



## MZM 100 ST-AS MAP

- Power to lock
- Guard locking monitored
- Permanent magnet
- 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  $\pm 5$  mm vertically and  $\pm 3$  mm horizontally
- Intelligent diagnosis

## Data

### Ordering data

Product type description	MZM 100 ST-AS MAP
Article number (order number)	101209554
EAN (European Article Number)	4030661383187
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
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## 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	628 g

## General data - Features

Power to lock	Yes
Solenoid interlock monitored	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 x 10 <sup>-9</sup> /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

### Mechanical data - Connection technique

Termination	Connector plug M12, 4-pole, (A-coding)
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### 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
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### 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	No Function
AS-i Outputs, DO 2	No Function
AS-i Outputs, DO 3	No Function
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)
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 %
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### 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
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## 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.
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## Accessory

Recommendation (actuator)	MZM 100-B1.1
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## Note

Note (General)	<p>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.</p> <p>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.</p>
NOTE_VOLT_OPERAT_AUX_DC	stabilised PELV power supply

## Ordering code

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

(1)

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**without**

Guard locking monitored

**B**

Actuator monitored

(2)

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**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)



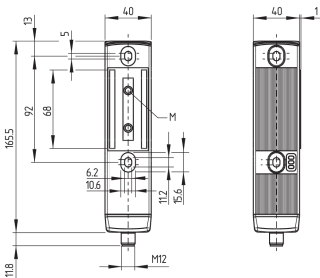
ID: kmzm1f10

| 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



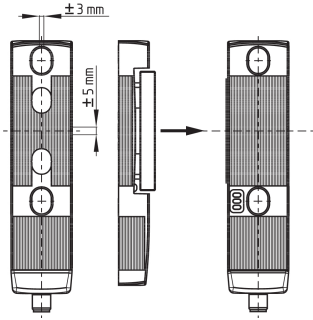
ID: 1mzm1g13

| 14.1 kB | .swf |

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

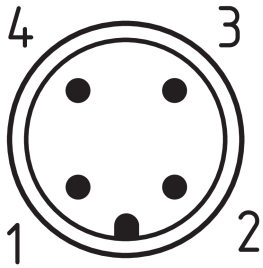
| 163.4 kB | .jpg | 352.778 x 304.8 mm - 1000 x 864 px - 72 dpi

### 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

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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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