



MZM 100 B ST2-SD2PREM-A-2930

- Connector M12, 8-pole
- · Power to lock
- serial diagnostic output
- Automatic latching
- Solenoid interlocks with innovating and unique operating principle
- 40 mm x 179 mm x 40 mm
- Electronic contact-free, coded system
- Thermoplastic enclosure
- Max. length of the sensor chain 200 m
- 3 LEDs to show operating conditions
- Sensor technology permits an offset between actuator and interlock of ± 5 mm vertically and ± 3 mm horizontally
- Intelligent diagnosis
- Self-monitoring series-wiring
- Patented

Data

Ordering data

Product type description MZM 100 B ST2-SD2PREM-A-2930

Article number (order number) 103014614

EAN (European Article Number) 4030661498904

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 UKCA

General data

Standards 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 Plastic, glass-fibre reinforced thermoplastic, self-extinguishing

Reaction time, maximum 150 ms

Duration of risk, maximum 150 ms

Gross weight 620 g

General data - Features

Power to lock Yes

Actuator monitored Yes

Serial diagnostics Yes

Latching 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

Number of series-wiring of

sensors

31

Safety classification

Standards EN ISO 13849-1

EN IEC 61508

Safety classification - Interlocking function

Performance Level, up to e

Category 4

PFH value 3.54×10^{-9} /h

Safety Integrity Level (SIL),

suitable for applications in

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 45 N

Latching force, maximum 115 N

Type of the fixing screws 2x M6

Tightening torque of the fixing

screws

8 Nm

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

Assured switching distance

0 mm

"ON" S_{ao}

Assured switching distance

1 mm

"OFF" Sar

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 dependiing on the

output current

Unlimited number of devices, oberserve external line fusing, max. 31 devices in Note (series-wiring)

case of serial diagnostic SD

Termination Connector M12, 8-pole

Mechanical data - Dimensions

Length of sensor 40 mm

Width of sensor 40 mm

Height of sensor 177.5 mm

Ambient conditions

Degree of protection **IP65**

IP67

Ambient temperature -25 ... +55 °C

Storage and transport

temperature, minimum

-25 °C

Storage and transport

temperature, maximum

+70 °C

Relative humidity, minimum 30 %

95 % Relative humidity, maximum

Note (Relative humidity) non-condensing

non-icing

Resistance to vibrations 10 ... 150 Hz, amplitude 0.35 mm / 5 g

Restistance to shock 30 g / 11 ms

Protection class Ш

Permissible installation altitude 2,000 m

above sea level, maximum

Ambient conditions - Insulation values

Rated insulation voltage U_i 32 VDC Rated impulse withstand

 $\mathsf{voltage}\;\mathsf{U}_{\mathsf{imp}}$

0.8 kV

Overvoltage category

Ш

Degree of pollution

3

Electrical data

Operating voltage 24 VDC -15 % / +10 % (stabilised PELV power supply)

No-load supply current I₀,

typical

100 mA

Current consumption with

magnet ON, average

350 mA

Current consumption with

magnet ON, peak

550 mA / 10 ms

Rated operating voltage 24 VDC

Operating current 1,100 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 - Magnet control

Designation, Magnet control IN

Switching thresholds -3 V ... 5 V (Low)

15 V ... 30 V (High)

Current consumption at 24 V 10 mA

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

Electrical data - Safety digital inputs

Designation, Safety inputs X1 and X2

Switching thresholds $-3 \text{ V} \dots 5 \text{ V} \text{ (Low)}$

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, C1

Source 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 1 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 1 ms

Classification ZVEI CB24I,

Source

C1

Classification ZVEI CB24I, Sink C1

Electrical data - Diagnostic outputs

Design of control elements short-circuit proof, p-type

Electrical data - Serial diagnostic SD

Designation, Serial diagnostic

SD

OUT

Operation current 150 mA

Design of control elements short-circuit proof, p-type

Wiring capacitance 50 nF

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 serial diagnostic output

PIN 6 X2 Safety input 2

PIN 7 Y2 Safety output 2

PIN 8 IN serial diagnostic input

Scope of delivery

Scope of delivery Actuator must be ordered separately.

Accessory

Recommendation (actuator) MZM 100-B1.1

Note

Note (General) As long as the actuating unit is applied to 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.

Ordering code	
Product type description: MZM 100(1)(2)(3)(4)(5)-A	
(1)	
without	Solenoid interlock monitored
В	Actuator monitored
(2)	
ST2	Connector plug M12, 8-pole
ST	Connector plug M23, 8+1-pole
(3)	
1P2P	1 p-type diagnostic output and 2 p-type safety outputs (only in connection with "Solenoid interlock monitored")
1P2PW	Similar to -1P2P, combined diagnostic signal: guard door closed and solenoid interlock locked (only in connection with "Solenoid interlock monitored")
1P2PW2	Similar to -1P2P, combined diagnostic signal: guard door closed and can be locked (only in connection with "Actuator monitored")
SD2P	serial diagnostic output and 2 p-type safety outputs
(4)	
without	without latching (only in connection with "Solenoid interlock monitored")
R	electrical latching force, typically 30 N
RE	electrically adjustable latching force 30 100 N
(5)	
М	permanent magnet, typically 15 N

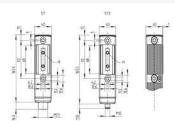
Pictures

Product picture (catalogue individual photo)



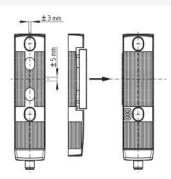
ID: kmzm1f35 | 1.9 MB | .jpg | 352.778 x 1222.375 mm - 1000 x 3465 px - 72 dpi | 167.1 kB | .png | 74.083 x 256.469 mm - 210 x 727 px - 72 dpi | 26.3 kB | .jpg | 35.631 x 123.472 mm - 101 x 350 px - 72 dpi

Dimensional drawing basic component



ID: 1mzm1g14 | 20.7 kB | .swf | | 5.2 kB | .png | 74.083 x 50.8 mm - 210 x 144 px - 72 dpi | 160.8 kB | .jpg | 352.778 x 242.358 mm - 1000 x 687 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

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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