

## Datasheet - AZ 16-12ZI-B1



Safety switch with separate actuator / AZ 16ZI / AZ 16ZI-B1



- thermoplastic enclosure
- Individual coding
- 600 different combinations
- 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
- Not sensitive to dirty conditions by virtue of patented roller system
- Slotted holes for adjustment, circular holes for location
- 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	AZ 16-12ZI-B1
Article number	1145134
EAN code	4030661136202

### Approval

Approval



### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> Opener (NC)	2.000.000
B <sub>10d</sub> Normally open contact (NO)	1.000.000
- notice	at 10% I <sub>e</sub> and ohmic load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{zyklus}}$

### Global Properties

Product name	AZ 16ZI
Standards	EN 60947-5-1, BG-GS-ET-15
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Material of the actuator	Stainless steel
- Material of the contacts	Silver
Housing coating	None
Weight	156 g

## Mechanical data

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Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	0,75 mm <sup>2</sup>
- Max. Cable section	2.5 mm <sup>2</sup>
Design of actuators	straight, rigid
Mechanical life	> 1.000.000 operations
With ejection force (Y/N)	Yes
Positive break force	20 N
positive break travel	8 mm
Max. Actuating speed	0,2 m/s
Minimum actuating radius	250 mm
notice	All indications about the cable section are including the conductor ferrules.

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	- 30°C
- Max. environmental temperature	+ 80°C
Protection class	IP67 to IEC/EN 60529

## Electrical data

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Design of control element	Normally open contact (NO), Opener (NC)
Switching principle	Creep circuit element
Number of auxiliary contacts	1 piece
Number of safety contacts	2 piece
Rated impulse withstand voltage U <sub>imp</sub>	6 kV
Rated insulation voltage U <sub>i</sub>	500 V
Thermal test current I <sub>the</sub>	10 A
Utilisation category	AC-15: 230 V / 4 A, DC-13: 24 V / 4 A
Max. fuse rating	6 A gG D-fuse

## ATEX

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Explosion protection categories for gases	None
Explosion protected category for dusts	None

## Dimensions

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Dimensions of the sensor	
- Width of sensor	52 mm
- Height of sensor	90 mm

- Length of sensor

30 mm

## notice

Minimum actuating radius on hinged guards 250 mm

The axis of the hinge should be 5 mm above the top edge of the safety switch and in the same plane

The actuator is not available separately.

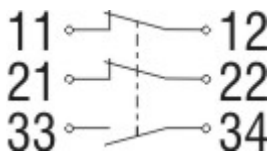
## Included in delivery

Individually coded actuator

tamperproof screws

Slot sealing plugs

## Diagram



Note Diagram

⊖ positive break NC contact

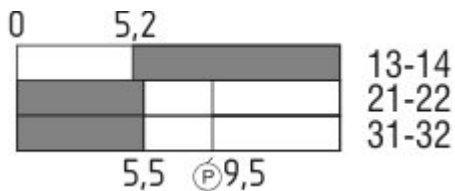
⊕ active

⊖ 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: AZ 16-12ZI-B1-**1637**

...-**1637**

0,3 µm gold-plated contacts

...- **M20**

cable entries M20

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## Documents

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**Operating instructions and Declaration of conformity (es)** 739 kB, 08.02.2010

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/es/mrl\\_az16zi\\_es.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/es/mrl_az16zi_es.pdf)

**Operating instructions and Declaration of conformity (it)** 727 kB, 08.02.2010

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/it/mrl\\_az16zi\\_it.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/it/mrl_az16zi_it.pdf)

**Operating instructions and Declaration of conformity (fr)** 448 kB, 27.01.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/fr/mrl\\_az16zi\\_fr.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/fr/mrl_az16zi_fr.pdf)

**Operating instructions and Declaration of conformity (pt)** 451 kB, 27.01.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/pt/mrl\\_az16zi\\_pt.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/pt/mrl_az16zi_pt.pdf)

