# DATASHEET




## AZM 170SK-02ZRK-2197 230VAC

- 1 Cable entry M 20 x 1.5
- Manual release from side
- Screw connection
- Thermoplastic enclosure
- Double-insulated
- Compact design
- Interlock with protection against incorrect locking.
- Long life
- High holding force

## Data

### Ordering data

| | |
|---|---|
| Product type description | AZM 170SK-02ZRK-2197 230VAC |
| Article number (order number) | 101144269 |
| EAN (European Article Number) | 4030661132174 |
| 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 | IFA<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 | 300 g |

## General data - Features

| | |
|---|---|
| Power to unlock | Yes |
| Manual release | Yes |
| Number of actuating directions | 2 |
| 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 |
| Latching force | 30 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

| | |
|---|---|
| Cable entry | 1 x M20 x 1,5 |
| Termination | Screw terminals |
| Cable section, minimum | 0.25 mm² |
| Cable section, maximum | 1.5 mm² |
| Note | All indications including the conductor ferrules. |
| Allowed type of cable | solid single-wire<br>solid multi-wire<br>flexible |

## Mechanical data - Dimensions

| | |
|---|---|
| Length of sensor | 30 mm |
| Width of sensor | 108 mm |
| Height of sensor | 100.5 mm |

## Ambient conditions

| | |
|---|---|
| Degree of protection | IP67 |
| Ambient temperature | -25 ... +60 °C |
| Storage and transport temperature | -25 ... +85 °C |
| Note (Relative humidity) | non-condensing<br>non-icing |
| 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

| | |
|---|---|
| Rated control voltage | 230 VAC |
| Required rated short-circuit current | 1,000 A |
| Electrical power consumption, maximum | 12 W |
| Switching element | 2 NC contact |
| 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 |
| Maximum 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 |

## Electrical data - Auxiliary contacts

| | |
|---|---|
| Voltage, Utilisation category AC-15 | 230 VAC |

## 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.<br>Slot sealing plugs |

## Note

| | |
|---|---|
| Note (Manual release) | right<br>bottom<br>For manual release using M5 triangular key, available as accessory<br>Additional manual release on side<br>For manual release using triangular key M3 (included in delivery) |

## 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 contact/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) |

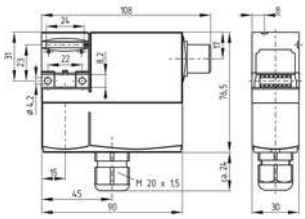
# Pictures

## Product picture (catalogue individual photo)



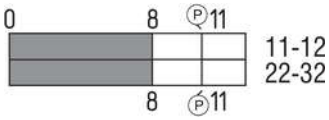

ID: kazm1f10
| 491.5 kB | .jpg | 243.769 x 229.658 mm - 691 x 651 px - 72 dpi
| 50.6 kB | .png | 74.083 x 69.85 mm - 210 x 198 px - 72 dpi
| 87.0 kB | .jpg | 123.472 x 116.417 mm - 350 x 330 px - 72 dpi

## Dimensional drawing basic component



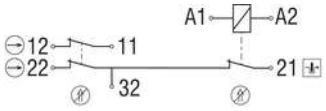
ID: 1azm1g07
| 44.4 kB | .cdr |
| 10.1 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi
| 126.8 kB | .jpg | 352.778 x 245.181 mm - 1000 x 695 px - 72 dpi

## Switch travel diagram



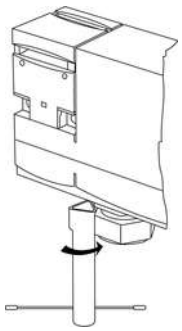

ID: kazm1s01
| 19.5 kB | .cdr |
| 1.8 kB | .png | 74.083 x 26.458 mm - 210 x 75 px - 72 dpi
| 49.4 kB | .jpg | 352.778 x 125.236 mm - 1000 x 355 px - 72 dpi

## Diagram



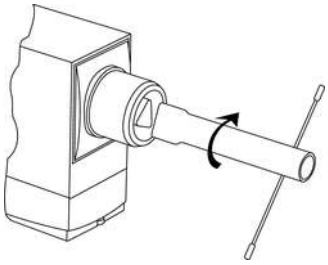

ID: kazm1k11
| 55.1 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi
| 47.2 kB | .jpg | 352.778 x 112.183 mm - 1000 x 318 px - 72 dpi
| 2.5 kB | .png | 74.083 x 23.636 mm - 210 x 67 px - 72 dpi

## Operating principle



ID: kazm1a70
| 213.5 kB | .jpg | 352.778 x 656.519 mm - 1000 x 1861 px - 72 dpi
| 6.5 kB | .png | 74.083 x 137.583 mm - 210 x 390 px - 72 dpi

## Operating principle



ID: kazm1a71
| 113.1 kB | .jpg | 352.778 x 280.811 mm - 1000 x 796 px - 72 dpi
| 4.6 kB | .png | 74.083 x 58.914 mm - 210 x 167 px - 72 dpi

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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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