



## AZM 170-02ZRK 24VAC/DC

- 1 Cable entry M 20 x 1.5
- IDC method of termination
- Manual release
- Thermoplastic enclosure
- Double-insulated
- Compact design
- Interlock with protection against incorrect locking.
- Long life
- High holding force

## Data

### Ordering data

Product type description	AZM 170-02ZRK 24VAC/DC
Article number (order number)	101140795
EAN (European Article Number)	4030661119830
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	cULus CCC
--------------	--------------

### General data

Standards	EN ISO 13849-1 EN ISO 14119 EN IEC 60947-5-1
Coding level according to EN ISO 14119	Low
Working principle	electromechanical
Housing material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Gross weight	288 g

### General data - Features

Power to unlock	Yes
Increased latching force	Yes
Manual release	Yes
Number of actuating directions	2
Number of auxiliary contacts	1
Number of safety contacts	2

### Safety classification

Standards	EN ISO 13849-1
Performance Level, up to	c
Category	1
B <sub>10D</sub> Normally-closed contact (NC)	2,000,000 Operations
Note	Electrical life on request.
B <sub>10D</sub> Normally-open contact (NO)	1,000,000 Operations
Note	at 10% I <sub>e</sub> and ohmic load
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

Unlocking	Rotating unlatch
Mechanical lifetime, 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 M4
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

Cable entry	1 x M20 x 1,5
Cable cross-section of the cable glands, minimum	4 mm
Cable cross-section of the cable glands, maximum	10 mm
Cable section, minimum	0.75 mm <sup>2</sup>
Cable section, maximum	1 mm <sup>2</sup>

Note	All indications including the conductor ferrules.
Wire cross-section, minimum	20 AWG
Wire cross-section, maximum	18 AWG
Allowed type of cable	solid single-wire solid multi-wire flexible
Terminal (mechanical)	IDC method of termination

### Mechanical data - Dimensions

Length of sensor	30 mm
Width of sensor	90 mm
Height of sensor	84 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 $U_i$	250 VAC
Rated impulse withstand voltage $U_{imp}$	4 kV
Overtoltage category	III
Degree of pollution	3

### Electrical data

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 contacts, with galvanically separated contact bridges
Switching principle	slow action, positive break NC contact
Maximale Schalthäufigkeit	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	2.5 A

### Other data

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

### Scope of delivery

Scope of delivery	Actuator must be ordered separately. Slot sealing plugs
-------------------	--

### Note

Note (General)

This type termination (IDC) method enables simple connection of flexible conductors without the need for the use of conductor ferrules

Note (Manual release)

bottom

## Ordering code

Product type description:

AZM 170(1)-(2)Z(3)K(4)-(5)-(6)-(7)-(8)

(1)

---

	Cut clamps
<b>SK</b>	Screw connection

(2)

---

<b>11</b>	1 NO contact/1 NC contact
<b>02</b>	2 NC contact

(3)

---

	Latching force 5 N
<b>R</b>	Latching force 30 N

(4)

---

	Power to unlock
<b>A</b>	Power to lock

(5)

---

	Cable entry M20
<b>ST</b>	2 connector, M12, 4-pin
<b>ST-2431</b>	As per the ST with additional individual solenoid monitoring
<b>ST8</b>	Connector M12 8-pole

(6)

---

<b>24 VAC/DC</b>	Us 24 VAC/DC
<b>110 VAC</b>	Us 110 VAC
<b>230 VAC</b>	Us 230 VAC

(7)

1637

Gold-plated contacts

(8)

Manual release

2197

Manual release from side (default in the power-to-unlock version)

2405

Emergency exit from side

## Pictures

### Product picture (catalogue individual photo)



ID: kazm1f04

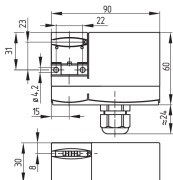
| 456.6 kB | .jpg | 352.425 x 356.658 mm - 999 x 1011 px - 72 dpi

| 60.6 kB | .png | 74.083 x 74.789 mm - 210 x 212 px - 72 dpi

| 64.5 kB | .png | 74.083 x 74.083 mm - 210 x 210 px - 72 dpi

| 4.8 MB | .png | 169.333 x 171.281 mm - 2000 x 2023 px - 300 dpi

### Dimensional drawing basic component



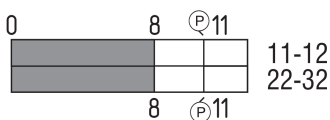
ID: 1azm1g03

| 96.8 kB | .cdr |

| 3.7 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi

| 75.8 kB | .jpg | 352.778 x 245.886 mm - 1000 x 697 px - 72 dpi

### Switch travel diagram



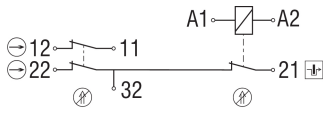
ID: kazm1s01

| 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



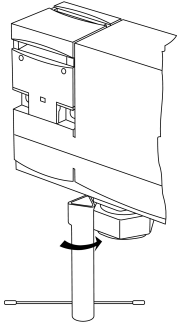
ID: kazm1k11

| 55.1 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi

| 47.2 kB | .jpg | 352.778 x 112.183 mm - 1000 x 318 px - 72 dpi

| 2.5 kB | .png | 74.083 x 23.636 mm - 210 x 67 px - 72 dpi

## Operating principle



ID: kazm1a70

| 213.5 kB | .jpg | 352.778 x 656.519 mm - 1000 x 1861 px - 72 dpi

| 6.5 kB | .png | 74.083 x 137.583 mm - 210 x 390 px - 72 dpi

## Assembly example



ID: kazm1m06

| 98.4 kB | .cdr |

K.A. Schmersal GmbH & Co. KG, Möddinghofe 30, 42279 Wuppertal

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.

Generated on: 27/02/2026, 15:01