



## AZM 161SK-12/12RK-024

- 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-024
Article number (order number)	101164207
EAN (European Article Number)	4030661205144
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	450 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	24 VAC/DC
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)		
<b>without</b>		Power to unlock
<b>A</b>		Power to lock
(5)		
<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)		
<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)		
<b>024</b>		Us: 24 VAC/DC
<b>110/230</b>		Us: 110/230 VAC
(8)		
<b>without</b>		without LED
<b>G</b>		with LED (only for Us: 24 VAC/DC)

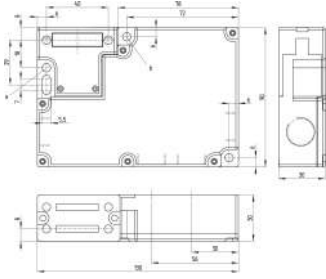
## Pictures

### Product picture (catalogue individual photo)



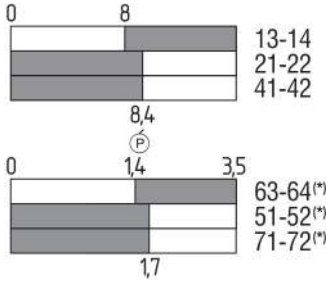
ID: kazm1f03  
 | 256.6 kB | .tif | 75.671 x 56.885 mm - 286 x 215 px - 96 dpi  
 | 698.5 kB | .jpg | 352.778 x 265.289 mm - 1000 x 752 px - 72 dpi  
 | 36.6 kB | .png | 74.083 x 55.739 mm - 210 x 158 px - 72 dpi  
 | 61.5 kB | .jpg | 123.472 x 92.781 mm - 350 x 263 px - 72 dpi

### Dimensional drawing basic component



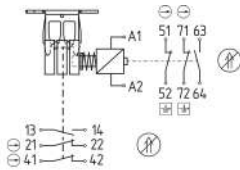
ID: kazm1g09  
 | 137.3 kB | .cdr |  
 | 4.5 kB | .png | 74.083 x 62.442 mm - 210 x 177 px - 72 dpi  
 | 139.6 kB | .jpg | 352.778 x 298.097 mm - 1000 x 845 px - 72 dpi

### 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

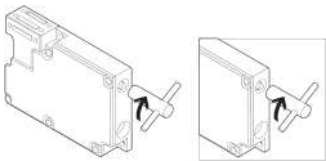
### Diagram



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

Schmersal India Pvt. Ltd., Plot No - G-7/1, Ranjangaon MIDC, Tal. - Shirur, Dist.- Pune 412 220  
 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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