## Datasheet - AZM 170-02ZRK-2197 24 VAC/DC

Solenoid interlock / AZM 170





(Minor differences between the printed image and the original product may

- 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 from side

## **Ordering details**

Product type description

Article number

EAN code

eCl@ss

exist!)

AZM 170-02ZRK-2197 24 VAC/DC

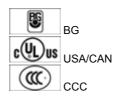
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4030661120065

27-27-26-03

### **Approval**

Approval



#### Classification

Standards

B<sub>10d</sub> Opener (NC)

Mission time

notice

EN ISO 13849-1

2.000.000

20 Years

$$MTTF_d = \frac{B_{10d}}{0.1 \times n_{op}}$$

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

### **Global Properties**

Product name

Standards

AZM 170

EN 60947-5-1, BG-GS-ET-19

Compliance with the Directives (Y/N) € €

Number of actuating directions

Active principle Duty cycle

Materials

- Material of the housings

- Material of the contacts Housing coating

Weight

Yes 2 piece

electromechanical

Magnet 100 %

Plastic, glass-fibre reinforced thermoplastic, self-extinguishing

None 285 g

**Mechanical data** 

Design of electrical connection

Cable section

- Min. Cable section

- Max. Cable section Mechanical life

Emergency unlocking device (Y/N)

- bottom

Manual release (Y/N)

- right

Emergency release (Y/N)

Latching force Positive break force positive break travel

Max. Actuating speed

Clamping force F

**Ambient conditions** 

Ambient temperature

- Min. environmental temperature - Max. environmental temperature

Protection class

**Electrical data** 

Design of control element

notice

Switching principle Number of auxiliary contacts

Number of safety contacts Power to unlock Power to lock

Rated control voltage Us Power consumption Rated impulse withstand voltage Uimp

Rated insulation voltage Ui Thermal test current Ithe Utilisation category

Max. fuse rating

IDC method of termination

1 x 0.75 mm<sup>2</sup>

1 x 1.0 mm<sup>2</sup>, flexible > 1.000.000 operations

No

Yes

No 30 N

> 17 N 11 mm 1000 N 2 m/s

-25 °C

+60 °C

IP67 to IEC/EN 60529

Opener (NC)

change-over contact with double break, type Zb or 2 NC contacts, with

galvanically separated contact bridges

Creep circuit element

0 piece 2 piece Yes No

24 VAC/DC max. 10 W 4 kV 250 V

10 A

AC-15: 230 V / 4 A, DC-13: 24 V / 4 A

6 A gG D-fuse

**ATEX** 

Explosion protection categories for gases Explosion protected category for dusts

None

None

#### Miscellaneous data

**Applications** 



sliding safety guard,



removable guard,



90 mm

84 mm

30 mm

hinged safety guard

#### **Dimensions**

Dimensions of the sensor

- Width of sensor- Height of sensor- Length of sensor

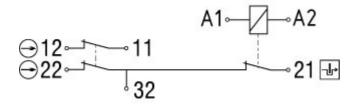
### notice

This type termination (IDC) method enables simple connetion of flexible conductors without the need for the use of conductor ferrules Individual coding available on request

Manual release from side

- For manual release using M5 triangular key, available as accessory
- · Additional manual release on side

### **Diagram**



Note Diagram

opositive break NC contact

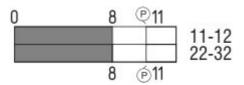




O—\_\_\_O Normally-open contact

o-t--- Normally-closed contact

# Switch travel diagram



Notes Switch travel diagram



Contact open

Setting range
(L) 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: AZM 170-02ZRK-2197 24 VAC/DC-1637

...-1637

0,3 µm gold-plated contacts

connector M12, Individual solenoid monitoring

Ordering code

...ST-2431

(2)

(3)

(5)

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

without IDC method of termination

SK Screw connection

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

02 2 Opener (NC)

12/0.0 1 Normally open contact (NO), 2 Opener (NC) / -

withoutLatching force 5 NRLatching force 30 NIIndividual coding

I Individual coding
(4)

without Power to unlock

A Power to lock

without cable gland

ST Connector M12 x 1
ST-2431 Connector M12 x 1, Individual solenoid monitoring

(6)

