



## AZ201-I2-ST2-T-1P2P

- Repeated individual coding with RFID technology
- Coding level "High" according to ISO 14119
- Thermoplastic enclosure
- RFID-technology for needs-based protection against tampering
- Max. length of the sensor chain 200 m
- Self-monitoring series-wiring
- 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

## Data

### Ordering data

|                               |                     |
|-------------------------------|---------------------|
| Product type description      | AZ201-I2-ST2-T-1P2P |
| Article number (order number) | 103015819           |
| EAN (European Article Number) | 4030661504339       |
| eCl@ss number, version 12.0   | 27-27-26-02         |
| eCl@ss number, version 11.0   | 27-27-26-02         |
| eCl@ss number, version 9.0    | 27-27-26-02         |
| ETIM number, version 7.0      | EC002592            |
| ETIM number, version 6.0      | EC002592            |

### Approvals - Standards

|              |                                     |
|--------------|-------------------------------------|
| Certificates | TÜV<br>cULus<br>FCC<br>IC<br>ANATEL |
|--------------|-------------------------------------|

## General data

|  |  |
|--|--|
| Standards  | EN ISO 13849-1<br>EN ISO 14119<br>EN IEC 60947-5-3<br>EN IEC 61508 |
| Coding   | Individual coding, multiple teaching                               |
| Coding level according to EN ISO 14119                                 | High   |
| Working principle  | RFID, 125 kHz  |
| Transmitter output RFID, maximum                                       | -6 dB/m  |
| Housing material   | Glass-fibre, reinforced thermoplastic                              |
| Duration of risk, maximum  | 200 ms   |
| Reaction time, switching off safety outputs via actuator, maximum      | 100 ms   |
| Reaction time, switching off safety outputs via safety inputs, maximum | 0.5 ms   |
| Gross weight   | 410 g  |

## General data - Features

|                                     |     |
|-------------------------------------|-----|
| Short circuit detection             | Yes |
| Cross-circuit detection             | Yes |
| Series-wiring                       | Yes |
| Safety functions                    | Yes |
| Integral system diagnostics, status | Yes |
| Number of safety contacts           | 2   |

## Safety classification

|                          |                                |
|--------------------------|--------------------------------|
| Standards                | EN ISO 13849-1<br>EN IEC 61508 |
| Performance Level, up to | e                              |
| 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) |

### Mechanical data

|  |                      |
|--|----------------------|
| Mechanical life, minimum   | 1,000,000 Operations |
| Latching force   | 30 N                 |
| Actuating speed, maximum   | 0.2 m/s              |
| Type of the fixing screws  | 2x M6                |
| Tightening torque of the fastening screws for the housing cover, minimum | 0.7 Nm               |
| Tightening torque of the fastening screws for the housing cover, maximum | 1 Nm                 |
| Note   | Torx T10             |

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

|   |        |
|---|--------|
| Assured switching distance "ON" $S_{ao}$  | 4 mm   |
| Assured switching distance "OFF" $S_{ar}$ | 30 mm  |
| Hysteresis (Switching distance), maximum  | 1.5 mm |
| Repeat accuracy R                         | 0.5 mm |

### Mechanical data - Connection technique

|                                   |  |
|-----------------------------------|--|
| 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-wiring)              | Unlimited number of devices, observe external line fusing, max. 31 devices in case of serial diagnostic SD |
| Termination                       | 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                                       | IP67<br>IP66                     |
| Ambient temperature  | -25 ... +70 °C                   |
| Storage and transport temperature, minimum                 | -25 °C                           |
| Storage and transport temperature, maximum                 | +85 °C                           |
| Relative humidity, maximum                                 | 93 %                             |
| Note (Relative humidity)                                   | non-condensing<br>non-icing      |
| Resistance to vibrations                                   | 10 ... 150 Hz, amplitude 0.35 mm |
| Resistance to shock  | 30 g / 11 ms                     |
| Protection class   | III                              |
| Permissible installation altitude above sea level, maximum | 2,000 m                          |

## 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

|  |                      |
|--|----------------------|
| Operating voltage                      | 24 VDC -15 % / +10 % |
| No-load supply current $I_0$ , typical | 50 mA                |
| Rated operating voltage                | 24 VDC               |
| Operating current                      | 700 mA               |
| Required rated short-circuit current   | 100 A                |
| External wire and device fuse rating   | 2 A gG               |
| Time to readiness, maximum             | 4,000 ms             |
| Switching frequency, maximum           | 1 Hz                 |

## Electrical data - Safety digital inputs

|                                   |  |
|-----------------------------------|--|
| Designation, Safety inputs        | X1 and X2                                  |
| Switching thresholds              | –3 V ... 5 V (Low)<br>15 V ... 30 V (High) |
| Current consumption at 24 V       | 5 mA                                       |
| Test pulse duration, maximum      | 1 ms                                       |
| Test pulse interval, minimum      | 100 ms                                     |
| Classification ZVEI CB24I, Sink   | C1   |
| Classification ZVEI CB24I, Source | C1<br>C2<br>C3                             |

## Electrical data - Safety digital outputs

|  |                             |
|--|-----------------------------|
| Designation, Safety outputs              | Y1 and Y2                   |
| Rated operating current (safety outputs) | 250 mA                      |
| Design of control elements               | short-circuit proof, p-type |
| Voltage drop $U_d$ , maximum             | 4 V                         |
| Leakage current $I_r$ , maximum          | 0.5 mA                      |
| Voltage, Utilisation category DC-13      | 24 VDC                      |
| Current, Utilisation category DC-13      | 0.25 A                      |
| Test pulse interval, typical             | 1000 ms                     |
| Test pulse duration, maximum             | 0.5 ms                      |
| Classification ZVEI CB24I, Source        | C2                          |
| Classification ZVEI CB24I, Sink          | C1<br>C2                    |

## Electrical data - Diagnostic outputs

|                                 |                             |
|---------------------------------|-----------------------------|
| Designation, Diagnostic outputs | OUT                         |
| Operating current               | 50 mA                       |
| Design of control elements      | short-circuit proof, p-type |
| Voltage drop $U_d$ , maximum    | 4 V                         |

Voltage, Utilisation category DC-13 24 VDC

Current, Utilisation category DC-13 0.05 A

## 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 Diagnostic output |
| PIN 6 | X2 Safety input 2     |
| PIN 7 | Y2 Safety output 2    |
| PIN 8 | n.c.                  |

## Scope of delivery

Scope of delivery Actuator must be ordered separately.

## Accessory

Recommendation (actuator) AZ/AZM201-B1  
AZ/AZM201-B30

## Ordering code

Product type description:  
AZ201(1)-T-(2)

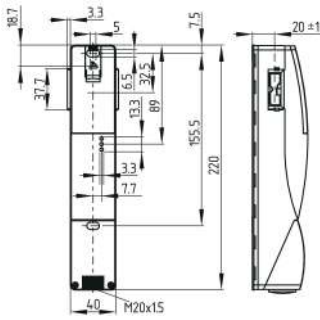
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**SK**

Screw connection



## Assembly example



ID: 1azm2m17

| 167.9 kB | .jpg | 352.778 x 346.428 mm - 1000 x 982 px - 72 dpi

Schmersal India Pvt. Ltd., Plot No - G-7/1, Ranjangaon MIDC, Tal. - Shirur, Dist.- Pune 412 220

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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