



AZM40Z-I2-ST-1P2P

- Compact, flat design
- 119,5 mm x 40 mm x 20 mm
- High holding force 2000
- Latching force 40 N
- RFID-technology for needs-based protection against tampering
- Individually coded version with coding level "High" according to ISO 14119
- Only one version for hinged and sliding doors
- Actuator can approach interlock continuously within a 180 degree angle.
- Symmetrical mounting, can be bolted on either side

Data

Ordering data

| | |
|-------------------------------|-------------------|
| Product type description | AZM40Z-I2-ST-1P2P |
| Article number (order number) | 103034189 |
| EAN (European Article Number) | 4030661535142 |
| eCl@ss number, version 12.0 | 27-27-26-03 |
| eCl@ss number, version 11.0 | 27-27-26-03 |
| eCl@ss number, version 9.0 | 27-27-26-03 |
| ETIM number, version 7.0 | EC002593 |
| ETIM number, version 6.0 | EC002593 |

Approvals - Standards

Certificates

TÜV
cULus
FCC
IC
UKCA
ANATEL

General data

| | |
|--|---|
| Standards | EN ISO 13849-1 EN ISO 14119 EN IEC 60947-5-3 EN IEC 61508 |
| Coding | Individual coding, multiple teaching |
| Coding level according to EN ISO 14119 | High |
| Working principle | RFID |
| Frequency band RFID | 125 kHz |
| Transmitter output RFID, maximum | -6 dB/m |
| Housing material | Light alloy die cast and plastic (glass-fibre reinforced thermoplastic) |
| Reaction time, maximum | 100 ms |
| Duration of risk, maximum | 200 ms |
| Reaction time, switching off safety outputs via safety inputs, maximum | 1.5 ms |
| Gross weight | 300 g |

General data - Features

| | |
|-------------------------------------|-----|
| Solenoid interlock monitored | Yes |
| Latching | Yes |
| Manual release | Yes |
| 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

EN IEC 61508

Safety classification - Interlocking function

| | |
|--|--------------------------|
| Performance Level, up to | e |
| Category | 4 |
| PFH value | 1.10×10^{-9} /h |
| PFD value | 8.90×10^{-5} |
| Safety Integrity Level (SIL), suitable for applications in | 3 |
| Mission time | 20 Year(s) |

Safety classification - Guard locking function

| | |
|--|--------------------------|
| Performance Level, up to | d |
| Category | 2 |
| PFH value | 3.00×10^{-9} /h |
| PFD value | 2.40×10^{-4} |
| Safety Integrity Level (SIL), suitable for applications in | 2 |
| Mission time | 20 Year(s) |

Mechanical data

| | |
|--|---|
| Interlocking principle | bistable |
| Mechanical life, locking cycles | 1,000,000 Operations |
| Mechanical life, actuator cycles | 500,000 Operations |
| Note (Mechanical life) | from device version V2 (V1 = 200.000 actuator cycles) |
| Holding force F_{Zh} in accordance with EN ISO 14119 | 2,000 N |
| Holding force F_{max} , maximum | 2,600 N |
| Latching force | 40 N |
| Note (Latch force) | +/- 25% |
| Actuating speed, maximum | 0.5 m/s |

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| Mounting | mounting holes countersink |
| Type of the fixing screws | 2x M5 |
| Tightening torque of the fixing screws, minimum | 4 Nm |
| Tightening torque of the fixing screws, maximum | 6 Nm |
| Note | Observe the maximum tightening torque of the fixing screws used. |

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

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|---|------|
| Assured switching distance "ON" S_{ao} | 1 mm |
| Assured switching distance "OFF" S_{ar} | 8 mm |

Mechanical data - Connection technique

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|-----------------------------------|--|
| Length of sensor chain, maximum | 30 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, A-coded |

Mechanical data - Dimensions

| | |
|------------------|----------|
| Length of sensor | 119.5 mm |
| Width of sensor | 40 mm |
| Height of sensor | 20 mm |

Ambient conditions

| | |
|-----------------------------------|----------------------|
| Degree of protection | IP66 IP67 IP69 |
| Ambient temperature | -20 ... +55 °C |
| Storage and transport temperature | -40 ... +85 °C |
| Relative humidity, maximum | 93 % |

| | |
|--|------------------------------|
| Note (Relative humidity) | non-condensing non-icing |
| Resistance to vibrations | 10 ... 55 Hz, amplitude 1 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 % (stabilised PELV power supply) |
| No-load supply current I_0 , typical | 100 mA |
| Current consumption magnet at switching moment, peak | 600 mA / 100 ms |
| Rated operating voltage | 24 VDC |
| Operating current | 1,200 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 | 0.25 Hz |
| Utilisation category DC-12 | 24 VDC / 0.05 A |
| Electrical fuse rating, maximum | 2 A |

