

ITEM 119106 CET3-AP-CRA-AH-50F-SH-C2312-119106

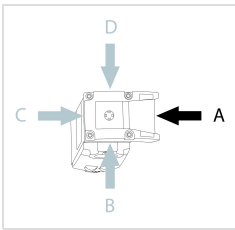
Description	Technical data	Accessories	Downloads
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Features

- › Read head 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
- › Plug connector M23 (RC18)
- › Unicode
- › Door monitoring output
- › Indication of the door position by LED
- › Teach-in input
- › Escape release, 105 mm long
- › 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

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

OUT Monitoring output (semiconductor)

OUT D Door monitoring output

RST Reset input

J Teach-in input

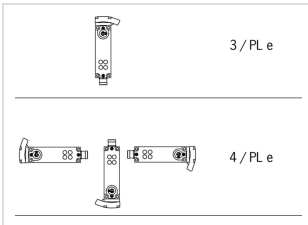
Category according to EN ISO 13849-1

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

Escape release

This is used for manual release of guard locking from the danger zone without tools.

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 [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 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
	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 [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 (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 [4]
Safety class	EN IEC 61140	III
Switching load	According to UL	24V DC, class 2 [5]
		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 ... 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
		Teach-in input
Input voltage	High	15 ... 27,6 V DC
	Low	0 ... 1 V DC
		Monitoring output OUT
Type of output		p-switching, short circuit-proof

Switching current	OUT	1 ... 50 mA
Output voltage	OUT	0,8xUB ... UB 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	0,8xUB ... UB V DC
Switching delay from state change		max.700 ms

Operating distance

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

Miscellaneous

C number	C2312	Extended escape release
For the approval according to UL the following applies		Operation only with UL class 2 power supply, or equivalent measures see operating instructions

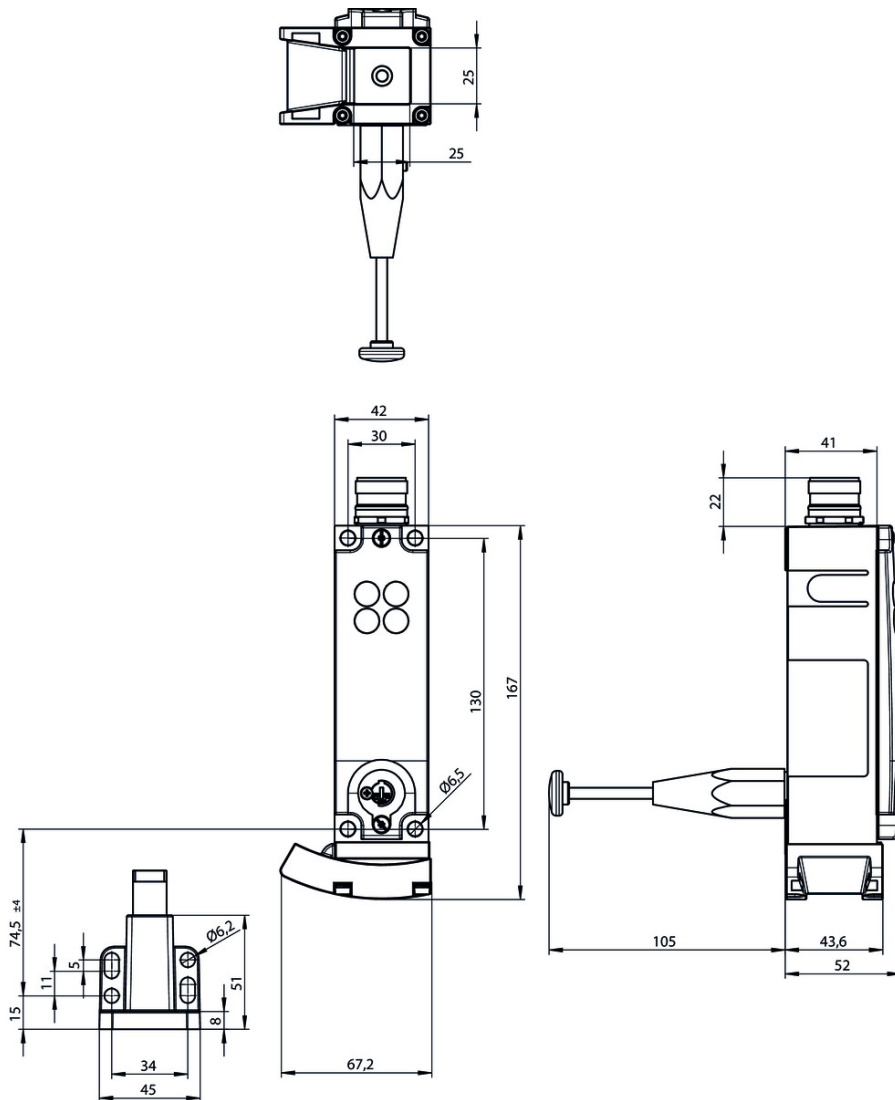
Reliability values acc. to EN ISO 13849-1

