

MZM 100 ST-1P2PR-A



- Patented
- Power to lock
- Automatic latching
- Intelligent diagnosis
- 40 mm x 179 mm x 40 mm
- Thermoplastic enclosure
- Guard locking monitored
- Connector M23, 8+1-pole
- Self-monitoring series-wiring
- 3 LEDs to show operating conditions
- Electronic contact-free, coded system
- Max. length of the sensor chain 200 m
- Solenoid interlocks (for the protection of man) with innovating and unique operating principle
- Sensor technology permits an offset between actuator and interlock of ± 5 mm vertically and ± 3 mm horizontally

Data

Ordering data

MZM 100 ST-1P2PR-A
101187450

EAN (European Article Number) 4030661343426

eCl@ss number, Version 9.0 27-27-26-03

Approval - Standards

TÜV
cULus
EAC

General data

MZM 100
IEC 61508

general information Universal coding

Coding level according to ISO 14119 Low

Active principle	inductive
Enclosure material	Glass-fibre, reinforced thermoplastic
Gross weight	635 g
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
Guard locking monitored	Yes
Latching	Yes
Short circuit detection	Yes
Short-circuit recognition	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 appraisal

IEC 61508

Safety appraisal - Interlocking

Performance level, up to	e
Control category	4
PFH-value	3.54×10^{-9} /h
Safety Integrity Level (SIL), applicable for	3
Mission Time	20 Year(s)

Mechanical data

Mechanical life, minimum	1,000,000 Operations
Note (Mechanical lifetime)	Actuating speed < 0.5 m/s Operations for door weights ≤ 5 kg
Clamping force, typically	750 N
Clamping force, guaranteed	500 N
Latching force	30 N

Mechanical data - Connection technique

Terminal Connector	Connector M23, 8+1-pole
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Mechanical data - Dimensions

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

Ambient conditions

Protection class	IP 65 to IEC/EN 60529 IP 67 to IEC/EN 60529
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+55 °C
Storage and transport temperature, minimum	-25 °C
Storage and transport temperature, maximum	+70 °C
Relative humidity, minimum	30 %
Relative humidity, maximum	95 %
Note (Relative humidity)	non-condensing non-icing
Resistance to vibrations to EN 60068-2-6	10 ... 150 Hz, amplitude 0.35 mm 30 g / 11 ms III

Ambient conditions - Insulation value

Rated impulse withstand voltage	0.8 kV III 3
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Electrical data

Operating voltage, minimum	20.4 VDC
Operating voltage, maximum	26.4 VDC
No-load current	600 mA
Operating current	50 mA
Required rated short-circuit current to EN 60947-5-1	100 A
Switching frequency, maximum	1 Hz
Note	Cable length and cable section alter the voltage drop depending on the output current

Electrical data - Solenoid control

-3 V ... 5 V (Low)
15 V ... 30 V (High)
C0
C1
C2
C3

Electrical data - Fail-safe digital inputs

-3 V ... 5 V (Low)
15 V ... 30 V (High)
C1
C1
C2
C3

Electrical data - Fail-safe digital outputs

Rated operating current (safety outputs)	250 mA
Voltage drop U_d , maximum	1 V
Current leakage	0.5 mA
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.3 A
	C1
	C1

Electrical data - Diagnostic output

Voltage drop U_d , maximum	2 V
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.1 A

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
PIN 9	without function

Scope of delivery

Included in delivery	Actuators must be ordered separately.
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Accessory

MZM 100-B1.1

Notes

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.
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Ordering code

Product type description:

MZM 100

(1)

ST Connector M23, (8+1 pole)

ST2 Connector M12, 8-pole

(2)

1P2PW 1 diagnostic output and 2 safety outputs, p-type, combined diagnostic signal: guard system closed and interlock locked

SD2P serial diagnostic output and 2 p-type safety outputs

(3)

without without latching force

RE electrically adjustable latching force 30 ... 100 N

(4)

M Permanent magnet approx. 30 N

(1)

ST Connector M23, (8+1 pole)

ST2 Connector M12, 8-pole

(2)

- 1P2PW2**

1 diagnostic output and 2 safety outputs, all p-type and combined diagnostic signal: safety guard closed and solenoid interlock locked.
- SD2P**

serial diagnostic output and 2 p-type safety outputs

(3)

- M**

Permanent magnet approx. 30 N
- NB, MBN, BN**

Actuator monitored
- RE**

electrically adjustable latching force 30 ... 100 N
- A**

Power to lock

Pictures

Photo/Product/Catalogue

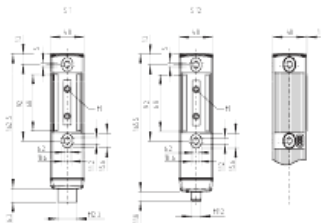


ID: kmzm1f08

| 1,4 MB | .jpg | 216.253 x 833.261 mm - 613 x 2362
Pixel - 72 dpi

| 235,7 kB | .png | 74.083 x 285.397 mm - 210 x 809
Pixel - 72 dpi

Dimension/Product/Basic

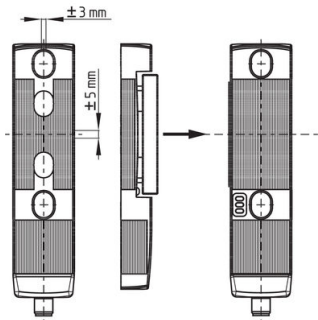


ID: 1mzm1g14

| 160,8 kB | .jpg | 352.778 x 242.358 mm - 1000 x 687
Pixel - 72 dpi

| 5,2 kB | .png | 74.083 x 50.8 mm - 210 x 144 Pixel -
72 dpi

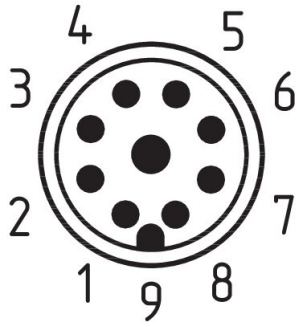
Dimension/Other



ID: 1mzm1g15

| 290,8 kB | .jpg | 352.425 x 362.656 mm - 999 x 1028
Pixel - 72 dpi

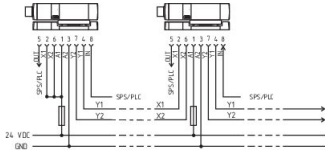
Graphic/Product/PIN



ID: km23-k9d

| 18,5 kB | .cdr |

Graphic/Product/Wiring



ID: kmzm1l03

| 37,0 kB | .cdr |

| 86,9 kB | .jpg | 352.778 x 161.572 mm - 1000 x 458

Pixel - 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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