

## Datasheet - AZ 16ZVK

Safety switch with separate actuator / AZ 16

☒ Preferred typ



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

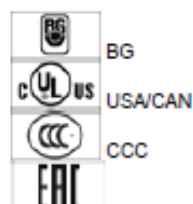
- Thermoplastic enclosure
- Double-insulated
- Large wiring compartment
- 52 mm x 90 mm x 30 mm
- Multiple coding
- Long life
- High level of contact reliability with low voltages and currents
- Insensitive to soiling
- Slotted holes for adjustment, circular holes for location
- 3 cable entries M 16 x 1.5
- LED version available

### Ordering details

Product type description	AZ 16ZVK
Article number	101152887
EAN code	4030661166773
eCl@ss	27-27-26-02

### Approval

Approval



### Classification

Standards	EN ISO 13849-1
B10d Opener (NC)	2.000.000
B10d Normally open contact (NO)	1.000.000
- notice	at 10% I <sub>e</sub> and ohmic load
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$

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

## Global Properties

Product name	AZ 16
Standards	EN 60947-5-1, 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	120 g

## Mechanical data

Design of electrical connection	Screw connection
notice	All indications about the cable section are including the conductor ferrules.
Cable section	
- Min. Cable section	0,75 mm <sup>2</sup>
- Max. Cable section	2.5 mm <sup>2</sup>
Mechanical life	> 1.000.000 operations
higher Latching force (Y/N)	No
With ejection force (Y/N)	Yes
Positive break force	10 N
positive break travel	8 mm
Actuating speed	max. 2 m/s

## Ambient conditions

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

## Electrical data

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	1 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>th</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

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

## Dimensions

Dimensions of the sensor	
- Width of sensor	52 mm

- Height of sensor 80 mm
- Length of sensor 30 mm

#### Included in delivery

Actuators must be ordered separately.

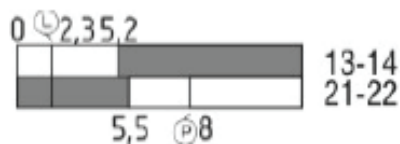
#### Diagram



Note Diagram

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

#### Switch travel diagram



Notes Switch travel diagram

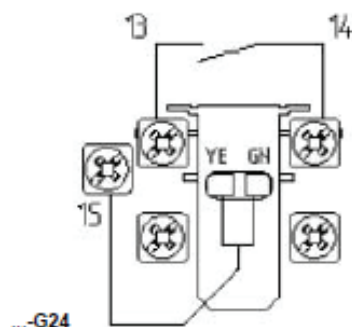
- Contact closed
- Contact open
- ▨ Setting range
- Ⓜ Break point
- Ⓜ Positive opening sequence/- angle
- VS adjustable range of NO contact
- V0 adjustable range of NC contact
- N after travel

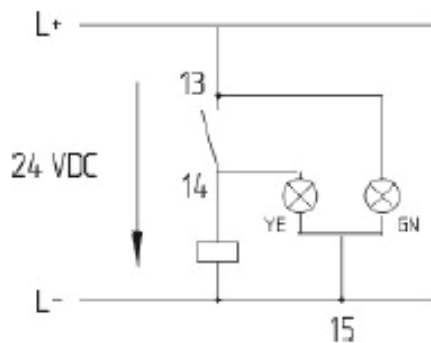
#### Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.  
Order example: AZ 16ZVK-M20

...M20

cable entries M20





only available for version with one NO and one NC contact.  
Protected against incorrect polarity and voltage spikes.

## Ordering code

AZ 16-(1)ZV(2)K-(3)-(4)-(5)

(1)

without

02

03

12

1 Normally open contact (NO) / 1 Opener (NC)

2 Opener (NC)

3 Opener (NC)

Normally open contact (NO) 1 / Opener (NC) 2

(2)

without

R

Ejection force

Latching force 30 N

(3)

G24

with LED (only available for version with one NO and one NC contact.)

(4)

without

M20

Cable entry M16

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

## Documents

Operating instructions and Declaration of conformity (pt) 433 kB, 25.05.2010

Code: mrl\_az15-16\_pt

Operating instructions and Declaration of conformity (pt) 268 kB, 21.08.2013

Code: mrl\_az15-16\_pt

Operating instructions and Declaration of conformity (de) 265 kB, 05.10.2015

Code: mrl\_az15-16\_de

Operating instructions and Declaration of conformity (fr) 268 kB, 29.07.2013

Code: mrl\_az15-16\_fr

Operating instructions and Declaration of conformity (jp) 374 kB, 10.07.2013

Code: mrl\_az15-16\_jp

Operating instructions and Declaration of conformity (cs) 400 kB, 11.10.2011  
Code: mrl\_az15-16\_cs

Operating instructions and Declaration of conformity (es) 282 kB, 24.11.2015  
Code: mrl\_az15-16\_es

Operating instructions and Declaration of conformity (pl) 313 kB, 06.02.2015  
Code: mrl\_az15-16\_pl

