



## AZM201Z-ST2-T-SD2P-A

- Power to lock
- Thermoplastic enclosure
- Max. length of the sensor chain 200 m
- Self-monitoring series-wiring
- Coding in accordance to ISO 14119 by using RFID-Technology
- 3 LEDs to show operating conditions
- Sensor technology permits an offset between actuator and interlock of  $\pm 5$  mm vertically and  $\pm 3$  mm horizontally
- Suitable for hinged and sliding guards
- Intelligent diagnosis
- Manual release
- Protection class IP66, IP67
- High holding force 2000
- symmetrical construction form, assembly on 40mm profiles
- OSSD safety outputs
- Emergency exit / Emergency release suitable for retrofitting

## Data

### Ordering data

|                               |               |
|-------------------------------|---------------|
| EAN (European Article Number) | 4030661529424 |
| 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 |
|              | EAC   |
|              | FCC   |
|              | IC    |

## General data

|  |  |
|--|--|
| Standards  | IEC 60947-5-1<br>EN ISO 13849-1<br>IEC 61508<br>IEC 60947-5-3<br>EN ISO 14119<br>IEC 62061 |
| general information  | Universal coding   |
| Coding level according to ISO 14119  | Low  |
| Active principle   | RFID   |
| Enclosure material   | Glass-fibre, reinforced thermoplastic  |
| Gross weight   | 596.1 g  |
| Time to readiness, maximum   | 4,000 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 | 0.5 ms   |

## General data - Features

|                                     |     |
|-------------------------------------|-----|
| Guard locking monitored             | Yes |
| Serial diagnostics                  | 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 safety contacts           | 2   |
| Number of Series-wiring of sensors  | 31  |

## Safety appraisal

|           |  |
|-----------|--|
| Standards | EN ISO 13849-1<br>IEC 62061<br>IEC 61508 |
|-----------|--|

## Safety appraisal - Interlocking

|  |                          |
|--|--------------------------|
| Performance level, up to                                   | e                        |
| Control category   | 4                        |
| PFH-value  | $1.90 \times 10^{-9}$ /h |
| PFD value  | $1.60 \times 10^{-4}$    |
| Safety Integrity Level (SIL), suitable for applications in | 3                        |
| Mission Time   | 20 Year(s)               |

## Safety appraisal - Guard locking

|              |            |
|--------------|------------|
| Mission Time | 20 Year(s) |
|--------------|------------|

## Mechanical data

|   |                      |
|---|----------------------|
| Mechanical life, minimum                            | 1,000,000 Operations |
| Clamping force in accordance with ISO14119 $F_{zh}$ | 2,000 N              |
| Clamping force, maximum $F_{max}$                   | 2,600 N              |
| Latching force                                      | 30 N                 |
| Actuating speed, maximum                            | 0.2 m/s              |

## Mechanical data - Connection technique

|                    |                       |
|--------------------|-----------------------|
| Terminal Connector | Connector M12, 8-pole |
|--------------------|-----------------------|

## Mechanical data - Dimensions

|                  |        |
|------------------|--------|
| Length of sensor | 50 mm  |
| Width of sensor  | 40 mm  |
| Height of sensor | 220 mm |

## Ambient conditions

|  |                                      |
|--|--------------------------------------|
| Degree of protection                       | IP66 to EN 60529<br>IP67 to EN 60529 |
| 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                       |
| 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                                  |

## 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 VDE 0100           | 3      |

## Electrical data

|                            |          |
|----------------------------|----------|
| Operating voltage, minimum | 20.4 VDC |
|----------------------------|----------|

|   |                 |
|---|-----------------|
| Operating voltage, maximum                    | 26.4 VDC        |
| No-load supply current $I_0$                  | 50 mA           |
| Current consumption with solenoid ON, average | 200 mA          |
| Current consumption with solenoid ON, peak    | 700 mA / 100 ms |
| Operating current                             | 1,200 mA        |
| Switching frequency, approx.                  | 1 Hz            |

### Electrical data - Solenoid control

|                                   |  |
|-----------------------------------|--|
| Switching thresholds              | -3 V ... 5 V (Low)<br>15 V ... 30 V (High) |
| Classification ZVEI CB24I, Sink   | C0   |
| Classification ZVEI CB24I, Source | C1<br>C2<br>C3                             |

### Electrical data - Fail-safe digital inputs

|                                   |  |
|-----------------------------------|--|
| Switching thresholds              | -3 V ... 5 V (Low)<br>15 V ... 30 V (High) |
| Classification ZVEI CB24I, Sink   | C1   |
| Classification ZVEI CB24I, Source | C1<br>C2<br>C3                             |

### Electrical data - Fail-safe digital outputs

|  |        |
|--|--------|
| Rated operating current (safety outputs) | 250 mA |
| Voltage drop $U_d$ , maximum             | 4 V    |
| Current leakage $I_r$                    | 0.5 mA |
| Voltage, Utilisation category DC13       | 24 VDC |
| Current, Utilisation category DC13       | 0.25 A |
| Classification ZVEI CB24I, Source        | C2     |

Classification ZVEI CB24I, Sink

C1

C2

## Electrical data - Diagnostic output

|                                    |        |
|------------------------------------|--------|
| Operating current                  | 50 mA  |
| Voltage drop $U_d$ , maximum       | 4 V    |
| Voltage, Utilisation category DC13 | 24 VDC |
| Current, Utilisation category DC13 | 0.05 A |

## Status indication

|   |  |
|---|--|
| Note (LED switching conditions display) | Operating condition: LED green<br>Error / functional defect: LED red<br>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.<br>Triangular key for AZM 201 |
|----------------------|---|

## Accessory

|                           |                               |
|---------------------------|-------------------------------|
| Recommendation (actuator) | AZ/AZM201-B1<br>AZ/AZM201-B30 |
|---------------------------|-------------------------------|

**Notes**

|                |  |
|----------------|--|
| Note (General) | 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.  
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