

ITEM 122409 CET3-AP-CRA-CH-50X-SA-122409

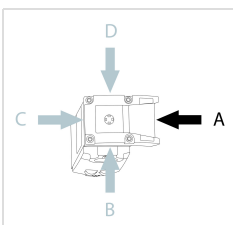
Description	Technical data	Accessories	Downloads
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Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Locking force up to 6500 N
- › Short circuit monitoring
- › 2 safety outputs (semiconductor outputs)
- › Up to category 4/PL e according to EN ISO 13849-1
- › With 1 plug connector M12, 8-pin
- › Multicode
- › Door monitoring output
- › Indication of the door position by LED
- › Monitoring output DIA
- › 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.

Multicode evaluation

Every suitable actuator is detected by the switch.

Solenoid operating voltage

› DC 24 V +10% -15%

Guard locking type

CET3 Closed-circuit current principle, guard locking by spring force.

Release by applying voltage to the guard locking solenoid. The door position is also monitored. The door monitoring output OUT D is set to HIGH as soon as the actuator is above the extended plunger (state: door closed, guard locking not active). The output OUT D remains set also with guard locking active.

LED function display

LED State Status LED

LED DIA Diagnostic LED

LED 1 rd illuminates when the solenoid is energized

LED 2 gn illuminates when door is closed

Additional connections

DIA Monitoring output (semiconductor)

OUT D Door monitoring output

RST Reset input

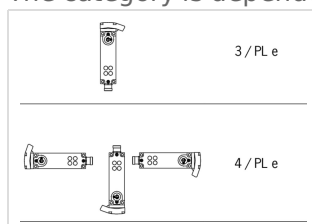
Category according to EN ISO 13849-1

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		IP67 [1]
Resilience to vibration		In acc. with EN IEC 60947-5-2
Mechanical life		1×10^6
Installation position		Any [2]
Degree of freedom	Z	± 4 mm
	Y	± 5 mm
	X	± 5 mm
Ready delay		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}		6500 N
Locking force F_{Zh}		5000 N [3]

Electrical connection ratings

Operating voltage DC	U_B	24 V DC -15% ... 15% Reverse polarity protected, regulated, residual ripple < 5%, PELV [4]
	LED	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 [5]
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 (solenoid 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
Connecting cable		30V DC, 2A [6]
Safety class		
	EN IEC 61140	III
Switching load		
	According to UL	24V DC, class 2 [7]
		Safety outputs OA/OB
Type of output		2 semiconductor outputs, p-switching, short circuit-proof
Switching current		
	Per safety output OA / OB	1 ... 200 mA
Output voltage		
	High $U(OA) / U(OB)$	$U_B - 1,5V \dots U_B V DC$
	Low $U(OA) / U(OB)$	0 ... 1 V DC
Off-state current I_r		max.0,25 mA
Risk time according to EN 60947-5-3		
	Single device	max.400 ms
Switch-on time		400 ms
Discrepancy time		
	Both safety outputs	max.10 ms
		Monitoring output DIA
Type of output		p-switching, short circuit-proof
Switching current		
	DIA	1 ... 50 mA
Output voltage		
	DIA	$0,8xU_B \dots U_B V DC$
Switching delay from state change		max.400 ms
		Monitoring output OUT D
Type of output		p-switching, short circuit-proof
Switching current		
	OUT D	1 ... 50 mA
Output voltage		
	OUT D	$0,8xU_B \dots U_B V DC$
Switching delay from state change		max.700 ms

Operating distance

Repeat accuracy R According to EN 60947-5-2	10 %
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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

		Monitoring of guard locking and the safety guard position
Category		
	Head upward	3
	Head downward or horizontal	4
Performance Level		PL e
PFH _D		
	Head upward	4.29×10^{-8}
	Head downward or horizontal	3.1×10^{-9}
		Control of the guard locking
Category		Depending on external control of guard locking
Performance Level		Depending on external control of guard locking
PFH _D		Depending on external control of guard locking
<hr/>		
Mission time		20 y

