


## Datasheet - AZM 170 BZ ST-AS P



AS interface safety at work / Safety switchgear / Solenoid interlock / AZM 170 AS

Preferred typ



- Solenoid interlock
- Integrated AS-Interface
- Thermoplastic enclosure
- 90 mm x 84 mm x 30 mm
- Double-insulated 
- High holding force
- Combined monitoring of actuator and solenoid interlock



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

### Ordering details

Product type description	AZM 170 BZ ST-AS P
Article number	101210931
EAN code	4030661390451

### Approval

Approval



### Classification


Standards	EN ISO 13849-1, IEC 61508
PL	up c
Control category	1
PFH	$1.16 \times 10^{-6} / h$
- notice	up to max. 100.000 switching cycles/year
SIL	up 1
Mission time	20 Years

**If a fault exclusion for hazardous damage of the 1-channel mechanics is authorized and an adequate protection against tampering is ensured, suitable for use up to:**

Standards	EN ISO 13849-1, IEC 61508
PL	up d
Control category	3
PFH value	1.01 x 10 <sup>-7</sup> / h
- notice	up to max. 100.000 switching cycles/year
SIL	up 2
Mission time	20 Years

## Global Properties

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Product name	AZM 170 AS
Standards	EN 50295, EN 60947-5-1, IEC 61508, EN ISO 13849-1
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	glass-fibre reinforced thermoplastic, Plastic self-extinguishing,
Housing coating	None
Weight	288 g
Guard locking monitored (Y/N)	Yes
Actuator monitored (Y/N)	Yes
Response time	< 100 ms


## Mechanical data

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Design of electrical connection	connector plug M12, 4-pole
Mechanical life	> 1.000.000 operations
Manual release (Y/N)	No
Latching force	5 N
Clamping force $F_{max}$	1000 N
Max. Actuating speed	2 m/s

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+55 °C
Storage and transport temperature	
- Min. Storage and transport temperature	-25 °C
- Max. Storage and transport temperature	+85 °C
Relative humidity	30 % ... 95 %
- non-condensing	
- non-icing	
Protection class	IP67 to IEC/EN 60529
Protection rating	II 
Air clearances and creepage distances To IEC/EN 60664-1	
- Rated impulse withstand voltage $U_{imp}$	0,8 kV
- Rated insulation voltage $U_i$	32 VDC
- Overvoltage category	III
- Degree of pollution	3

## Electrical data

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Power to unlock	Yes
Power to lock	No

## Electrical data - AS interface

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AS-i Supply voltage	26.5 ... 31.6 VDC, Protection against polarity reversal
AS-i operating current	≤ 50 mA
AS-i Device insulation	internally short-circuit proof
AS-i Specification	
- version	V 2.1
- Profile	S-7.B.F.E
- IO-Code	0x7
- ID-Code	0xB
- ID-Code1	0xF
- ID-Code2	0xE
AS-i Inputs	
- Channel 1	Data bits DI 0/DI 1= dynamic code transmission
- Channel 2	Data bits DI 2/DI 3= dynamic code transmission
AS-i Outputs	
- DO 0	Solenoid control
- DO 1	not used
- DO 2	not used
- DO 3	not used
AS-i Parameter bits	
- P0	Safety guard and actuator detected
- P1	Solenoid interlock locked
- P2	not used
- P3	not used
AS-i input module address	0
- Default on address 0, programmable via the AS-Interface Master or Hand-held programming device	

## Electrical data - Auxiliary voltage (Aux)

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Supply voltage $U_B$	24 VDC (-15 % / +10 %) stabilised PELV
Operating current	≤ 500 mA
Device insulation	≤ 4 A (if used in accordance with UL 508)

## LED switching conditions display

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LED switching conditions display (Y/N)	Yes
AS-i LED switching conditions display	
(1) green LED	Supply voltage
(2) red LED	Communication error / slave address = 0
(3) yellow LED	Enabling status

## 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	90 mm

- Height of sensor	75.5 mm
- Length of sensor	30 mm

## Pin assignment

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1	AS-i +
2	Aux - (P)
3	AS-i -
4	Aux + (P)

## notice

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Interlocks with power to lock principle may only be used in special cases after a thorough evaluation of the accident risk, since the guarding device can immediately be opened on failure of the electrical power supply or when the main switch is opened.

