DATASHEET



AZM 170-02ZRI-ST-B5-2197 24VAC/DC

- Connector M12, 4-pole
- A- and B-coding of the connectors
- Manual release from side
- Double-insulated
- Individual coding
- Coding level "High" according to ISO 14119
- 90 mm x 84 mm x 30 mm
- Compact design
- Interlock with protection against incorrect locking.
- Long life
- High holding force
- Particularly suitable for front mounting

Data

Ordering data

Product type description	AZM 170-02ZRI-ST-B5-2197 24VAC/DC
Article number (order number)	101144339
EAN (European Article Number)	4030661132822
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	IFA cULus CCC

General data

Standards	BG-GS-ET-19 EN ISO 13849-1 EN ISO 14119 EN IEC 60947-5-1
Coding	Individual coding
Coding level according to EN ISO 14119	High
Working principle	electromechanical
Housing material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Material of the actuator	Stainless steel
Gross weight	296 g

General data - Features

Power to unlock	Yes
Manual release	Yes
Number of actuating directions	2
Number of safety contacts	2

Safety classification

Standards	EN ISO 13849-1
Performance Level, up to	c
Category	1
B_{10D} Normally-closed contact (NC)	2,000,000 Operations
Mission time	20 Year(s)

Safety classification - Fault exclusion

Please note:	Can be used when fault exclusion for dangerous damage to the 1-channel mechanism is permissible and sufficient protection against manipulation is guaranteed.
Performance Level, up to	d
Category	3
Note	for 2-channel use and with suitable logic unit.
Mission time	20 Year(s)

Mechanical data

Actuating radius, minimum	140 mm
Mechanical life, minimum	1,000,000 Operations
Holding force F_{Zh} in accordance with EN ISO 14119	1,000 N
Holding force F_{max}, maximum	1,300 N
Latching force	30 N
Positive break travel	11 mm
Positive break force per NC contact, minimum	8.5 N
Positive break force, minimum	17 N
Actuating speed, maximum	2 m/s
Mounting	Screws
Type of the fixing screws	2x M5
Tightening torque of the fastening screws for the housing cover, minimum	0.7 Nm
Tightening torque of the fastening screws for the housing cover, maximum	1 Nm
Note	Torx T10

Mechanical data - Connection technique

Connector position	Centre
Termination	Connector plug M12, 4-pole, (A-coding) IDC method of termination

Mechanical data - Dimensions

Length of sensor	30 mm
Width of sensor	108 mm
Height of sensor	75.5 mm

Ambient conditions

Degree of protection	IP67
Ambient temperature	-25 ... +60 °C
Storage and transport temperature	-25 ... +85 °C
Note (Relative humidity)	non-condensing non-icing
Protection class	II
Permissible installation altitude above sea level, maximum	2,000 m

Ambient conditions - Insulation values

Rated insulation voltage U_i	60 V
Rated impulse withstand voltage U_{imp}	0.8 kV
Overvoltage category	III
Degree of pollution	3

Electrical data

Thermal test current	4 A
Rated control voltage	24 VAC/DC
Required rated short-circuit current	1,000 A
Electrical power consumption, maximum	12 W
Switching element	2 NC contact
Note (Switching element)	Change-over contact with double break, type Zb or 2 NC or 3 NC or 4 NC contacts, with galvanically separated contact bridges
Switching principle	slow action, positive break NC contact

Maximum switching frequency	1,000 /h
Material of the contacts, electrical	Silver

Electrical data - Magnet control

Magnet switch-on time	100 %
Test pulse duration, maximum	5 ms
Test pulse interval, minimum	50 ms

Electrical data - Safety contacts

Voltage, Utilisation category AC-15	230 VAC
Current, Utilisation category AC-15	4 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	4 A

Other data

Note (applications)	sliding safety guard removable guard hinged safety guard

Scope of delivery

Scope of delivery	Not available as spare part Slot sealing plugs The actuator is included in the scope of delivery

Note

Note (General)	minimum actuating radius on rotating guard systems via the narrow edge of the actuator 140 mm minimum actuating radius on hinged guards in line with the plane of the actuator 200 mm The axis of the hinge must be 13 mm above and in a parallel plane to the top surface of the safety switch. The actuator is not available separately.

