


## Datasheet - AZ 16-03ZI-B1-2177 WITH CENTERING GUIDE



Safety switch with separate actuator / AZ 16ZI / AZ 16ZI-B1 - 2177 WITH CENTERING GUIDE



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

- Thermoplastic enclosure
- Individual coding
- 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
- For interlocking of light, unguided guards
- 3 cable entries M 16 x 1.5

### Ordering details

Product type description	AZ 16-03ZI-B1-2177 MIT ZENTRIERHILFE
Article number	101150059
EAN code	4030661154534
eCl@ss	27-27-26-02

### Approval

Approval



### Classification

Standards	EN ISO 13849-1
B10d Opener (NC)	2.000.000
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

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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 contacts	Silver
Housing coating	None
Weight	150 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
notice	All indications about the cable section are including the conductor ferrules.
With ejection force (Y/N)	Yes
Positive break force	30 N
positive break travel	8 mm
Actuating speed	max. 2 m/s
Minimum actuating radius	250 mm

### 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	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 $I_{the}$	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

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Minimum actuating radius on hinged guards 250 mm

The axis of the hinge should be 11 mm above the top edge of the safety switch and in the same plane

The actuator is not available separately.

## Included in delivery

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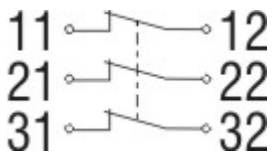
Individually coded actuator

tamperproof screws


Slot sealing plugs

## Diagram


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
Note Diagram

 positive break NC contact

 active

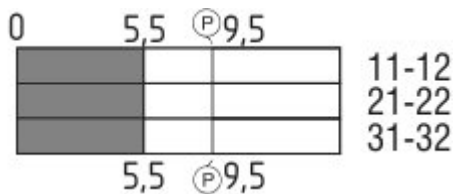
 no active

 Normally-open contact

 Normally-closed contact

## Switch travel diagram

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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

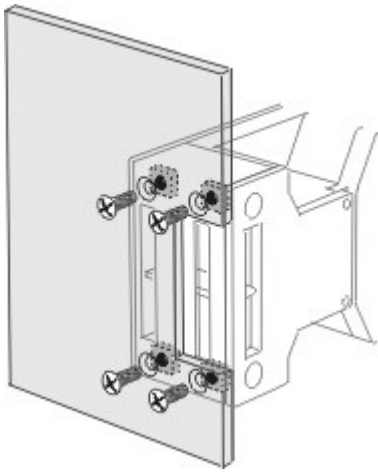
**N** after travel

## Ordering suffix

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

Order example: AZ 16-03ZI-B1-2177 WITH CENTERING GUIDE-1762



....-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

....-M20

cable entries M20

## Ordering code

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AZ 16-(1)ZI-(2)-(3)

<b>(1)</b>	
<b>3.0</b>	3 Opener (NC)
<b>12</b>	1 Normally open contact (NO) / 2 Opener (NC)
<b>(2)</b>	<b>Actuator:</b>
<b>B1</b>	straight Design
<b>B1-1747</b>	straight Design with magnetic latch
<b>B1-2024</b>	straight Design with slot sealing plug
<b>B1-2053</b>	straight Design with ball latch
<b>B1-2177</b>	straight Design with centering guide
<b>(3)</b>	
<b>M16</b>	Cable entry M16
<b>M20</b>	Cable entry M20

## Documents

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**Operating instructions and Declaration of conformity (jp)** 593 kB, 01.09.2014

