# DATASHEET




## AZM 170-02ZK 24VAC/DC

- Thermoplastic enclosure
- Double-insulated
- Compact design
- Interlock with protection against incorrect locking.
- Long life
- High holding force

## Data

### Ordering data

| | |
|---|---|
| Product type description | AZM 170-02ZK 24VAC/DC |
| Article number (order number) | 101141641 |
| EAN (European Article Number) | 4030661122939 |
| eCl@ss number, version 12.0 | 27-27-26-03 |
| eCl@ss number, version 11.0 | 27-27-26-03 |
| eCl@ss number, version 9.0 | 27-27-26-03 |
| ETIM number, version 7.0 | EC002593 |
| ETIM number, version 6.0 | EC002593 |

### Approvals - Standards

| | |
|---|---|
| Certificates | BG<br>cULus<br>CCC |

### General data

| | |
|---|---|
| Standards | EN ISO 13849-1<br>EN ISO 14119<br>EN IEC 60947-5-1 |
| Coding level according to EN ISO 14119 | Low |
| Working principle | electromechanical |
| Housing material | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| Gross weight | 271 g |

## General data - Features

| | |
|---|---|
| Power to unlock | Yes |
| Manual release | Yes |
| Number of actuating directions | 2 |
| Number of auxiliary contacts | 1 |
| Number of safety contacts | 2 |

### Safety classification

| | |
|---|---|
| Standards | EN ISO 13849-1 |
| Performance Level, up to | c |
| Category | 1 |
| $B_{10D}$ Normally-closed contact (NC) | 2,000,000 Operations |
| Note | Electrical life on request. |
| $B_{10D}$ Normally-open contact (NO) | 1,000,000 Operations |
| Note | at 10% $I_e$ and ohmic load |
| Mission time | 20 Year(s) |

### Safety classification - Fault exclusion

| | |
|---|---|
| Please note: | Can be used when fault exclusion for dangerous damage to the 1-channel mechanism is permissible and sufficient protection against manipulation is guaranteed. |

| | |
|---|---|
| Performance Level, up to | d |
| Category | 3 |
| Note | for 2-channel use and with suitable logic unit. |
| Mission time | 20 Year(s) |

## Mechanical data

| | |
|---|---|
| Mechanical life, minimum | 1,000,000 Operations |
| Holding force $F_{Zh}$ in accordance with EN ISO 14119 | 1,000 N |
| Holding force $F_{max}$, maximum | 1,300 N |
| Positive break travel | 11 mm |
| Positive break force per NC contact, minimum | 8.5 N |
| Positive break force, minimum | 17 N |
| Actuating speed, maximum | 2 m/s |
| Mounting | Screws |
| Type of the fixing screws | 2x M5 |
| Tightening torque of the fastening screws for the housing cover, minimum | 0.7 Nm |
| Tightening torque of the fastening screws for the housing cover, maximum | 1 Nm |
| Note | Torx T10 |

## Mechanical data - Connection technique

| | |
|---|---|
| Termination | IDC method of termination |
| Cable section, minimum | 0.75 mm² |
| Cable section, maximum | 1 mm² |
| Allowed type of cable | flexible |

## Mechanical data - Dimensions

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

## Ambient conditions

| | |
|---|---|
| Degree of protection | IP67 |
| Ambient temperature | -25 ... +60 °C |
| Storage and transport temperature, minimum | -25 °C |
| Storage and transport temperature, maximum | +85 °C |
| Protection class | II |
| Permissible installation altitude above sea level, maximum | 2,000 m |

## Ambient conditions - Insulation values

| | |
|---|---|
| Rated insulation voltage $U_i$ | 250 VAC |
| Rated impulse withstand voltage $U_{imp}$ | 4 kV |
| Overvoltage category | III |
| Degree of pollution | 3 |

## Electrical data

| | |
|---|---|
| Thermal test current | 6 A |
| Rated control voltage | 24 VAC/DC |
| Required rated short-circuit current | 1,000 A |
| Electrical power consumption, maximum | 12 W |
| Switching element | Opener (NC) |

| | |
|---|---|
| Note (Switching element) | Change-over contact with double break, type Zb or 2 NC contacts, with galvanically separated contact bridges |
| Switching principle | slow action, positive break NC contact |
| Switching frequency | 1,000 /h |
| Material of the contacts, electrical | Silver |

