

ITEM 124937 CEM-I2-AR-U-C40-SH-124937

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



Features

- › Safety switches with guard locking for process protection and integrated evaluation electronics
- › Solenoid with locking force 600 N
- › Adhesive-force adjustment in 3 levels
- › 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 for door position monitoring
- › With plug connector M23
- › Unicode
- › Door monitoring output

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.

Guard locking type

Connector assignment

| Plug connector (view of connection side) | Pin | Designation | Function | Conductor coloring of connection cable |
|---|-----|-------------|--|---|
|  | 1 | IMP | Control voltage, guard locking solenoid, 24 V DC | VT |
| | 2 | FI1A | Enable input for channel 1 | RD |
| | 3 | FI1B | Enable input for channel 2 | GY |
| | 4 | FO1A | Safety output, channel 1 | RD/BU |
| | 5 | FO1B | Safety output, channel 2 | GN |
| | 6 | UB | Operating voltage, 24 V DC | BU |
| | 7 | RST | Reset input | GY/PK |
| | 8 | OT | Door monitoring output | GN/WH |
| | 9 | OI | Diagnostics output | YE/WH |
| | 10 | OL | Guard locking monitoring output | GY/WH |
| | 11 | - | n.c. | BK |
| | 12 | FE | Function earth (must be connected to meet the EMC requirements) | GN/YE |
| | 13 | - | n.c. | PK |
| | 14 | - | n.c. | BN/GY |
| | 15 | - | n.c. | BN/YE |
| | 16 | - | n.c. | BN/GN |
| | 17 | - | n.c. | WH |
| | 18 | - | n.c. | YE |
| | 19 | 0 V UB | Operating voltage, 0 V | BN |

Approvals

Mechanical values and environment

| | | |
|--|--------------------|----------------------------|
| Material | Read head | Plastic (PBT) |
| | Solenoid | Nickel-plated steel |
| Housing material | | Aluminum |
| Weight | | 0,64 kg |
| Ambient temperature | | -20 ... 55 °C |
| Degree of protection | | IP65/IP67 ^[1] |
| Resilience to vibration | | In acc. with EN 60947-5-3 |
| Mechanical life | | |
| In case of use as door stop, and 1 Joule impact energy | | 1×10^6 |
| Installation position | | Any |
| Tightening torque | | |
| | Fixing screws | 4 Nm |
| Ready delay | | 12 s |
| Connection | | Plug connector M23, 19-pin |
| Locking force F_{max} | | |
| | In axial direction | 600 N ^[2] |
| Adhesive force | | |
| | adjustable | 0, 30, 50 N |

Electrical connection ratings

| | | |
|---|-------------------------------------|-----------------------------------|
| Operating voltage | DC | 24 V -15% ... +15% ^[3] |
| Rated conditional short-circuit current | | 100 A |
| Current consumption | | |
| | Guard locking inactive | 80 mA ^[4] |
| | Guard locking active | 350 mA ^[5] |
| | Control input I_IMP | min.20 mA |
| Fusing | | |
| | External (operating voltage U_B) | 1 A |
| Rated insulation voltage U_i | | max.30 V |
| Rated impulse withstand voltage U_{imp} | | max.0,5 kV |
| EMC protection requirements | | In acc. with EN 60947-5-3 |
| Degree of contamination (external, according to EN 60947-1) | | 3 |
| Switch-on time | | |
| | Safety outputs | 700 ... 2500 ms |
| | Monitoring output OT | 700 ... 2500 ms ^[6] |
| Safety class | | III |

| | |
|--|---|
| Discrepancy time | max.10 ms |
| Risk time according to EN 60947-5-3 | |
| | max.260 ms |
| Delay per device | 5 ms |
| | FO1A/FO1B |
| Type of output | Semiconductor outputs, p-switching, short circuit-proof |
| Switching frequency, electrical | 0,5 Hz |
| Switching current | |
| Per output | 1 ... 150 mA |
| Output voltage | |
| HIGH U(FO1A) / U(FO1B) | UB - 1,5 ... UB V DC |
| LOW U(FO1A) / U(FO1B) | 0 ... 1 V DC |
| Utilization category according to EN 60947-5-2 | |
| DC-13 | DC-13 24V 150mA [7] |
| Off-state current I _r | max.0,25 mA |
| | OT, OI, OL |
| Type of output | Semiconductor output, p-switching, short circuit-proof |
| Switching current | |
| Per monitoring output | max.50 mA |
| Output voltage | 0,8 x UB ... UB V DC |

