT** Monitoring output (semiconductor)

**RST** Reset input

**J** Teach-in input

---

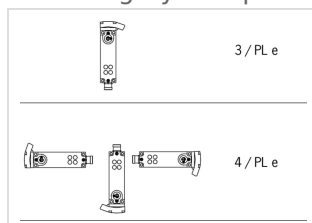
## Category according to EN ISO 13849-1

Due to two redundantly designed semiconductor outputs (safety outputs) with internal monitoring suitable for:

› Category 4/PL e according to EN ISO 13849-1

**Important:** To achieve the stated category in accordance with EN ISO 13849-1, both safety outputs (OA and OB) must be evaluated.

The category is dependent on the installation position of the safety switch:



› Figure

## Approvals

## Mechanical values and environment

Housing material		
	Slide	Stainless steel
	Safety switch housing	Die-cast aluminum
Weight		
	Net	1 kg
Ambient temperature		
	At $U_B = 24V DC$	-20 ... 55 °C
Degree of protection		IP65/IP67 <b>[1]</b>
Mechanical life		$1 \times 10^6$
Installation position		Any <b>[2]</b>
Degree of freedom		
	X	$\pm 5$ mm
	Y	$\pm 5$ mm
	Z	$\pm 4$ mm
Ready delay		10 s
Switching frequency		max.0,5 Hz
Connection		1 plug connector M23, 19-pin, RC18
Approach speed		20 m/min
Guard locking principle		Closed-circuit current principle
Locking force $F_{max}$		6500 N
Locking force $F_{Zh}$		5000 N

## Electrical connection ratings

Operating voltage DC		
	$U_B$	24 V DC -15% ... 15% Reverse polarity protected, regulated, residual ripple < 5%, PELV
	LED1 , LED2	24 V DC -15% ... 10%
Current consumption		
	$I_B$	80 mA
	$I_{CM}$	480 mA
Utilization category according to EN 60947-5-2		
	DC-13	24V 200mA <b>[3]</b>
Solenoid operating voltage DC		
	$U_{CM}$	24 V DC -15% ... +10% Reverse polarity protected, regulated, residual ripple < 5%, PELV
Fusing		
	External (operating voltage $U_B$ )	0,25 ... 2 A
	External (operating voltage $U_{CM}$ )	0,5 ... 8 A
Power consumption		
	Solenoid	max.12 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 <sup>[4]</sup>
<b>Safety outputs OA/OB</b>	
Type of output	Semiconductor outputs, p-switching, short circuit-proof
Output voltage	High U(OA,OB) UB-1,5V ... UB V DC <sup>[5]</sup> Low U(OA,OB) 0 ... 1 V DC
Output current	per safety output 1 ... 200 mA
Off-state current I <sub>r</sub>	max.0,25 mA
Risk time according to EN 60947-5-3	Single device max.400 ms Delay per device 5 ms
Switch-on time	Safety outputs 400 ms
Discrepancy time	Both safety outputs max.10 ms
<b>Teach-in input J</b>	
Input voltage	High 15 ... 27,6 V DC Low 0 ... 1 V DC
<b>Monitoring output OUT</b>	
Type of output	Semiconductor output, p-switching, short circuit-proof
Output voltage	OUT 0,8xUB ... UB V DC
Output current	OUT 1 ... 50 mA

### 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
--	--

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

		<b>Monitoring of guard locking and the safety guard position</b>
Category	Head upward	3
	Head downward or horizontal	4
Performance Level		PL e
PFH <sub>D</sub>	Head upward	$4.29 \times 10^{-8}$
	Head downward or horizontal	$3.1 \times 10^{-9}$
		<b>Control of the guard locking</b>
Category		Depending on external control of guard locking <b>[6]</b>
Performance Level		Depending on external control of guard locking <b>[7]</b>
PFH <sub>D</sub>		Depending on external control of guard locking <b>[8]</b>
<hr/>		
Mission time		20 y

