# Datasheet - AZM 170-02ZRK-2197 24 VAC/DC

Solenoid interlock / AZM 170



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

- thermoplastic enclosure
- Double-insulated ⧈
- Compact design
- 90 mm x 84 mm x 30 mm
- 1 Cable entry M 20 x 1.5
- Interlock with protection against incorrect locking.
- Long life
- High holding force
- IDC method of termination
- Manual release from side

## Ordering details

| | |
|---|---|
| Product type description | AZM 170-02ZRK-2197 24 VAC/DC |
| Article number | 101140818 |
| EAN code | 4030661120065 |

## Approval

| | |
|---|---|
| Approval | BG<br>USA/CAN<br>CCC |

## Classification

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

## Global Properties

| | |
|---|---|
| Product name | AZM 170 |
| Standards | EN 60947-5-1, BG-GS-ET-19 |
| Compliance with the Directives (Y/N) CE | Yes |

| | |
|---|---|
| Number of actuating directions | 2 piece |
| Active principle | electromechanical |
| Duty cycle | Magnet 100 % |
| Materials | |
| - Material of the housings | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| - Material of the contacts | Silver |
| Housing coating | None |
| Weight | 285 g |

## Mechanical data

| | |
|---|---|
| Design of electrical connection | IDC method of termination |
| Cable section | |
| - Min. Cable section | 1 x 0,75 mm² |
| - Max. Cable section | 1 x 1.0 mm², flexible |
| Mechanical life | > 1.000.000 operations |
| Emergency unlocking device (Y/N) | No |
| - bottom | |
| Manual release (Y/N) | Yes |
| - right | |
| Emergency release (Y/N) | No |
| Latching force | 30 N |
| Positive break force | 17 N |
| positive break travel | 11 mm |
| Clamping force $F_{max}$ | 1000 N |
| Max. Actuating speed | 2 m/s |

## Ambient conditions

| | |
|---|---|
| Ambient temperature | |
| - Min. environmental temperature | −25 °C |
| - Max. environmental temperature | +60 °C |
| 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 piece |
| Number of safety contacts | 2 piece |
| 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 $I_{the}$ | 10 A |
| Utilisation category | AC-15: 230 V / 4 A, DC-13: 24 V / 4 A |
| Max. fuse rating | 6 A gG D-fuse |

## ATEX

| | |
|---|---|
| Explosion protection categories for gases | None |
| Explosion protected category for dusts | None |

## Miscellaneous data

| | |
|---|---|
| Applications | sliding safety guard,<br>removable guard,<br>hinged safety guard |

## Dimensions

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

## notice

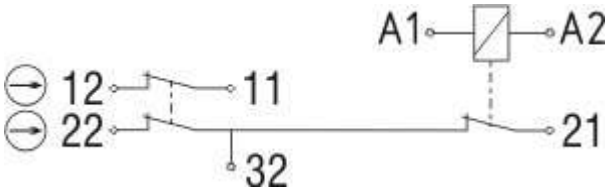
This type termination (IDC) method enables simple connetion of flexible conductors without the need for the use of conductor ferrules

Individual coding available on request

Manual release from side

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

## Diagram




Note Diagram

positive break NC contact

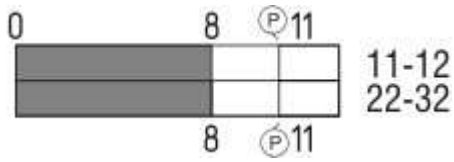
active

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: AZM 170-02ZRK-2197 24 VAC/DC**-1637**

| | |
|---|---|
| ...**-1637** | 0,3 µm gold-plated contacts |
| ...**ST-2431** | connector M12 , Individual solenoid monitoring |

## Ordering code

AZM 170**(1)**-**(2)**Z**(3)**K**(4)**-**(5)**-**(6)**-**(7)**

**(1)**

| | |
|---|---|
| *without* | IDC method of termination |
| **SK** | Screw connection |

**(2)**

| | |
|---|---|
| **11** | 1 Normally open contact (NO) / 1 Opener (NC) |
| **02** | 2 Opener (NC) |
| **12/0.0** | 1 Normally open contact (NO), 2 Opener (NC) / - |

**(3)**

| | |
|---|---|
| *without* | Latching force 5 N |
| **R** | Latching force 30 N |
| **I** | Individual coding |

**(4)**

| | |
|---|---|
| *without* | Power to unlock |
| **A** | Power to lock |

**(5)**

| | |
|---|---|
| *without* | cable gland |
| **ST** | Connector M12 x 1 |
| **ST-2431** | Connector M12 x 1, Individual solenoid monitoring |

**(6)**

| | |
|---|---|
| **24VAC/DC** | $U_S$ 24 VAC/DC |
| **110VAC** | $U_S$ 110 VAC |
| **230VAC** | $U_S$ 230 VAC |

**(7)**

| | |
|---|---|
| *without* | Manual release |
| **2197** | Manual release from side (Power to unlock) |
| **1637** | gold-plated contacts |

**AZM 170ST and AZM 170SK**

**AZM 170ST-(1)Z(2)K(3)-(4)-(5)-024**
**AZM 170SK-(1)Z(2)K(3)-(4)-(5)-024**

**(1)**

| | |
|---|---|
| **11/11** | 1 Normally open contact (NO), 1 Opener (NC) / 1 Normally open contact (NO), 1 Opener (NC) |
| **11/02** | 1 Normally open contact (NO), 1 Opener (NC) / 2 Opener (NC) |
| **12/00** | 1 Normally open contact (NO), 2 Opener (NC) / - |
| **12/11** | 1 Normally open contact (NO), 2 Opener (NC) / 1 Normally open contact (NO), 1 Opener (NC) |

| | |
|---|---|
| **12/02** | 1 Normally open contact (NO), 2 Opener (NC) / 2 Opener (NC) |
| **02/01** | 2 Opener (NC), - / 1 Opener (NC), - |
| **02/10** | 2 Opener (NC), - / 1 Normally open contact (NO), - |
| **(2)** | |
| *without* | Latching force 5 N |
| **R** | Latching force 30 N |
| **(3)** | |
| *without* | Power to unlock |
| **A** | Power to lock |
| **(4)** | |
| **1637** | gold-plated contacts |
| **(5)** | |
| **2197** | Manual release for Power to unlock |

