



## AZM 170-11ZRI-B6R 24VAC/DC

- 1 Cable entry M 20 x 1.5
- IDC method of termination
- Manual release
- 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
- right-hand model
- For very small actuating radii in line with or at 90° to the plane of the actuator

## Data

### Ordering data

|                               |                            |
|-------------------------------|----------------------------|
| Product type description      | AZM 170-11ZRI-B6R 24VAC/DC |
| Article number (order number) | 101140805                  |
| EAN (European Article Number) | 4030661119939              |
| 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<br>cULus<br>CCC |
|--------------|---------------------|

## General data

|                                        |                                                                   |
|----------------------------------------|-------------------------------------------------------------------|
| Standards                              | BG-GS-ET-19<br>EN ISO 13849-1<br>EN ISO 14119<br>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                           | 300 g                                                             |

## General data - Features

|                                |     |
|--------------------------------|-----|
| Power to unlock                | Yes |
| Manual release                 | Yes |
| Number of actuating directions | 2   |
| Number of auxiliary contacts   | 1   |
| Number of safety contacts      | 1   |

## 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 - Safety outputs

Note ( $B_{10D}$  Normally open contact at 10%  $I_e$  and ohmic load (NO))

## 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                                                | 50 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                                            | 8.5 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

|                        |                           |
|------------------------|---------------------------|
| Cable entry            | 1 x M20 x 1,5             |
| Termination            | IDC method of termination |
| Cable section, minimum | 0.75 mm <sup>2</sup>      |
| Cable section, maximum | 1 mm <sup>2</sup>         |
| Allowed type of cable  | flexible                  |

### 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<br>non-icing |
| Protection class                                              | II                          |
| Permissible installation altitude<br>above sea level, maximum | 2,000 m                     |

### Ambient conditions - Insulation values

|                                                  |         |
|--------------------------------------------------|---------|
| Rated insulation voltage U <sub>i</sub>          | 250 VAC |
| Rated impulse withstand voltage U <sub>imp</sub> | 4 kV    |
| Overvoltage category                             | III     |
| Degree of pollution                              | 3       |

## Electrical data

|                                       |                                                                                                              |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Thermal test current                  | 6 A                                                                                                          |
| Rated control voltage                 | 24 VAC/DC                                                                                                    |
| Required rated short-circuit current  | 1,000 A                                                                                                      |
| Electrical power consumption, maximum | 12 W                                                                                                         |
| Switching element                     | 1 NO contact, 1 NC contacts                                                                                  |
| 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                                                                       |
| 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     |

## Electrical data - Auxiliary 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<br>removable guard<br>hinged safety guard |
|---------------------|----------------------------------------------------------------|

## Scope of delivery

|                   |                                      |
|-------------------|--------------------------------------|
| Scope of delivery | Actuator must be ordered separately. |
|-------------------|--------------------------------------|

## Note

|                       |                                                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Note (General)        | This type termination (IDC) method enables simple connection of flexible conductors without the need for the use of conductor ferrules<br>The actuator is not available separately. |
| Note (Manual release) | bottom<br>For manual release using M5 triangular key, available as accessory                                                                                                        |

## Ordering code

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

(1)

|                |                  |
|----------------|------------------|
| <b>without</b> | Cut clamps       |
| <b>SK</b>      | Screw connection |

(2)

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

(3)

|                |                     |
|----------------|---------------------|
| <b>without</b> | Latching force 5 N  |
| <b>R</b>       | Latching force 30 N |
| <b>I</b>       | Individual coding   |

(4)