**[1]** Screwed tight plug connector/mating component

**[2]** Preferably head downward

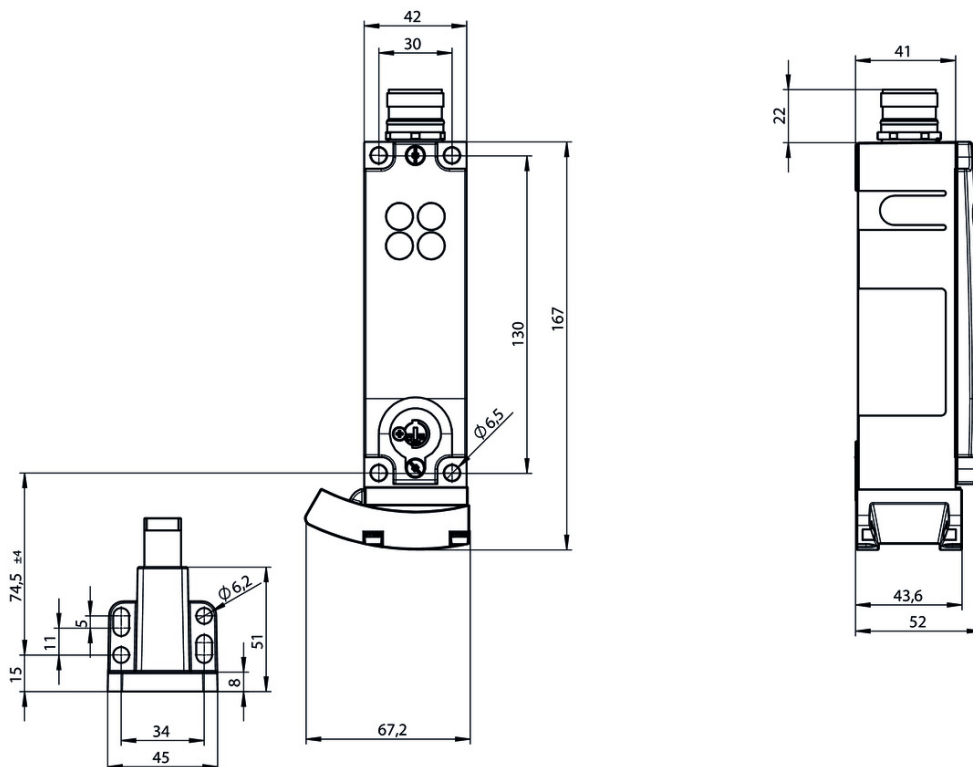
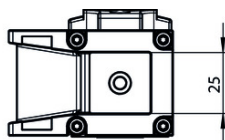
**[3]** Caution: outputs must be protected with a free-wheeling diode in case of inductive loads

**[4]** For alternatives see operating instructions

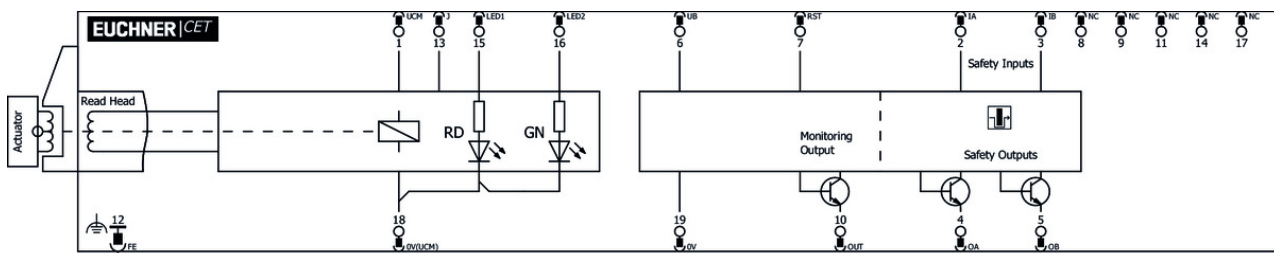
**[5]** Values at a switching current of 50mA without taking into account the cable lengths

**[6, 7, 8]** Teach-in input and LEDs have the same ground potential as the guard locking solenoid

## Dimension drawing



## Block diagram



## Connection material

✓ Connection cable with plug connector M23 with option C1825, 30m, straight



**095993** C-M23F19-19XDIFPU30,0-MA-095993

✓ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 30 m

- › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 20m, straight



**092726** C-M23F19-19XDIFPU20,0-MA-092726

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 20 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 25m, angled



**092912** C-M23F19-19XDIFPU25,0-MA-092912

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit C (left)
  - › PUR cable
  - › Cable length 25 m
  - › With flying lead
  - › Cores color-coded
- 



**092913** C-M23F19-19XDIFPU25,0-MA-092913

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit A (right)
  - › PUR cable
  - › Cable length 25 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 3m, angled



**092909** C-M23F19-19XDIFPU03,0-MA-092909

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit A (right)
  - › PUR cable
  - › Cable length 3 m
  - › With flying lead
  - › Cores color-coded
- 



