



AZM 161 BZ ST1-AS RP

- Solenoid supply 24 VDC (Aux)
- Combined monitoring of actuator and solenoid interlock
- Manual release
- Solenoid interlock
- Thermoplastic enclosure
- High holding force 2000
- 130 mm x 90 mm x 30 mm
- Interlock with protection against incorrect locking.
- Double-insulated
- Long life
- Integrated AS-Interface

Data

Ordering data

EAN (European Article Number) 4030661405513

eCl@ss number, Version 9.0 27-27-26-03

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Approval - Standards

Certificates TÜV
cULus
ASi-SaW
EAC

General data

Standards	IEC 61508 EN 60947-5-1 EN 62026-2 EN ISO 13849-1
Active principle	electromechanical
Enclosure material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Gross weight	452 g
Reaction time, maximum	100 ms

General data - Features

Power to unlock	Yes
Actuator and interlock combined monitored	Yes
Manual release	Yes
Integral System Diagnostics, status	Yes
Number of actuating directions	3

Safety appraisal

Standards	IEC 61508
Performance level, up to	c
Control category to EN13849	1
PFH-value	1.14×10^{-6} /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	1.01×10^{-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
Actuating play in direction of actuation	5.5 mm
Clamping force	2,000 N
Latching force	30 N
Actuating speed, maximum	2 m/s

Mechanical data - Connection technique

Terminal Connector	Connector plug M12, 4-pole, (A-coding)
Connector position	Bottom

Mechanical data - Dimensions

Length of sensor	30 mm
Width of sensor	130 mm
Height of sensor	90 mm

Ambient conditions

Degree of protection	IP67 to EN 60529
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+60 °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
Resistance to vibrations to EN 60068-2-6	10 Hz ... 150 Hz, amplitude 0.35 mm
Resistance to shock	30 g / 11 ms
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

Switching frequency	1,000 /h
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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	Actuator detected
AS-i Parameter bits, P1	Solenoid interlock locked
AS-i Parameter bits, P2	Magnet voltage in tolerance range
AS-i Parameter bits, P3	Error message - locking/unlocking of the solenoid interlock blocked
Note (AS-i Parameter bits)	Set the parameter outputs to "1111" (0xF)
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 yellow: Channel 2 / AS-i SaW Bit 2.3 (2) LED green/red (AS-i duo LED): Supply voltage / communication error / slave address = 0 / periphery error detected (3) LED yellow: Channel 1 / AS-i SaW Bit 0.1
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Other data

Note (applications)	sliding safety guard removable guard hinged safety guard
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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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Note (Manual release)

For maintenance, installation, etc.

For manual release using M5 triangular key, available as accessory

Schmersal, Inc., 15 Skyline Drive, Hawthorne, NY 10532

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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