



## AZM 161SK-12/12RKED/TU -024

- Large wiring compartment
- Manual release, cover-side and Emergency exit, rear
- 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-12/12RKED/TU -024 |
| Article number (order number) | 101187866                   |
| EAN (European Article Number) | 4030661357188               |
| 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                           | 449 g                                                             |

## General data - Features

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

## Safety classification

|                                               |                                      |
|-----------------------------------------------|--------------------------------------|
| Standards                                     | EN ISO 13849-1                       |
| Performance Level, up to                      | c                                    |
| Category                                      | 1                                    |
| B <sub>10D</sub> Normally-closed contact (NC) | 2,000,000 Operations                 |
| Note                                          | Electrical life on request.          |
| B <sub>10D</sub> Normally-open contact (NO)   | 1,000,000 Operations                 |
| Note                                          | at 10% I <sub>e</sub> 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                                           | 10 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 mm <sup>2</sup>                              |
| Cable section, maximum | 1.5 mm <sup>2</sup>                               |
| 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 |
| 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 | Actuator must be ordered separately. |
|-------------------|--------------------------------------|

### Note

|                                       |                                                                                                                                                                                                                                                                                         |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note (Emergency exit)                 | The emergency exit is used where an intervention in an already locked hazardous area is required<br>Emergency exit by pressing the red push button<br>Resetting by pulling on the latched button<br>Top-side (ordering suffix -TD) or rear-side (ordering suffix -TU) mounting possible |
| Note (Manual release)                 | For maintenance, installation, etc.<br>For manual release using M5 triangular key, available as accessory<br>Top-side (ordering suffix -ED) or rear-side (ordering suffix -EU) mounting possible                                                                                        |
| Note (Emergency exit, Manual release) | A combination of manual release and emergency exit in different mounting directions in only possible for the following variants: -ED/-TU and -TD/-EU                                                                                                                                    |

### Ordering code

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

|           |                    |
|-----------|--------------------|
| (1)       |                    |
| <b>SK</b> | Screw connection   |
| <b>CC</b> | Cage clamps        |
| <b>ST</b> | Connector plug M12 |

(2)

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

(3)

|                |                     |
|----------------|---------------------|
| <b>without</b> | Latching force 5 N  |
| <b>R</b>       | Latching force 30 N |

(4)

|                |                 |
|----------------|-----------------|
| <b>without</b> | Power to unlock |
| <b>A</b>       | Power to lock   |

(5)

|                |                                  |
|----------------|----------------------------------|
| <b>without</b> | Lateral manual release           |
| <b>ED</b>      | Manual release on the cover side |
| <b>EU</b>      | Manual release on the back side  |

(6)

|           |                                  |
|-----------|----------------------------------|
| <b>T</b>  | Lateral emergency exit           |
| <b>TD</b> | Emergency exit on the cover side |
| <b>TU</b> | Emergency exit on the back side  |
| <b>N</b>  | Emergency release                |

(7)

|                |                 |
|----------------|-----------------|
| <b>024</b>     | Us: 24 VAC/DC   |
| <b>110/230</b> | Us: 110/230 VAC |

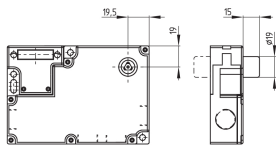
(8)

## G

with LED (only for Us: 24 VAC/DC)

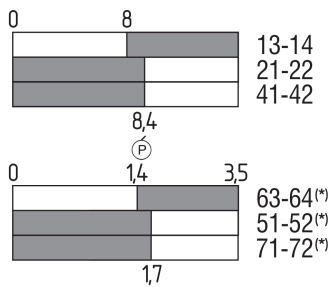
## Dimensional drawing miscellaneous





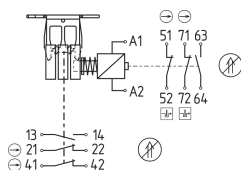
ID: lazm1g23  
| 76.8 kB | .jpg | 352.778 x 245.886 mm - 1000 x 697 px - 72 dpi

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

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 11 | 12 | 21 | 22 | 41 | 42 | 51 | 52 | 63 | 64 | 71 | 72 | A1 | A2 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|