

## AZM400Z-ST-1P2P-T



- Emergency exit
- 1 Diagnostic output
- Connector M12, 8-pole
- Clamping force 10.000
- Guard locking monitored
- Bistable, motor-driven system
- High tolerance to door misalignment
- Universal coding with RFID technology
- Operation on P/P- and P/N-switching outputs
- Release possible against lateral forces up to 300 N
- Two-channel input signal of the guard locking function
- PL e / cat. 4 / SIL 3 for interlocking and guard locking function

### Data

#### Ordering data

AZM400Z-ST-1P2P-T

103003593

EAN (European Article Number)

4030661472584

eCl@ss number, Version 9.0

27-27-26-03

#### Approval - Standards

TÜV  
cULus  
EAC  
FCC  
IC

#### General data

AZM 400  
IEC 60947-5-1  
ISO 13849-1  
IEC 61508  
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                        | 846 g                   |
| Time to readiness, maximum          | 1,500 ms                |
| Reaction time, maximum              | 100 ms                  |

#### General data - Features

|                                     |     |
|-------------------------------------|-----|
| Guard locking monitored             | Yes |
| Emergency exit                      | Yes |
| Short circuit detection             | Yes |
| Short-circuit recognition           | Yes |
| Safety functions                    | Yes |
| Integral System Diagnostics, status | Yes |
| Number of diagnostic signals        | 1   |
| Number of safety contacts           | 2   |

#### Safety appraisal

ISO 13849-1  
IEC 61508

#### 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), applicable for | 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), applicable for | 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 $F_{trans} = 100 \text{ N}$ : 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                                                                        |

#### Mechanical data - Connection technique

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

#### Mechanical data - Dimensions

|                  |          |
|------------------|----------|
| Height of sensor | 166.7 mm |
| Length of sensor | 65.3 mm  |
| Width of sensor  | 77.8 mm  |

#### Ambient conditions

|                                            |                                                         |
|--------------------------------------------|---------------------------------------------------------|
| Protection class                           | IP 66 to IEC/EN 60529<br>IP 67 to IEC/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<br>30 g / 11 ms<br>III |

#### Ambient conditions - Insulation value

|                                 |                    |
|---------------------------------|--------------------|
| Rated impulse withstand voltage | 0.8 kV<br>III<br>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 current                     | 100 mA<br>24 VDC<br>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

|                                             |                      |
|---------------------------------------------|----------------------|
|                                             | –3 V ... 5 V (Low)   |
|                                             | 15 V ... 30 V (High) |
| Allowable discrepancy time (input), maximum | 10 s                 |
|                                             | C0                   |
|                                             | C1                   |
|                                             | C2                   |
|                                             | C3                   |

#### Electrical data - Fail-safe digital inputs

C1

#### Electrical data - Fail-safe digital outputs

|                                          |        |
|------------------------------------------|--------|
| Rated operating current (safety outputs) | 250 mA |
| Voltage drop $U_d$ , maximum             | 2 V    |
| Current leakage                          | 1.5 mA |
| Voltage, Utilisation category DC12       | 24 VDC |
| Current, Utilisation category DC12       | 0.3 A  |
| Voltage, Utilisation category DC13       | 24 VDC |
| Current, Utilisation category DC13       | 0.3 A  |
|                                          | C2     |
|                                          | C1     |
|                                          | 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 | 0.1 A                       |
| Voltage, Utilisation category DC13 | 24 VDC                      |
| Current, Utilisation category DC13 | 0.1 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 | E1 Control input 1    |
| PIN 3 | A2 GND                |
| PIN 4 | Y1 Safety output 1    |
| PIN 5 | OUT Diagnostic output |
| PIN 6 | E3 Control input 3    |
| PIN 7 | Y2 Safety output 2    |
| PIN 8 | E2 Control input 2    |

## Scope of delivery

|                      |                                                        |
|----------------------|--------------------------------------------------------|
| Included in delivery | Actuators must be ordered separately.<br>2 x M6 (10.9) |
|----------------------|--------------------------------------------------------|

## Accessory

AZM400-B1

## Ordering code

Product type description:

AZM400Z(1)(2)(3)(4)(5)

(1)

**ST** 1 Connector plug M12, 8-pin

**ST2** 2 Connector plug M12, 8-pin / 5-pin

(2)

**without** Standard coding

**I1** Individual coding

**I2** Individual coding, multiple teaching

(3)

**1P2P** 1 serial diagnostic output and 2 p-type safety outputs (only for ST)

**2P2P** 2 serial diagnostic output and 2 p-type safety outputs (only for ST2)

(4)

**without** Manual release

**T** Emergency exit

**BOW** With securing holes for Bowden cable assembly

(5)

**E** with electronic manual release (Only for ST2)

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+010001pm31
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