


## Datasheet - AZM 170-11ZK 230 VAC

Solenoid interlock / AZM 170



- thermoplastic enclosure
- Double-insulated 
- Compact design
- 90 mm x 84 mm x 30 mm
- 1 Cable entry M 20 x 1.5
- Interlock with protection against incorrect locking.
- Long life
- High holding force
- IDC method of termination
- Manual release

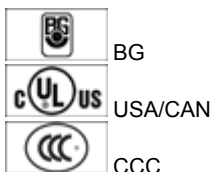
(Minor differences between the printed image and the original product may exist!)

### Ordering details

Product type description	AZM 170-11ZK 230 VAC
Article number	101141776
EAN code	4030661123301

### Approval


Approval



### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> 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

Product name	AZM 170
Standards	EN 60947-5-1, BG-GS-ET-19
Compliance with the Directives (Y/N) 	Yes
Number of actuating directions	2 piece
Active principle	electromechanical
Duty cycle	Magnet 100 %
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Material of the contacts	Silver
Housing coating	None
Weight	310 g

## Mechanical data

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Design of electrical connection	IDC method of termination
Cable section	
- Min. Cable section	1 x 0,75 mm <sup>2</sup>
- Max. Cable section	1 x 1.0 mm <sup>2</sup> , flexible
Mechanical life	> 1.000.000 operations
Emergency unlocking device (Y/N)	No
- bottom	
Manual release (Y/N)	Yes
Emergency release (Y/N)	No
Latching force	5 N
Positive break force	8.5 N
positive break travel	11 mm
Clamping force F <sub>max</sub>	1000 N
Max. Actuating speed	2 m/s

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+60 °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	1 piece
Power to unlock	Yes
Power to lock	No
Rated control voltage U <sub>s</sub>	230 VAC
Power consumption	max. 10 W
Rated impulse withstand voltage U <sub>imp</sub>	4 kV
Rated insulation voltage U <sub>i</sub>	250 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  
Explosion protected category for dusts

None  
None

## Miscellaneous data

Applications



sliding safety guard,



removable guard,



hinged safety guard

## Dimensions

Dimensions of the sensor

- Width of sensor	90 mm
- Height of sensor	84 mm
- Length of sensor	30 mm

## notice

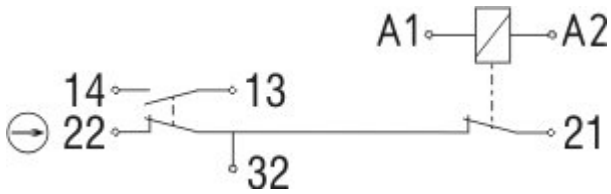
This type termination (IDC) method enables simple connection of flexible conductors without the need for the use of conductor ferrules

Individual coding available on request

Manual release

- For manual release using M5 triangular key, available as accessory

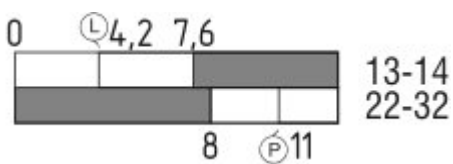
## Diagram



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

- P** 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: AZM 170-11ZK 230 VAC-**1637**

.... <b>1637</b>	0,3 µm gold-plated contacts
... <b>ST-2431</b>	connector M12 , Individual solenoid monitoring

## Ordering code

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AZM 170(1)-(2)Z(3)K(4)-(5)-(6)-(7)

(1)		
without		IDC method of termination
<b>SK</b>		Screw connection
(2)		
<b>11</b>		1 Normally open contact (NO) / 1 Opener (NC)
<b>02</b>		2 Opener (NC)
<b>12/0.0</b>		1 Normally open contact (NO), 2 Opener (NC) / -
(3)		
without		Latching force 5 N
<b>R</b>		Latching force 30 N
<b>I</b>		Individual coding
(4)		
without		Power to unlock
<b>A</b>		Power to lock
(5)		
without		cable gland
<b>ST</b>		Connector M12 x 1
<b>ST-2431</b>		Connector M12 x 1, Individual solenoid monitoring
(6)		
<b>24VAC/DC</b>		U <sub>s</sub> 24 VAC/DC
<b>110VAC</b>		U <sub>s</sub> 110 VAC
<b>230VAC</b>		U <sub>s</sub> 230 VAC
(7)		
without		Manual release
<b>2197</b>		Manual release from side (Power to unlock)
<b>1637</b>		gold-plated contacts
		<b>AZM 170ST and AZM 170SK</b>
		<b>AZM 170ST-(1)Z(2)K(3)-(4)-(5)-024</b>
		<b>AZM 170SK-(1)Z(2)K(3)-(4)-(5)-024</b>
(1)		
<b>11/11</b>		1 Normally open contact (NO), 1 Opener (NC) / 1 Normally open contact (NO), 1 Opener (NC)
<b>11/02</b>		1 Normally open contact (NO), 1 Opener (NC) / 2 Opener (NC)

