

Datasheet - EX-AZ 16-03ZVRK-3D

Safety switch with separate actuator / EX-AZ 16



- thermoplastic enclosure
 - Double-insulated 
 - Multiple coding
 - 52 mm x 90 mm x 30 mm
 - Large wiring compartment
 - High level of contact reliability with low voltages and currents
 - Slotted holes for adjustment, circular holes for location
 - Long life
 - Ex certified
- Including Ex-certified screwed cable gland and screw plug
- 3 cable entries M 16 x 1.5

(Minor differences between the printed image and the original product may exist!)

Ordering details

| | |
|--------------------------|--------------------|
| Product type description | EX-AZ 16-03ZVRK-3D |
| Article number | 1193631 |
| EAN code | 4030661356457 |

Approval

Approval



Classification


| | |
|------------------|----------------|
| Standards | EN ISO 13849-1 |
| B10d Opener (NC) | 2.000.000 |
| Mission time TM | 20 Years |

notice

$$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$$

$$n_{op} = \frac{d_{cp} \times h_{op} \times 3600 \text{ s/h}}{t_{zyklus}}$$

Global Properties

| | |
|--|---|
| Product name | EX-AZ 16 |
| Standards | Ex tD A22 IP67 T90° C X, EN 60947-5-1, EN 61241-1, BG-GS-ET-15 |
| Compliance with the Directives (Y/N)  | Yes |
| Materials | |
| - Material of the housings | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| - Material of the contacts | Silver |
| Housing coating | None |
| Weight | 195 g |

Mechanical data

| | |
|--|---|
| Design of electrical connection | Screw connection |
| Cable cross-section of the cable glands | |
| - Min. Cable cross-section of the cable glands | Ø 6 mm |
| - Max. Cable cross-section of the cable glands | Ø 12 mm |
| Cable section | |
| - Min. Cable section | 0,75 mm ² |
| - Max. Cable section | 2.5 mm ² |
| Mechanical life | > 1 million operations |
| higher Latching force (Y/N) | Yes |
| Latching force | 30 N |
| With ejection force (Y/N) | No |
| Positive break force | 10 N |
| positive break travel | 8 mm |
| Max. Actuating speed | 1 m/s |
| notice | All indications about the cable section are including the conductor ferrules. |

Ambient conditions

| | |
|----------------------------------|----------------------|
| Ambient temperature | |
| - Min. environmental temperature | - 20°C |
| - Max. environmental temperature | + 70°C |
| Protection class | IP67 to IEC/EN 60529 |

Electrical data

| | |
|---|---|
| Design of control element | Opener (NC) |
| Switching principle | Creep circuit element |
| Number of auxiliary contacts | 0 piece |
| Number of safety contacts | 3 piece |
| Rated impulse withstand voltage U_{imp} | 6 kV |
| Rated insulation voltage U_i | 500 V |
| Thermal test current I_{the} | 2.5 A |
| Utilisation category | AC-15: 230 V / 2,5 A, DC-13: 24 V / 2,5 A |
| Max. fuse rating | 4 A gG D-fuse |

ATEX

| | |
|---|---------------------------------|
| Explosion protection categories for gases | None |
| Explosion protection Zones for gases | None |
| Explosion protected category for dusts | ATEX dust ex-protection, Cat. 3 |
| Explosion protection Zones for dusts | 22 |

Dimensions

Dimensions of the sensor

| | |
|--------------------|-------|
| - Width of sensor | 52 mm |
| - Height of sensor | 90 mm |
| - Length of sensor | 30 mm |

notice

Individual coding available on request

Included in delivery

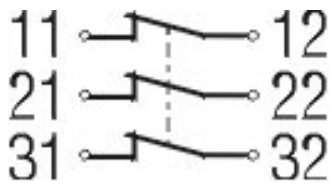
Actuators must be ordered separately.

Slot sealing plugs

Keywords

| | |
|----------|--|
| Keywords | Ex, EEx, ATEX, Ex AZ 16, Ex AZ16, AZ 16 Ex, AZ16 ex, AZ16ex, ATEX AZ16 |
|----------|--|

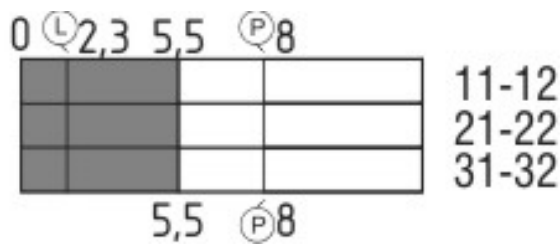
Diagram



Note Diagram

- positive break NC contact
- active
- no active
- Normally-open contact
- Normally-closed contact

Switch travel diagram



Notes Switch travel diagram

- Contact closed
- Contact open
- Setting range
- Break point
- Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

Ordering suffix

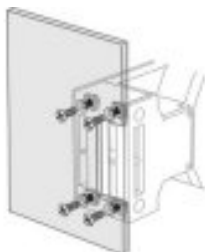
The applicable ordering suffix is added at the end of the part number of the safety switch.

