



MZM 100 B ST2-1P2PW2R60M-A-DU

- Connector M12, 8-pole
- Power to lock
- Automatic latching
- Solenoid interlocks (for the protection of man) 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 \pm 5 mm vertically and \pm 3 mm horizontally
- Intelligent diagnosis
- Self-monitoring series-wiring
- Patented

Data

Ordering data

Product type description MZM 100 B ST2-1P2PW2R60M-A-DU

Article number (order

number)

103047170

EAN (European Article

Number)

4030661619903

Approvals - Standards

Certificates TÜV

cULus EAC

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

Enclosure material Glass-fibre, reinforced thermoplastic

Time to readiness, maximum 4,000 ms

Reaction time, maximum 150 ms

Duration of risk, maximum 150 ms

General data - Features

Power to lock Yes

Actuator monitored 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

Category 4

PFH value $3.54 \times 10^{-9} / h$

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 60 N

Mechanical data - Connection technique

Termination Connector M12, 8-pole

Mechanical data - Dimensions

Length of sensor 40 mm

Width of sensor 40 mm

Height of sensor 179 mm

Ambient conditions

Degree of protection IP65

IP67

Ambient temperature, -25 °C

minimum

Ambient temperature, +55 °C

maximum

Storage and transport -25 °C

temperature, minimum

Storage and transport +70 °C

temperature, maximum

Relative humidity, minimum 30 %

Relative humidity, maximum 95 %

Note (Relative humidity) non-condensing

non-icing

Resistance to vibration to EN

60068-2-6

10 ... 150 Hz, amplitude 0.35 mm

Restistance to shock 30 g / 11 ms

Protection class III

Ambient conditions - Insulation values

Rated insulation voltage U_i 32 VDC

Rated impulse withstand

a a II

0.8 kV

voltage U_{imp}

Overvoltage category III

Degree of pollution to VDE

0100

Electrical data

Operating voltage, minimum 20.4 VDC

Operating voltage, maximum 26.4 VDC

No-load supply current I_0 ,

maximum

600 mA

Operating current 1,000 mA

50 mA

Required rated short-circuit

current to EN 60947-5-1

100 A

Note Cable length and cable section alter the voltage drop depending on the output

current

Switching frequency,

maximum

1 Hz

Electrical data - Magnet control

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

15 V ... 30 V (High)

Classification ZVEI CB24I, Sink C0

Classification ZVEI CB24I, C1

Source C2

C3

Electrical data - Safety digital inputs

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

15 V ... 30 V (High)

Classification ZVEI CB24I, Sink C1

Classification ZVEI CB24I, C1

Source C2

C3

Electrical data - Safety digital outputs

Rated operating current 2

(safety outputs)

250 mA

Voltage drop U_d, maximum 1 V

Leakage current I_r, maximum 0.5 mA

Voltage, Utilisation category 24 VDC

DC-13

Current, Utilisation category

DC-13

0.25 A

Classification ZVEI CB24I,

Source

C1

Classification ZVEI CB24I, Sink C1

Electrical data - Diagnostic outputs

Voltage drop U_d, maximum 2 V

Voltage, Utilisation category 24 VDC

DC-13

Current, Utilisation category 0.05 A

DC-13

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 Diagnostic output

PIN 6 X2 Safety input 2

PIN 7 Y2 Safety output 2

PIN 8 IN Solenoid control

Scope of delivery

Scope of delivery Actuators 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)

(1)

without Solenoid interlock monitored

B 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)	

Pictures

М

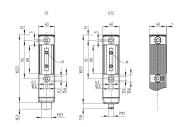
Product picture (catalogue individual photo)



ID: kmzm1f25 | 273.6 kB | .jpg | 352.778 x 477.661 mm - 1000 x 1354 px - 72 dpi | 22.1 kB | .png | 74.083 x 100.189 mm - 210 x 284 px - 72 dpi

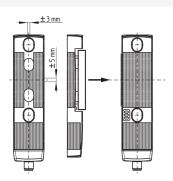
permanent magnet, typically 15 N

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

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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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