

## Datasheet - EX-AZM 170-02ZK-24VAC/DC-3G/D

Solenoid interlock / EX-AZM 170



- Interlock with protection against incorrect locking.
- Long life
- High holding force
- Double-insulated  $\square$
- 1 Cable entry M 20 x 1.5
- Ex-certified screwed cable gland
- Ex certified
- IDC method of termination
- Manual release

(Minor differences between the printed image and the original product may exist!)

### Ordering details

|                          |                               |
|--------------------------|-------------------------------|
| Product type description | EX-AZM 170-02ZK-24VAC/DC-3G/D |
| Article number           | EX-AZM 170-02ZK-24VAC/DC-3G/D |
| EAN Code                 |                               |
| eCl@ss                   | 27-27-26-03                   |

### Approval


|          |      |
|----------|------|
| Approval | ATEX |
|----------|------|

### Classification

|                                   |  |
|-----------------------------------|--|
| Standards                         | EN ISO 13849-1   |
| B10d Normally-closed contact (NC) | 2.000.000  |
| Mission time notice               | 20 Years   |
|                                   | $MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$ |

### Global Properties

|                 |   |
|-----------------|---|
| Permanent light | EX-AZM 170  |
| Standards       | EN 60079-0, EN 60079-15, EN 60079-31, EN 60947-5-1, BG-GS-ET-19 |

|   |   |
|---|---|
| Compliance with the Directives (Y/N)  | Yes   |
| Duty cycle ED   | Magnet 100 %  |
| Materials   |   |
| - Material of the housings  | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| - Material of the contacts  | Silver  |
| Housing coating   | None  |
| Weight  |   |

## Mechanical data

---

|  |                           |
|--|---------------------------|
| Design of electrical connection                | IDC method of termination |
| Cable cross-section of the cable glands        |                           |
| - Min. Cable cross-section of the cable glands | Ø 6.5                     |
| - Max. Cable cross-section of the cable glands | Ø 12                      |
| Cable section                                  |                           |
| - Min. Cable section                           | 1 x 0,75, flexible        |
| - Max. Cable section                           | 1 x 1, flexible           |
| Mechanical life                                | > 1.000.000 operations    |
| Emergency unlocking device (Y/N)               | No                        |
| Manual release (Y/N)                           | Yes                       |
| - bottom                                       |                           |
| Emergency release (Y/N)                        | No                        |
| Latching force                                 | 5                         |
| Positive break force                           | 17                        |
| positive break travel                          | 11                        |
| Clamping force F                               | 1000 N                    |
| Impact energy                                  | 1 J                       |
| Max. Actuating speed                           | 1                         |

## Ambient conditions

---

|                                  |                      |
|----------------------------------|----------------------|
| Ambient temperature              |                      |
| - Min. environmental temperature | -15                  |
| - Max. environmental temperature | +45                  |
| Protection class                 | IP67 to IEC/EN 60529 |

## Electrical data

---

|   |                                       |
|---|---------------------------------------|
| Design of control element                 | Opener (NC)                           |
| Switching principle                       | Creep circuit element                 |
| Number of auxiliary contacts              | 0                                     |
| Number of safety contacts                 | 2                                     |
| Power to unlock                           | Yes                                   |
| Power to lock                             | No                                    |
| Rated control voltage $U_s$               | 24 VAC/DC                             |
| Power consumption                         | max. 10 W                             |
| Rated impulse withstand voltage $U_{imp}$ | 4 kV                                  |
| Rated insulation voltage $U_i$            | 250 V                                 |
| Thermal test current $I_{the}$            | 2 A                                   |
| Utilisation category                      | AC-15: 230 V / 2 A, DC-13: 24 V / 2 A |
| Max. fuse rating                          | 6 A gG D-fuse                         |

## ATEX

---

|   |  |
|---|--|
| EX-marking                                | EX II 3D Ex tc IIIC T80°C Dc X<br>EX II 3G Ex nC IIB T5 Gc X |
| Explosion protection categories for gases | 3G   |
| Explosion protection Zones for gases      | 2  |
| Explosion protected category for dusts    | 3D   |
| Explosion protection Zones for dusts      | 22   |