[1] Screwed tight plug connector/mating component

[2] Preferably head downward

[3] $FZH = FMAX/1.3$

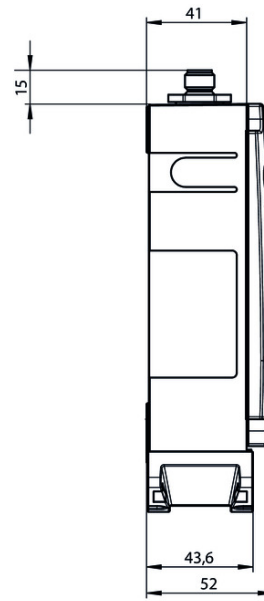
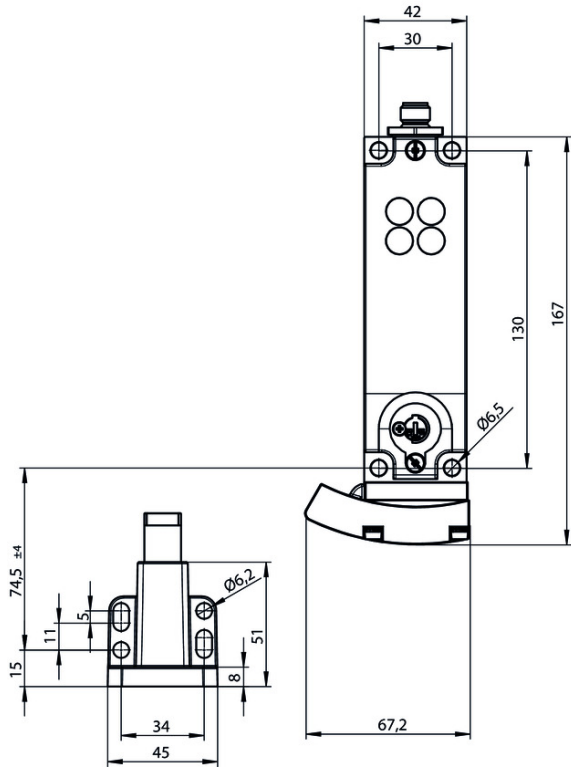
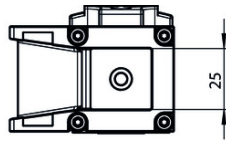
[4] The device tolerates voltage interruptions of up to 5ms

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

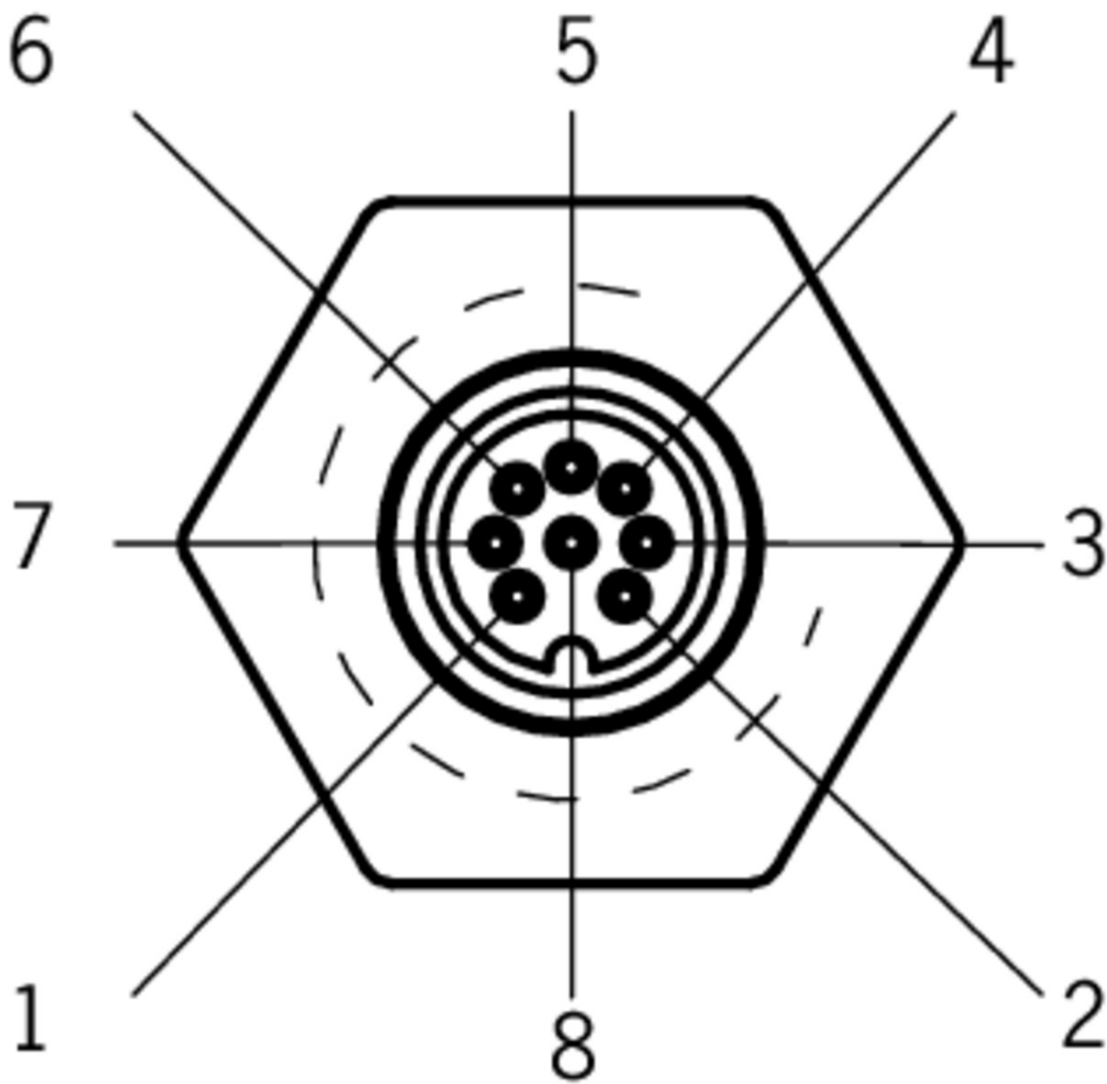
[6] For UL requirement UL category code (CYJV/CYJV7)

