



## AZ 16-02ZVRK-ST

- Connector M12, 4-pole
- 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 16-02ZVRK-ST |
| Article number (order number) | 101143125       |
| EAN (European Article Number) | 4030661127224   |
| 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<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                           | 120 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.          |
| 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**

|                    |                                        |
|--------------------|----------------------------------------|
| Connector position | Bottom                                 |
| Cable entry        | M12 (A-coding)                         |
| Termination        | Connector plug M12, 4-pole, (A-coding) |

### **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

Rated impulse withstand voltage, connector 4-pole 2.5 kV

## Electrical data

Thermal test current 10 A

Required rated short-circuit current 1,000 A

Switching element 2 NC contact

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

Note, Utilisation category DC-13 Connector 4-pole

## Electrical data - Auxiliary 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

Note, Utilisation category DC-13 Connector 4-pin

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                                                      |
| <b>ST</b>      | Connector M12, 4 pole, bottom                                        |
| <b>STL</b>     | Connector M12, 4 pole, left                                          |

STR

Connector M12, 4 pole, right

(5)

2254

Latching force 5 N

1762

Front mounting

1637

Gold-plated contacts

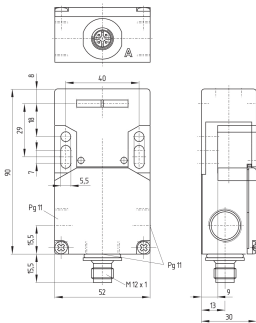
Pictures

Product picture (catalogue individual photo)



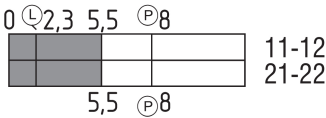
ID: kaz16f02  
| 177.3 kB | .jpg | 137.936 x 230.717 mm - 391 x 654 px - 72 dpi  
| 96.4 kB | .png | 74.083 x 123.825 mm - 210 x 351 px - 72 dpi  
| 48.8 kB | .jpg | 73.731 x 123.472 mm - 209 x 350 px - 72 dpi

Dimensional drawing basic component



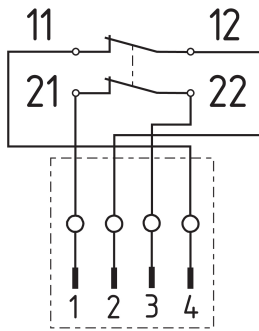
ID: kaz16g02  
| 37.1 kB | .cdr |  
| 6.5 kB | .png | 74.083 x 93.133 mm - 210 x 264 px - 72 dpi  
| 200.1 kB | .jpg | 352.778 x 443.794 mm - 1000 x 1258 px - 72 dpi

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



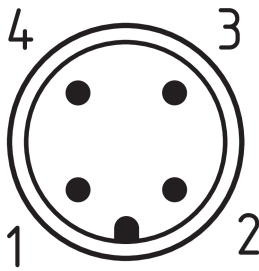
ID: kaz16k06

| 18.0 kB | .cdr |

| 116.5 kB | .jpg | 352.425 x 437.444 mm - 999 x 1240 px - 72 dpi

| 3.7 kB | .png | 74.083 x 91.722 mm - 210 x 260 px - 72 dpi

## Contact arrangement



ID: km12-k4c

| 4.2 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi

| 113.3 kB | .jpg | 352.778 x 352.778 mm - 1000 x 1000 px - 72 dpi

Schmersal India Pvt. Ltd., Plot No - G-7/1, Ranjangaon MIDC, Tal. - Shirur, Dist.- Pune 412 220

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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