# DATASHEET

## AZM400Z-ST2-2P2P-BOW-E

- Universal coding with RFID technology
- 2 Connector M12, 8- and 5-poles
- Guard locking monitored
- 2 Diagnostic outputs
- With securing holes for Bowden cable assembly
- Electric manual release with auxiliary voltage
- Bistable, motor-driven system
- Clamping force 10.000
- Release possible against lateral forces up to 300 N
- PL e / cat. 4 / SIL 3 for interlocking and guard locking function
- Two-channel input signal of the guard locking function
- Operation on P/P- and P/N-switching outputs
- High tolerance to door misalignment

## Data

### Ordering data

| | |
|---|---|
| EAN (European Article Number) | 4030661503998 |
| eCl@ss number, Version 9.0 | 27-27-26-03 |
| eCl@ss number, Version 11.0 | 27-27-26-03 |

### Approval - Standards

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

## General data

| | |
|---|---|
| Standards | IEC 60947-5-1<br>EN ISO 13849-1<br>IEC 61508<br>EN ISO 14119 |
| general information | Universal coding |
| Coding level according to ISO 14119 | Low |
| Active principle | Magnetic field<br>RFID |
| Enclosure material | Light alloy die-casting |
| Gross weight | 860.1 g |
| Time to readiness, maximum | 1,500 ms |
| Reaction time, maximum | 100 ms |

## General data - Features

| | |
|---|---|
| Guard locking monitored | Yes |
| Electronic manual release | Yes |
| Short circuit detection | Yes |
| Short-circuit recognition | Yes |
| Securing holes for Bowden cable assembly | Yes |
| Safety functions | Yes |
| Integral System Diagnostics, status | Yes |
| Number of diagnostic signals | 2 |
| Number of safety contacts | 2 |

## Safety appraisal

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

## Safety appraisal - Interlocking

| | |
|---|---|
| Performance level, up to | e |
| Control category | 4 |
| PFH-value | $1.00 \times 10^{-9}$ /h |
| PFD value | $9.00 \times 10^{-5}$ |
| Safety Integrity Level (SIL), suitable for applications in | 3 |
| Mission Time | 20 Year(s) |

## Safety appraisal - Guard locking

| | |
|---|---|
| Performance level, up to | e |
| Control category | 4 |
| PFH-value | $1.80 \times 10^{-9}$ /h |
| PFD value | $1.60 \times 10^{-4}$ |
| Safety Integrity Level (SIL), suitable for applications in | 3 |
| Mission Time | 20 Year(s) |

## Mechanical data

| | |
|---|---|
| Interlocking principle | bistable |
| Mechanical life, minimum | 1,000,000 Operations |
| Note (Mechanical lifetime) | Which have a lateral force Ftrans = 100 N: 100.000 operations |
| Minimum distance devices | 30 mm |
| Clamping force in accordance with ISO14119 $F_{zh}$ | 10,000 N |
| Clamping force, maximum $F_{max}$ | 13,000 N |
| Lateral force at bolt return, maximal (against locked door) | 300 N |
| Note (Lateral force at bolt return) | Does not apply to emergency exit, Bowden cable and manual release |
| Tightening torque of the screw | 8 Nm |

| | |
|---|---|
| Tightening torque of the fixing screws Bowden cable | 1.2 Nm |

## Mechanical data - Connection technique

| | |
|---|---|
| Terminal Connector | 2 connector M12, 8 and 5 pin |

## Mechanical data - Dimensions

| | |
|---|---|
| Length of sensor | 46.7 mm |
| Width of sensor | 77.8 mm |
| Height of sensor | 166.7 mm |

## Ambient conditions

| | |
|---|---|
| Degree of protection | IP66 to EN 60529<br>IP67 to EN 60529 |
| Ambient temperature, minimum | -20 °C |
| Ambient temperature, maximum | +55 °C |
| Storage and transport temperature, minimum | -40 °C |
| Storage and transport temperature, maximum | +85 °C |
| Resistance to vibrations to EN 60068-2-6 | 10 … 150 Hz, amplitude 0.35 mm |
| Restistance 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 Current | 100 mA |
| Current consumption, maximum | 600 mA |
| Current consumption at 24V, minimum | 10 mA |
| Current consumption at 24V, maximum | 15 mA |
| No-load supply current $I_0$ | 100 mA |
| Rated operating voltage | 24 VDC |
| Rated operating voltage | 24 VDC |
| Operating current | 50 mA |
| Required rated short-circuit current to EN 60947-5-1 | 100 A |
| Switching frequency, approx. | 0.3 Hz |
| Open / close cycle (Motor), minimum | 3 |
| Minimal average cycle time (with continuous operation) | 20 s |

## Electrical data - Control inputs

| | |
|---|---|
| Switching thresholds of the control inputs | −3 V … 5 V (Low)<br>15 V … 30 V (High) |
| Allowable discrepancy time (input), maximum | 10 s |
| Classification ZVEI CB24I, Sink | C0 |
| Classification ZVEI CB24I, Source | C1<br>C2<br>C3 |

## Electrical data - Fail-safe digital inputs

| | |
|---|---|
| Classification ZVEI CB24I, Sink | C1 |

## Electrical data - Fail-safe digital outputs

| | |
|---|---|
| Rated operating current (safety outputs) | 250 mA |
| Voltage drop $U_d$, maximum | 2 V |
| Current leakage $I_r$ | 1.5 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 |
| Classification ZVEI CB24I, Source | C2 |
| Classification ZVEI CB24I, Sink | C1<br>C2 |

## Electrical data - Diagnostic output

| | |
|---|---|
| Versions | short-circuit proof, p-type |
| Voltage drop $U_d$, maximum | 2 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 |
| Note | The diagnostic output are not safety relevant outputs! |

## 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

| | |
|---|---|
| Connection | Connector 1 |

| | |
|---|---|
| PIN 1 | OUT2 Diagnostic output 2 |
| PIN 2 | E1 Control input 1 |
| PIN 3 | n.c. |
| PIN 4 | Y1 Safety output 1 |
| PIN 5 | OUT1 Diagnostic output 1 |
| PIN 6 | E3 Control input 3 |
| PIN 7 | Y2 Safety output 2 |
| PIN 8 | E2 Control input 2 |
| Connection | Connector 2 |
| PIN 1 | A1 Supply voltage UB |
| PIN 2 | H2 GND |
| PIN 3 | A2 GND |
| PIN 4 | H1 Auxiliary voltage Uhe |
| PIN 5 | FE (functional earth connection) |

## Scope of delivery

| | |
|---|---|
| Included in delivery | The Bowden cable is not included in delivery.<br>Note: Versions AZM400Z-...-BOW may only be used in connection with Bowden cable release ACC-AZM400-BOW-.M-.M, which is available as an accessory. Use without the Bowden cable release fitted is not permissible. |
| Delivery scope of Mounting material | 2 x M6 (10.9) |

## Accessory

| | |
|---|---|
| Recommendation (actuator) | AZM400-B1 |