**092908** C-M23F19-19XDIFPU03,0-MA-092908

▼ Features

- › M23 plug connector, 18-pin + PE
- › Angled plug connector
- › Cable exit C (left)

- › PUR cable
  - › Cable length 3 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 6m, angled



**085194** C-M23F19-19XDIFPU06,0-MA-085194

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit A (right)
  - › PUR cable
  - › Cable length 6 m
  - › With flying lead
  - › Cores color-coded
- 



**077018** C-M23F19-19XDIFPU06,0-MA-077018

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit C (left)
  - › PUR cable
  - › Cable length 6 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 8m, angled



**077019** C-M23F19-19XDIFPU08,0-MA-077019

▼ Features

- › RC18 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit C (left)
  - › PUR cable
  - › Cable length 8 m
  - › With flying lead
  - › Cores color-coded
- 



**085195** C-M23F19-19XDIFPU08,0-MA-085195

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Angled plug connector
  - › Cable exit A (right)
  - › PUR cable
  - › Cable length 8 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 10m, angled

**092901** C-M23F19-19XDIFPU10,0-MA-092901

▼ Features





- › M23 plug connector, 18-pin + PE
- › Angled plug connector
- › Cable exit C (left)
- › PUR cable
- › Cable length 10 m
- › With flying lead
- › Cores color-coded



**092902** C-M23F19-19XDIFPU10,0-MA-092902

▣ Features

- › M23 plug connector, 18-pin + PE
- › Angled plug connector
- › Cable exit A (right)
- › PUR cable
- › Cable length 10 m
- › With flying lead
- › Cores color-coded

▣ Connection cable with plug connector M23 with option C1825, 15m, angled



**077020** C-M23F19-19XDIFPU15,0-MA-077020

▣ Features

- › M23 plug connector, 18-pin + PE
- › Angled plug connector
- › Cable exit C (left)
- › PUR cable
- › Cable length 15 m
- › With flying lead
- › Cores color-coded



**085196** C-M23F19-19XDIFPU15,0-MA-085196

▣ Features

- › M23 plug connector, 18-pin + PE
- › Angled plug connector
- › Cable exit A (right)
- › PUR cable
- › Cable length 15 m
- › With flying lead
- › Cores color-coded

▣ Connection cable with plug connector M23 with option C1825, 20m, angled



**092910** C-M23F19-19XDIFPU20,0-MA-092910

▣ Features

- › M23 plug connector, 18-pin + PE
- › Angled plug connector
- › Cable exit C (left)
- › PUR cable
- › Cable length 20 m
- › With flying lead
- › Cores color-coded

**092911** C-M23F19-19XDIFPU20,0-MA-092911



- ▼ Features
    - › M23 plug connector, 18-pin + PE
    - › Angled plug connector
    - › Cable exit A (right)
    - › PUR cable
    - › Cable length 20 m
    - › With flying lead
    - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 1.5m, angled



**092906** C-M23F19-19XDIFPU01,5-MA-092906

- ▼ Features
    - › M23 plug connector, 18-pin + PE
    - › Angled plug connector
    - › Cable exit C (left)
    - › PUR cable
    - › Cable length 1.5 m
    - › With flying lead
    - › Cores color-coded
- 



**092907** C-M23F19-19XDIFPU01,5-MA-092907

- ▼ Features
    - › M23 plug connector, 18-pin + PE
    - › Angled plug connector
    - › Cable exit A (right)
    - › PUR cable
    - › Cable length 1.5 m
    - › With flying lead
    - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 6m, straight



**077014** C-M23F19-19XDIFPU06,0-MA-077014

- ▼ Features
    - › M23 plug connector, 18-pin + PE
    - › Straight plug connector
    - › PUR cable
    - › Cable length 6 m
    - › With flying lead
    - › Cores color-coded
- 

▼ Connection cable with plug connector M23 with option C1825, 8m, straight



**077015** C-M23F19-19XDIFPU08,0-MA-077015

- ▼ Features
    - › M23 plug connector, 18-pin + PE
    - › Straight plug connector
    - › PUR cable
    - › Cable length 8 m
    - › With flying lead
    - › Cores color-coded
-

- ▼ Connection cable with plug connector M23 with option C1825, 10m, straight



**092898** C-M23F19-19XDIFPU10,0-MA-092898

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 10 m
  - › With flying lead
  - › Cores color-coded
- 

