



## AZ 16-12ZIB1-M16-1747

- Thermoplastic enclosure
- Individual coding
- Coding level "High" according to ISO 14119
- 52 mm x 90 mm x 30 mm
- Long life
- Double-insulated
- Large wiring compartment
- High level of contact reliability with low voltages and currents
- Insensitive to soiling
- Slotted holes for adjustment, circular holes for location
- For play-free interlocking of light guards
- The magnetic latch can be easily fitted in any actuating plane

## Data

### Ordering data

|                               |                       |
|-------------------------------|-----------------------|
| Product type description      | AZ 16-12ZIB1-M16-1747 |
| Article number (order number) | 101150051             |
| EAN (European Article Number) | 4030661154459         |
| eCl@ss number, version 12.0   | 27-27-26-02           |
| eCl@ss number, version 11.0   | 27-27-26-02           |
| eCl@ss number, version 9.0    | 27-27-26-02           |
| ETIM number, version 7.0      | EC002592              |
| ETIM number, version 6.0      | EC002592              |

### Approvals - Standards

|              |              |
|--------------|--------------|
| Certificates | IFA<br>cULus |
|--------------|--------------|

## General data

|                                        |                                                                   |
|----------------------------------------|-------------------------------------------------------------------|
| Standards                              | EN ISO 13849-1<br>EN ISO 14119<br>EN IEC 60947-5-1                |
| 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                           | 176 g                                                             |

## General data - Features

|                              |     |
|------------------------------|-----|
| Ejection force               | Yes |
| Number of auxiliary contacts | 1   |
| Number of safety contacts    | 2   |
| Number of cable glands       | 3   |

## Safety classification

|                                               |                                      |
|-----------------------------------------------|--------------------------------------|
| Standards                                     | EN IEC 60947-5-1                     |
| 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)                                                                                                                                                    |

## Mechanical data

|                                              |                      |
|----------------------------------------------|----------------------|
| Actuating radius, minimum                    | 250 mm               |
| Actuator                                     | straight<br>rigid    |
| Mechanical life, minimum                     | 1,000,000 Operations |
| Latching force                               | 30 N                 |
| Positive break travel                        | 8 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                    | 2x M6                |

## Mechanical data - Connection technique

|                        |                                                   |
|------------------------|---------------------------------------------------|
| Cable entry            | 3 x M16 x 1,5                                     |
| Termination            | Screw terminals                                   |
| Cable section, minimum | 0.75 mm <sup>2</sup>                              |
| Cable section, maximum | 2.5 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  | 52 mm |
| Height of sensor | 90 mm |

### Ambient conditions

|                                                            |                |
|------------------------------------------------------------|----------------|
| Degree of protection                                       | IP67           |
| Ambient temperature                                        | -30 ... +80 °C |
| Storage and transport temperature                          | -40 ... +85 °C |
| Permissible installation altitude above sea level, maximum | 2,000 m        |

### Ambient conditions - Insulation values

|                                           |       |
|-------------------------------------------|-------|
| Rated insulation voltage $U_i$            | 500 V |
| Rated impulse withstand voltage $U_{imp}$ | 6 kV  |
| Overvoltage category                      | III   |
| Degree of pollution                       | 3     |

### Electrical data

|                                      |                                        |
|--------------------------------------|----------------------------------------|
| Thermal test current                 | 10 A                                   |
| Required rated short-circuit current | 1,000 A                                |
| Switching element                    | 1 NO contact, 2 NC contacts            |
| Switching principle                  | slow action, positive break NC contact |
| Maximum switching frequency          | 4,000 /h                               |
| Material of the contacts, electrical | Silver                                 |

### Electrical data - Safety contacts

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

Current, Utilisation category AC- 4 A  
15

Voltage, Utilisation category DC- 24 VDC  
13

Current, Utilisation category DC- 4 A  
13

**Electrical data - Auxiliary contacts**

Current, Utilisation category AC- 4 A  
15

Current, Utilisation category DC- 4 A  
13

**Scope of delivery**

Scope of delivery                      Slot sealing plugs

**Note**

Note (General)                      The axis of the hinge must be 5 mm above and in a parallel plane to the top surface of the safety switch.  
Minimum actuating radius on hinged guards 250 mm  
The actuator is not available separately.

