

## Datasheet - AZM300Z-ST-1P2P-A

Solenoid interlock / AZM300



(Minor differences between the printed image and the original product may exist!)

- Suitable for mounting to profile systems
- Thermoplastic enclosure
- 
- 3 different directions of actuation
- Compact design
- 3 LEDs to show operating conditions
- Suitable for hinged and sliding guards
- Series-wiring
- Manual release
- Connector M12, 8-pole
- Power to lock
- Guard locking monitored
- Diagnostic output

### Ordering details

Product type description	AZM300Z-ST-1P2P-A
Article number	103001450
EAN code	
eCl@ss	27-27-26-03

### Approval


Approval



### Classification

Standards	EN ISO 13849-1, IEC 61508
PL	e
Control category	4
SIL	3
Mission time	20 Years
PFH value	5.2 x 10 <sup>-10</sup> /h

### Global Properties

Product name	AZM300
Standards	EN 60947-5-1, IEC 60947-5-3, IEC 61508, EN ISO 13849-1
Compliance with the Directives (Y/N) 	Yes
Suitable for safety functions (Y/N)	Yes
Series-wiring	Yes
Length of the sensor chain	max. 200 m
Active principle	RFID
Duty cycle	100 %
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic
Housing coating	None
Weight	
Guard locking monitored (Y/N)	Yes
Actuator monitored (Y/N)	No
Idle assignable pushbutton and LED (Y/N)	No
Reaction time	< 120 ms
Duration of risk	< 200 ms
Time to readiness	5 s
Recommended actuator	AZ/AZM300-B1

## Mechanical data

Design of electrical connection	Connector M12, 8-pole, A-coded
Mechanical life	≥ 1.000.000 operations
notice - Mechanical life ( )	≥ 50000 operations for guards ≤ 5 kg; actuating speed ≤ 0,5 m/s
Switch distance S <sub>n</sub>	2 mm
Ensured switch distance ON S <sub>ao</sub>	1 mm
Ensured switch distance OFF S <sub>ar</sub>	20 mm
restistance to shock	30 g / 11 ms
Resistance to vibration	10 ... 150 Hz, Amplitude 0,35 mm
Emergency unlocking device (Y/N)	No
Manual release (Y/N)	Yes
Emergency release (Y/N)	No
Latching (Y/N)	Yes
Latching force	25 N / 50 N
Clamping force F <sub>max</sub>	1000 N
Actuator and interlock misalignment	≤ 2°
fixing screws	2 x M6

## Ambient conditions

Ambient temperature	
- Min. environmental temperature	0 °C
- Max. environmental temperature	+60 °C
Storage and transport temperature	
- Min. Storage and transport temperature	-10 °C
- Max. Storage and transport temperature	+90 °C
Protection class	IP66, IP67 to IEC/EN 60529 IP69K to DIN 40050-9
Protection rating	II
Air clearances and creepage distances To IEC/EN 60664-1	
- Rated impulse withstand voltage U <sub>imp</sub>	0,8 kV

- Overvoltage category	III
- Degree of pollution	3

## Electrical data

Number of auxiliary contacts	0 piece
Number of safety contacts	2 piece
Cross circuit/short circuit recognition possible (Y/N)	Yes
Power to unlock	No
Power to lock	Yes
Supply voltage $U_B$ (stabilised PELV)	24 VDC $-15\%$ / $+10\%$
Switch frequency	0,5 Hz
Operating current	100 mA (without load)
Rated insulation voltage $U_i$	32 VDC
Operating current $I_e$	1 A
Utilisation category	DC-13
Required rated short-circuit current	100 A
Device insulation	2 A
notice	Cable length and cable section alter the voltage drop depending on the output current

## Electrical data - Safety inputs

Safety inputs	X1 and X2
Rated operating voltage $U_e$	$-3\text{ V} \dots 5\text{ V}$ ( Low) $15\text{ V} \dots 30\text{ V}$ ( High)
Switching thresholds	$-3\text{ V} \dots 5\text{ V}$ ( Low) $15\text{ V} \dots 30\text{ V}$ ( High)
Operating current $I_e$	5 mA / 24 V
Operating current	5 mA / 24 V

## Electrical data - Safety outputs

Safety outputs	Y1 and Y2
Design of control output	short-circuit proof, p-type
Rated operating voltage	0 V ... 4 V under Supply voltage $U_B$
Residual current $I_r$	$\leq 0,5\text{ mA}$
Operating current $I_e$	0,25 A
Utilisation category	DC-12, DC-13 $< 0,5$ 1

## Electrical data - Diagnostic output

Serial diagnostics (Y/N)	No
Fuse rating	p-type, short-circuit proof
Design of control output	short-circuit proof, p-type
Rated operating voltage $U_e$	0 V ... 4 V under Supply voltage $U_B$
Operating current $I_e$	0,05 A
Utilisation category	DC-12, DC-13
Wiring capacitance for serial diagnostics	-
diagnostic signals	guard door closed and interlocking device locked
Operating principle of the diagnostic output	The short-circuit proof diagnostic output OUT can be used for central visualisation or control tasks, e.g. in a PLC.
notice	The diagnostic output is not a safety-relevant output!