## Documents

**Operating instructions and Declaration of conformity** (fr) 670 kB, 01.07.2010
Code: mrl_azm170_fr

**Operating instructions and Declaration of conformity** (de) 923 kB, 24.02.2011
Code: mrl_azm170_de

**Operating instructions and Declaration of conformity** (it) 645 kB, 09.04.2010
Code: mrl_azm170_it

**Operating instructions and Declaration of conformity** (nl) 720 kB, 23.09.2010
Code: mrl_azm170_nl

**Operating instructions and Declaration of conformity** (en) 746 kB, 12.03.2010
Code: mrl_azm170_en

**Operating instructions and Declaration of conformity** (jp) 709 kB, 14.04.2011
Code: mrl_azm170_jp

**Operating instructions and Declaration of conformity** (pl) 576 kB, 11.07.2013
Code: mrl_azm170_pl

**Operating instructions and Declaration of conformity** (da) 582 kB, 07.08.2012
Code: mrl_azm170_da

**Operating instructions and Declaration of conformity** (es) 665 kB, 25.03.2010
Code: mrl_azm170_es

**BG-test certificate** (en) 236 kB, 10.12.2013
Code: z_m17p02

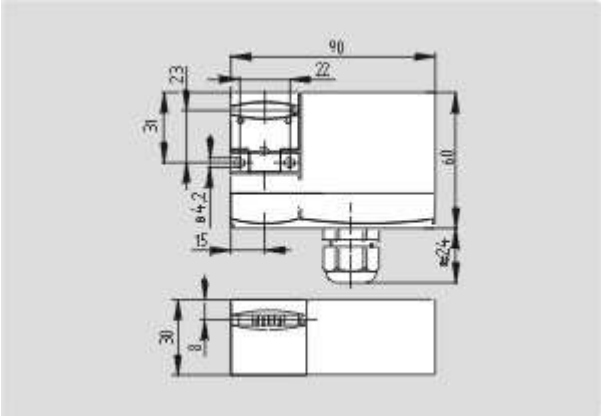
**BG-test certificate** (de) 238 kB, 10.12.2013
Code: z_m17p01

**CCC certification** (en) 469 kB, 21.09.2012
Code: q_371p02

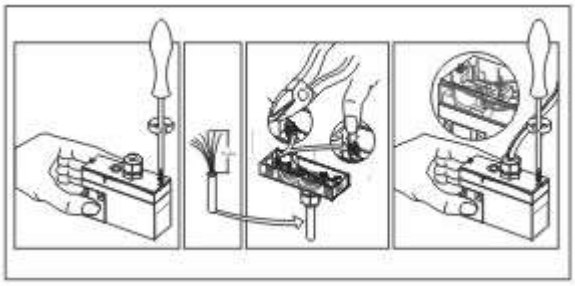
**CCC certification** (cn) 470 kB, 21.09.2012
Code: q_371p03

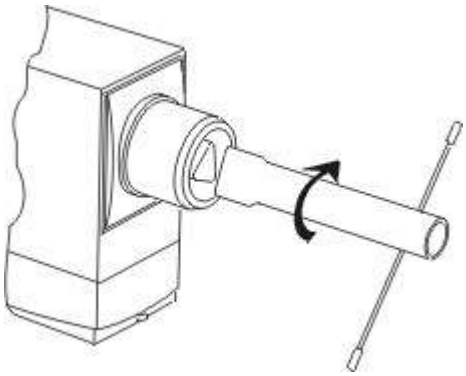
**Gost certification** (ru) 2 MB, 07.07.2011
Code: q_az1p01

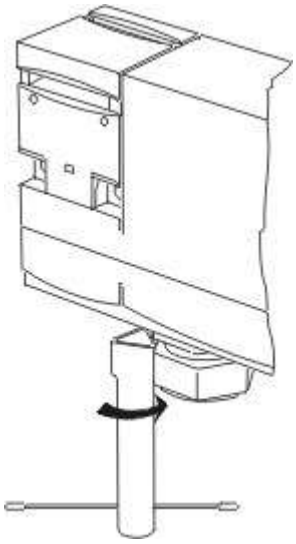
## Images



Dimensional drawing (basic component)


Assembly example


Detail photo



Detail photo

## System components

### Actuator



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

• Particularly suitable for sliding doors



**1137406 - AZ 17/170-B1-2245**

• Damps vibration on guard device



**1122895 - AZ 17/170-B5**

• Particularly suitable for hinged guards (front mounting)



**1139788 - AZ 17/170-B11**

• Particularly suitable for sliding doors



**1139789 - AZ 17/170-B15**

• Particularly suitable for hinged guards (front mounting)



**101123391 - AZM 170-B6**

• For very smal actuating radii
• The direction of actuation can be selected by applicable insertion of the insert

## Accessories



**1208493 - AZM 170-B CENTERING GUIDE**

• for AZ 17 and AZM 170



**101100887 - TRIANGULAR KEY TK-M5**

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

## Connector




**A-K4M12**

• Pre-wired cable
• 4-pole




**S-K4M12**

• Connector without cable
• 4-pole

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