



## AZM300Z-I2-ST-SD2P-A

- Repeated individual coding with RFID technology
- Coding level "High" according to ISO 14119
- Connector M12, 8-pole
- Power to lock
- Guard locking monitored
- serial diagnostic output
- Hygienic design
- Protection class IP 69
- Suitable for mounting to profile systems
- Thermoplastic enclosure
- RFID-technology for needs-based protection against tampering
- 3 different directions of actuation
- Compact design
- 3 LEDs to show operating conditions
- Suitable for hinged and sliding guards
- Series-wiring
- Manual release

## Data

### Ordering data

EAN (European Article Number)	4030661426044
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 ECOLAB EAC FCC IC
--------------	--

## General data

Standards	IEC 61508 IEC 60947-5-3 EN ISO 13849-1 EN ISO 14119
general information	Individual coding, multiple teaching
Coding level according to ISO 14119	High
Active principle	RFID
Frequency band RFID	125 kHz
Transmit power, maximum	-6 dB/m
Enclosure material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Gross weight	585 g
Time to readiness, maximum	5,000 ms
Duration of risk, maximum	200 ms
Response time safety outputs in case of switch-off by actuator, maximum	100 ms
Response time safety outputs in case of switch-off by safety inputs, maximum	1.5 ms

## General data - Features

Power to lock	Yes
Guard locking monitored	Yes
Serial diagnostics	Yes
Latching	Yes
Manual release	Yes

Short circuit detection	Yes
Short-circuit recognition	Yes
Series-wiring	Yes
Safety functions	Yes
Integral System Diagnostics, status	Yes
Number of fail-safe digital outputs	2

## Safety appraisal

Standards	EN ISO 13849-1 IEC 61508
-----------	-----------------------------

## Safety appraisal - Interlocking

Performance level, up to	e
Control category	4
PFH-value	$5.20 \times 10^{-10} /h$
PFD value	$4.50 \times 10^{-5}$
Safety Integrity Level (SIL), suitable for applications in	3
Mission Time	20 Year(s)

## Mechanical data

Mechanical life, minimum	1,000,000 Operations
Note (Mechanical lifetime)	When using as door stop: $\geq 50.000$ operations (door mass $\leq 5$ kg and actuating speed $\leq 0.5$ m/s)
Angular offset between interlocking device and actuator, maximum	2 °
Clamping force in accordance with ISO14119 $F_{zh}$	1,150 N
Clamping force, maximum $F_{max}$	1,500 N
Latching force, adjustable, position 1	25 N
Latching force, adjustable, position 2	50 N

Type of the fixing screws 2x M6

Tightening torque of the fixing screws, minimum 6 Nm

Tightening torque for the fixing screws, maximum 7 Nm

### **Mechanical data - Switching distances according IEC 60947-5-3**

Switch distance 2 mm

Ensured switch distance "ON"  $S_{ao}$  1 mm

Ensured switch distance "OFF"  $S_{ar}$  20 mm

### **Mechanical data - Connection technique**

Terminal Connector Connector M12, 8-pole, A-coded

Length of sensor chain, maximum 200 m

Note (length of the sensor chain) Cable length and cross-section change the voltage drop depending on the output current

Note (series connection of the sensors) Unlimited number of devices, observe external line fusing, max. 31 devices in case of serial diagnostic SD

### **Mechanical data - Dimensions**

Length of sensor 120 mm

Width of sensor 87.5 mm

Height of sensor 35 mm

### **Ambient conditions**

Degree of protection IP66 to EN 60529

IP67 to EN 60529

IP69 to EN 60529

Ambient temperature, minimum +0 °C

Ambient temperature, maximum +60 °C

Storage and transport temperature, minimum	-10 °C
Storage and transport temperature, maximum	+90 °C
Relative humidity, maximum	93 %
Note (Relative humidity)	non-condensing non-icing
Resistance to vibrations to EN 60068-2-6	10 ... 150 Hz, amplitude 0.35 mm
Resistance to shock	30 g / 11 ms
Protection rating	III
Zulässige Aufstellhöhe über NN, maximum	2,000 m

### 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 IEC/EN 60664-1	3

### Electrical data

Operating voltage, minimum	20.4 VDC
Operating voltage, maximum	26.4 VDC
Notes (Power supply, general)	stabilised PELV power supply
No-load supply current $I_0$	100 mA
Current consumption with solenoid ON, average	200 mA
Current consumption with solenoid ON, peak	350 mA / 200 ms
Required rated short-circuit current to EN 60947-5-1	100 A
External wiring and device fuse rating	2 A gG

Switching frequency, maximum	0.5 Hz
------------------------------	--------

### Electrical data - Solenoid control

Switching thresholds	-3 V ... 5 V (Low) 15 V ... 30 V (High)
Duty cycle solenoid	100 %
Test pulse duration, maximum	5 ms
Test pulse interval, minimum	40 ms
Classification ZVEI CB24I, Sink	C0
Classification ZVEI CB24I, Source	C1 C2 C3

### Electrical data - Fail-safe digital inputs

Switching thresholds	-3 V ... 5 V (Low) 15 V ... 30 V (High)
Current consumption at 24V	5 mA
Test pulse duration, maximum	1 ms
Test pulse interval, minimum	100 ms
Classification ZVEI CB24I, Sink	C1
Classification ZVEI CB24I, Source	C1 C2 C3

### Electrical data - Fail-safe digital outputs

Versions	short-circuit proof, p-type
Voltage drop $U_d$ , maximum	4 V
Current leakage $I_r$	0.5 mA
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.25 A
Voltage, Utilisation category DC13	24 VDC

Current, Utilisation category DC13	0.25 A
Test pulse duration, maximum	0.5 ms
Test pulse interval, typical	1000 ms
Classification ZVEI CB24I, Source	C2
Classification ZVEI CB24I, Sink	C1 C2

### Electrical data - Diagnostic output

Versions	short-circuit proof, p-type
Voltage drop $U_d$ , maximum	4 V
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.05 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.05 A

### Electrical data - Serial diagnostic SD

Operation current	150 mA
Wiring capacity	50 nF

### Status indication

Note (LED switching conditions display)	Operating condition: LED green Error / functional defect: LED red Supply voltage UB: LED green
---	--

### Pin assignment

PIN 1	A1 Supply voltage UB
PIN 2	X1 Safety input 1
PIN 3	A2 GND
PIN 4	Y1 Safety output 1

PIN 5	OUT serial diagnostic output
PIN 6	X2 Safety input 2
PIN 7	Y2 Safety output 2
PIN 8	IN serial diagnostic input

## Scope of delivery

Included in delivery	Actuators must be ordered separately.
----------------------	---------------------------------------

## Accessory

Recommendation (actuator)	AZ/AZM300-B1
---------------------------	--------------

## Notes

Note (General)	For doors that are flush with the door frame, the optional mounting plate MP-AZ/AZM300-1 can be used. For glass and Makrolon doors, the optional mounting kit MS-AZ/AZM300-B1-1 can be used. As long as the actuating unit remains inserted in the solenoid interlock, the unlocked safety guard can be relocked. In this case, the safety outputs are re-enabled, so that the safety guard must not be opened.
----------------	---

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.

Generated on: 11/9/2021, 9:38 AM