Electrical data - Solenoid control IN

Rated operating voltage U <sub>e</sub>	-3 V ... 5 V (Low) 15 V ... 30 V (High)
Switching thresholds	-3 V ... 5 V (Low) 15 V ... 30 V (High)
Operating current I <sub>e</sub>	10 mA / 24 V
Operating current	10 mA / 24 V

LED switching conditions display

LED switching conditions display (Y/N)	Yes
LED switching conditions display	
- Supply voltage U <sub>B</sub>	green LED
- switching condition	yellow LED
- Error functional defect	red LED

ATEX

Explosion protection categories for gases	None
Explosion protected category for dusts	None

Dimensions

Dimensions of the sensor	
- Width of sensor	85 mm
- Height of sensor	100 mm
- Length of sensor	35 mm

Pin assignment

1	A1 Supply voltage U <sub>B</sub>
2	X1 Safety input 1
3	A2 GND
4	Y1 Safety output 1
5	OUT Diagnostic output
6	X2 Safety input 2
7	Y2 Safety output 2
8	IN Solenoid control

notice

As long as the actuating unit remains inserted in the solenoid interlock, the unlocked safety guard can be relocked. The safety outputs then will be enabled again; opening the safety guard therefore is not required.

Included in delivery

Actuators must be ordered separately.

Ordering code

AZM300(1)(2)-ST(3)-(4)-(5)

<b>(1)</b>	
<b>Z</b>	Guard locking monitored
<b>B</b>	Actuator monitored
<b>(2)</b>	
<i>without</i>	Included in standard versioncoding
<b>I1</b>	Individual coding
<b>I2</b>	Individual coding, multiple teaching
<b>(3)</b>	
<b>1P2P</b>	1 Diagnostic output, p-type and 2 Safety outputs, p-type
<b>SD2P</b>	serial diagnostic output and 2 Safety outputs, p-type
<b>(4)</b>	
<i>without</i>	Power to unlock
<b>A</b>	Power to lock
<b>(5)</b>	
<i>without</i>	Manual release
<b>T</b>	Emergency unlocking device
<b>N</b>	Emergency release

## Documents

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**Operating instructions and Declaration of conformity** (it) 1 MB, 27.02.2015