<b>12/00</b>	1 Normally open contact (NO), 2 Opener (NC) / -
<b>12/11</b>	1 Normally open contact (NO), 2 Opener (NC) / 1 Normally open contact (NO), 1 Opener (NC)
<b>12/02</b>	1 Normally open contact (NO), 2 Opener (NC) / 2 Opener (NC)
<b>02/01</b>	2 Opener (NC), - / 1 Opener (NC), -
<b>02/10</b>	2 Opener (NC), - / 1 Normally open contact (NO), -
<b>(2)</b>	
<i>without</i>	Latching force 5 N
<b>R</b>	Latching force 30 N
<b>(3)</b>	
<i>without</i>	Power to unlock
<b>A</b>	Power to lock
<b>(4)</b>	
<b>1637</b>	gold-plated contacts
<b>(5)</b>	
<b>2197</b>	Manual release for Power to unlock

## Documents

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**Operating instructions and Declaration of conformity** (de) 923 kB, 24.02.2011

Code: mrl\_azm170\_de

**Operating instructions and Declaration of conformity** (it) 645 kB, 09.04.2010

Code: mrl\_azm170\_it

**Operating instructions and Declaration of conformity** (en) 746 kB, 12.03.2010

Code: mrl\_azm170\_en

**Operating instructions and Declaration of conformity** (jp) 709 kB, 14.04.2011

Code: mrl\_azm170\_jp

**Operating instructions and Declaration of conformity** (pl) 576 kB, 11.07.2013

Code: mrl\_azm170\_pl

**Operating instructions and Declaration of conformity** (da) 582 kB, 07.08.2012

Code: mrl\_azm170\_da

**Operating instructions and Declaration of conformity** (es) 665 kB, 25.03.2010

Code: mrl\_azm170\_es

**BG-test certificate** (en) 236 kB, 10.12.2013

Code: z\_m17p02

**BG-test certificate** (de) 238 kB, 10.12.2013

Code: z\_m17p01

**CCC certification** (en) 469 kB, 21.09.2012

Code: q\_371p02

**CCC certification** (cn) 470 kB, 21.09.2012

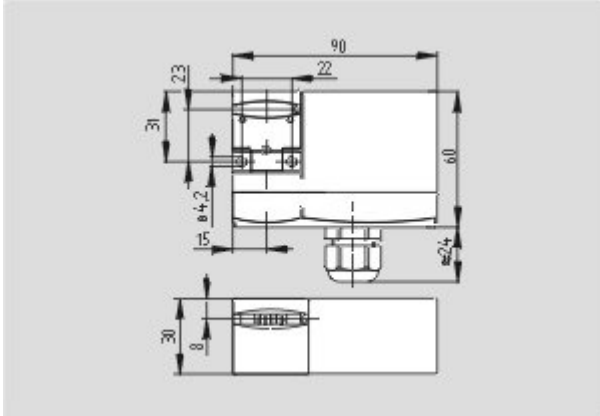
Code: q\_371p03

**Gost certification** (ru) 2 MB, 07.07.2011

Code: q\_az1p01

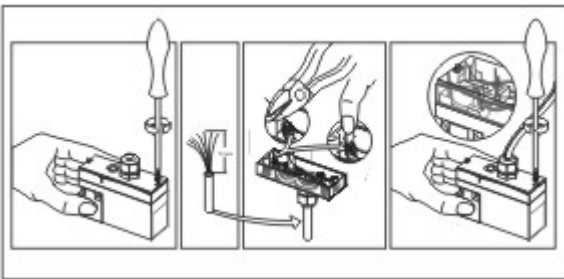
## Images

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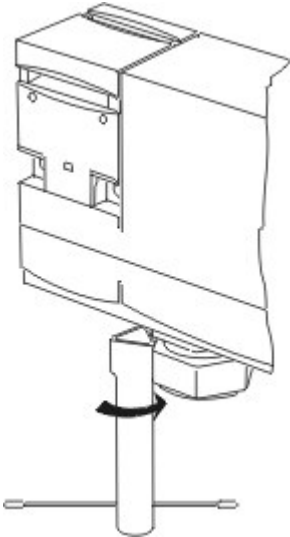
Dimensional drawing (basic component)

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Assembly example

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Detail photo

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## System components

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### Actuator



101122893 - AZ 17/170-B1

- Particularly suitable for sliding doors



**1137406 - AZ 17/170-B1-2245**

- Damps vibration on guard device



**1122895 - AZ 17/170-B5**

- Particularly suitable for hinged guards (front mounting)



**1139788 - AZ 17/170-B11**

- Particularly suitable for sliding doors



**1139789 - AZ 17/170-B15**

- Particularly suitable for hinged guards (front mounting)



**101123391 - AZM 170-B6**

- For very small actuating radii
- The direction of actuation can be selected by applicable insertion of the insert

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**Accessories**



**1208493 - AZM 170-B CENTERING GUIDE**

- for AZ 17 and AZM 170



**101100887 - TRIANGULAR KEY M5**

- For manual release using M5 triangular key, available as accessory
- For maintenance, installation, etc.

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**Connector**

**A-K4M12**

- Pre-wired cable



- 4-pole



**S-K4M12**

- Connector without cable
- 4-pole

K.A. Schmersal GmbH & Co. KG, Möddinghofe 30, D-42279 Wuppertal

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

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