- ▼ Connection cable with plug connector M23 with option C1825, 3m, straight



**092816** C-M23F19-19XDIFPU03,0-MA-092816

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 3 m
  - › With flying lead
  - › Cores color-coded
- 

- ▼ Connection cable with plug connector M23 with option C1825, 15m, straight



**077016** C-M23F19-19XDIFPU15,0-MA-077016

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 15 m
  - › With flying lead
  - › Cores color-coded
- 

- ▼ Connection cable with plug connector M23 with option C1825, 25m, straight



**092727** C-M23F19-19XDIFPU25,0-MA-092727

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 25 m
  - › With flying lead
  - › Cores color-coded
- 

- ▼ Connection cable with plug connector M23 with option C1825, 1.5m, straight



**092761** C-M23F19-19XDIFPU01,5-MA-092761

▼ Features

- › M23 plug connector, 18-pin + PE
- › Straight plug connector
- › PUR cable
- › Cable length 1.5 m
- › With flying lead

- › Cores color-coded
- 

▼ Female plug RC18 angled



**074617** RC18WF

▼ Features

- › Plug connector M23, angled
  - › Number of pins: 19-pin with screen bonding clamp
- 

▼ Female plug RC18 straight



**074616** RC18EF

▼ Features

- › Plug connector M23, straight
  - › Number of pins: 19-pin with screen bonding clamp
- 

▼ Connection cable with plug connector M23 with option C1825, 40m, straight



**102490** C-M23F19-19XDIFPU40,0-MA-102490

▼ Features

- › M23 plug connector, 18-pin + PE
  - › Straight plug connector
  - › PUR cable
  - › Cable length 40 m
  - › With flying lead
  - › Cores color-coded
- 

▼ Female plug RC18 straight with option C1825



**077025** RC18EF-C1825

▼ Features

- › Plug connector M23, straight
  - › Number of pins: 19-pin with screen bonding clamp
- 

▼ Female connector RC18 angled with option C1825



**077026** RC18WF-C1825

▼ Features

- › Plug connector M23, angled
  - › Number of pins: 19-pin with screen bonding clamp
- 

## Actuator

---

▼ Actuator CET-A-BWK-50X



**096327** CET-A-BWK-50X

▼ Features

- › Actuator for read head/safety switch CET
- › Four safety screws M5x16 included

---

## Function expansion

---

### Emergency unlocking for CET



**103714** NOTENTSPERRUNG CET

### Cover for read head and actuator CET



**098807** CET ABDECKUNG LINKS

Features

- › Cover for read heads / safety switches CET and actuators CET
- › For approach direction C



**098808** CET ABDECKUNG RECHTS

Features

- › Cover for read heads / safety switches CET and actuators CET
- › For approach direction A

### Mechanical key release for CET read head/switch



**098850** SCHLUESSEL-HILFSENTRIEGELUNG

Features

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

### Double ramp for safety switch/read head CET



**114091** CET-DR

### Teach-in adapter for CET 1/3



**122748** AC-TA-A1-SH-122748

Features

- › Teach-in adapter
- › Optional accessories for teaching-in a new actuator for safety switch with M23 plug connector.

### Cover for actuator CET



**124979** AM-C-124979

Features

- › Cover for actuator CET
  - › Horizontal and vertical fastening option on the actuator
  - › Mounting using 4 screws M5x16 (included with the actuator)
  - › Not suitable in combination with lockout bar for actuator CET
-

▼ Lockout mechanism for CET actuator



**122609** AE-L-CET-122609

▼ Features

- › Prevents unintentional closing of the door
- › Can be secured with padlocks
- › Not suitable in combination with cover AM-C for actuator CET



**156429** AE-L-CET-156429

▼ Features

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

▼ Holder for lockout mechanism CET actuator



**156338** Y-CHN-A1-156338

▼ Features

- › Holder (incl. wire rope) for lockout bar CET

▼ Lockout bar and holder for CET actuators



**155865** AE-SET-LCHN-A1-155865

▼ Features

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

## Mounting accessories

▼ Mounting plate EMP-L... for CET read head/switches



**106695** EMP-L-CET

▼ Features

- › Mounting plate for CET read heads/switches
- › For hinged or sliding doors
- › Suitable for aluminum profiles 40 ... 45 mm
- › Horizontal and vertical mounting
- › Suitable for CET with escape release

▼ Mounting plate EM-P handle for safety switch CET



**126398** AM-P-126398

▼ Features

- › Mounting plate with handle (handle included)
- › For hinged or sliding doors
- › Horizontal and vertical assembly circuits possible
- › Suitable for aluminum profiles of width 30/40/50 mm
- › Suitable for the CET mounting plates AM-P-126399 and AM-P-126400

