

ITEM 105802 CET1-AR-CRA-AH-50S-SG-105802

Description	Technical data	Accessories	Downloads
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Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Locking force up to 6,500 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 2 plug connectors M12
- › Unicode
- › Feedback loop

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 Guard locking by spring force; release by applying voltage to the guard locking solenoid.

LED function display

LED State Status LED

LED DIA Diagnostics LED

LED 1 rot freely configurable

LED 2 grün freely configurable

Additional connections

OUT Monitoring output (semiconductor)

RST Reset input

Y Feedback loop

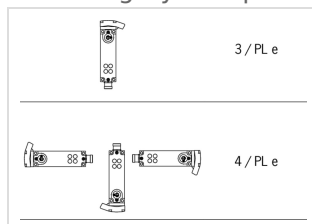
Category according to EN ISO 13849-1

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 figures and environment

Housing material		
	Slide	Stainless steel
	Safety switch housing	Die-cast aluminum
Ground		
	Net	1 kg
Ambient temperature		
	At $U_B = 24V DC$	-20 ... 55 °C
Degree of protection		IP67 [1]
Mechanical life		1×10^6
Installation position		Any [2]
Degree of freedom		
	X	± 5 mm
	Y	± 5 mm
	Z	± 4 mm
Ready delay		10 s
Switching frequency		max. 0,5 Hz
Connection		2 plug connectors M12, 5 and 8-pin
Approach speed		20 m/min
Guard locking principle		Closed-circuit current principle
Locking force F_{max}		6500 N
Locking force F_{Zh} (in accordance with GS-ET-19)		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 acc. to EN 60947-5-2		
	DC-13	24V 200mA [3]
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 ^[4]
Safety outputs OA/OB		
Type of output		Semiconductor outputs, p-switching, short circuit-proof
Output voltage	High U(OA,OB)	UB-1,5V ... UB V DC ^[5]
	Low U(OA,OB)	0 ... 1 V DC
Output current	per safety output	1 ... 200 mA
Off-state current I _r		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
Time difference	Both safety outputs	max. 10 ms
Feedback loop Y		
Input voltage	High	15 ... UB V DC
	Low	0 ... 1 V DC
Monitoring output OUT		
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 %
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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 according 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 [6]
Performance Level		Depending on external control of guard locking [7]
PFH _d		Depending on external control of guard locking [8]
<hr/>		
Mission time		20 y