## Included in delivery

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Actuators must be ordered separately.

## Ordering code

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AZM 170 (1) (2)-AS(3)(4)(5)(6)

<b>(1)</b>	
<b>B</b>	Actuator monitored
<b>BZ</b>	Combined monitoring of actuator and solenoid interlock
<b>(2)</b>	
<b>ST</b>	male connector M12
<b>(3)</b>	
<i>without</i>	Latching force 5 N
<b>R</b>	Latching force 30 N
<b>(4)</b>	
<i>without</i>	Power to unlock
<b>A</b>	Power to lock
<b>(5)</b>	
<b>P</b>	Solenoid supply 24 VDC (Aux)
<b>(6)</b>	
<b>2197</b>	Manual release for Power to unlock

## Documents

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**Operating instructions and Declaration of conformity (fr)** 677 kB, 11.03.2010

Code: mrl\_azm170as\_fr

**Operating instructions and Declaration of conformity (de)** 1 MB, 11.03.2010

Code: mrl\_azm170as\_de

**Operating instructions and Declaration of conformity (en)** 678 kB, 11.03.2010

Code: mrl\_azm170as\_en

**Operating instructions and Declaration of conformity (jp)** 464 kB, 14.04.2011

Code: mrl\_azm170as\_jp

**Operating instructions and Declaration of conformity (nl)** 586 kB, 11.03.2010

Code: mrl\_azm170as\_nl

**Operating instructions and Declaration of conformity (it)** 990 kB, 11.03.2010

Code: mrl\_azm170as\_it

**Operating instructions and Declaration of conformity (es)** 672 kB, 11.03.2010

Code: mrl\_azm170as\_es

**TÜV certification (de, en)** 870 kB, 22.02.2010

Code: z\_azmp03

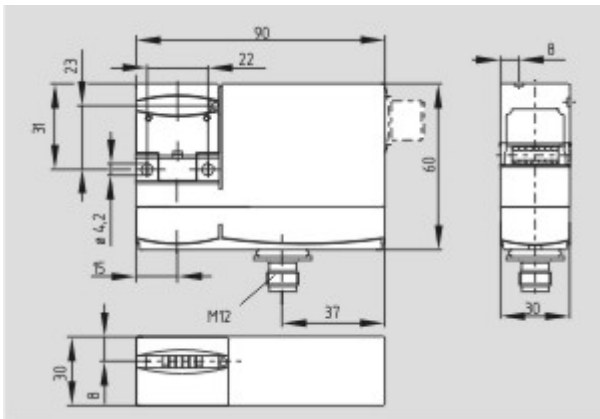
## Images

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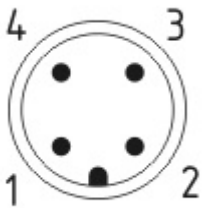
Product photo

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Dimensional drawing (basic component)

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Contact arrangement

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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)



### 101123391 - AZM 170-B6

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



### 1139788 - AZ 17/170-B11

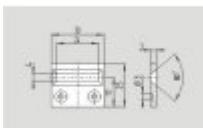
- Particularly suitable for sliding doors



### 1139789 - AZ 17/170-B15

- Particularly suitable for hinged guards (front mounting)

## Accessories



### 1208493 - AZM 170-B CENTERING GUIDE

- for AZ 17 and AZM 170

### 101150367 - Mounting set MS AZM 170 P



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**101149211 - Mounting set MS AZM 170 R/P**



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**101100887 - TRIANGULAR KEY M5**



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

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**Mounting accessories**

**101147463 - TAMPERPROOF SCREWS M 4 x 8**



- 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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