Operating instructions and Declaration of conformity (sv) 275 kB, 17.06.2015  
Code: mrl\_az15-16\_sv

Operating instructions and Declaration of conformity (da) 398 kB, 17.11.2011  
Code: mrl\_az15-16\_da

Operating instructions and Declaration of conformity (en) 280 kB, 05.10.2015  
Code: mrl\_az15-16\_en

Operating instructions and Declaration of conformity (ro) 400 kB, 18.11.2011  
Code: mrl\_az15-16\_ro

Operating instructions and Declaration of conformity (nl) 266 kB, 02.07.2013  
Code: mrl\_az15-16\_nl

Operating instructions and Declaration of conformity (fi) 256 kB, 02.07.2015  
Code: mrl\_az15-16\_fi

Operating instructions and Declaration of conformity (it) 276 kB, 04.11.2015  
Code: mrl\_az15-16\_it

Mounting and wiring instructions (de, en, fr, it, es, jp) 181 kB, 12.06.2007  
Code: m\_mazp01

BG-test certificate (en) 135 kB, 18.11.2014  
Code: z\_z15p02

BG-test certificate (de) 138 kB, 18.11.2014  
Code: z\_z15p01

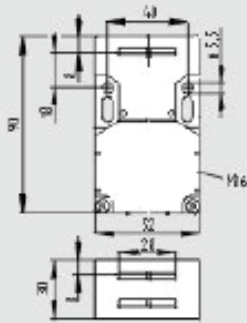
CCC certification (cn) 270 kB, 20.01.2016  
Code: q\_175p03

CCC certification (en) 316 kB, 20.01.2016  
Code: q\_175p02

EAC certification (ru) 844 kB, 05.10.2015  
Code: q\_6037p17\_ru

## Images

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## Dimensional drawing (basic component)

## System components

## Actuator

101083036 - AZ 15/16-B1



101092711 - AZ 15/16-B1-1747



- For play-free interlocking of light guards
- Suitable for retrofitting

101093553 - AZ 15/16-B1-1747



- For play-free interlocking of light guards
- The magnetic latch can be easily fitted in any actuating plane
- Suitable for retrofitting

101108276 - AZ 15/16-B1-2024



101108278 - AZ 15/16-B1-2024 WITH SLOT SEALING PLUG

- For protection against the ingress of course dirt

101111079 - AZ 15/16-B1-2053

- For interlocking of light to medium-weight guards



**101111081 - AZ 15/16-B1-2053 WITH BALL LATCH**

- For interlocking of light to medium-weight guards



**101126793 - AZ 15/16-B1-2177**

- For interlocking of light, unguided guards



**101126794 - AZ 15/16-B1-2177 WITH CENTERING GUIDE**

- For interlocking of light, unguided guards



**101137408 - AZ 15/16-B1-2245**

- Damps vibration on guard device



**101095558 - AZ 15/16-B2**

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



**101096091 - AZ 15/16-B2-1747**

- For very small actuating radii in line with the plane of the actuator
- Suitable for retrofitting
- For play-free interlocking of light guards



**101096089 - AZ 15/16-B2-1747 WITH MAGNETIC LATCH**

- For very small actuating radii in line with the plane of the actuator
- Suitable for retrofitting
- For play-free interlocking of light guards
- The magnetic latch can be easily fitted in any actuating plane





**101095550 - AZ 15/16-B3**

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



**101096090 - AZ 15/16-B3-1747 WITH MAGNETIC LATCH**

- For very small actuating radii at 90° to the plane of the actuator
- Suitable for retrofitting
- For play-free interlocking of light guards
- The magnetic latch can be easily fitted in any actuating plane



**101096092 - AZ 15/16-B3-1747**

- For very small actuating radii at 90° to the plane of the actuator
- Suitable for retrofitting
- For play-free interlocking of light guards



**101137434 - AZ 15/16-B6**

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

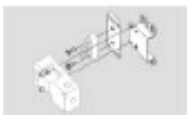
**Door-handle system**



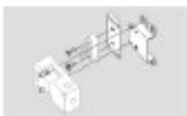
**AZ 16-ST530**

- Latching handle
- Suitable for all types of guard

**Accessories**



**101149214 - Mounting set MS AZ 15/16 R/P**



**101150373 - Mounting set MS AZ 15/16 P**

**101089116 - Slot sealing plugs AZ 15/16-1476**

- For protection against the ingress of coarse dirt





- To cover unused actuator slots
- Simple clip-in fitting



#### 101115025 - Ball latch 2053-2

- Additional ball latch for stable latching of light to medium-weight guards
- For separate mounting on the guard



#### 101110500 - SZ 16/335

- To prevent inadvertent closing, e.g. during maintenance
- For complex plant
- Prevents actuation of the switch
- Up to 6 padlocks can be fitted
- The lockout tag can be mounted on a chain near to the safety switch

### 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