[1] Screwed tight plug connector/mating component

[2] Preferably head downward

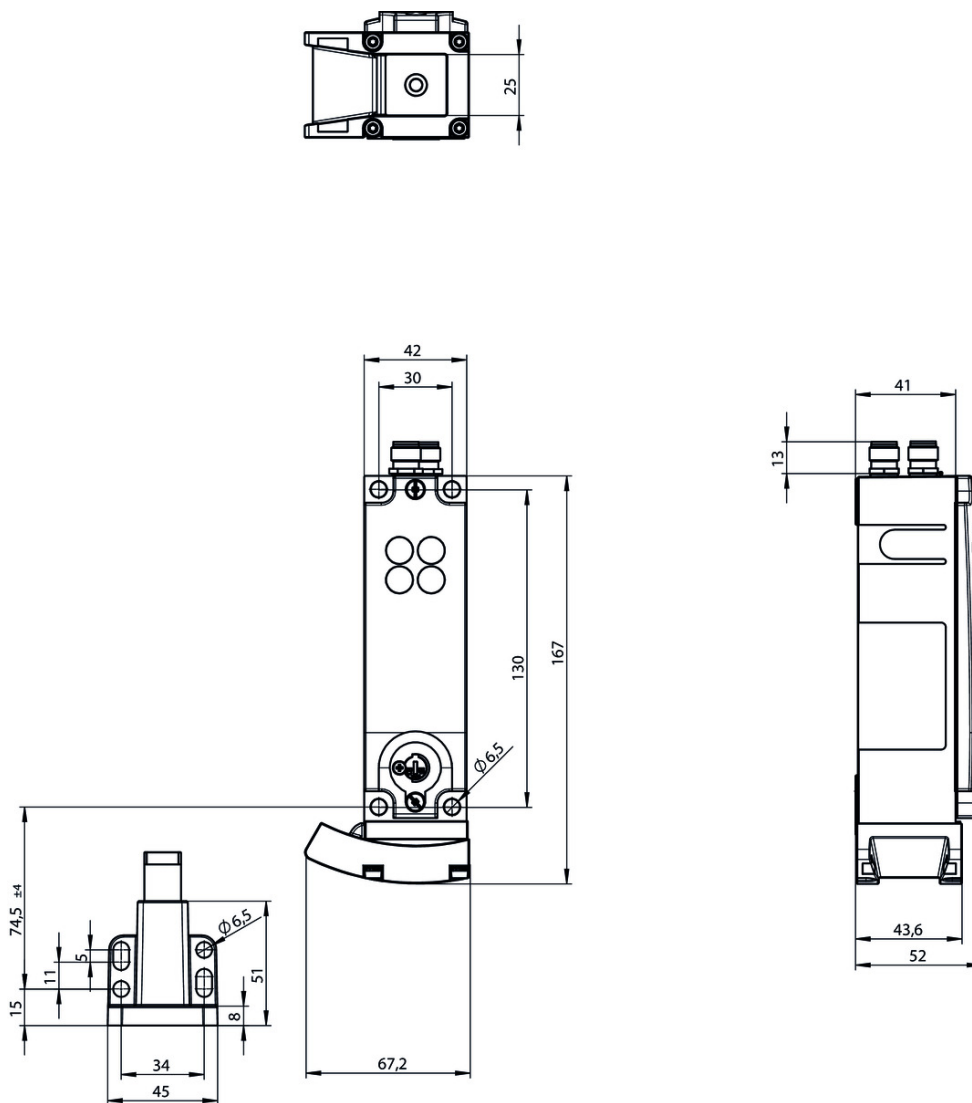
[3] Caution: outputs must be protected with a free-wheeling diode in case of inductive loads

[4] For alternatives see operating instructions

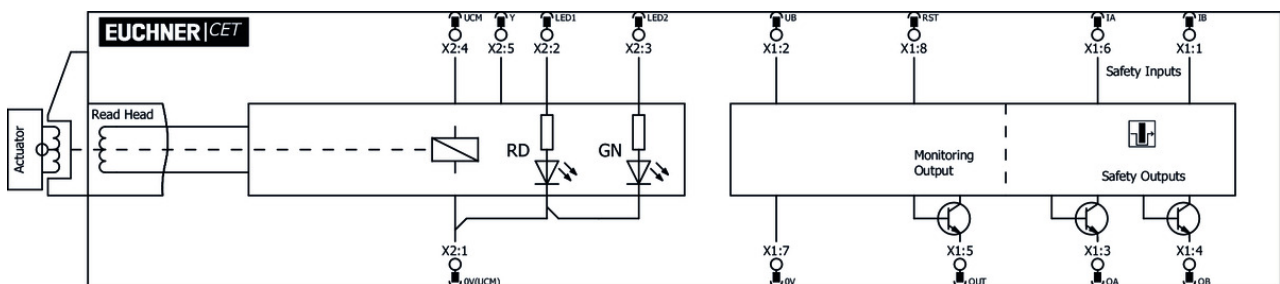
[5] Values at a switching current of 50mA without taking into account the cable lengths

[6, 7, 8] Feedback loop and LEDs have the same ground potential as the guard locking solenoid

Dimension drawing



Block diagram



Actuator

✓ Actuator CET-A-BWK-50X



096327 CET-A-BWK-50X

✓ Features

- › Actuator for read head/safety switch CET
- › Two safety screws per actuator

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

▼ Y-distributor M12



097627 Y-VERTEILER M12

▼ Features

- › Y-distributor M12, 2 x 5-pin, 1 x 8-pin
 - › Straight plug connector
-

▼ Bridging plug M12



097645 BRUECKEN-STECKER

▼ Y-distributor M12 with connection cable



111696 Y-VERTEILER M12 MIT ANSCHLUSSKABEL

▼ Features

- › Y-distributor M12 with connection cable, 2 x 5-pin, 1 x 8-pin
 - › Straight plug connector
 - › PVC cable
 - › Cable length 0.2 m
-



112395 Y-VERTEILER M12 MIT 1M KABEL

▼ Features

- › Y-distributor M12 with connection cable, 2 x 5-pin, 1 x 8-pin
 - › Straight plug connector
 - › PVC cable
 - › Cable length 1 m
-

