



AZM 161 Z ST1-AS RA

- Solenoid supply aus AS interface
- Guard locking monitored
- 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

Product type description	AZM 161 Z ST1-AS RA
Article number (order number)	101209104
EAN (European Article Number)	4030661396477
eCl@ss number, version 12.0	27-27-26-03
eCl@ss number, version 11.0	27-27-26-03
eCl@ss number, version 9.0	27-27-26-03
ETIM number, version 7.0	EC002593
ETIM number, version 6.0	EC002593

Approvals - Standards

Certificates	TÜV cULus ASi-SaW EAC
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General data

Standards	EN IEC 62026-2 EN ISO 13849-1 EN IEC 60947-5-1 EN IEC 61508
Working principle	electromechanical
Enclosure material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Gross weight	465 g
Reaction time, maximum	100 ms

General data - Features

Power to lock	Yes
Solenoid interlock monitored	Yes
Manual release	Yes
Integral system diagnostics, status	Yes
Number of actuating directions	3

Safety classification

Standards	EN IEC 61508
Performance Level, up to	c
Category to EN ISO 13849	1

PFH value	1.14 x 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 classification - 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
Category to EN ISO 13849	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
Actuating play in direction of actuation	5.5 mm
Holding force	2,000 N
Latching force	30 N
Actuating speed, maximum	2 m/s

Mechanical data - Connection technique

Termination	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
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 vibration to EN 60068-2-6	10 Hz ... 150 Hz, amplitude 0.35 mm
Resistance to shock	30 g / 11 ms
Protection class	II

Ambient conditions - Insulation values

Rated insulation voltage U_i	32 VDC
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Rated impulse withstand voltage U_{imp}	0.8 kV
Oversvoltage 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	250 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) 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

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

Scope of delivery Actuators must be ordered separately.

Note

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

Ordering code

Product type description:
AZM 161 (1) (2)-AS (3)(4)(5)(6)

(1)

Z	Guard locking monitored
B	Actuator monitored
BZ	Combined monitoring of actuator and solenoid interlock

(2)

ST1	Bottom-side connector
ST2	Connector at the right-hand side

(3)

without	Latching force 5 N
R	Latching force 30 N

(4)

without	Power to unlock
A	Power to lock

(5)

without	Magnet supply from AS-Interface
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P Magnet supply 24 VDC (AUX)

(6)

without Manual release

N Emergency release

T Emergency exit

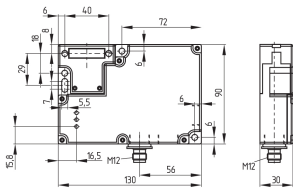
Pictures

Product picture (catalogue individual photo)



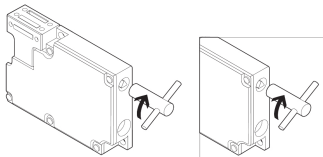
ID: kazm1f53
| 643.1 kB | .jpg | 352.778 x 277.283 mm - 1000 x 786 px - 72 dpi
| 45.9 kB | .png | 74.083 x 58.208 mm - 210 x 165 px - 72 dpi

Dimensional drawing basic component



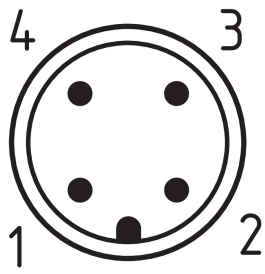
ID: 1azm1g06
| 41.6 kB | .cdr |
| 9.6 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi
| 115.1 kB | .jpg | 352.778 x 245.181 mm - 1000 x 695 px - 72 dpi

Operating principle



ID: kazm1a41
| 105.3 kB | .jpg | 352.778 x 170.744 mm - 1000 x 484 px - 72 dpi
| 13.0 kB | .png | 74.083 x 35.983 mm - 210 x 102 px - 72 dpi

Contact arrangement



ID: km12-k4c

| 4.2 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi

| 113.3 kB | .jpg | 352.778 x 352.778 mm - 1000 x 1000 px - 72 dpi

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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