Operating distance

| | |
|---|------------------|
| Assured switch-off distance S _{ar} | 18 mm |
| Center offset | |
| Solenoid | -5 ... +5 mm [8] |

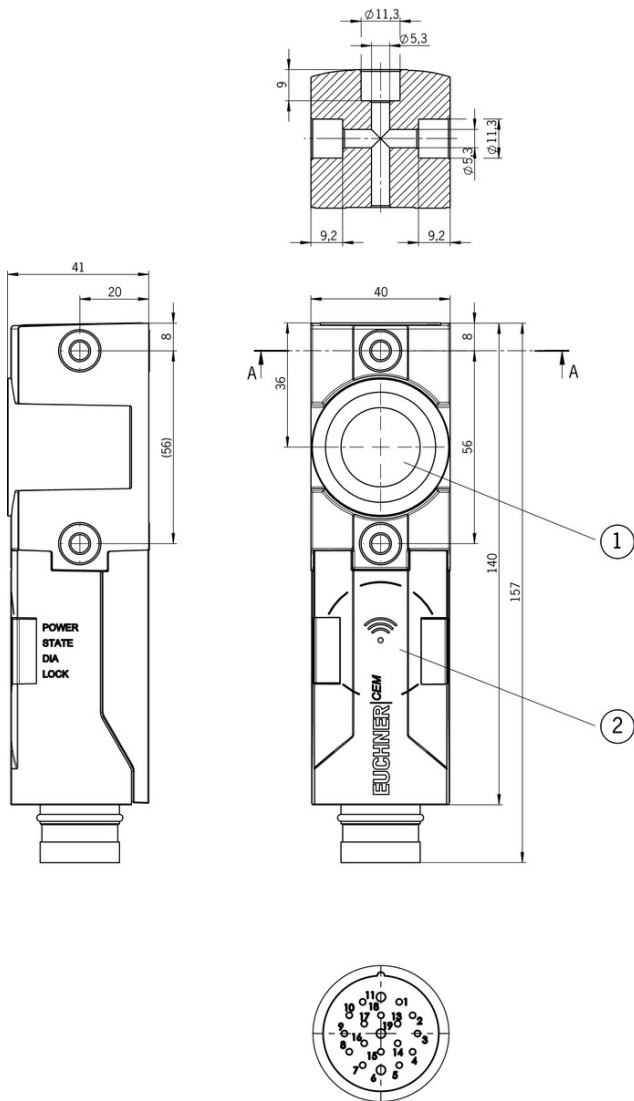
Reliability values acc. to EN ISO 13849-1

| | Monitoring of the position of the safety guard |
|-------------------|--|
| Category | 4 |
| Performance Level | PL e |
| PFH _D | 4.5 x 10 ⁻⁹ |

| | |
|--------------|------|
| Mission time | 20 y |
|--------------|------|

- [1] Screwed tight with the corresponding mating connector
- [2] The device signals if the locking force drops below 400N.
- [3] PELV
- [4, 5] Monitoring outputs not loaded
- [6] Guard locking active
- [7] Caution: outputs must be protected with a free-wheeling diode in case of inductive loads
- [8] In all directions

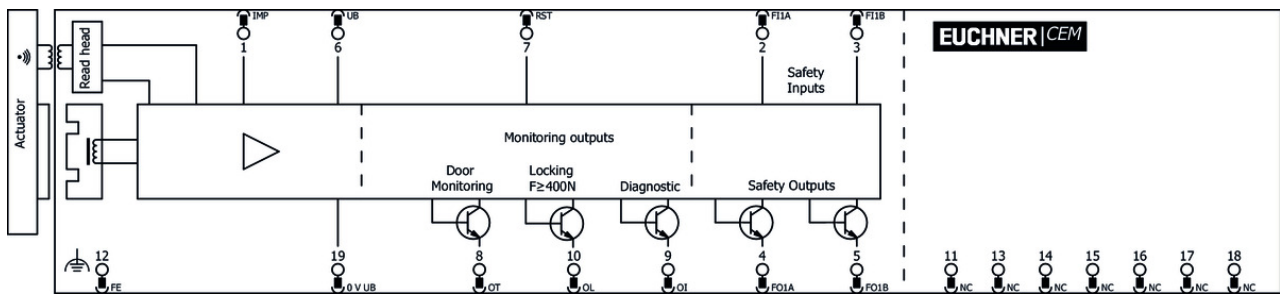
Dimension drawing



Legende

- 1 Active solenoid face
- 2 Active read head face

Block diagram



Actuator

Actuator A-C40-113869



113869 A-C40-113869

Features

- › Locking force 600 N
- › Two screws M5x16 (one as safety screw) included

Mounting accessories

Mounting bracket for actuator CEM-C40



126230 AM-B-126230

Features

- › Mounting bracket for actuator CEM-C40
- › Suitable for mounting on aluminum profiles of width 30-45 mm