▼ Mounting plate EM-P actuator for safety switch CET



### **126400** AM-P-126400

#### ▼ Features

- › Mounting plate for CET actuator
  - › Suitable for mounting on aluminum profiles of width 30/40/50 mm
  - › Suitable for the mounting plates AM-P-126399 and AM-P-126398
- 

#### ▼ Mounting plate EM-P switch for safety switch CET



### **126399** AM-P-126399

#### ▼ Features

- › Mounting plate for CET read heads/switches
  - › Direct mounting on aluminum profiles of width 30/40/50 mm
  - › Suitable for the mounting plates AM-P-126400 and AM-P-126398
- 

#### ▼ Mounting plate EMP-B-... for actuator CET



### **106694** EMP-B-CET

#### ▼ Features

- › Mounting plate for actuator CET for hinged or sliding doors
  - › Suitable for aluminum profiles 40 ... 45 mm
  - › Horizontal and vertical mounting
  - › Made of aluminum
- 

## Bolt

---

#### ▼ Bolt CET-A-C



### **104309** RIEGEL CET-A-C

#### ▼ Features

- › Steel bolt
  - › In combination with CET
  - › For left or right hinged doors
  - › Can be locked in open position with padlocks
- 



### **109672** RIEGEL CET-A-C-C2308

#### ▼ Features

- › Steel bolt
  - › In combination with CET
  - › For left or right hinged doors
  - › Can be locked in open position with padlocks
  - › Bolt without door stop, suitable for swing doors
- 

## Instructions

#### ▼ Bezpečnostní informace CET (-AR/-AP)

	Doc. no.	Version	Language	Download
Sicherheitsinformation CET (-AR/-AP)	105517	14-01/17		0.7 MB
Información de seguridad CET (-AR/-AP)				
Information de sécurité CET (-AR/-AP)				
Informazioni sulla sicurezza CET (-AR/-AP)				
Safety Information CET (-AR/-AP)				
Bezpečnostní informace CET (-AR/-AP)	105517	14-01/17		0.2 MB
Informação de segurança CET (-AR/-AP)	105517	14-01/17		0.2 MB
Güvenlik bilgisi CET (-AR/-AP)	105517	14-01/17		0.3 MB
安全情報 CET (-AR/-AP)	105517	14-01/17		0.6 MB
Информация о безопасности CET (-AR/-AP)	105517	14-01/17		0.3 MB
安全信息 CET (-AR/-AP)	105517	14-01/17		0.3 MB

**Návod k použití Bezpečnostní spínač s kódovaným transpondérem a jištěním ochranného krytu CET.-AR-... (Unicode/Multicode)**


	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CET.-AR-... (Uni-/Multicode)	2110788	12-07/18		3.3 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur avec interverrouillage CET.-AR-... (uni-/multicode)	2110788	12-07/18		3.3 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder con bloqueo CET.-AR-... (Unicode/Multicode)	2110788	12-07/18		3.3 MB
Návod k použití Bezpečnostní spínač s kódovaným transpondérem a jištěním ochranného krytu CET.-AR-... (Unicode/Multicode)	2110788	12-07/18		3.6 MB
Operating Instructions Transponder-Coded Safety Switch With Guard Locking CET.-AR-... (Unicode/Multicode)	2110788	12-07/18		3.3 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder con meccanismo di ritenuta CET.-AR-... (Unicode/Multicode)	2110788	12-07/18		3.3 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 CET.-AR-... (ユニコード/マルチコード)	2110788	12-07/18		3.7 MB
Návod na prevádzku Bezpečnostný spínač kódovaný transpondérom s istením CET.-AR-... (Uni-/Multicode)	2110788	12-07/18		3.5 MB
İşletim kılavuzu Kapalı tutmalı CET.-AR-... (Uni-/Multicode)	2110788	12-07/18		3.7 MB
使用说明书应答机编码安全开关 CET.-AR-... (特殊/通用编码)	2110788	12-07/18		3.7 MB
Инструкция по эксплуатации Транспондерный предохранительный выключатель с защитной блокировкой CET.-AR-... (Uni-/Multicode)	2110788	12-07/18		3.8 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 Declaración UE de conformidad Déclaration UE de conformité Dichiarazione di conformità EU declaration of conformity	2110802	10-01/17	    	 0.3 MB

### CAD data

CAD data for this item on TraceParts