



## MZM 100 B ST-AS REAP

- Power to lock
- Actuator monitored
- 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 B ST-AS REAP
Article number (order number)	101198705
EAN (European Article Number)	4030661370767
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	605 g

## General data - Features

Power to lock	Yes
Actuator monitored	Yes
Latching	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	$5.00 \times 10^{-9}$ /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 $\leq 0.5$ m/s Operations for door weights $\leq 5$ kg
Holding force, typically	750 N
Holding force, guaranteed	500 N
Latching force, minimum	30 N
Latching force, maximum	100 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	For the variable setting of the latching force
AS-i Outputs, DO 2	For the variable setting of the latching force
AS-i Outputs, DO 3	For the variable setting of the latching force
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) FID: periphery error
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

## 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.

## Accessory

Recommendation (actuator)              MZM 100-B1.1

## Note

Note (General)                              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.  
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.

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)

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)



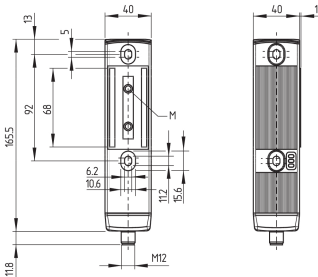
ID: kmzm1f10

| 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



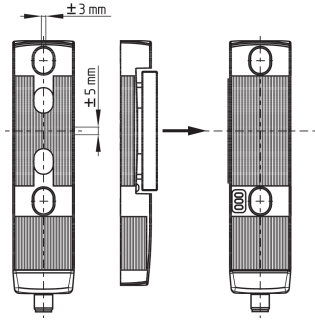
ID: 1mzm1g13

| 14.1 kB | .swf |

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

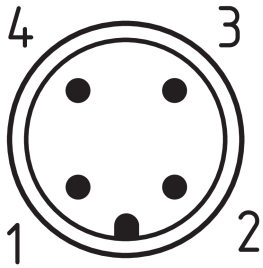
| 163.4 kB | .jpg | 352.778 x 304.8 mm - 1000 x 864 px - 72 dpi

### 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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