



MZM 100 ST-AS REAP

- Power to lock
- Guard locking monitored
- Solenoid interlock
- Thermoplastic enclosure
- Integrated AS-Interface
- 40 mm x 179 mm x 40 mm
- Solenoid interlocks with innovating and unique operating principle
- Electronic contact-free, coded system
- 3 LEDs to show operating conditions
- Automatic latching
- Sensor technology permits an offset between actuator and interlock of ± 5 mm vertically and ± 3 mm horizontally
- Intelligent diagnosis

Data

Ordering data

| | |
|-------------------------------|--------------------|
| Product type description | MZM 100 ST-AS REAP |
| Article number (order number) | 101198704 |
| EAN (European Article Number) | 4030661370774 |
| 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 ASi-SaW UKCA |
|--------------|---------------------------------|

General data

| | |
|--|--|
| Standards | EN IEC 62026-2 EN ISO 13849-1 EN ISO 14119 EN IEC 60947-5-3 EN IEC 61508 |
| Coding | Universal coding |
| Coding level according to EN ISO 14119 | Low |
| Working principle | inductive |
| Housing material | Glass-fibre, reinforced thermoplastic |
| Reaction time, maximum | 150 ms |
| Duration of risk, maximum | 150 ms |
| Gross weight | 602 g |

General data - Features

| | |
|-------------------------------------|-----|
| Power to lock | Yes |
| Solenoid interlock monitored | Yes |
| Latching | Yes |
| Safety functions | Yes |
| Integral system diagnostics, status | Yes |

Safety classification

| | |
|--------------------------|----------------------------------|
| Standards | EN IEC 60947-5-3 EN IEC 61508 |
| Performance Level, up to | e |

| | |
|--|--------------------------|
| Category | 4 |
| PFH value | 5.00×10^{-9} /h |
| Safety Integrity Level (SIL), suitable for applications in | 3 |
| Mission time | 20 Year(s) |

Mechanical data

| | |
|---------------------------|---|
| Mechanical life, minimum | 1,000,000 Operations |
| Note (Mechanical life) | Actuating speed ≤ 0.5 m/s Operations for door weights ≤ 5 kg |
| Holding force, typically | 750 N |
| Holding force, guaranteed | 500 N |
| Latching force, minimum | 30 N |
| Latching force, maximum | 100 N |

Mechanical data - Connection technique

| | |
|-------------|--|
| Termination | Connector plug M12, 4-pole, (A-coding) |
|-------------|--|

Mechanical data - Dimensions

| | |
|------------------|--------|
| Length of sensor | 40 mm |
| Width of sensor | 40 mm |
| Height of sensor | 179 mm |

Ambient conditions

| | |
|--|----------------|
| Degree of protection | IP67 |
| Ambient temperature | -25 ... +55 °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 non-icing |
| Resistance to vibrations | 10 ... 150 Hz, amplitude 0.35 mm |
| Resistance to shock | 30 g / 11 ms |
| Protection class | III |

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

| | |
|----------------------------|----------|
| Time to readiness, maximum | 4,000 ms |
|----------------------------|----------|

Electrical data - AS Interface

| | |
|-----------------------------------|--|
| Rated operating voltage | 26.5 ... 31.6 VDC (Protection against polarity reversal) |
| AS-i Current consumption, maximum | 100 mA |

Electrical data - AS-Interface specification

| | |
|--------------------|--------------|
| AS-i Specification | Safety-Slave |
| AS-i Version | V 2.1 |
| AS-i Profile | S-7.B.F.E |

| | |
|----------------------------------|---|
| AS-i, IO-Code | 0x7 |
| AS-i, ID-Code | 0xB |
| AS-i, ID-Code1 | 0xF |
| AS-i, ID-Code2 | 0xE |
| AS-i Input, Channel 1 | Data bits DI 0 / DI 1 = dynamic code transmission |
| AS-i Input, Channel 2 | Data bits DI 2 / DI 3 = dynamic code transmission |
| AS-i Outputs, DO 0 | Solenoid control |
| AS-i Outputs, DO 1 | For the variable setting of the latching force |
| AS-i Outputs, DO 2 | For the variable setting of the latching force |
| AS-i Outputs, DO 3 | For the variable setting of the latching force |
| AS-i Parameter bits, P0 | Actuator in |
| AS-i Parameter bits, P1 | Solenoid interlock locked |
| AS-i Parameter bits, P2 | Auxiliary voltage in |
| AS-i Parameter bits, P3 | Device error (fault detected) |
| Note (AS-i Parameter bits) | Set the parameter outputs to "1111" (0xF) FID: periphery error |
| AS-i Input module address | 0 |
| Note (AS-i Input module address) | Preset to address 0, can be changed through AS-interface bus master or hand-held programming device |