Mounting bracket for switch CEM-C40



126231 AM-B-126231

Features

- › Mounting bracket for switch CEM-C40
- › Suitable for mounting on aluminum profiles of width 30-45 mm

Function expansion

Lockout mechanism CEM-C40



123625 AE-L-C40-123625

Features

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

Connection material

▼ Replacement crimp contacts for female connector RC18 with option C1825

094310 CRIMPKONTAKT BUCHSE RCF-C1825

▼ Features

- › 19 crimp sockets
 - › Conductor cross-section 16 x 0.25 - 0.5 mm² and 3 x 0.75 - 1 mm²
 - › For plug connector RC18..C1825
-

▼ 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
-

▼ Replacement crimp contacts for female connector RC18

094309 CRIMPKONTAKT BUCHSE RCF

▼ Features

- › 19 crimp sockets
 - › Conductor cross-section 19 x 0.75 - 1 mm²
 - › For plug connector RC18
-

▼ 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
-

▼ 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, 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, 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, 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, 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, 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, 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
-

- ▼ 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, 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, 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, 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, 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, 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, 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

Miscellaneous accessories

☑ Programming adapter





125481 A-TI-001-125481

Instructions

☑ Betriebsanleitung Transpondercodierter Sicherheitsschalter, Zuhaltung für den Prozessschutz CEM-AR Uni-/Multicode/CEM-AY Unicode


| | Doc. no. | Version | Language | Download |
|---|----------|----------|----------|----------|
| Betriebsanleitung Transpondercodierter Sicherheitsschalter, Zuhaltung für den Prozessschutz CEM-AR Uni-/Multicode/CEM-AY Unicode | 2124745 | 04-10/17 | | 1.5 MB |
| Mode d'emploi Interrupteur de sécurité à codage par transpondeur, interverrouillage pour protection du process CEM-AR uni-/multicode/CEM-AY unicode | 2124745 | 04-10/17 | | 1.6 MB |
| Manual de instrucciones Interruptor de seguridad con codificación por transponder, bloqueo para la protección de procesos CEM-AR Unicode/Multicode/CEM-AY Unicode | 2124745 | 04-10/17 | | 1.5 MB |
| Operating Instructions Transponder-Coded Safety Switch, Guard Locking for Process Protection CEM-AR Unicode/Multicode/CEM-AY Unicode | 2124745 | 04-10/17 | | 1.5 MB |
| Istruzioni di impiego Finecorsa di sicurezza con codifica a transponder, meccanismo di ritenuta per la protezione del processo CEM-AR Uni-/Multicode/CEM-AY Unicode | 2124745 | 04-10/17 | | 1.5 MB |

▼ Sicherheitsinformation und Wartung CEM-AR/CEM-AY




| | Doc. no. | Version | Language | Download |
|---|----------|----------|--|--|
| Sicherheitsinformation und Wartung CEM-AR/CEM-AY | 126019 | 02-07/16 |   |  0.5 MB |
| Información de seguridad y mantenimiento CEM-AR/CEM-AY | | |   | |
| Information de sécurité et entretien CEM-AR/CEM-AY | | |  | |
| Informazioni sulla sicurezza e manutenzione CEM-AR/CEM-AY | | | | |
| Safety Information and Maintenance CEM-AR/CEM-AY | | | | |

Catalogs



▼ Transpondercodierter Sicherheitsschalter CEM-AR-C40

| | Doc. no. | Version | Language | Download |
|---|----------|----------|--|--|
| Transpondercodierter Sicherheitsschalter CEM-AR-C40 | 126106 | 02-01/16 |   |  0.2 MB |
| Transponder-coded safety switch CEM-AR-C40 | | | | |

▼ Interruptor de seguridad con codificación por transponder CEM-AR-C40

| | Doc. no. | Version | Language | Download |
|--|----------|----------|---|---|
| Interruptor de seguridad con codificación por transponder CEM-AR-C40 | 126943 | 02-01/16 |   |  0.2 MB |
| Interrupteur de sécurité à codage par transpondeur CEM-AR-C40 | | | | |

▼ 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
EU declaration of conformity
Declaración UE de conformidad
Déclaration UE de conformité
Dichiarazione di conformità

2123042 06-08/18



 0.4 MB