**Ordering code**

Product type description:  
AZ 16-(1)ZI-(2)-(3)

|                |                                     |
|----------------|-------------------------------------|
| (1)            |                                     |
| <b>03</b>      | 3 NC contact                        |
| <b>12</b>      | 1 NO contact/2 NC contacts          |
| (2)            |                                     |
| <b>B1</b>      | straight design                     |
| <b>B1-1747</b> | straight design with magnetic latch |
| <b>B1-2024</b> | straight design with slot-lip seal  |

|                |                                      |
|----------------|--------------------------------------|
| <b>B1-2053</b> | straight design with ball latch      |
| <b>B1-2177</b> | straight design with centering guide |
| <b>B6L</b>     | angled, flexible to the left         |
| <b>B6R</b>     | angled, flexible to the right        |
| (3)            |                                      |
| <b>M16</b>     | cable entry M16                      |
| <b>M20</b>     | Cable entry M20                      |

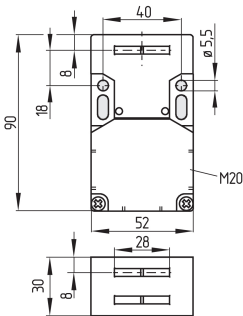
## Pictures

### Product picture (catalogue individual photo)



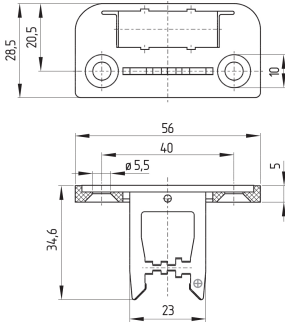
ID: kaz16f11  
 | 674.9 kB | .jpg | 352.778 x 685.094 mm - 1000 x 1942 px - 72 dpi  
 | 64.3 kB | .png | 73.731 x 143.581 mm - 209 x 407 px - 72 dpi  
 | 29.8 kB | .jpg | 63.5 x 123.472 mm - 180 x 350 px - 72 dpi

### Dimensional drawing basic component



ID: 1az16g05  
 | 140.4 kB | .jpg | 352.425 x 444.147 mm - 999 x 1259 px - 72 dpi

### Dimensional drawing actuator

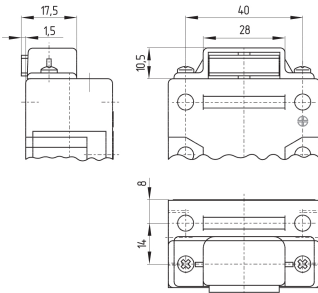


ID: kaz16bi3

| 5.2 kB | .png | 74.083 x 82.903 mm - 210 x 235 px - 72 dpi

| 163.9 kB | .jpg | 352.778 x 395.464 mm - 1000 x 1121 px - 72 dpi

## Dimensional drawing actuator

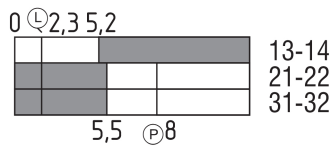


ID: kaz15b01

| 4.6 kB | .png | 74.083 x 67.381 mm - 210 x 191 px - 72 dpi

| 154.4 kB | .jpg | 352.778 x 321.028 mm - 1000 x 910 px - 72 dpi

## Switch travel diagram



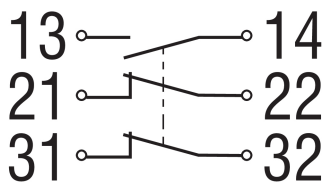
ID: kaz16s04

| 20.2 kB | .cdr |

| 2.1 kB | .png | 74.083 x 32.103 mm - 210 x 91 px - 72 dpi

| 65.6 kB | .jpg | 352.778 x 152.047 mm - 1000 x 431 px - 72 dpi

## Diagram

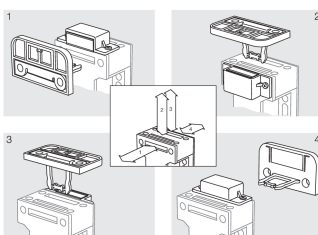


ID: k2o1sk02

| 82.3 kB | .jpg | 352.778 x 193.322 mm - 1000 x 548 px - 72 dpi

| 3.2 kB | .png | 74.083 x 40.569 mm - 210 x 115 px - 72 dpi

## Operating principle



ID: kaz16ai5

| 77.2 kB | .cdr |

| 241.6 kB | .jpg | 352.778 x 255.058 mm - 1000 x 723 px - 72 dpi

| 22.5 kB | .png | 74.083 x 53.622 mm - 210 x 152 px - 72 dpi

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.

Generated on: 26/08/2024, 2:20 pm