Order example: EX-AZ 16-03ZVRK-3D-**2254**

...-**2254**

Latching force 5 N

...- **1762**



Versions with M5 nuts
For front mounting of safety switch, e.g. on sheet-steel covers
Cannot be retrofitted

...-**1637**

0,3 µm gold-plated contacts

Ordering code

EX-AZ 16-(1)ZV(2)K-(3)-3D

(1)

- 03** 3 Opener (NC)
- 12** 1 Normally open contact (NO) / 2 Opener (NC)

(2)

without Ejection force

- R** Latching force 30 N

(3)

- 2254** Latching force 5 N
- 1762** Front mounting
- 1637** gold-plated contacts

Documents

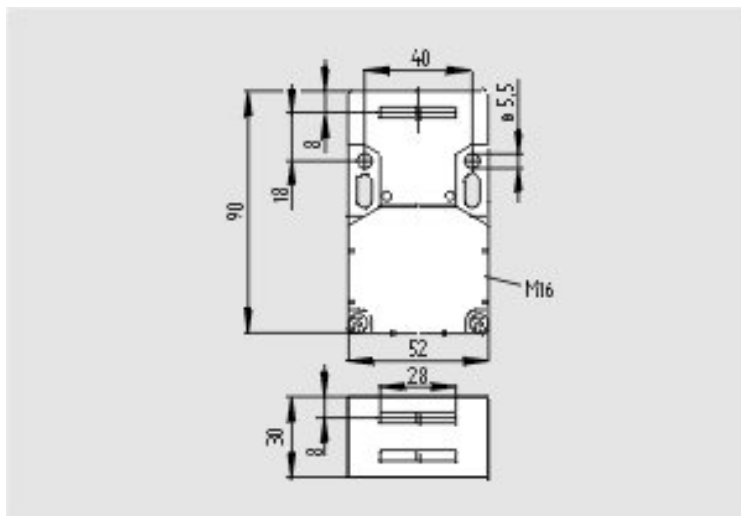
Operating instructions and Declaration of conformity (de) 493 kB, 01.03.2010

http://www.schmersal.net/Bilddata/Eex/Pdf/ex_az16/bedien/de/mrl_ex-az16_de.pdf

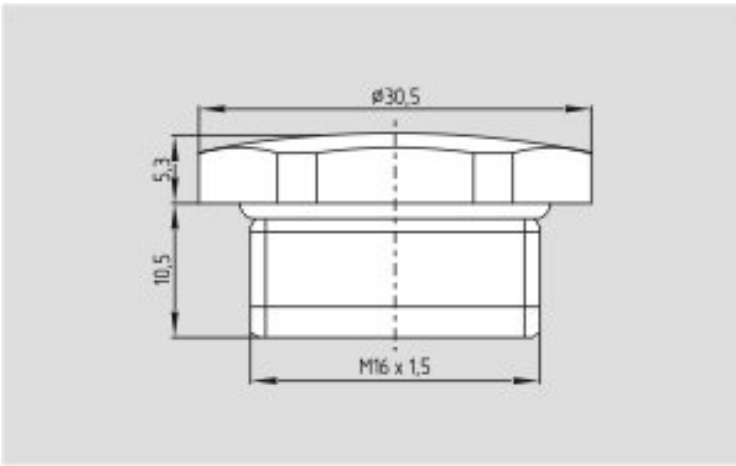
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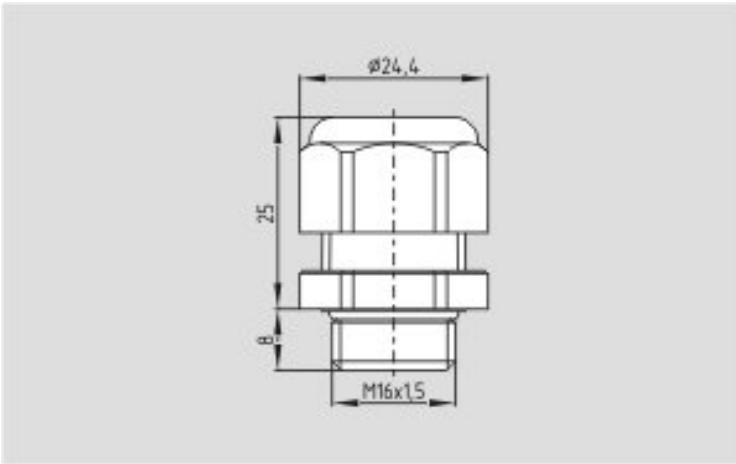
Images



Dimensional drawing (basic component)



Dimensional drawing (miscellaneous)



Dimensional drawing (miscellaneous)

System components

Actuator

1083036 - AZ 15/16-B1



1108278 - AZ 15/16-B1-2024 WITH SLOT SEALING PLUG

- For protection against the ingress of course dirt
-



1111081 - AZ 15/16-B1-2053 WITH BALL LATCH

- For interlocking of light to medium-weight guards



1126794 - AZ 15/16-B1-2177 WITH CENTERING GUIDE

- For interlocking of light, unguided guards



1137408 - AZ 15/16-B1-2245

- Damps vibration on guard device



1095558 - AZ 15/16-B2

- For very small actuating radii in line with the plane of the actuator



1095550 - AZ 15/16-B3

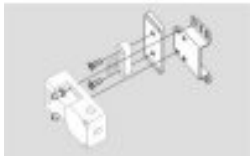
- For very small actuating radii at 90° to the plane of the actuator



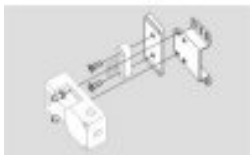
1137434 - AZ 15/16-B6

- For very small actuating radii in line with or at 90° to the plane of the actuator

1149214 - Mounting set MS AZ 15/16 R/P



1150373 - Mounting set MS AZ 15/16 P



1089116 - Slot sealing plugs AZ 15/16-1476



- For protection against the ingress of course dirt
- To cover unused actuator slots
- Simple clip-in fitting

Mounting accessories



tamperproof screws

- To mount the actuator
- Higher protection against tampering with interlock
- Protects against unauthorised removal of actuator
- Various lengths available

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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