

Datasheet - AZM300B-ST-1P2P

Solenoid interlock / AZM300



- 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 unlock
- Actuator monitored
- Diagnostic output

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

Ordering details

| | |
|--------------------------|-----------------|
| Product type description | AZM300B-ST-1P2P |
| Article number | 103001411 |
| 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 | $5.2 \times 10^{-10} / h$ |

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 |
| Coding | |
| Coding levels according to ISO 14119 | low |
| Duty cycle | 100 % |
| Materials | |
| - Material of the housings | Plastic, glass-fibre reinforced thermoplastic |
| Housing coating | None |
| Weight | |
| Guard locking monitored (Y/N) | No |
| Actuator monitored (Y/N) | Yes |
| 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_n | 2 mm |
| Ensured switch distance ON S_{ao} | 1 mm |
| Ensured switch distance OFF S_{ar} | 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_{max} | 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_{imp} | 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 | Yes |
| Power to lock | No |
| 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 |
| Switching thresholds | $-3\text{ V} \dots 5\text{ V}$ (Low) $15\text{ V} \dots 30\text{ V}$ (High) |
| 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 |
| 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_e | -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_e | 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_B | 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_B |
| 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)

(1)

Z Guard locking monitored

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

Documents

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

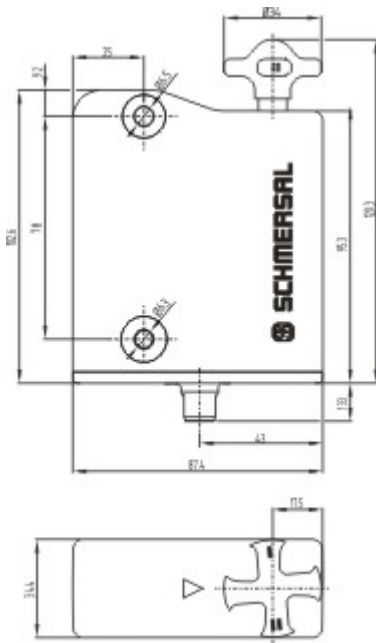
ECOLAB certification (en) 94 kB, 08.04.2013

Code: q_azmp03

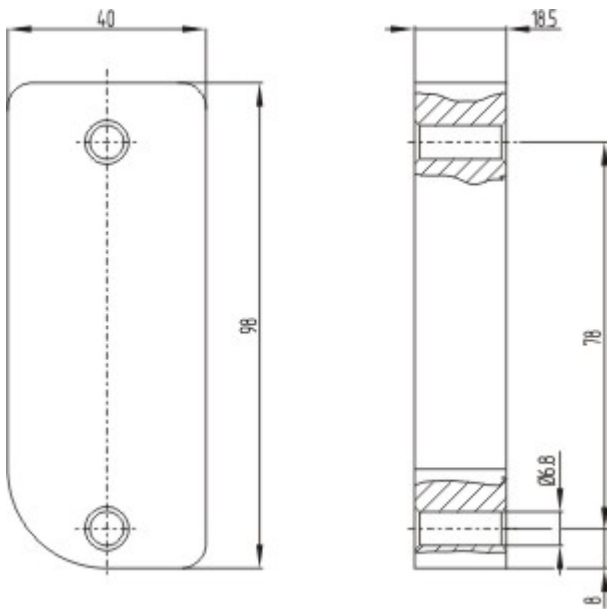
ECOLAB certification (de) 93 kB, 08.04.2013

Code: q_azmp02

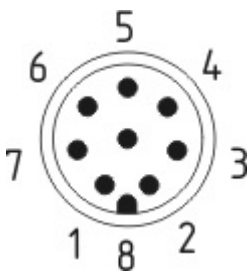
Images



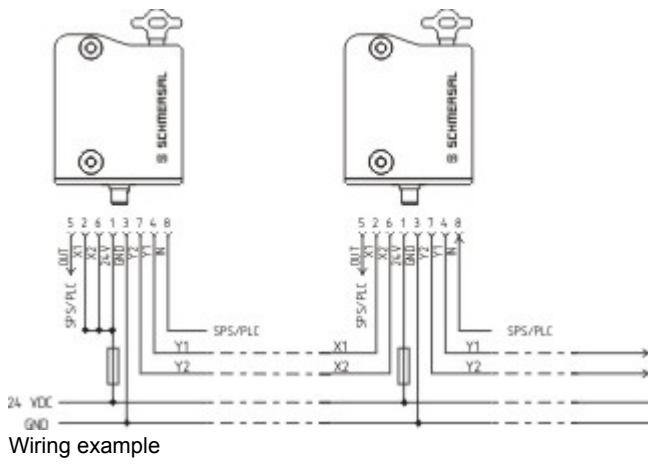
Dimensional drawing (basic component)



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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