

ITEM 113021 CET1-AR-CRA-AH-50F-SH-C2353-113021

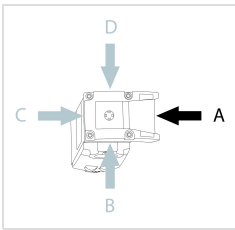
Description	Technical data	Accessories	Downloads
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Features

- › Safety switch with guard locking and integrated evaluation electronics
- › Locking force up to 6500 N
- › 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
- › Plug connector M23 (RC18)
- › Unicode
- › Teach-in input
- › Escape release, 105 mm long
- › Wire front release (bowden), 3 m, automatic return
- › 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

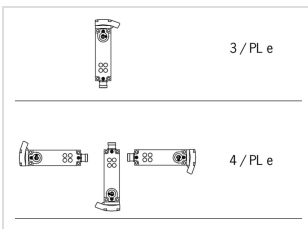
Category according to EN ISO 13849-1

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

Wire front release (bowden)

The wire front release permits remote unlocking of the guard locking via a pull wire. Flexible routing of the pull wire permits release of the guard locking in inaccessible installation situations.

Important: The wire front release (bowden) is not a safety function.

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]
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		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
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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 ^[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 $U(OA,OB)$	$U_B - 1,5V \dots U_B$ 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
Discrepancy time	Both safety outputs	max.10 ms
Teach-in input J		
Input voltage		

	High	15 ... 27,6 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

C number	C2353	With wire front release (bowden) mounted and long escape release 105mm
For the approval according to UL the following applies	Operation only with UL class 2 power supply, or equivalent measures see operating instructions	

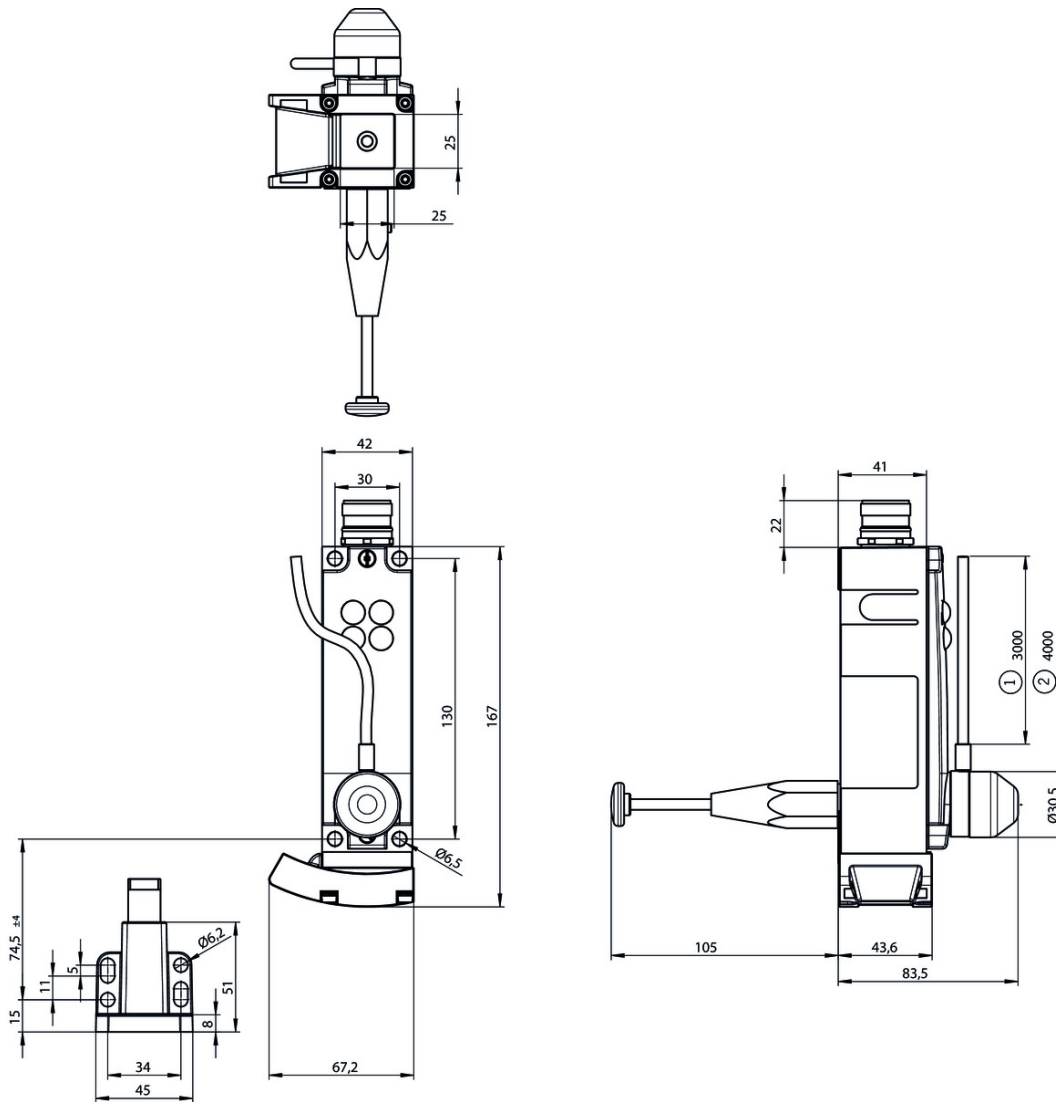
Reliability values acc. to EN ISO 13849-1