**Operating instructions and Declaration of conformity (br)** 456 kB, 27.01.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/az16zi\\_ace/br/mrl\\_az16zi-ace\\_br.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/az16zi_ace/br/mrl_az16zi-ace_br.pdf)

**Operating instructions and Declaration of conformity (de)** 453 kB, 18.02.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/de/mrl\\_az16zi\\_de.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/de/mrl_az16zi_de.pdf)

**Operating instructions and Declaration of conformity (en)** 528 kB, 27.01.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/en/mrl\\_az16zi\\_en.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/en/mrl_az16zi_en.pdf)

**Operating instructions and Declaration of conformity (nl)** 731 kB, 08.02.2010

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/nl/mrl\\_az16zi\\_nl.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/nl/mrl_az16zi_nl.pdf)

**Operating instructions and Declaration of conformity (jp)** 923 kB, 12.08.2010

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/jp/mrl\\_az16zi\\_jp.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/bedien/jp/mrl_az16zi_jp.pdf)

**BG-test certificate (de)** 544 kB, 05.01.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/baumuste/z\\_\\_16p01.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/baumuste/z__16p01.pdf)

**BG-test certificate (en)** 536 kB, 05.01.2011

[http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/baumuste/z\\_\\_16p02.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/az16zi/baumuste/z__16p02.pdf)

**CCC certification (cn)** 730 kB, 12.12.2006

[http://127.0.0.1/Bilddata/AZ/Pdf/Az15\\_16/zertifikat/q\\_175p03.pdf](http://127.0.0.1/Bilddata/AZ/Pdf/Az15_16/zertifikat/q_175p03.pdf)

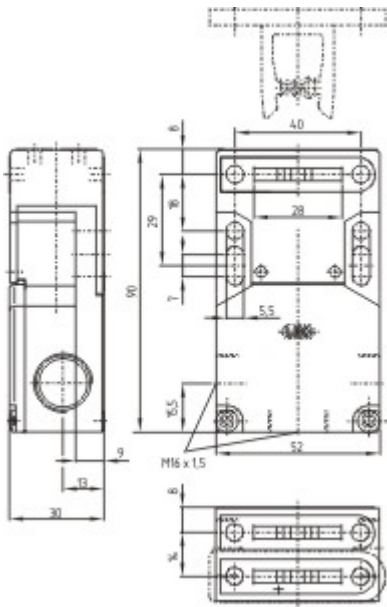
**CCC certification (en)** 746 kB, 12.12.2006

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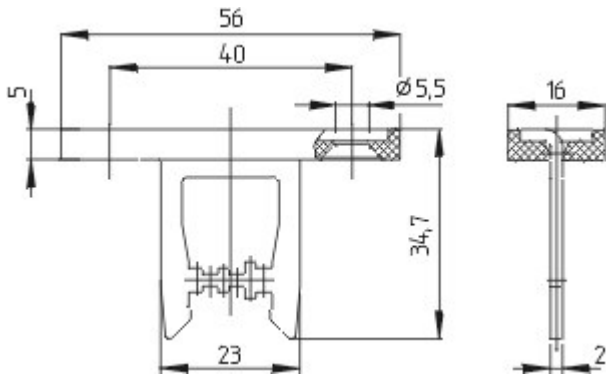
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## Images

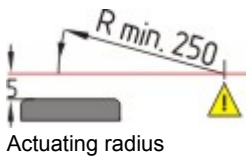
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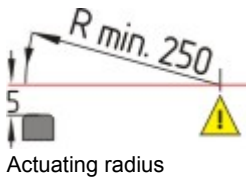
Dimensional drawing (basic component)



Dimensional drawing (miscellaneous)



Actuating radius



Actuating radius

## System components

### Mounting accessories



#### 1135338 - TAMPERPROOF SCREWS M 5 x 12

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

#### 1135339 - TAMPERPROOF SCREWS M 5 x 16



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



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#### **1135340 - TAMPERPROOF SCREWS M 5 x 20**

- 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.

Generiert am 21.04.2011 - 12:36:02h Kasbase 1.4.7 DBI