



AZM 170 BZ ST-AS RAP

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

Data

Ordering data

EAN (European Article Number)	4030661390437
eCl@ss number, Version 9.0	27-27-26-03
eCl@ss number, Version 11.0	27-27-26-03

Approval - Standards

Certificates	TÜV cULus ASi-SaW EAC
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General data

Standards	IEC 61508 EN 60947-5-1 EN 62026-2 EN ISO 13849-1
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Active principle	electromechanical
Enclosure material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Gross weight	300 g
Reaction time, maximum	100 ms

General data - Features

Power to lock	Yes
Actuator and interlock combined monitored	Yes
Integral System Diagnostics, status	Yes
Number of actuating directions	2

Safety appraisal

Standards	IEC 61508
Performance level, up to	c
Control category to EN13849	1
PFH-value	$1.16 \times 10^{-6} / \text{h}$
Note (PFH-value)	up to max. 100,000 switching cycles/year
Safety Integrity Level (SIL), suitable for applications in	1
Mission Time	20 Year(s)

Safety appraisal - Fault exclusion

Please note:	Einsetzbar wenn ein Fehlerausschluss für eine gefahrbringende Beschädigung der 1-kanaligen Mechanik zulässig ist und ein ausreichender Manipulationsschutz gewährleistet ist.
Performance Level, up to	d
Control category to EN13849	3

PFH-value	1.01 x 10 ⁻⁷ /h
Note (PFH-value)	up to max. 100,000 switching cycles/year
Safety Integrity Level (SIL), suitable for applications in	2
Mission time	20 Year(s)

Mechanical data

Mechanical life, minimum	1,000,000 Operations
Clamping force	1,000 N
Latching force	30 N
Actuating speed, maximum	2 m/s

Mechanical data - Connection technique

Terminal Connector	Connector plug M12, 4-pole, (A-coding)
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Mechanical data - Dimensions

Width of sensor	90 mm
Height of sensor	75.5 mm

Ambient conditions

Degree of protection	IP67 to EN 60529
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+55 °C
Storage and transport temperature, minimum	-25 °C
Storage and transport temperature, maximum	+85 °C
Relative humidity, minimum	30 %

Relative humidity, maximum	95 %
Note (Relative humidity)	non-condensing non-icing
Protection rating	II

Ambient conditions - Insulation value

Rated insulation voltage U_i	32 VDC
Rated impulse withstand voltage U_{imp}	0.8 kV
Overvoltage category	III
Degree of pollution to VDE 0100	3

Electrical data - AS Interface

AS-i Operating voltage, minimum	26.5 VDC
AS-i Operating voltage AS-i maximum	31.6 VDC
Note (AS-i Operating voltage)	Protection against polarity reversal
AS-i Current consumption, maximum	100 mA

Electrical data - AS-Interface specification

AS-i Specification	Safety-Slave
AS-i Version	V 2.1
AS-i Profile	S-7.B.F.E
AS-i, IO-Code	0x7
AS-i, ID-Code	0xB
AS-i, ID-Code1	0xF
AS-i, ID-Code2	0xE

AS-i Input, Channel 1	Data bits DI 0 / DI 1 = dynamic code transmission
AS-i Input, Channel 2	Data bits DI 2 / DI 3 = dynamic code transmission
AS-i Outputs, DO 0	Solenoid control
AS-i Outputs, DO 1	No Function
AS-i Outputs, DO 2	No Function
AS-i Outputs, DO 3	No Function
AS-i Parameter bits, P0	Safety guard and actuator detected
AS-i Parameter bits, P1	Solenoid interlock locked
AS-i Parameter bits, P2	No function
AS-i Parameter bits, P3	No function
Note (AS-i Parameter bits)	Set the parameter outputs to "1111" (0xF) FID: periphery error
AS-i Input module address	0
Note (AS-i Input module address)	Preset to address 0, can be changed through AS-interface bus master or hand-held programming device

Electrical data - Auxiliary voltage

Rated operating voltage	24 VDC -15% / +10% (stabilised PELV)
Operating current	500 mA

Status indication

Note (LED switching conditions display)	(1) LED green: Supply voltage (2) red LED: Communication error / Slave address = 0 (3) LED yellow : Enabling status
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Pin assignment

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

Scope of delivery

Included in delivery	Actuators must be ordered separately.
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Notes

Note (General)	Interlocks with the 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.
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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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