		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 x 10 ⁻⁸
	Head downward or horizontal	3.1 x 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]	

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 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

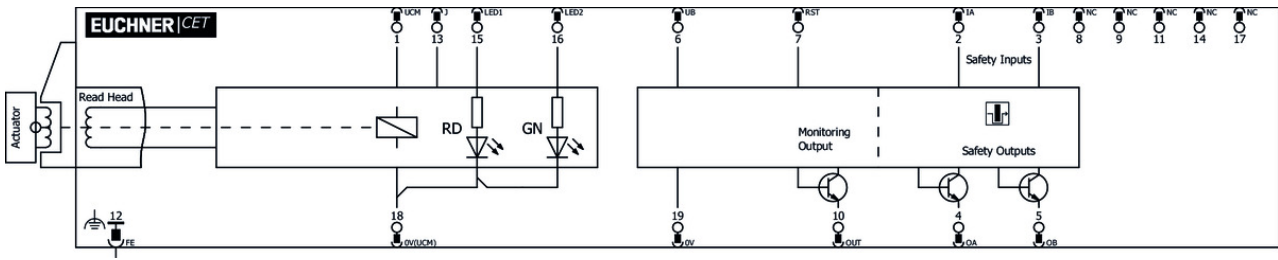
Dimension drawing



Legende

- 1 Hose length
- 2 Rope length

Block diagram



Connection material

- ✔ 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, 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, 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, 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, 25m, angled



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
-



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
-

▼ Female plug RC18 angled



074617 RC18WF

▼ Features

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

▼ 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, 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, 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, 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
-

▼ 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
-

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
-

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

✓ Double ramp for safety switch/read head CET



114091 CET-DR

▼ 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

▼ Handle for wire front release



099795 AY-HDL-099795

▼ Features

- › Suitable for all wire front releases



124204 AY-HDL-124204

▼ Features

- › Suitable for all wire front releases

▼ 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
-

▼ 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
-

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

▼ Bezpečnostní informace CET (-AR/-AP)


	Doc. no.	Version	Language	Download
Sicherheitsinformation CET (-AR/-AP)	105517	14-01/17		0.7 MB
Safety Information CET (-AR/-AP)				
Información de seguridad CET (-AR/-AP)				
Information de sécurité CET (-AR/-AP)				
Informazioni sulla sicurezza 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
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EU-Konformitätserklärung	2110802	10-01/17		 0.3 MB
EU declaration of conformity				
Declaración UE de conformidad				
Déclaration UE de conformité				
Dichiarazione di conformità				

CAD data

CAD data for this item on TraceParts