Code: mrl\_azm300\_it

**Operating instructions and Declaration of conformity** (sv) 1 MB, 27.02.2015

Code: mrl\_azm300\_sv

**Operating instructions and Declaration of conformity** (en) 1 MB, 09.01.2015

Code: mrl\_azm300\_en

**Operating instructions and Declaration of conformity** (da) 371 kB, 22.08.2013

Code: mrl\_azm300\_da

**Operating instructions and Declaration of conformity** (es) 1 MB, 27.02.2015

Code: mrl\_azm300\_es

**Operating instructions and Declaration of conformity** (de) 1 MB, 09.01.2015

Code: mrl\_azm300\_de

**Operating instructions and Declaration of conformity** (fr) 1 MB, 03.12.2014

Code: mrl\_azm300\_fr

**Operating instructions and Declaration of conformity** (cs) 1 MB, 24.11.2014

Code: mrl\_azm300\_cs

**Operating instructions and Declaration of conformity** (nl) 1 MB, 16.10.2014

Code: mrl\_azm300\_nl

**Operating instructions and Declaration of conformity** (pt) 376 kB, 09.04.2013

Code: mrl\_azm300\_pt

**Operating instructions and Declaration of conformity** (pl) 1 MB, 27.02.2015

Code: mrl\_azm300\_pl

**Brochure** (es) 2 MB, 03.05.2013

Code: b\_azm300p01\_es

**Brochure** (jp) 1 MB, 13.03.2013

Code: b\_azm300p01\_jp

**Brochure** (pt) 1 MB, 03.05.2013

Code: b\_azm300p01\_pt

**Brochure** (it) 1 MB, 03.05.2013

Code: b\_azm300p01\_it

**Brochure** (fr) 2 MB, 03.05.2013

Code: b\_azm300p01\_fr

**Brochure** (br) 2 MB, 08.03.2013

Code: b\_azm300p01\_br

**Brochure** (br) 2 MB, 03.05.2013

Code: b\_azm300p01\_br

**Brochure** (nl) 1 MB, 03.05.2013

Code: b\_azm300p01\_nl

**Brochure** (en) 3 MB, 03.05.2013

Code: b\_azm300p01\_en

**Brochure** (de) 764 kB, 03.05.2013

Code: b\_azm300p01\_de

**Brochure** (pl) 2 MB, 03.05.2013

Code: b\_azm300p01\_pl

**TÜV certification** (de, en) 227 kB, 10.12.2013

Code: z\_azmp05

**ECOLAB certification** (en) 94 kB, 08.04.2013

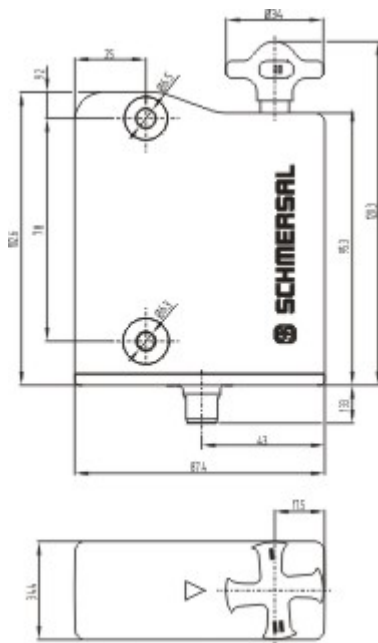
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**ECOLAB certification** (de) 93 kB, 08.04.2013

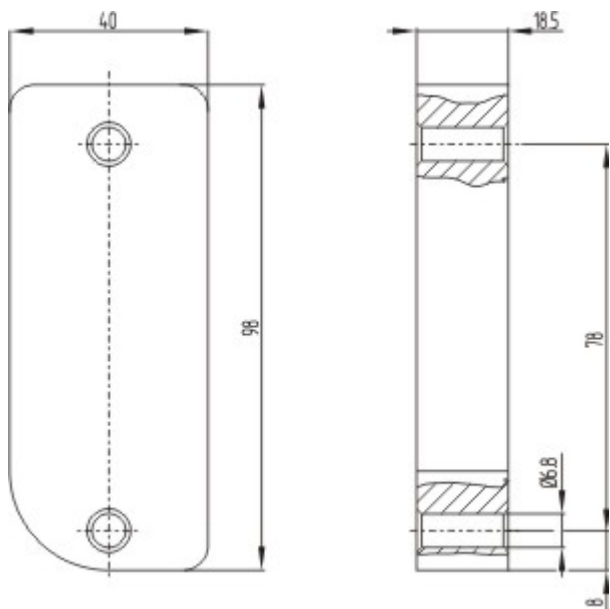
Code: q\_azmp02

## Images

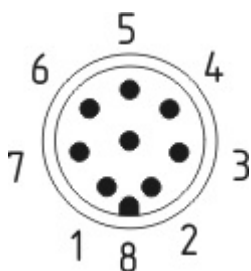
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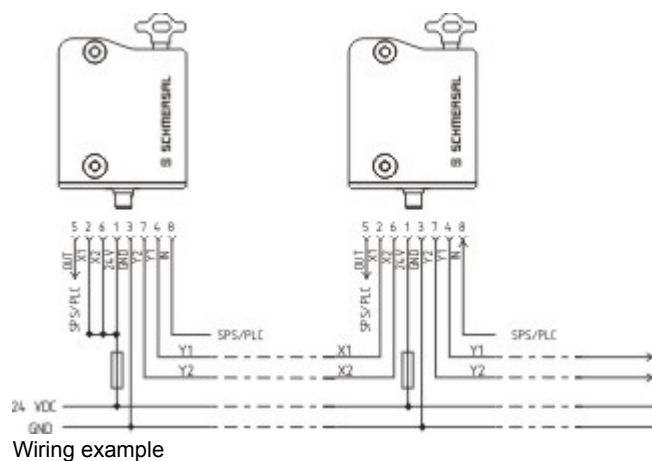
Dimensional drawing (basic component)



Dimensional drawing (miscellaneous)



Contact arrangement



## System components

### Actuator



**101218025 - AZ/AZM300-B1**

- 3 different directions of actuation

### Accessories



**103002891 - MS-AZ/AZM300-B1-1**



**103003172 - MP-AZ/AZM300-1**

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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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