## Dimensions

|                          |    |
|--------------------------|----|
| Dimensions of the sensor |    |
| - Width of sensor        | 90 |
| - Height of sensor       | 84 |
| - Length of sensor       | 30 |

## notice

This type termination (IDC) method enables simple connection of flexible conductors without the need for the use of conductor ferrules

Individual coding available on request

Manual release

- For manual release using M5 triangular key, available as accessory

## Included in delivery

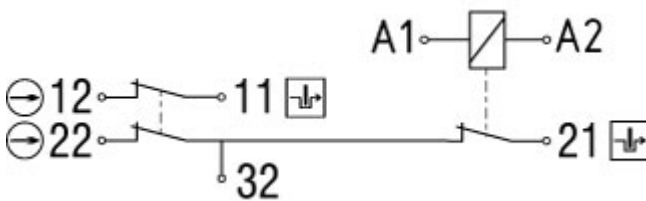
Actuators must be ordered separately.

Including Ex-certified screwed cable gland and screw plug

## Keywords

|          |  |
|----------|--|
| Keywords | Ex, EEx, ATEX, Ex AZM170, Ex AZM170, AZM 170 Ex, AZM170ex, AZM170ex, ATEX AZM170 |
|----------|--|

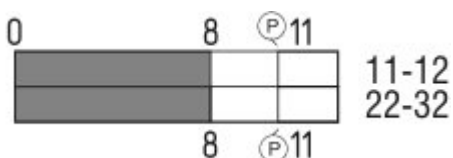
## Diagram








Note Diagram

- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

## Switch travel diagram



Notes Switch travel diagram

-  Contact closed
-  Contact open
-  Setting range
-  Break point
-  Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

## Ordering suffix

---

The applicable ordering suffix is added at the end of the part number of the safety switch.  
 Order example: EX-AZM 170-02ZK-24VAC/DC-3G/D-**1637**

...-**1637** 0,3 µm gold-plated contacts

## Ordering code

---

EX-AZM 170-(1)Z(2)K(3)-24VAC/DC-(4)-3G/D

|                |  |  |
|----------------|--|--|
| <b>(1)</b>     |  |  |
| <b>11</b>      |  | 1 Normally open contact (NO) / 1 Opener (NC) |
| <b>02</b>      |  | 2 Opener (NC)                                |
| <b>(2)</b>     |  |  |
| <i>without</i> |  | Latching force 5 N                           |
| <b>R</b>       |  | Latching force 30 N                          |
| <b>(3)</b>     |  |  |
| <i>without</i> |  | Power to unlock                              |
| <b>A</b>       |  | Power to lock                                |
| <b>(4)</b>     |  |  |
| <i>without</i> |  | Manual release                               |
| <b>1637</b>    |  | gold-plated contacts                         |

