



## AZ 16-12ZVRK-M16

- 3 cable entries M 16 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      | AZ 16-12ZVRK-M16 |
| Article number (order number) | 131154221        |
| EAN (European Article Number) | 8905236103858    |
| 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                           | 120 g                                                             |

### General data - Features

|                                |   |
|--------------------------------|---|
| Number of actuating directions | 3 |
| Number of auxiliary contacts   | 1 |
| 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.          |
| 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

|                          |                      |
|--------------------------|----------------------|
| 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 | 0.25 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-15 | 4 A     |
| Voltage, Utilisation category DC-13 | 24 VDC  |
| Current, Utilisation category DC-13 | 4 A     |

## Electrical data - Auxiliary 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 Slot covers for dust-proof covering of the openings not in use

## Ordering code

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

|                |                                                                      |
|----------------|----------------------------------------------------------------------|
| (1)            |                                                                      |
| <b>without</b> | 1 NO contact/1 NC contact                                            |
| <b>02</b>      | 2 NC contact                                                         |
| <b>03</b>      | 3 NC contact                                                         |
| <b>12</b>      | 1 NO contact/2 NC contacts                                           |
| (2)            |                                                                      |
| <b>without</b> | Ejection force                                                       |
| <b>R</b>       | 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                                                      |

|     |                               |
|-----|-------------------------------|
| ST  | Connector M12, 4 pole, bottom |
| STL | Connector M12, 4 pole, left   |
| STR | Connector M12, 4 pole, right  |

(5)

|      |                      |
|------|----------------------|
| 2254 | Latching force 5 N   |
| 1762 | Front mounting       |
| 1637 | Gold-plated contacts |

Pictures

Product picture (catalogue individual photo)



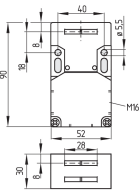
ID: kaz16f01

| 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



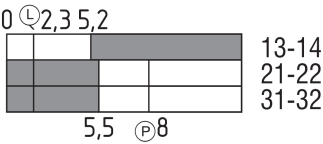
ID: laz16g01

| 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



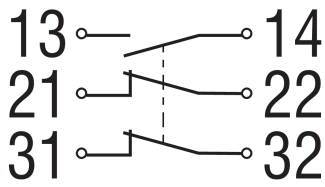
ID: kaz16s04

| 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

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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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