		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

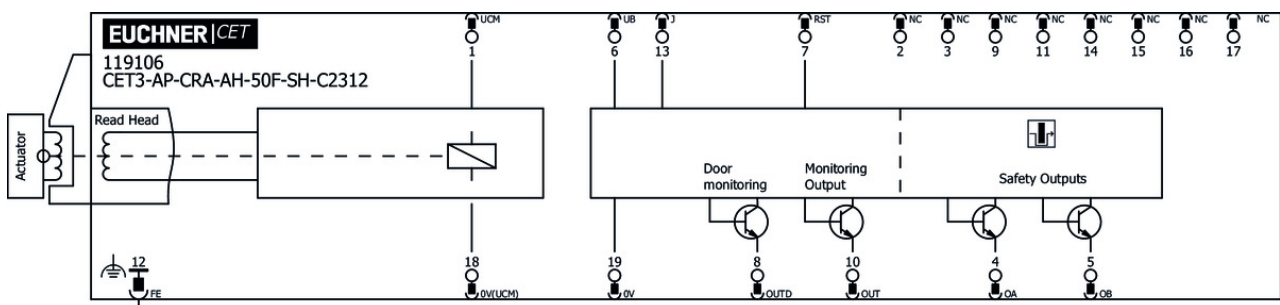
Mission time		20 y
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- [1] Screwed tight plug connector/mating component
- [2] Preferably head downward
- [3] Caution: outputs must be protected with a free-wheeling diode in case of inductive loads
- [4] For UL requirement UL category code (CYJV2/CYJV8) or (CYJV/CYJV7)
- [5] For alternatives see operating instructions

Dimension drawing



Block diagram



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
-

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

▼ 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)
- › 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

▼ 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.
-

▼ Extension of the escape release CET



127377 AF-E-80-127377

▼ Features

- › Extension of the CET escape release by 30, 50 or 80 mm
-

▼ 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
-

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/F with escape release



106172 RIEGEL CET-A-C/F

▼ Features

- › Steel bolt
- › For doors hinged on the left or right
- › In combination with CET with escape release
- › Detent knob in open position
- › Can be locked in open position with padlocks



106350 RIEGEL CET-A-C/F-C2282

✓ Features

- › Steel bolt
- › Stainless steel guide strip
- › For left or right hinged doors
- › In combination with CET with escape release
- › Detent knob in open position
- › Can be locked in open position with padlocks

Connection material

- ✓ 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

- ✓ 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, 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, 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, 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, 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, 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, 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, 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, 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, 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



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
-



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
-

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



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
-



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

▼ 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

▼ Female plug RC18 straight



074616 RC18EF

▼ Features

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

▼ Female plug RC18 angled



074617 RC18WF

▼ Features

- › Plug connector M23, angled
- › 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

▼ Female plug RC18 straight with option C1825



077025 RC18EF-C1825

▼ 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

Instructions

- 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)

	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



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