DATASHEET

AZM40Z-ST-1P2P-PH

- Compact, flat design
- 119,5 mm x 40 mm x 20 mm
- High holding force 2000
- Latching force 40 N
- RFID-technology for needs-based protection against tampering
- Individually coded version with coding level "High" according to ISO 14119
- Only one version for hinged and sliding doors
- Actuator can approach interlock continuously within a 180 degree angle.
- Symmetrical mounting, can be bolted on either side

Data

Ordering data

Product type description	AZM40Z-ST-1P2P-PH
Article number (order number)	103037333
EAN (European Article Number)	4030661543741
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 FCC IC ANATEL

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	RFID
Frequency band RFID	125 kHz
Transmitter output RFID, maximum	-6 dB/m
Housing material	Light alloy die cast and plastic (glass-fibre reinforced thermoplastic, self-extinguishing)
Reaction time, maximum	100 ms
Duration of risk, maximum	200 ms
Reaction time, switching off safety outputs via safety inputs, maximum	1.5 ms
Gross weight	302 g

General data - Features

Solenoid interlock monitored	Yes
Latching	Yes
Manual release	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

Safety classification

Standards	EN ISO 13849-1 EN IEC 61508

Safety classification - Interlocking function

Performance Level, up to	e
Category	4
PFH value	1.10 x 10^{-9} /h
PFD value	8.90 x 10^{-5}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Safety classification - Guard locking function

Performance Level, up to	d
Category	2
PFH value	3.00 x 10^{-9} /h
PFD value	2.40 x 10^{-4}
Safety Integrity Level (SIL), suitable for applications in	2
Mission time	20 Year(s)

Mechanical data

Interlocking principle	bistable
Mechanical life, locking cycles	1,000,000 Operations
Mechanical life, actuator cycles	200,000 Operations
Holding force F_{Zh} in accordance with EN ISO 14119	2,000 N
Holding force F_{max}, maximum	2,600 N
Latching force	40 N
Note (Latch force)	+/- 25%
Actuating speed, maximum	0.5 m/s
Mounting	mounting holes plain
Type of the fixing screws	2x M5

Tightening torque of the fixing screws, minimum	4 Nm
Tightening torque of the fixing screws, maximum	6 Nm
Note	Observe the maximum tightening torque of the fixing screws used.

Mechanical data - Switching distances according EN IEC 60947-5-3

Assured switching distance "ON" S_{ao}	1 mm
Assured switching distance "OFF" S_{ar}	8 mm

Mechanical data - Connection technique

Length of sensor chain, maximum	30 m
Note (length of the sensor chain)	Cable length and cross-section change the voltage drop dependiing on the output current
Note (series-wiring)	Unlimited number of devices, oberserve external line fusing, max. 31 devices in case of serial diagnostic SD
Termination	Connector M12, 8-pole, A-coded

Mechanical data - Dimensions

Length of sensor	119.5 mm
Width of sensor	40 mm
Height of sensor	20 mm

Ambient conditions

Degree of protection	IP67 IP66
Ambient temperature	+0 ... +55 °C
Storage and transport temperature, minimum	-40 °C
Storage and transport temperature, maximum	+85 °C
Relative humidity, maximum	93 %
Note (Relative humidity)	non-condensing non-icing

Resistance to vibrations	10 … 55 Hz, amplitude 1 mm
Restistance to shock	30 g / 11 ms
Protection class	III
Permissible installation altitude above sea level, maximum	2,000 m

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

Operating voltage	24 VDC -15 % / +10 % (stabilised PELV power supply)
No-load supply current I_0, typical	100 mA
Current consumption magnet at switching moment, peak	600 mA / 100 ms
Rated operating voltage	24 VDC
Operating current	1,200 mA
Required rated short-circuit current	100 A
External wire and device fuse rating	2 A gG
Time to readiness, maximum	4,000 ms
Switching frequency, maximum	0.25 Hz
Utilisation category DC-12	24 VDC / 0.05 A

Electrical data - Magnet control

Designation, Magnet control	IN
Switching thresholds	-3 V … 5 V (Low) 15 V … 30 V (High)
Magnet switch-on time	100 %
Test pulse duration, maximum	5 ms
Test pulse interval, minimum	40 ms

Classification ZVEI CB24I, Sink	C0
Classification ZVEI CB24I, Source	C1 C2 C3
Current consumption at 24V, minimum	10 mA
Current consumption at 24V, maximum	15 mA

Electrical data - Safety digital inputs

Designation, Safety inputs	X1 and X2
Switching thresholds	−3 V ... 5 V (Low) 15 V ... 30 V (High)
Current consumption at 24 V	5 mA
Test pulse duration, maximum	1 ms
Test pulse interval, minimum	100 ms
Classification ZVEI CB24I, Sink	C1
Classification ZVEI CB24I, Source	C1 C2 C3

Electrical data - Safety digital outputs

Designation, Safety outputs	Y1 and Y2
Rated operating current (safety outputs)	250 mA
Design of control elements	short-circuit proof, p-type
Voltage drop U_d, maximum	2 V
Leakage current I_r, maximum	0.5 mA
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.25 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	0.25 A
Test pulse interval, typical	1000 ms
Test pulse duration, maximum	0.5 ms
Classification ZVEI CB24I, Source	C2

Classification ZVEI CB24I, Sink	C1 C2

Electrical data - Diagnostic outputs

Designation, Diagnostic outputs	OUT
Design of control elements	short-circuit proof, p-type
Voltage drop U_d, maximum	2 V
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.05 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	0.05 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

Accessory

Recommendation (actuator)	AZM40-B1-PH

Ordering code

Product type description:
AZM40(1)-(2)-ST-1P2P-(3)

(1)

Z	Guard locking monitored
B	Actuator monitored

(2)

without	Standard coding
I1	Individual coding
I2	Individual coding, re-teaching enabled

(3)

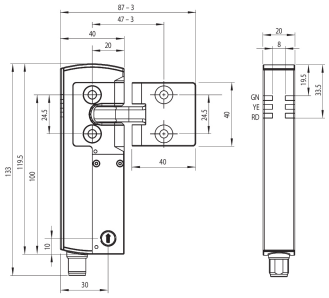
without	Counterbores for countersunk screws (standard)
PH	Flat enclosure for protruding screws

Pictures

Product picture (catalogue individual photo)

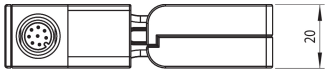
ID: kaz40f24
| 1.1 MB | .jpg | 352.778 x 866.422 mm - 1000 x 2456 px - 72 dpi
| 100.3 kB | .png | 74.083 x 181.681 mm - 210 x 515 px - 72 dpi
| 28.5 kB | .jpg | 50.447 x 123.472 mm - 143 x 350 px - 72 dpi

Dimensional drawing basic component



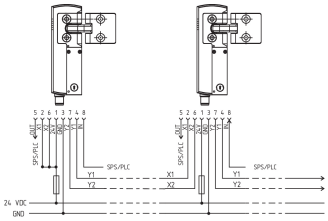
ID: kaz40g01
| 126.0 kB | .jpg | 352.778 x 352.778 mm - 1000 x 1000 px - 72 dpi

Dimensional drawing basic component



ID: kaz40g03
| 51.4 kB | .jpg | 352.778 x 160.514 mm - 1000 x 455 px - 72 dpi

Wiring example



ID: kaz40l01
| 5.1 kB | .png | 74.083 x 49.389 mm - 210 x 140 px - 72 dpi
| 108.5 kB | .jpg | 352.778 x 234.244 mm - 1000 x 664 px - 72 dpi