[7] For alternatives see operating instructions

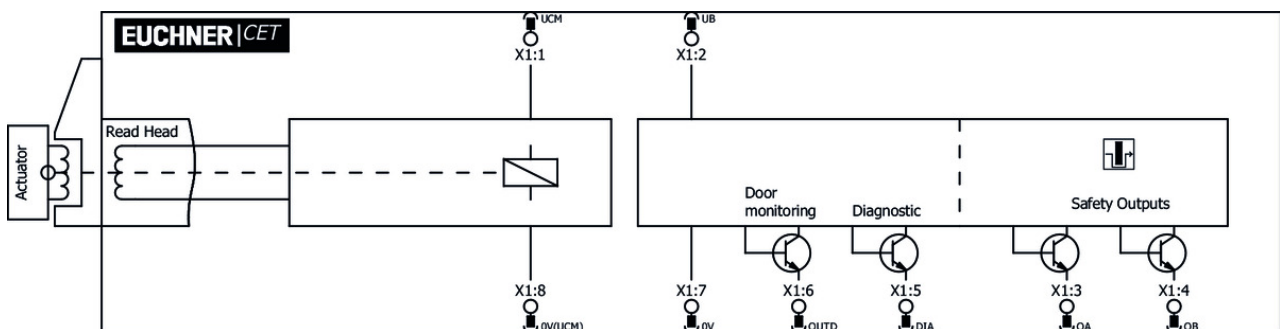
Dimension drawing



Wiring diagram



Block diagram



Function expansion

- ▣ 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

▼ Emergency unlocking for CET



103714 NOTENTSPERRUNG CET

▼ Mechanical key release for CET read head/switch



098850 SCHLUESSEL-HILFSENTRIEGELUNG

▼ Features

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

▼ 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
-

✓ Double ramp for safety switch/read head CET



114091 CET-DR

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 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 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 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
-

Actuator

✓ Actuator CET-A-BWK-50X



096327 CET-A-BWK-50X

✓ Features

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

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
-

Connection material

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



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
-



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
-

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



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
-



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
-

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



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
-



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
-

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



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
-

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
-

✓ 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
-

▼ Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CET.-AP-... (Uni-/Multicode)

	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CET.-AP-... (Uni-/Multicode)	2122242	04-05/18		2.5 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur avec interverrouillage CET.-AP-... (uni-/multicode)	2122242	04-05/18		2.6 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder con bloqueo CET.-AP-... (Unicode/Multicode)	2122242	04-05/18		2.6 MB
Operating Instructions Transponder-Coded Safety Switch With Guard Locking CET.-AP-... (Unicode/Multicode)	2122242	04-05/18		2.5 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder con meccanismo di ritenuta CET.-AP-... (Unicode/Multicode)	2122242	04-05/18		2.5 MB
使用说明书 应答机编码安全开关 CET.-AP-... (特殊/通用编码)	2122242	04-05/18		2.9 MB

▼ Bezpečnostní informace CET (-AR/-AP)

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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
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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

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Transpondercodierte Sicherheitsschalter - Verriegelungseinrichtungen und Zuhaltungen	127594	02-01/18		5.2 MB
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Interrupidores 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

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EU-Konformitätserklärung	2110802	10-01/17		 0.3 MB
Declaración UE de conformidad				
Déclaration UE de conformité				
Dichiarazione di conformità				
EU declaration of conformity			