## Electrical data - Magnet control

| | |
|---|---|
| Magnet switch-on time | 100 % |
| Test pulse duration, maximum | 5 ms |
| Test pulse interval, minimum | 50 ms |

## Electrical data - Safety contacts

| | |
|---|---|
| Voltage, Utilisation category AC-15 | 230 VAC |
| Current, Utilisation category AC-15 | 4 A |
| Voltage, Utilisation category DC-13 | 24 VDC |
| Current, Utilisation category DC-13 | 2.5 A |

## Other data

| | |
|---|---|
| Note (applications) | sliding safety guard<br>removable guard<br>hinged safety guard |

## Scope of delivery

| | |
|---|---|
| Scope of delivery | Actuator must be ordered separately. |

## Note

| | |
|---|---|
| Note (General) | This type termination (IDC) method enables simple connetion of flexible conductors without the need for the use of conductor ferrules |
| Note (Manual release) | For manual release using M5 triangular key, available as accessory |

## Ordering code

Product type description:
AZM 170(1)-(2)Z(3)K(4)-(5)-(6)-(7)-(8)

(1)

| | |
|---|---|
| **without** | Cut clamps |
| **SK** | Screw connection |

(2)

| | |
|---|---|
| **11** | 1 NO contacts/1 NC contact |
| **02** | 2 NC contact |

(3)

| | |
|---|---|
| **without** | Latching force 5 N |
| **R** | Latching force 30 N |

(4)

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

(5)

| | |
|---|---|
| **without** | Cable entry M20 |
| **ST** | 2 connector, M12, 4-pin |
| **ST-2431** | As well as ST; individual solenoid monitoring |
| **ST8** | Connector M12 8-pole |

(6)

| | |
|---|---|
| **24VAC/DC** | Us 24 VAC/DC |
| **110VAC** | Us 110 VAC |
| **230VAC** | Us 230 VAC |

(7)

| | |
|---|---|
| **1637** | Gold-plated contacts |

(8)

| | |
|---|---|
| **without** | Manual release |
| **2197** | Manual release from side (Standard in case of conector and power to unlock versions) |

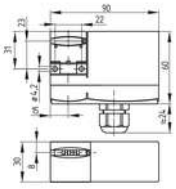
# Pictures

## Product picture (catalogue individual photo)



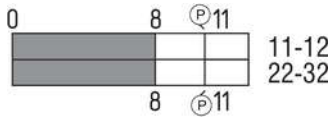

ID: kazm1f04
| 620.3 kB | .jpg | 352.425 x 356.658 mm - 999 x 1011 px - 72 dpi
| 48.7 kB | .png | 74.083 x 74.789 mm - 210 x 212 px - 72 dpi
| 71.0 kB | .jpg | 122.061 x 123.472 mm - 346 x 350 px - 72 dpi

## Dimensional drawing basic component



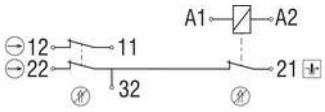
ID: 1azm1g03
| 96.8 kB | .cdr |
| 3.7 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi
| 75.8 kB | .jpg | 352.778 x 245.886 mm - 1000 x 697 px - 72 dpi

## Switch travel diagram



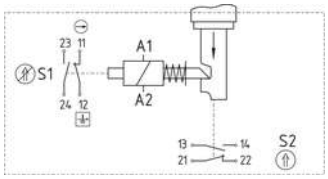

ID: kazm1s01
| 19.5 kB | .cdr |
| 1.8 kB | .png | 74.083 x 26.458 mm - 210 x 75 px - 72 dpi
| 49.4 kB | .jpg | 352.778 x 125.236 mm - 1000 x 355 px - 72 dpi

## Diagram




ID: kazm1k11
| 55.1 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi
| 47.2 kB | .jpg | 352.778 x 112.183 mm - 1000 x 318 px - 72 dpi
| 2.5 kB | .png | 74.083 x 23.636 mm - 210 x 67 px - 72 dpi

## Diagram




ID: kazm4k25
| 59.7 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi
| 80.4 kB | .jpg | 352.778 x 188.031 mm - 1000 x 533 px - 72 dpi
| 3.6 kB | .png | 74.083 x 39.511 mm - 210 x 112 px - 72 dpi

Schmersal, Inc., 15 Skyline Drive, Hawthorne, NY 10532
The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.
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