# DATASHEET



## AZM 161SK-12/12RKT-024

- Large wiring compartment
- Emergency exit, lateral
- cable entries 4 M 16 x 1.5
- Thermoplastic enclosure
- Double-insulated
- Interlock with protection against incorrect locking.
- 130 mm x 90 mm x 30 mm
- 6 Contacts
- Long life

## Data

### Ordering data

| | |
|---|---|
| Product type description | AZM 161SK-12/12RKT-024 |
| Article number (order number) | 101177876 |
| EAN (European Article Number) | 4030661309491 |
| 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 | 420 g |

## General data - Features

| | |
|---|---|
| Power to unlock | Yes |
| Emergency exit | Yes |
| Number of actuating directions | 3 |
| Number of auxiliary contacts | 2 |
| Number of safety contacts | 4 |

### Safety classification

| | |
|---|---|
| Vorschriften | 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) |

## Safety classification - Guard locking function

| | |
|---|---|
| Performance Level, up to | e |
| Note (Performance Level) | Information for the safety classification of the guard locking function is documented in the "Operating instructions" or in the "Operation and mounting" instructions. |

## Mechanical data

| | |
|---|---|
| Mechanical life, minimum | 1,000,000 Operations |
| Actuating play in direction of actuation | 5.5 mm |
| Holding force $F_{Zh}$ in accordance with EN ISO 14119 | 2,000 N |
| Holding force $F_{max}$, maximum | 2,600 N |
| Latching force | 30 N |
| Positive break travel | 9.5 mm |
| Positive break force per NC contact, minimum | 10 N |
| Positive break force, minimum | 20 N |
| Actuating speed, maximum | 2 m/s |
| Mounting | Screws |
| Type of the fixing screws | 3x M5 |
| Type of the screw head | Flat head screw |
| Tightening torque of the fastening screws for the housing cover | 0.6 Nm |
| Note | The tightening sequence of the cover screws must be observed. This can be found in the attached drawing in the “Pictures” tab. |

## Mechanical data - Connection technique

| | |
|---|---|
| Cable entry | 4 x M16 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 | 130 mm |
| Height of sensor | 90 mm |

## Ambient conditions

| | |
|---|---|
| Degree of protection | IP67 |
| Ambient temperature | -30 ... +60 °C |
| Storage and transport temperature | -30 ... +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 |

## 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 | 10 W |
| Switching element | NO contact, NC contact |
| Switching principle | slow action, positive break NC contact |
| Maximale Schalthäufigkeit | 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 |
| 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 (Emergency exit) | For cases of danger<br>Actuation from within the hazardous area |

## Ordering code

Product type description:
AZM161 (1)-(2)(3)K(4)-(5)/(6)-(7)(8)

(1)

| | |
|---|---|
| **SK** | Screw connection |
| **CC** | Cage clamps |
| **ST** | Connector plug M12 |

(2)

| | |
|---|---|
| **11/03** | Magnet: 1 NO contact, 1 NC contact / Actuator: 3 NC contacts with connector plug |
| **12/03** | Magnet: 1 NO contact, 2 NC contact / Actuator: 3 NC contacts |
| **12/11** | Magnet: 1 NO contact, 2 NC contacts / Actuator: 1 NO contact, 1 NC contact with connector plug |
| **11/12** | Magnet: 1 NO contact, 1 NC contacts / Actuator: 1 NO contact, 2 NC contact with connector plug |
| **12/12** | Magnet: 1 NO contact, 2 NC contacts / Actuator: 1 NO contact, 2 NC contacts |

(3)

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

(4)

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

(5)

| | |
|---|---|
| **without** | Lateral manual release |
| **ED** | Manual release on the cover side |
| **EU** | Manual release on the back side |

(6)

| | |
|---|---|
| **T** | Lateral emergency exit |
| **TD** | Emergency exit on the cover side |
| **TU** | Emergency exit on the back side |
| **N** | Emergency release |

(7)

| | |
|---|---|
| **024** | Us: 24 VAC/DC |
| **110/230** | Us: 110/230 VAC |

(8)

| | |
|---|---|
| **without** | without LED |
| **G** | with LED (only for Us: 24 VAC/DC) |

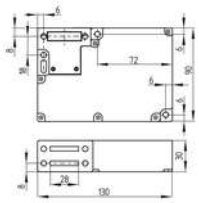
# Pictures

## Product picture (catalogue individual photo)



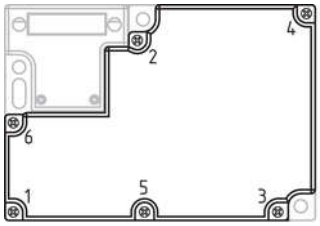

ID: kazm1f95
| 288.4 kB | .jpg | 352.778 x 257.528 mm - 1000 x 730 px - 72 dpi
| 30.4 kB | .png | 74.083 x 53.975 mm - 210 x 153 px - 72 dpi
| 42.3 kB | .jpg | 123.472 x 90.311 mm - 350 x 256 px - 72 dpi

## Dimensional drawing basic component



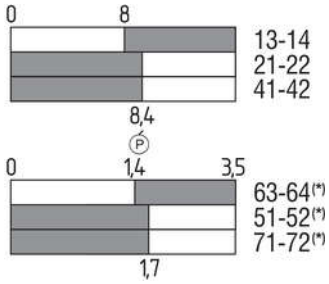
ID: 1azm1g09
| 8.1 kB | .swf |
| 3.6 kB | .png | 74.083 x 52.211 mm - 210 x 148 px - 72 dpi
| 75.8 kB | .jpg | 352.778 x 248.003 mm - 1000 x 703 px - 72 dpi

## Dimensional drawing basic component



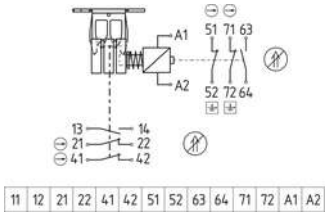

ID: 1azm1g30
| 93.0 kB | .jpg | 352.778 x 239.889 mm - 1000 x 680 px - 72 dpi

## Switch travel diagram



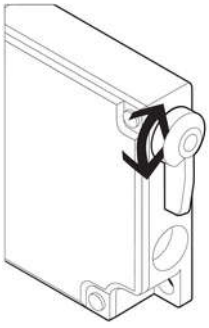

ID: kazm1s07
| 2.9 kB | .png | 74.083 x 63.853 mm - 210 x 181 px - 72 dpi
| 102.8 kB | .jpg | 352.778 x 304.8 mm - 1000 x 864 px - 72 dpi

## Diagram




ID: kazm1k29
| 80.8 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi
| 111.9 kB | .jpg | 352.778 x 227.894 mm - 1000 x 646 px - 72 dpi
| 4.8 kB | .png | 74.083 x 47.978 mm - 210 x 136 px - 72 dpi

## Operating principle



ID: kazm1a46
| 48.2 kB | .cdr |
| 195.4 kB | .jpg | 352.778 x 549.275 mm - 1000 x 1557 px - 72 dpi
| 18.4 kB | .png | 74.083 x 115.358 mm - 210 x 327 px - 72 dpi

Schmersal Ltd., Sparrowhawk Close, WR14 1GL Malvern
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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