## Documents

---

**Operating instructions and Declaration of conformity** (pl) 502 kB, 12.04.2018

Code: mrl\_ex-azm170\_pl

**Operating instructions and Declaration of conformity** (en) 474 kB, 26.03.2018

Code: mrl\_ex-azm170\_en

**Operating instructions and Declaration of conformity** (es) 475 kB, 29.03.2018

Code: mrl\_ex-azm170\_es

**Operating instructions and Declaration of conformity** (cn) 525 kB, 27.07.2017

Code: mrl\_ex-azm170\_cn

**Operating instructions and Declaration of conformity** (jp) 752 kB, 18.08.2017

Code: mrl\_ex-azm170\_jp

**Operating instructions and Declaration of conformity** (fr) 473 kB, 29.03.2018

Code: mrl\_ex-azm170\_fr

**Operating instructions and Declaration of conformity (da)** 532 kB, 11.04.2018

Code: mrl\_ex-azm170\_da

**Operating instructions and Declaration of conformity (de)** 448 kB, 26.03.2018

Code: mrl\_ex-azm170\_de

**Operating instructions and Declaration of conformity (pt)** 477 kB, 29.03.2018

Code: mrl\_ex-azm170\_pt

**Operating instructions and Declaration of conformity (it)** 468 kB, 29.03.2018

Code: mrl\_ex-azm170\_it

**Operating instructions and Declaration of conformity (nl)** 472 kB, 29.03.2018

Code: mrl\_ex-azm170\_nl

**Brochure (de)** 7 MB, 19.10.2016

Code: b\_atep01\_de

**Brochure (en)** 7 MB, 19.10.2016

Code: b\_atep01\_en

**Brochure (it)** 3 MB, 20.07.2007

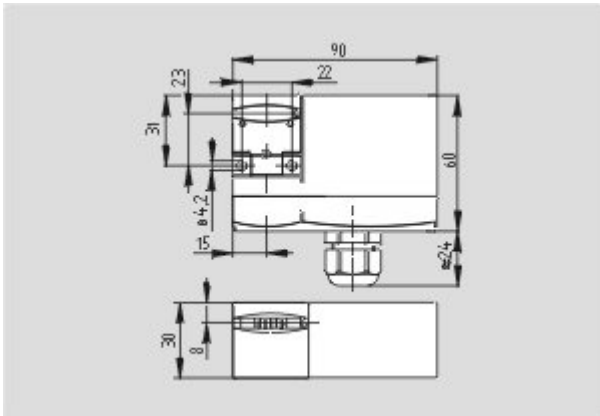
Code: b\_atep05

**Brochure (es)** 5 MB, 18.08.2009

Code: b\_atep09

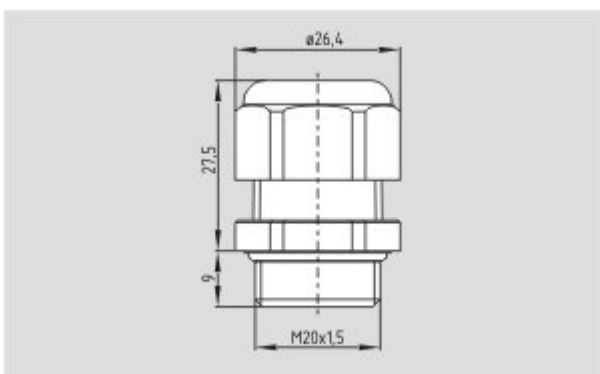
## Images

---

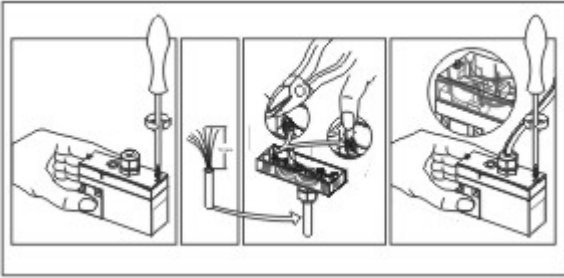


Dimensional drawing (basic component)

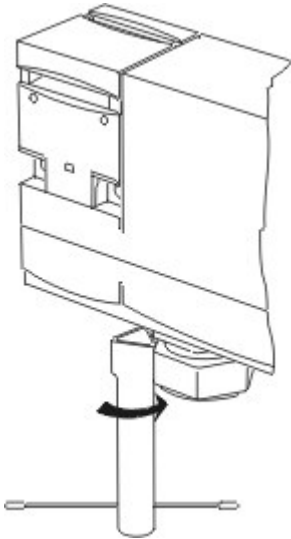
---



Dimensional drawing (miscellaneous)



Assembly example



Detail photo

---

## System components

### Actuator



#### 101123391 - AZM 170-B6

- Particularly suitable for hinged guards
- For very small actuating radii
- The direction of actuation can be selected by applicable insertion of the insert



#### 101122895 - AZ 17/170-B5

- Particularly suitable for sliding doors



#### 101139789 - AZ 17/170-B15

- Particularly suitable for sliding doors

---

#### 101139788 - AZ 17/170-B11



- Particularly suitable for sliding doors



---

**101137406 - AZ 17/170-B1-2245**

- Particularly suitable for sliding doors
- Damps vibration on guard device



---

**101122893 - AZ 17/170-B1**

- Particularly suitable for sliding doors

---

**Accessories**



**101100887 - TRIANGULAR KEY TK-M5**

- For manual release using M5 triangular key, available as accessory
- For maintenance, installation, etc.

---

K.A. Schmersal GmbH & Co. KG, Möddinghofe 30, D-42279 Wuppertal

The data and values have been checked thoroughly. Technical modifications and errors excepted.

Generiert am 13.02.2019 - 14:52:20h Kasbase 3.3.0.F.64l