# DATASHEET



## AZM 161SK-12/03RIA-024 -B6R

- 1 Cable entry M 20 x 1.5
- Screw connection
- Manual release from side
- right-hand model
- Compact design
- For very smal actuating radii in line with or at 90° to the plane of the actuator
- Interlock with protection against incorrect locking.
- Individual coding
- Coding level "High" according to ISO 14119
- Double-insulated
- High holding force
- Long life
- 130 mm x 90 mm x 30 mm

## Data

### Ordering data

| | |
|---|---|
| Product type description | AZM 161SK-12/03RIA-024 -B6R |
| Article number (order number) | 101217540 |
| EAN (European Article Number) | 4030661412474 |
| 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 | Individual coding |
| Coding level according to EN ISO 14119 | High |
| Working principle | electromechanical |
| Housing material | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| Material of the actuator | Stainless steel |
| Gross weight | 485 g |

## General data - Features

| | |
|---|---|
| Power to lock | Yes |
| Manual release | Yes |
| Number of actuating directions | 3 |
| Number of auxiliary contacts | 1 |
| Number of safety contacts | 5 |

### 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

| | |
|---|---|
| Actuating radius, minimum | 95 mm |
| 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 | 10 mm |
| Positive break force per NC contact, minimum | 10 N |
| Positive break force, minimum | 30 N |
| Actuating speed, maximum | 2 m/s |
| Mounting | Screws |
| Type of the fixing screws | 3x M6 |

| | |
|---|---|
| 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 | -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 |

## 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 |
| 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 |
| 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 | Not available as spare part<br>Slot sealing plugs<br>The actuator is included in the scope of delivery |

## Note

| | |
|---|---|
| Note (General) | Interlocks with the power to lock principle may only be used in special cases after a thorough evaluation of the accident risk, since the guarding device can immediately be opened on failure of the electrical power supply or when the main switch is opened. |
| Note (Manual release) | For maintenance, installation, etc.<br>For manual release using M5 triangular key, available as accessory |

## Ordering code

Product type description:
AZM 161(1)(2)(3)I(4)(5)(6)(7)(8)(9)

(1)

| | |
|---|---|
| **CC** | Cage clamps |
| **SK** | Screw terminals |
| **ST** | M12 connector |

(2)

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

(6)

| | |
|---|---|
| **T** | Lateral emergency exit |
| **TD** | Emergency exit on the cover side |
| **TU** | Emergency exit on the rear 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) |

(9)

| | |
|---|---|
| **B1** | Actuator B1 included |
| **B1E** | Actuator B1E included |
| **B6L** | Actuator B6 left included |
| **B6R** | Actuator B6 right included |
| **B1-1747** | Actuator B1-1747 included |
| **B1-2024** | Actuator B1-2024 included |
| **B1-2053** | Actuator B1-2053 included |
| **B1-2177** | Actuator B1-2177 included |

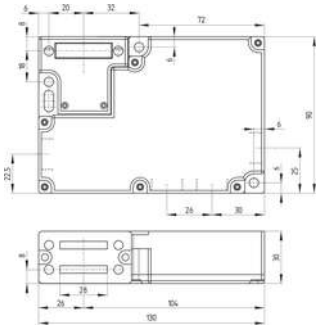
## Pictures

### Product picture (catalogue individual photo)



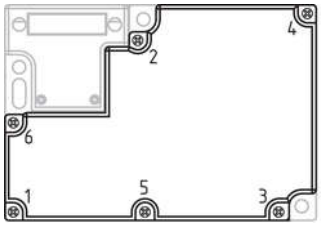
ID: kazm1f15
| 238.2 kB | .jpg | 352.778 x 251.883 mm - 1000 x 714 px - 72 dpi
| 19.4 kB | .png | 74.083 x 52.917 mm - 210 x 150 px - 72 dpi
| 27.1 kB | .jpg | 123.472 x 88.194 mm - 350 x 250 px - 72 dpi

### Dimensional drawing basic component



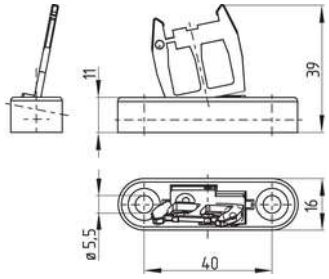
ID: kazm1g20
| 39.1 kB | .cdr |
| 4.8 kB | .png | 73.731 x 75.847 mm - 209 x 215 px - 72 dpi
| 154.6 kB | .jpg | 352.425 x 362.303 mm - 999 x 1027 px - 72 dpi

## Dimensional drawing basic component



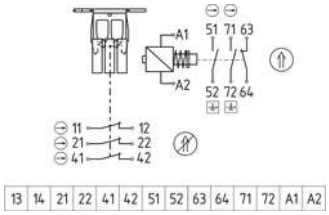

ID: 1azm1g30
| 93.0 kB | .jpg | 352.778 x 239.889 mm - 1000 x 680 px - 72 dpi

## Dimensional drawing actuator




ID: 1azm1b31
| 153.2 kB | .jpg | 352.778 x 296.333 mm - 1000 x 840 px - 72 dpi
| 18.4 kB | .png | 74.083 x 62.089 mm - 210 x 176 px - 72 dpi

## Diagram




ID: kazm1k124
| 113.2 kB | .jpg | 352.778 x 227.542 mm - 1000 x 645 px - 72 dpi
| 4.9 kB | .png | 74.083 x 47.978 mm - 210 x 136 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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