



## AZ16-02ZVRK-M20

- 3 cable entries M 20 x 1.5
- Large wiring compartment
- Thermoplastic enclosure
- Double-insulated
- 52 mm x 90 mm x 30 mm
- Universal coding
- Long life
- High level of contact reliability with low voltages and currents
- Insensitive to soiling
- Slotted holes for adjustment, circular holes for location

## Data

### Ordering data

|                               |                 |
|-------------------------------|-----------------|
| Product type description      | AZ16-02ZVRK-M20 |
| Article number (order number) | 161157381       |
| EAN (European Article Number) | 4030661180113   |
| 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 | cULus |
|              | 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                           | 115 g                                                             |

## General data - Features

|                                |   |
|--------------------------------|---|
| Number of actuating directions | 3 |
| Number of safety contacts      | 2 |
| Number of cable glands         | 3 |

## 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. |
| Mission time                                  | 20 Year(s)                  |

## Safety classification - Safety outputs

|                                                    |                                      |
|----------------------------------------------------|--------------------------------------|
| Note (B <sub>10D</sub> Normally open contact (NO)) | at 10% I <sub>e</sub> and ohmic load |
|----------------------------------------------------|--------------------------------------|

### 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 |
| 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 M20 x 1,5                                     |
| Termination            | Screw terminals                                   |
| Cable section, minimum | 0.25 mm <sup>2</sup>                              |
| Cable section, maximum | 2.5 mm <sup>2</sup>                               |
| Note (Cable section)   | 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 | 106.5 mm |

## Ambient conditions

|                                                            |                |
|------------------------------------------------------------|----------------|
| Degree of protection                                       | IP67           |
| Ambient temperature                                        | -30 ... +80 °C |
| Storage and transport temperature, minimum                 | -40 °C         |
| Storage and transport temperature, maximum                 | +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                    | Opener (NC)                            |
| Switching principle                  | slow action, positive break NC contact |
| Switching frequency                  | 4,000 /h                               |

Material of the contacts, Silver  
electrical

Electrical data - Safety contacts

Voltage, Utilisation category AC- 230 VAC  
15

Current, Utilisation category AC- 4 A  
15

Voltage, Utilisation category DC- 24 VDC  
13

Current, Utilisation category DC- 4 A  
13

Scope of delivery

Scope of delivery Actuator must be ordered separately.

Ordering code

Product type description:  
AZ 16-(1)ZV(2)K-(3)-(4)-(5)

|         |                            |
|---------|----------------------------|
| (1)     |                            |
| without | 1 NO contacts/1 NC contact |
| 02      | 2 NC contact               |
| 03      | 3 NC contact               |
| 12      | 1 NO contact/2 NC contacts |
| (2)     |                            |
| without | Ejection force             |
| R       | Latching force 30 N        |
| (3)     |                            |

|             |                                                                      |
|-------------|----------------------------------------------------------------------|
| <b>G24</b>  | with LED (only available for version with one NO and one NC contact) |
| (4)         |                                                                      |
| <b>M16</b>  | cable entry M16                                                      |
| <b>M20</b>  | Cable entry M20                                                      |
| <b>ST</b>   | Connector M12, 4 pole, bottom                                        |
| <b>STL</b>  | Connector M12, 4 pole, left                                          |
| <b>STR</b>  | Connector M12, 4 pole, right                                         |
| (5)         |                                                                      |
| <b>2254</b> | Latching force 5 N                                                   |
| <b>1762</b> | Front mounting                                                       |
| <b>1637</b> | Gold-plated contacts                                                 |

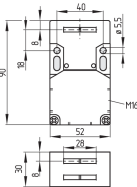
Pictures

Product picture (catalogue individual photo)



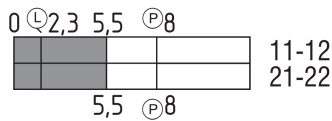
ID: kaz16f01  
| 471.8 kB | .jpg | 165.806 x 268.817 mm - 470 x 762 px - 72 dpi  
| 115.4 kB | .png | 74.083 x 119.944 mm - 210 x 340 px - 72 dpi  
| 74.5 kB | .jpg | 76.2 x 123.472 mm - 216 x 350 px - 72 dpi

Dimensional drawing basic component



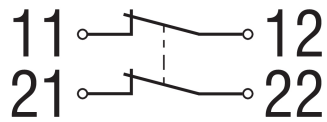
ID: laz16g01  
| 28.1 kB | .cdr |  
| 3.1 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi  
| 62.3 kB | .jpg | 352.778 x 245.886 mm - 1000 x 697 px - 72 dpi

Switch travel diagram



ID: kaz16s02  
| 20.1 kB | .cdr |  
| 2.1 kB | .png | 74.083 x 26.106 mm - 210 x 74 px - 72 dpi  
| 56.2 kB | .jpg | 352.778 x 123.472 mm - 1000 x 350 px - 72 dpi

Diagram



ID: k2o--k01  
| 48.8 kB | .jpg | 352.778 x 125.236 mm - 1000 x 355 px - 72 dpi  
| 2.3 kB | .png | 74.083 x 26.458 mm - 210 x 75 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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