



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	cULus ASi-SaW
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General data

Standards	EN IEC 62026-2 EN ISO 13849-1 EN IEC 60947-5-1 EN IEC 61508
Coding level according to EN ISO 14119	Low
Working principle	electromechanical
Housing material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Reaction time, maximum	100 ms
Gross weight	465 g

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 ISO 13849-1 EN IEC 61508
Performance Level, up to	c
Category	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:	Can be used when fault exclusion for dangerous damage to the 1-channel mechanism is permissible and sufficient protection against manipulation is guaranteed.
Performance Level, up to	d
Category	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)

Safety classification - Guard locking function

Performance Level, up to	e
Note (Performance Level)	Information for the safety classification of the guard locking function is documented in the "Operating instructions" or in the "Operation and mounting" instructions.

Mechanical data

Mechanical lifetime, minimum	1,000,000 Operations
Actuating play in direction of actuation	5.5 mm
Holding force F _{Zh} in accordance with EN ISO 14119	2,000 N

Holding force F _{max} , maximum	2,600 N
Latching force	30 N
Actuating speed, maximum	2 m/s
Mounting	Screws
Type of the fixing screws	3x M6

Mechanical data - Connection technique

Connector position	Centre
Termination	Connector plug M12, 4-pole, (A-coding)

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	-25 ... +60 °C
Storage and transport temperature	-25 ... +85 °C
Relative humidity, minimum	30 %
Relative humidity, maximum	95 %
Note (Relative humidity)	non-condensing non-icing
Resistance to vibrations	10 ... 150 Hz, amplitude 0.35 mm
Resistance to shock	30 g / 11 ms
Protection class	II

Permissible installation altitude above sea level, maximum	2,000 m
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Ambient conditions - Insulation values

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

Electrical data

Maximale Schalthäufigkeit	1,000 /h
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Electrical data - AS Interface

Rated operating voltage	26.5 ... 31.6 VDC (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	n.c.
PIN 3	AS-Interface -
PIN 4	n.c.

Scope of delivery

Scope of delivery Actuator 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
P	Magnet supply 24 VDC (AUX)

(6)

without	Manual release
N	Emergency release
T	Emergency exit

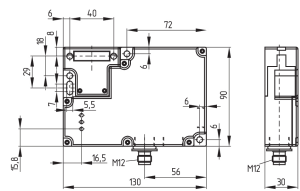
Pictures

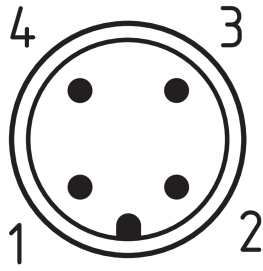
Product picture (catalogue individual photo)



ID: kazm1f53
| 438.3 kB | .jpg | 352.778 x 277.283 mm - 1000 x 786 px - 72 dpi
| 49.8 kB | .png | 74.083 x 58.208 mm - 210 x 165 px - 72 dpi
| 47.8 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi
| 4.5 MB | .png | 211.667 x 166.37 mm - 2000 x 1572 px - 240 dpi

Dimensional drawing basic component



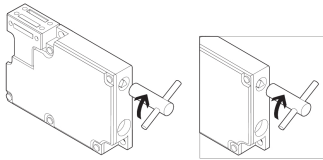


ID: km12-k4c

| 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

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

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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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