▼ M12 extension PUR 5-pin, plug connectors at both ends, 10m



115566 C-M12F05-05X025PU10,0-M12M05-115566

▼ Features

- › M12 female plug, 5-pin (angled) to M12 plug connector (straight)
- › Connectors at both ends
- › PUR cable
- › Cable length 10 m
- › With cable exit C (left)



115565 C-M12F05-05X025PU10,0-M12M05-115565

▼ Features

- › M12 female plug, 5-pin (angled) to M12 plug connector (straight)
- › Connectors at both ends
- › PUR cable
- › Cable length 10 m
- › With cable exit A (right)

▼ Connection cable with angled plug connector M12, 5-pin, 10m



113190 C-M12F05-05X025PU10,0-MA-113190

▼ Features

- › M12 female plug, 5-pin
- › Angled plug connector
- › PUR cable
- › Cable length 10 m
- › Cable exit C (left)
- › With flying lead



113187 C-M12F05-05X025PU10,0-MA-113187

▼ Features

- › M12 female plug, 5-pin
- › Angled plug connector
- › PUR cable
- › Cable length 10 m
- › Cable exit A (right)
- › With flying lead

▼ Connection cable with 2 plug connectors M12, 5-pin, 5m



100180 C-M12F05-05X034PV05,0-M12M05-100180

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
- › Straight female plug and plug connector
- › PVC cable
- › Cable length 5 m



119932 C-M12F05-05X034PU05,0-M12M05-119932

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
- › Straight female plug and plug connector
- › PUR cable

- › Cable length 5 m
-

- ▼ Connection cable with plug connector M12, 5-pin, 20m



100185 C-M12F05-05X034PV20,0-MA-100185

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PVC 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 2 plug connectors M12, 5-pin, 10m



100181 C-M12F05-05X034PV10,0-M12M05-100181

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PVC cable
 - › Cable length 10 m
-



119947 C-M12F05-05X034PU10,0-M12M05-119947

▼ Features

- › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PUR cable
 - › Cable length 10 m
-

- ▼ Connection cable with 2 plug connectors M12, 5-pin, 20m

100182 C-M12F05-05X034PV20,0-M12M05-100182



- ✓ Features
 - › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PVC cable
 - › Cable length 20 m
-



119971 C-M12F05-05X034PU20,0-M12M05-119971

- ✓ Features
 - › M12 female plug to M12 plug connector, 5-pin
 - › Straight female plug and plug connector
 - › PUR cable
 - › Cable length 20 m
-

- ✓ Connection cable with plug connector M12, 5-pin, 5m



100183 C-M12F05-05X034PV05,0-MA-100183

- ✓ Features
 - › M12 female plug, 5-pin
 - › Straight plug connector
 - › PVC cable
 - › Cable length 5 m
 - › With flying lead
-

- ✓ Connection cable with plug connector M12, 5-pin, 10m



100184 C-M12F05-05X034PV10,0-MA-100184

- ✓ Features
 - › M12 female plug, 5-pin
 - › Straight plug connector
 - › PVC cable
 - › Cable length 10 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 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

▼ Passive distribution module



120861 AC-DP-04-SA-120861

▼ Features

- › Connection of up to 4 CES-AR, CET-AR, CTP-AR and ESL-AR
 - › LEDs for the indication of the door position on each port
 - › Can be connected in series
-

▼ 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 straight plug connector M12, 5-pin, 30 m



122784 C-M12F05-05X034PU30,0-MA-122784

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PUR cable
 - › Cable length 30 m
 - › With flying lead
-

▼ Connection cable with straight plug connector M12, 5-pin, 20 m



113682 C-M12F05-05X034PU20,0-MA-113682

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PUR cable
 - › Cable length 20 m
 - › With flying lead
-

▼ Connection cable with straight plug connector M12, 5-pin, 10m



113640 C-M12F05-05X034PU10,0-MA-113640

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PUR cable
 - › Cable length 10 m
 - › With flying lead
-

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



113620 C-M12F05-05X034PU05,0-MA-113620

▼ Features

- › M12 female plug, 5-pin
 - › Straight plug connector
 - › PUR cable
 - › Cable length 5 m
 - › With flying lead
-