 24VAC/DC
 Us 24 VAC/DC

 110VAC
 Us 110 VAC

 230VAC
 Us 230 VAC

without Manual release

2197 Manual release from side (Power to unlock)

**1637** gold-plated contacts

AZM 170ST and AZM 170SK

AZM 170ST-(1)Z(2)K(3)-(4)-(5)-024 AZM 170SK-(1)Z(2)K(3)-(4)-(5)-024

(1)

11/11 1 Normally open contact (NO), 1 Opener (NC) / 1 Normally open contact

(NO), 1 Opener (NC)

11/02 1 Normally open contact (NO), 1 Opener (NC) / 2 Opener (NC)

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

12/11 1 Normally open contact (NO), 2 Opener (NC) / 1 Normally open contact

(NO), 1 Opener (NC)

12/02 1 Normally open contact (NO), 2 Opener (NC) / 2 Opener (NC)

**02/01** 2 Opener (NC), - / 1 Opener (NC), -

02/10 2 Opener (NC), - / 1 Normally open contact (NO), -

(2)

without Latching force 5 N

R Latching force 30 N

(3)

withoutPower to unlockAPower to lock

(4)

1637 gold-plated contacts

(5)

2197 Manual release for Power to unlock

#### **Documents**

Operating instructions and Declaration of conformity (fr) 611 kB, 29.04.2016

Code: mrl\_azm170\_fr

Operating instructions and Declaration of conformity (de) 595 kB, 25.04.2016

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 (nl) 720 kB, 23.09.2010

Code: mrl\_azm170\_nl

Operating instructions and Declaration of conformity (en) 611 kB, 25.04.2016

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) 590 kB, 11.02.2015

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) 260 kB, 09.12.2015

Code: z\_m17p02

BG-test certificate (de) 257 kB, 09.12.2015

Code: z\_m17p01

CCC certification (en) 596 kB, 23.06.2014

Code: q\_371p02

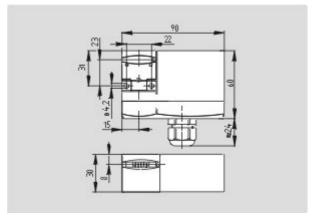
CCC certification (cn) 607 kB, 23.06.2014

Code: q\_371p03

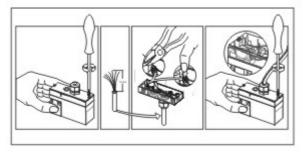
EAC certification (ru) 809 kB, 05.10.2015

Code: q\_6040p17\_ru

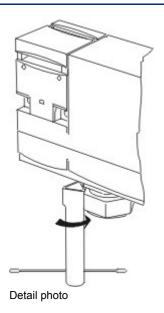
## **Images**

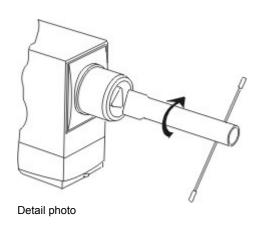


Dimensional drawing (basic component)



Assembly example





## **System components**

#### **Actuator**



#### 101122893 - AZ 17/170-B1

• Particularly suitable for sliding doors



## 101137406 - AZ 17/170-B1-2245

- Particularly suitable for sliding doors
- Damps vibration on guard device



## 101122895 - AZ 17/170-B5

• Particularly suitable for sliding doors



### 101139788 - AZ 17/170-B11

• Particularly suitable for sliding doors



#### 101139789 - AZ 17/170-B15

• Particularly suitable for sliding doors

### 101123391 - AZM 170-B6

- Particularly suitable for hinged guards
- For very smal actuating radii
- The direction of actuation can be selected by applicable insertion of the



insert

#### **Accessories**



#### 101208493 - AZM 170-B CENTERING GUIDE

• for AZ 17 and AZM 170



#### 101100887 - TRIANGULAR KEY TK-M5

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

### 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 throroughly. Technical modifications and errors excepted. Generiert am 15.07.2016 - 17:53:00h Kasbase 3.2.4.F.64I