



## AZM 161SK-12/12RK -110/230

- Large wiring compartment
- Manual release
- cable entries 4 M 16 x 1.5
- Thermoplastic enclosure
- Double-insulated
- Interlock with protection against incorrect locking.
- 130 mm x 90 mm x 30 mm
- 6 Contacts
- Long life

## Data

### Ordering data

Product type description	AZM 161SK-12/12RK -110/230
Article number (order number)	101166282
EAN (European Article Number)	4030661213941
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
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### 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	415 g

### General data - Features

Power to unlock	Yes
Manual release	Yes
Number of actuating directions	3
Number of auxiliary contacts	2
Number of safety contacts	4

### 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)

### Safety classification - Guard locking function

Performance Level, up to	e
Note (Performance Level)	Information for the safety classification of the guard locking function is documented in the "Operating instructions" or in the "Operation and mounting" instructions.

### Mechanical data

Mechanical life, minimum	1,000,000 Operations
Actuating play in direction of actuation	5.5 mm
Holding force $F_{Zh}$ in accordance with EN ISO 14119	2,000 N
Holding force $F_{max}$ , maximum	2,600 N
Latching force	30 N
Positive break travel	10 mm
Positive break force per NC contact, minimum	10 N
Positive break force, minimum	20 N
Actuating speed, maximum	2 m/s
Mounting	Screws
Type of the fixing screws	3x M6

### Mechanical data - Connection technique

Cable entry	4 x M16 x 1,5
Termination	Screw terminals
Cable section, minimum	0.25 mm <sup>2</sup>
Cable section, maximum	1.5 mm <sup>2</sup>
Note (Cable section)	All indications including the conductor ferrules.

Allowed type of cable	solid single-wire solid multi-wire flexible
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### Mechanical data - Dimensions

Length of sensor	30 mm
Width of sensor	130 mm
Height of sensor	90 mm

### Ambient conditions

Degree of protection	IP67
Ambient temperature	-30 ... +60 °C
Storage and transport temperature, minimum	-25 °C
Storage and transport temperature, maximum	+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

### Electrical data

Thermal test current	6 A
Rated control voltage	110 VAC 230 VAC
Required rated short-circuit current	1,000 A

Electrical power consumption, maximum	10 W
Switching element	NO contact, NC contact
Switching principle	slow action, positive break NC contact
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	2.5 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	2.5 A

### Other data

Note (applications)	sliding safety guard removable guard hinged safety guard
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## Scope of delivery

Scope of delivery	Actuator must be ordered separately.
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## Note

Note (Manual release)	For maintenance, installation, etc. For manual release using M5 triangular key, available as accessory
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## Ordering code

Product type description:  
AZM161 (1)-(2)(3)K(4)-(5)/(6)-(7)(8)

(1)	
<b>SK</b>	Screw connection
<b>CC</b>	Cage clamps
<b>ST</b>	Connector plug M12
(2)	
<b>11/03</b>	Magnet: 1 NO contact, 1 NC contact / Actator: 3 NC contacts with connector plug
<b>12/03</b>	Magnet: 1 NO contact, 2 NC contact / Actator: 3 NC contacts
<b>12/11</b>	Magnet: 1 NO contact, 2 NC contacts / Actator: 1 NO contact, 1 NC contact with connector plug
<b>11/12</b>	Magnet: 1 NO contact, 1 NC contacts / Actator: 1 NO contact, 2 NC contact with connector plug
<b>12/12</b>	Magnet: 1 NO contact, 2 NC contacts / Actator: 1 NO contact, 2 NC contacts
(3)	
<b>without</b>	Latching force 5 N
<b>R</b>	Latching force 30 N

(4)

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<b>without</b>	Power to unlock
<b>A</b>	Power to lock

(5)

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<b>without</b>	Lateral manual release
<b>ED</b>	Manual release on the cover side
<b>EU</b>	Manual release on the back side

(6)

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<b>T</b>	Lateral emergency exit
<b>TD</b>	Emergency exit on the cover side
<b>TU</b>	Emergency exit on the back side
<b>N</b>	Emergency release

(7)

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<b>024</b>	Us: 24 VAC/DC
<b>110/230</b>	Us: 110/230 VAC

(8)

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<b>without</b>	without LED
<b>G</b>	with LED (only for Us: 24 VAC/DC)

## Pictures

### Product picture (catalogue individual photo)



ID: kazm1f03  
| 256.6 kB | .tif | 75.671 x 56.885 mm - 286 x 215 px - 96 dpi  
| 698.5 kB | .jpg | 352.778 x 265.289 mm - 1000 x 752 px - 72 dpi  
| 36.6 kB | .png | 74.083 x 55.739 mm - 210 x 158 px - 72 dpi  
| 61.5 kB | .jpg | 123.472 x 92.781 mm - 350 x 263 px - 72 dpi

### Product picture (catalogue individual photo)



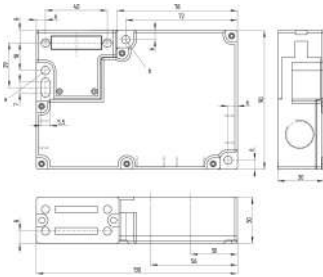
ID: sazm1f03

| 364.3 kB | .jpg | 352.778 x 265.289 mm - 1000 x 752 px - 72 dpi

| 25.3 kB | .png | 74.083 x 55.739 mm - 210 x 158 px - 72 dpi

| 41.1 kB | .jpg | 123.472 x 92.781 mm - 350 x 263 px - 72 dpi

## Dimensional drawing basic component



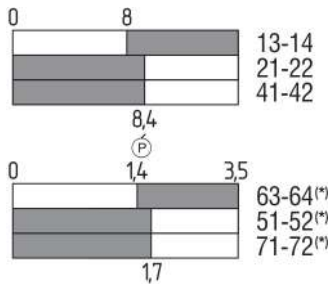
ID: kazm1g09

| 137.3 kB | .cdr |

| 4.5 kB | .png | 74.083 x 62.442 mm - 210 x 177 px - 72 dpi

| 139.6 kB | .jpg | 352.778 x 298.097 mm - 1000 x 845 px - 72 dpi

## Switch travel diagram

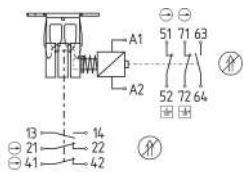


ID: kazm1s07

| 2.9 kB | .png | 74.083 x 63.853 mm - 210 x 181 px - 72 dpi

| 102.8 kB | .jpg | 352.778 x 304.8 mm - 1000 x 864 px - 72 dpi

## Diagram



ID: kazm1k29

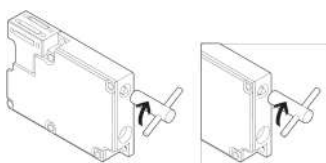
| 80.8 kB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi

| 111.9 kB | .jpg | 352.778 x 227.894 mm - 1000 x 646 px - 72 dpi

| 4.8 kB | .png | 74.083 x 47.978 mm - 210 x 136 px - 72 dpi

11	12	21	22	41	42	51	52	63	64	71	72	A1	A2
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## Operating principle



ID: kazm1a41

| 105.3 kB | .jpg | 352.778 x 170.744 mm - 1000 x 484 px - 72 dpi

| 13.0 kB | .png | 74.083 x 35.983 mm - 210 x 102 px - 72 dpi



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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