Code: mrl\_az16zi\_jp

**Operating instructions and Declaration of conformity (nl)** 345 kB, 30.09.2014

Code: mrl\_az16zi\_nl

**Operating instructions and Declaration of conformity (it)** 344 kB, 01.09.2014

Code: mrl\_az16zi\_it

**Operating instructions and Declaration of conformity (pt)** 350 kB, 17.06.2014

Code: mrl\_az16zi\_pt

**Operating instructions and Declaration of conformity (da)** 361 kB, 25.01.2012

Code: mrl\_az16zi\_da

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

Code: mrl\_az16zi\_en

**Operating instructions and Declaration of conformity (de)** 577 kB, 24.02.2011

Code: mrl\_az16zi\_de

**Operating instructions and Declaration of conformity (ro)** 362 kB, 25.01.2012

Code: mrl\_az16zi\_ro

**Operating instructions and Declaration of conformity (fr)** 347 kB, 30.09.2014

Code: mrl\_az16zi\_fr

**Operating instructions and Declaration of conformity (es)** 349 kB, 11.08.2014

Code: mrl\_az16zi\_es

**Operating instructions and Declaration of conformity (sv)** 343 kB, 17.06.2015

Code: mrl\_az16zi\_sv

**Operating instructions and Declaration of conformity (pl)** 414 kB, 11.08.2014

Code: mrl\_az16zi\_pl

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

Code: z\_\_16p02

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

Code: z\_\_16p01

**CCC certification (cn)** 408 kB, 24.06.2014

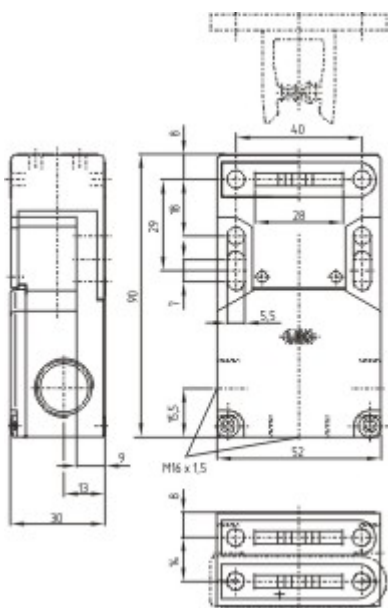
Code: q\_175p03

**CCC certification (en)** 396 kB, 24.06.2014

Code: q\_175p02

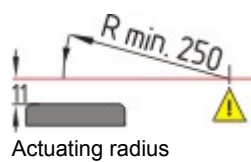
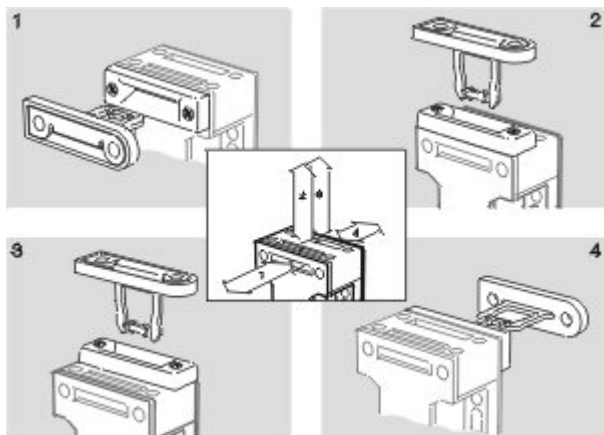
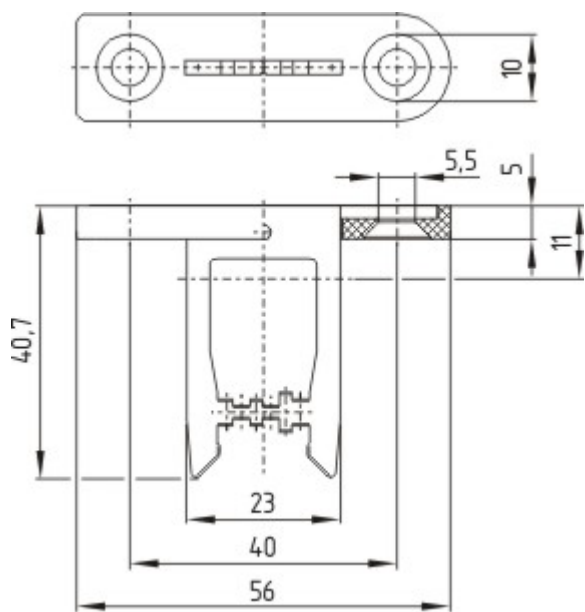
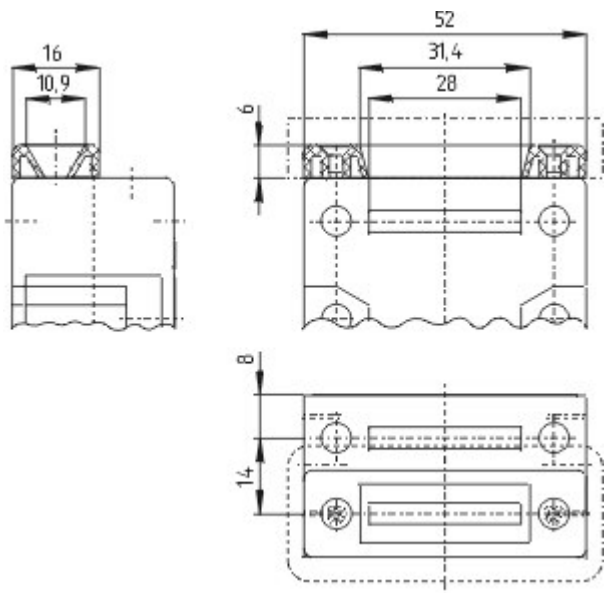
## Images

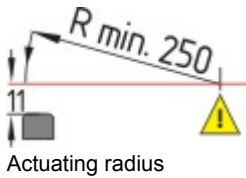
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Dimensional drawing (basic component)

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## 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



#### **101135339 - 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



#### **101135340 - 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.

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