Note (Manual release)	right For manual release using M5 triangular key, available as accessory Additional manual release on side For manual release using triangular key M3 (included in delivery)

Ordering code

Product type description:
AZM 170(1)-(2)Z(3)I(4)-(5)-(6)-(7) (8)

(1)

without	Cut clamps
SK	Screw connection

(2)

11	1 NO contact/1 NC contact
02	2 NC contact

(3)

without	Latching force 5 N
R	Latching force 30 N
I	Individual coding

(4)

without	Power to unlock
A	Power to lock

(5)

without	cable gland
ST	M12 x 1 connector

(6)

B1	with actuator B1
B5	with actuator B5
B6L	with actuator B6L
B6R	with actuator B6R

(7)

without	Manual release
2197	Manual release from side (Standard in case of conector and power to unlock versions)
1637	Gold-plated contacts

(8)

24VAC/DC	Us 24 VAC/DC
110VAC	Us 110 VAC
230VAC	Us 230 VAC

(1)

11/11	1 NO contact, 1 NC contact / 1 NO contact 1, NC contact
11/02	1 NO contact, 1 NC contact / 2 NC contacts
12/00	1 NO contact, 2 NC contacts / -
12/11	1 NO contact, 2 NC contact / 1 NO contact 1, NC contact
12/02	1 NO contact, 2 NC contact / 2 NC contacts
02/01	2 NC contacts / 1 NC contact
02/10	2 NC contacts, - / 1 NO contact

(2)

without	Latching force 5 N
R	Latching force 30 N

(3)

without	Power to unlock
A	Power to lock

(4)

B1	with actuator B1
B5	with actuator B5
B6L	with actuator B6L
B6R	with actuator B6R

(5)

1637	Gold-plated contacts

(6)

2197	Manual release for Power to unlock

Pictures

Product picture (catalogue individual photo)



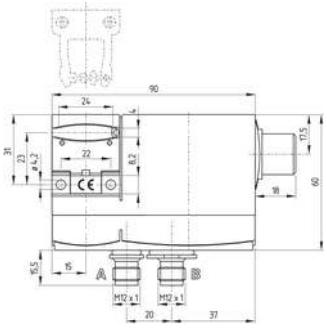
ID: kazm1fi4
| 611.5 kB | .jpg | 291.042 x 301.625 mm - 825 x 855 px - 72 dpi
| 39.7 kB | .png | 73.731 x 76.553 mm - 209 x 217 px - 72 dpi
| 65.0 kB | .jpg | 119.239 x 123.472 mm - 338 x 350 px - 72 dpi

Product picture (catalogue individual photo)



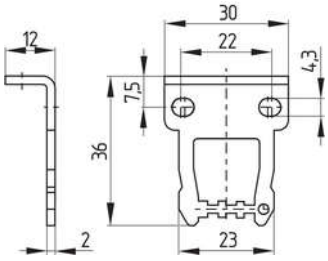
ID: kazm1fi7
| 332.8 kB | .jpg | 352.778 x 391.936 mm - 1000 x 1111 px - 72 dpi
| 32.3 kB | .png | 74.083 x 82.197 mm - 210 x 233 px - 72 dpi
| 35.1 kB | .jpg | 111.125 x 123.472 mm - 315 x 350 px - 72 dpi

Dimensional drawing basic component



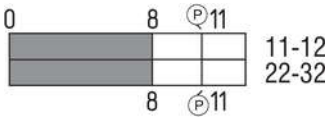
ID: kazm1gi4
| 91.6 kB | .cdr |
| 5.1 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi
| 153.6 kB | .jpg | 352.778 x 353.483 mm - 1000 x 1002 px - 72 dpi

Dimensional drawing actuator



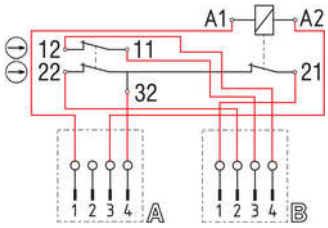
ID: 1az17b06
| 99.1 kB | .jpg | 352.778 x 277.989 mm - 1000 x 788 px - 72 dpi
| 4.8 kB | .png | 74.083 x 58.561 mm - 210 x 166 px - 72 dpi

Switch travel diagram



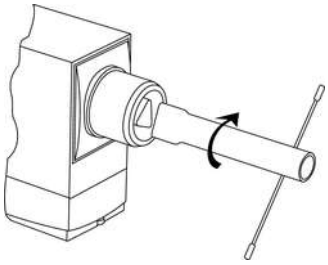
ID: kazm1s01
| 19.5 kB | .cdr |
| 1.8 kB | .png | 74.083 x 26.458 mm - 210 x 75 px - 72 dpi
| 49.4 kB | .jpg | 352.778 x 125.236 mm - 1000 x 355 px - 72 dpi

Diagram



ID: kazm1k14
| 46.9 kB | .cdr |
| 135.9 kB | .jpg | 352.778 x 240.947 mm - 1000 x 683 px - 72 dpi
| 5.7 kB | .png | 74.083 x 50.447 mm - 210 x 143 px - 72 dpi

Operating principle



ID: kazm1a71
| 113.1 kB | .jpg | 352.778 x 280.811 mm - 1000 x 796 px - 72 dpi
| 4.6 kB | .png | 74.083 x 58.914 mm - 210 x 167 px - 72 dpi