Electrical data - Auxiliary voltage

| | |
|-------------------------|---|
| Operating voltage | 24 VDC -15 % / +10 % (stabilised PELV power supply) |
| Current consumption | 600 mA |
| Rated operating voltage | 24 VDC |

Electrical data - Magnet control

| | |
|-----------------------|-------|
| Magnet switch-on time | 100 % |
|-----------------------|-------|

Status indication

Note (LED switching conditions display)

(1) LED green-red (AS-i Duo LED): Supply voltage / Communication error / Slave address = 0
(2) LED yellow: Device condition
(3) LED red: Internal device error

Pin assignment

| | |
|-------|----------------|
| PIN 1 | AS-i + |
| PIN 2 | Aux - (P) |
| PIN 3 | AS-Interface - |
| PIN 4 | Aux + (P) |

Scope of delivery

Scope of delivery Actuator must be ordered separately.

Accessory

Recommendation (actuator) MZM 100-B1.1

Note

Note (General) Interlocks with the power to lock principle may only be used in special cases after a thorough evaluation of the accident risk, since the guarding device can immediately be opened on failure of the electrical power supply or when the main switch is opened.
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.

NOTE_VOLT_OPERAT_AUX_DC stabilised PELV power supply

Ordering code

Product type description:
MZM 100 (1) ST-AS (2)(3)AP

(1)

without

Guard locking monitored

B

Actuator monitored

(2)

without

without latching (guard locking monitored only)

RE

electrically adjustable latching force 30 N ... 100 N

(3)

without

without Permanent magnet

M

Permanent magnet 30 N

Pictures

Product picture (catalogue individual photo)



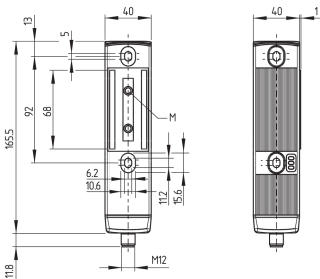
ID: kmzm1f10

| 1.0 MB | .jpg | 261.408 x 768.35 mm - 741 x 2178 px - 72 dpi

| 133.6 kB | .png | 74.083 x 217.664 mm - 210 x 617 px - 72 dpi

| 28.7 kB | .jpg | 41.981 x 123.472 mm - 119 x 350 px - 72 dpi

Dimensional drawing basic component



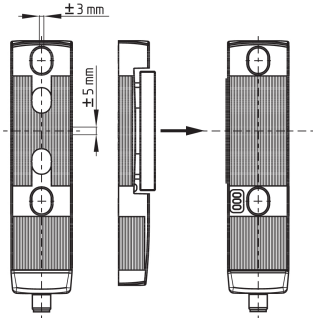
ID: 1mzm1g13

| 14.1 kB | .swf |

| 4.7 kB | .png | 74.083 x 64.206 mm - 210 x 182 px - 72 dpi

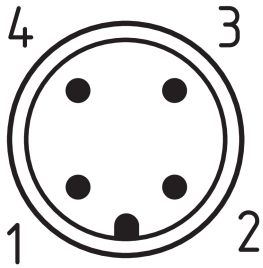
| 163.4 kB | .jpg | 352.778 x 304.8 mm - 1000 x 864 px - 72 dpi

Dimensional drawing miscellaneous



ID: 1mzm1g15
| 12.9 kB | .swf |
| 290.8 kB | .jpg | 352.425 x 362.656 mm - 999 x 1028 px - 72 dpi

Contact arrangement



ID: km12-k4c
| 4.2 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi
| 113.3 kB | .jpg | 352.778 x 352.778 mm - 1000 x 1000 px - 72 dpi

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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