|                 |                                                                                       |
|-----------------|---------------------------------------------------------------------------------------|
| <b>without</b>  | Power to unlock                                                                       |
| <b>A</b>        | Power to lock                                                                         |
| (5)             |                                                                                       |
| <b>without</b>  | cable gland                                                                           |
| <b>ST</b>       | M12 x 1 connector                                                                     |
| (6)             |                                                                                       |
| <b>B1</b>       | with actuator B1                                                                      |
| <b>B5</b>       | with actuator B5                                                                      |
| <b>B6L</b>      | with actuator B6L                                                                     |
| <b>B6R</b>      | with actuator B6R                                                                     |
| (7)             |                                                                                       |
| <b>without</b>  | Manual release                                                                        |
| <b>2197</b>     | Manual release from side (Standard in case of connector and power to unlock versions) |
| <b>1637</b>     | Gold-plated contacts                                                                  |
| (8)             |                                                                                       |
| <b>24VAC/DC</b> | Us 24 VAC/DC                                                                          |
| <b>110VAC</b>   | Us 110 VAC                                                                            |
| <b>230VAC</b>   | Us 230 VAC                                                                            |
| (1)             |                                                                                       |
| <b>11/11</b>    | 1 NO contact, 1 NC contact / 1 NO contact 1, NC contact                               |
| <b>11/02</b>    | 1 NO contact, 1 NC contact / 2 NC contacts                                            |
| <b>12/00</b>    | 1 NO contact, 2 NC contacts / -                                                       |
| <b>12/11</b>    | 1 NO contact, 2 NC contact / 1 NO contact 1, NC contact                               |
| <b>12/02</b>    | 1 NO contact, 2 NC contact / 2 NC contacts                                            |
| <b>02/01</b>    | 2 NC contacts / 1 NC contact                                                          |
| <b>02/10</b>    | 2 NC contacts, - / 1 NO contact                                                       |

|                |                                    |
|----------------|------------------------------------|
| (2)            |                                    |
| <b>without</b> | Latching force 5 N                 |
| <b>R</b>       | Latching force 30 N                |
| (3)            |                                    |
| <b>without</b> | Power to unlock                    |
| <b>A</b>       | Power to lock                      |
| (4)            |                                    |
| <b>B1</b>      | with actuator B1                   |
| <b>B5</b>      | with actuator B5                   |
| <b>B6L</b>     | with actuator B6L                  |
| <b>B6R</b>     | with actuator B6R                  |
| (5)            |                                    |
| <b>1637</b>    | Gold-plated contacts               |
| (6)            |                                    |
| <b>2197</b>    | Manual release for Power to unlock |

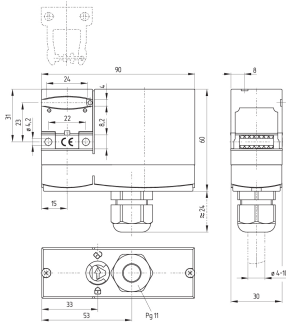
## Pictures

### Product picture (catalogue individual photo)



ID: kazm1fi3  
 | 595.8 kB | .jpg | 262.114 x 331.258 mm - 743 x 939 px - 72 dpi  
 | 49.6 kB | .png | 74.083 x 93.486 mm - 210 x 265 px - 72 dpi  
 | 54.5 kB | .jpg | 97.719 x 123.472 mm - 277 x 350 px - 72 dpi

### Dimensional drawing basic component



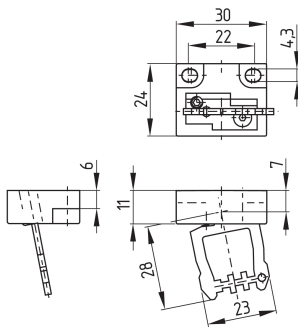
ID: kazm1gi3

| 106.0 kB | .cdr |

| 6.2 kB | .png | 74.083 x 83.961 mm - 210 x 238 px - 72 dpi

| 195.9 kB | .jpg | 352.778 x 400.403 mm - 1000 x 1135 px - 72 dpi

## Dimensional drawing actuator



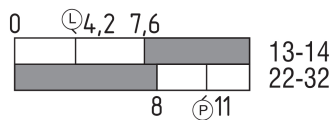
ID: 1az17b02

| 41.2 kB | .cdr |

| 148.6 kB | .jpg | 352.425 x 383.469 mm - 999 x 1087 px - 72 dpi

| 18.2 kB | .png | 74.083 x 80.433 mm - 210 x 228 px - 72 dpi

## Switch travel diagram



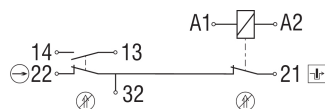
ID: kazm1s02

| 19.7 kB | .cdr |

| 2.0 kB | .png | 74.083 x 25.753 mm - 210 x 73 px - 72 dpi

| 50.1 kB | .jpg | 352.778 x 123.119 mm - 1000 x 349 px - 72 dpi

## Diagram



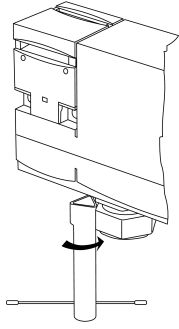
ID: kazm1k12

| 52.5 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi

| 45.9 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 |

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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.

Generated on: 24/12/2024, 7:03 am