MZM100ST-1P2PWR100-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-1P2PWR100-A
	101194473
EAN (European Article Number)	4030661358857
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	637 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	100 N
Mechanical data - Connection technique	
Terminal Connector	Connector M23, 8+1-pole

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
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.

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.

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

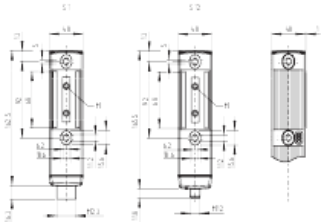
Photo/Product/Catalogue



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

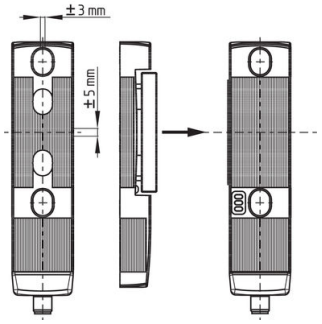
Dimension/Product/Basic



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

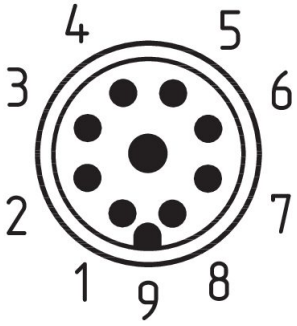
Dimension/Other



ID: 1mzm1g15

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

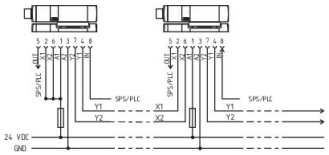
Graphic/Product/PIN



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

K.A. Schmersal GmbH & Co. KG, Möddinghofe 3, D-42279 Wuppertal
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.
Generated on 282021-01-30T19:00:28+01:000701Europe/BerlinSat, 30 Jan 2021 19:00:28 +010028pmSaturday.30pm31Europe/BerlinCET0001Europe/BerlinJanuary2021Sat, 30 Jan 2021 19:00:28 +010001pm31