Electrical data - Magnet control

| | |
|-----------------------------|--|
| Designation, Magnet control | IN |
| Switching thresholds | -3 V ... 5 V (Low) 15 V ... 30 V (High) |

| | |
|-------------------------------------|----------------|
| Magnet switch-on time | 100 % |
| Test pulse duration, maximum | 5 ms |
| Test pulse interval, minimum | 40 ms |
| Classification ZVEI CB24I, Sink | C0 |
| Classification ZVEI CB24I, Source | C1 C2 C3 |
| Current consumption at 24V, minimum | 10 mA |
| Current consumption at 24V, maximum | 15 mA |

Electrical data - Safety digital inputs

| | |
|-----------------------------------|--|
| Designation, Safety inputs | X1 and X2 |
| Switching thresholds | -3 V ... 5 V (Low) 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 C2 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 | 2 V |
| Leakage current I_r , maximum | 0.5 mA |
| Voltage, Utilisation category DC-12 | 24 VDC |
| Current, Utilisation category DC-12 | 0.25 A |
| 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 C2 |

Electrical data - Diagnostic outputs

| | |
|-------------------------------------|-----------------------------|
| Designation, Diagnostic outputs | OUT |
| Design of control elements | short-circuit proof, p-type |
| Voltage drop U_d , maximum | 2 V |
| Voltage, Utilisation category DC-12 | 24 VDC |
| Current, Utilisation category DC-12 | 0.05 A |
| Voltage, Utilisation category DC-13 | 24 VDC |
| Current, Utilisation category DC-13 | 0.05 A |

Status indication

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|---|--|
| Note (LED switching conditions display) | Operating condition: LED green Error / functional defect: LED red Supply voltage UB: LED green |
|---|--|

Pin assignment

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|-------|-----------------------|
| 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 | IN Solenoid control |

Accessory

| | |
|---------------------------|----------|
| Recommendation (actuator) | AZM40-B1 |
|---------------------------|----------|

Ordering code

Product type description:
AZM40(1)-(2)-ST-1P2P-(3)

(1)

| | |
|----------|--------------------------|
| Z | Guard locking monitoring |
| B | Actuator monitoring |

(2)

| | |
|----------------|--|
| without | Standard coding |
| I1 | Individual coding |
| I2 | Individual coding, re-teaching enabled |

(3)

| | |
|----------------|--|
| without | Counterbores for countersunk screws (standard) |
| PH | Flat enclosure for protruding screws |

Pictures

Product picture (catalogue individual photo)



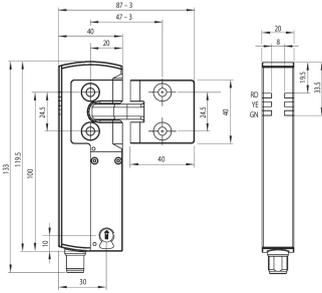
ID: kaz40f23

| 1.1 MB | .jpg | 352.778 x 866.422 mm - 1000 x 2456 px - 72 dpi

| 128.5 kB | .png | 74.083 x 181.681 mm - 210 x 515 px - 72 dpi

| 28.9 kB | .jpg | 50.447 x 123.472 mm - 143 x 350 px - 72 dpi

Dimensional drawing basic component

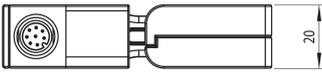


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| 8.8 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi

| 126.7 kB | .jpg | 352.778 x 352.778 mm - 1000 x 1000 px - 72 dpi

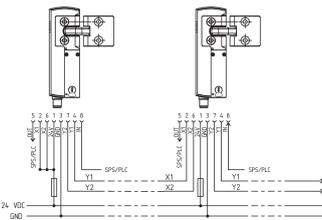
Dimensional drawing basic component



ID: kaz40g03

| 51.4 kB | .jpg | 352.778 x 160.514 mm - 1000 x 455 px - 72 dpi

Wiring example

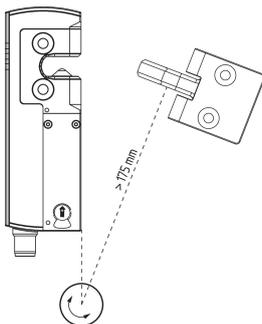


ID: kaz40l01

| 5.2 kB | .png | 74.083 x 49.389 mm - 210 x 140 px - 72 dpi

| 111.1 kB | .jpg | 352.778 x 235.303 mm - 1000 x 667 px - 72 dpi

Sample application general



ID: kaz40a30

| 7.2 kB | .png | 73.731 x 91.722 mm - 209 x 260 px - 72 dpi

| 145.6 kB | .jpg | 352.425 x 437.797 mm - 999 x 1241 px - 72 dpi

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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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