



AZM400Z-ST-1P2P

- Universal coding with RFID technology
- Connector M12, 8-pole
- Guard locking monitored
- 1 Diagnostic output
- manual release
- Bistable, motor-driven system
- Clamping force 10.000
- Release possible against lateral forces up to 300 N
- PL e / cat. 4 / SIL 3 for interlocking and guard locking function
- Two-channel input signal of the guard locking function
- Operation on P/P- and P/N-switching outputs
- High tolerance to door misalignment

Data

Ordering data

Product type description	AZM400Z-ST-1P2P
Article number (order number)	103003590
EAN (European Article Number)	4030661472577
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	Magnetic field RFID
Frequency band RFID	125 kHz
Transmitter output RFID, maximum	-6 dB/m
Housing material	Light alloy die-casting
Reaction time, switching off safety outputs via actuator, maximum	100 ms
Gross weight	764 g

General data - Features

Solenoid interlock monitored	Yes
Manual release	Yes
Short circuit detection	Yes
Cross-circuit detection	Yes
Safety functions	Yes
Integral system diagnostics, status	Yes
Number of diagnostic signals	1
Number of safety contacts	2

Safety classification

Safety classification - Interlocking function

Performance Level, up to	e
Category	4
PFH value	1.00×10^{-9} /h
PFD value	9.00×10^{-5}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Safety classification - Guard locking function

Performance Level, up to	e
Category	4
PFH value	1.80×10^{-9} /h
PFD value	1.60×10^{-4}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Mechanical data

Interlocking principle	bistable
Mechanical life, minimum	1,000,000 Operations
Note (Mechanical life)	Which have a lateral force $F_{trans} = 100$ N: 100.000 operations
Allowed distance interlock to actuator, minimum	1 mm
Allowed distance interlock to actuator, maximum	7 mm
Angular misalignment between solenoid interlock and actuator, maximum	2 °
Minimum distance devices	30 mm
Holding force F_{Zh} in accordance with EN ISO 14119	10,000 N
Holding force F_{max} , maximum	13,000 N

Lateral force at bolt return, maximal (against locked door)	300 N
Note (Lateral force at bolt return)	Does not apply to emergency exit, Bowden cable and manual release
Type of the fixing screws	2x M6
Note (Type of the fixing screws)	Property class min. 10.9
Tightening torque of the screw	8 Nm
Note	The maximum tightening torque of the cover screw (cover triangle) is 0.55 Nm.

Mechanical data - Connection technique

Termination	Connector M12, 8-pole, A-coded
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Mechanical data - Dimensions

Length of sensor	46.7 mm
Width of sensor	77.8 mm
Height of sensor	156.7 mm

Ambient conditions

Degree of protection	IP66 IP67
Ambient temperature	-20 ... +55 °C
Storage and transport temperature	-40 ... +85 °C
Relative humidity, maximum	93 %
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
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
Operating current while bolt movement, peak	600 mA / 100 ms
Rated operating voltage	24 VDC
Required rated short-circuit current	100 A
External wire and device fuse rating	2 A gG
Time to readiness, maximum	1,500 ms
Switching frequency, maximum	0.3 Hz
Open / close cycle (motor), minimum	3
Minimal average cycle time (with continuous operation)	20 s
Utilisation category DC-12	24 VDC / 0.05 A
Electrical fuse rating, maximum	2 A

Electrical data - Control inputs Guard locking function

Designation, Control inputs	E1 und E2 (p-schaltend), E3 (n-schaltend)
Switching thresholds of the control inputs	−3 V ... 5 V (Low) 15 V ... 30 V (High)
Classification ZVEI CB24I, Sink	C0
Classification ZVEI CB24I, Source	C1 C2 C3
Current consumption at 24V, minimum	5 mA
Current consumption at 24V, maximum	10 mA
Allowable discrepancy time (input), maximum	10 s

Test pulse interval, maximum	40 ms
Test pulse duration, maximum	5 ms
Permissible residual drive current	1.5 mA

Electrical data - Safety digital outputs

Designation, Safety outputs	Y1 and Y2
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
Note	The diagnostic output are not safety relevant outputs!

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	E1 Control input 1
PIN 3	A2 GND
PIN 4	Y1 Safety output 1
PIN 5	OUT Diagnostic output
PIN 6	E3 Control input 3
PIN 7	Y2 Safety output 2
PIN 8	E2 Control input 2

Accessory

Recommendation (actuator)	AZM400-B1
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Ordering code

Product type description:
AZM400Z-(1)-(2)-(3)-(4)-(5)

(1)

ST	1 Connector plug M12, 8-pin
ST2	2 Connector plug M12, 8-pin / 5-pin

(2)

without	Standard coding
I1	Individual coding
I2	Individual coding, multiple teaching

(3)

1P2P	1 serial diagnostic output and 2 p-type safety outputs (only for ST)
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2P2P		2 serial diagnostic output and 2 p-type safety outputs (only for ST2)
(4)		
without		Manual release
T		Emergency exit
BOW		With securing holes for Bowden cable assembly
(5)		
without		without electronic manual release (Only for ST)
E		with electronic manual release (Only for ST2)

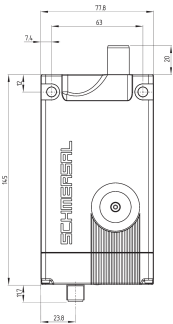
Pictures

Product picture (catalogue individual photo)



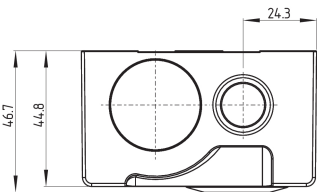
ID: kazm4f41
 | 412.3 kB | .jpg | 352.778 x 174.272 mm - 1000 x 494 px - 72 dpi
 | 29.7 kB | .png | 74.083 x 36.689 mm - 210 x 104 px - 72 dpi
 | 51.4 kB | .jpg | 123.472 x 61.031 mm - 350 x 173 px - 72 dpi

Dimensional drawing basic component



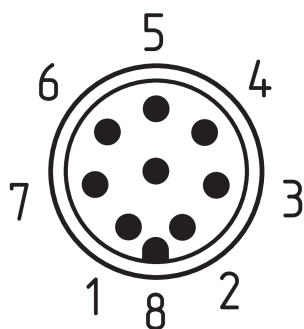
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 | 251.9 kB | .ai | 210 x 297 mm - 595 x 841 px - 72 dpi
 | 6.0 kB | .png | 74.083 x 137.583 mm - 210 x 390 px - 72 dpi
 | 207.5 kB | .jpg | 352.778 x 655.108 mm - 1000 x 1857 px - 72 dpi

Dimensional drawing basic component



ID: kazm4g22
 | 84.3 kB | .ai | 210 x 297 mm - 595 x 841 px - 72 dpi
 | 4.1 kB | .png | 74.083 x 44.097 mm - 210 x 125 px - 72 dpi
 | 107.4 kB | .jpg | 352.778 x 210.608 mm - 1000 x 597 px - 72 dpi

Contact arrangement



ID: km23-k8b
| 5.3 kB | .png | 73.731 x 79.728 mm - 209 x 226 px - 72 dpi
| 139.8 kB | .jpg | 352.778 x 380.647 mm - 1000 x 1079 px - 72 dpi

Schmersal Ltd., Sparrowhawk Close, WR14 1GL Malvern
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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