Function expansion

▼ Mechanical key release for CET read head/switch



098850 SCHLUESSEL-HILFSENTRIEGELUNG

▼ Emergency unlocking for CET



103714 NOTENTSPERRUNG CET

▼ Cover for read head and actuator CET



098808 CET ABDECKUNG RECHTS

▼ Features

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



098807 CET ABDECKUNG LINKS

▼ Features

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

▼ Double ramp for safety switch/read head CET



114091 CET-DR

▼ 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)
-

✓ Lockout bar CET



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
-

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 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 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 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

Instructions

✓ Operating Instructions Transponder-Coded Safety Switch With Guard Locking CET.-AR-... (Unicode/Multicode)

	Doc. no.	Version	Language	Download
Betriebsanleitung Transpondercodierter Sicherheitsschalter mit Zuhaltung CET.-AR-... (Uni-/Multicode)	110788	11-05/16		3.8 MB
Operating Instructions Transponder-Coded Safety Switch With Guard Locking CET.-AR-... (Unicode/Multicode)	110788	11-05/16		3.8 MB
Mode d'emploi Interrupteur de sécurité à codage par transpondeur avec interverrouillage CET.-AR-... (uni-/multicode)	110788	11-05/16		3.8 MB
Manual de instrucciones Interruptor de seguridad con codificación por transponder con bloqueo CET.-AR-... (Unicode/Multicode)	110788	11-05/16		3.8 MB
Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder con meccanismo di ritenuta CET.-AR-... (Unicode/Multicode)	110788	11-05/16		3.8 MB
Návod k použití Bezpečnostní spínač s kódovaným transpondérem a jištěním ochranného krytu CET.-AR-... (Unicode/Multicode)	110788	11-05/16		4.5 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)	110788	11-05/16		5.0 MB
Инструкция по эксплуатации Транспондерный предохранительный выключатель с защитной блокировкой CET.-AR-... (Uni-/Multicode)	110788	11-05/16		4.6 MB
İşletim kılavuzu Kapalı tutmalı CET.-AR-... (Uni-/Multicode)	110788	11-05/16		4.5 MB
使用说明书应答机编码安全开关 CET.-AR-... (特殊/通用编码)	110788	11-05/16		4.2 MB

✓ Safety Information CET/CTP (-AR/-AP)

Doc. no. Version Language Download

Sicherheitsinformation CET/CTP (-AR/-AP)	105517	13-11/16		0.9 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)				
Informação de segurança CET/CTP (-AR/-AP)	105517	13-11/16		0.2 MB
Bezpečnostní informace CET/CTP (-AR/-AP)	105517	13-11/16		0.1 MB
安全情報 CET/CTP (-AR/-AP)	105517	13-11/16		0.3 MB
Güvenlik bilgisi CET/CTP (-AR/-AP)	105517	13-11/16		0.2 MB
安全信息 CET/CTP (-AR/-AP)	105517	13-11/16		0.2 MB

Catalogs

Transponder-coded safety switches - Interlocking devices and guard locking devices

	Doc. no.	Version	Language	Download
Transpondercodierte Sicherheitsschalter - Verriegelungseinrichtungen und Zuhaltungen	127594	01-09/16		5.0 MB
Transponder-coded safety switches - Interlocking devices and guard locking devices	127595	01-09/16		5.0 MB
Interrupteurs de sécurité à codage par transpondeur - Dispositifs de verrouillage et interverrouillages	137558	01-09/16		5.0 MB
Interruptores de seguridad con codificación por transponder - Dispositivos de enclavamiento y bloqueos	137560	01-09/16		5.0 MB

Declaration of conformity

EC-Declaration of Conformity CET-AP; CET-AR; CET-A

	Doc. no.	Version	Language	Download
EG-Konformitätserklärung CET-AP; CET-AR; CET-AS	110802	09-02/16		0.8 MB
EC-Declaration of Conformity CET-AP; CET-AR; CET-A				
CE-Declaración de Conformidad CET-AP; CET-AR; CET-AS				
CE-Déclaration de Conformité CET-AP; CET-AR; CET-AS				
CE-Dichiarazione di conformità CET-AP; CET-AR; CET-AS				

CAD data

CAD data for this item on TraceParts