

## Datasheet - AZM 161SK-12/12RKA-024

Solenoid interlock / AZM 161



Preferred typ



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

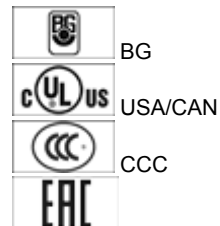
(Minor differences between the printed image and the original product may exist!)

### Ordering details

Product type description	AZM 161SK-12/12RKA-024
Article number	101166285
EAN code	4030661213972
eCl@ss	27-27-26-03

### Approval


Approval



### Classification

Standards	EN ISO 13849-1
B <sub>10d</sub> Opener (NC)	2.000.000
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{op} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Product name	AZM 161
Standards	EN 60947-5-1, BG-GS-ET-19
Compliance with the Directives (Y/N) 	Yes
Number of actuating directions	3 piece
Active principle	electromechanical
Duty cycle	Magnet 100 %
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Material of the contacts	Silver
Housing coating	None
Weight	460 g

## Mechanical data

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Actuating play in direction of actuation	5.5 mm
Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	1 x 0,25 mm <sup>2</sup>
- Max. Cable section	1 x 1.5 mm <sup>2</sup>
Mechanical life	> 1.000.000 operations
notice	All indications about the cable section are including the conductor ferrules.
Emergency unlocking device (Y/N)	No
Manual release (Y/N)	Yes
Emergency release (Y/N)	No
Latching force	30 N
Positive break force	20 N
positive break travel	10 mm
Clamping force F	2000 N
Max. Actuating speed	2 m/s
Actuating frequency	max. 1000 / h

## Ambient conditions

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Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+60 °C
Protection class	IP67 to IEC/EN 60529

## Electrical data

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Design of control element	Normally open contact (NO), Opener (NC)
Switching principle	Creep circuit element
Number of auxiliary contacts	2 piece
Number of safety contacts	4 piece
Power to unlock	No
Power to lock	Yes
Rated control voltage U <sub>s</sub>	24 VAC/DC
Power consumption	max. 10 W
Rated impulse withstand voltage U <sub>imp</sub>	4 kV
Rated insulation voltage U <sub>i</sub>	250 V
Thermal test current I <sub>the</sub>	6 A
Utilisation category	AC-15: 230 V / 4 A, DC-13: 24 V / 2,5 A
Required rated short-circuit current	1000 A

**ATEX**

Explosion protection categories for gases	None
Explosion protected category for dusts	None

**Miscellaneous data**

Applications	 sliding safety guard,  removable guard,  hinged safety guard
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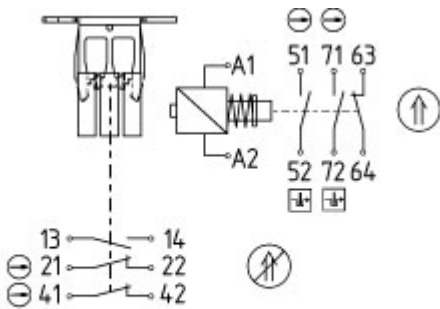
**Dimensions**

Dimensions of the sensor	
- Width of sensor	130 mm
- Height of sensor	90 mm
- Length of sensor	30 mm

**notice**






- Manual release
- For maintenance, installation, etc.
  - For manual release using M5 triangular key, available as accessory

**Diagram**

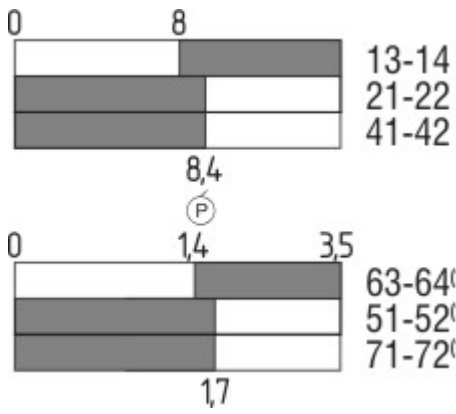


13	14	21	22	41	42	51	52	63	64	71	72	A1	A2
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Note Diagram

-  positive break NC contact
-  active
-  no active
-  Normally-open contact
-  Normally-closed contact

**Switch travel diagram**

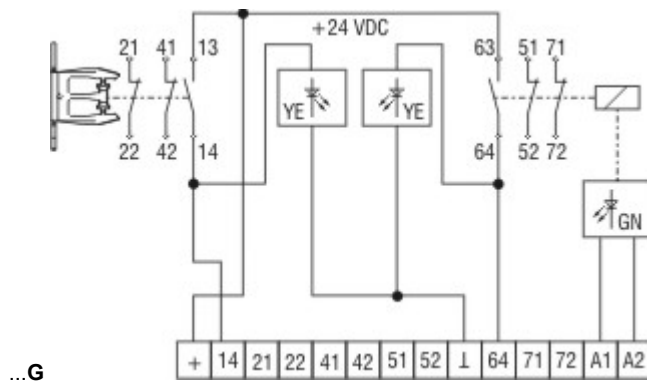


Notes Switch travel diagram

- Contact closed
- Contact open
- Setting range
- Break point
- Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.  
 Order example: AZM 161SK-12/12RKA-024**G**



Protected against incorrect polarity and voltage spikes.  
 limited terminating space 0,75 mm<sup>2</sup>

- Diagram**
- 14 guard open
  - 13 +24 VDC
  - 63 0 VDC
  - 64 unlocked

Ordering code

AZM 161 (1)-(2)(3)K(4)-(5)-(6)(7)

- (1)**
- SK** Screw connection
- CC** Cage clamps
- ST** male connector M12, 8- and 4-poles (*Only for Us: 24 VAC/DC*)
- (2)**
- 12/12** 2 Normally open contact (NO) / 4 Opener (NC)
- 12/11** 2 Normally open contact (NO) / 3 Opener (NC) (*Plug-in connection*)
- 11/12** 2 Normally open contact (NO) / 3 Opener (NC) (*Plug-in connection*)
- (3)**
- without* Latching force 5 N
- R** Latching force 30 N

<b>(4)</b>		
<i>without</i>		Power to unlock
<b>A</b>		Power to lock
<b>(5)</b>		
<i>without</i>		Manual release lateral
<b>ED</b>		Manual release cover-side
<b>EU</b>		Manual release rear
<b>T</b>		Emergency exit lateral
<b>TD</b>		Emergency exit cover-side
<b>TU</b>		Emergency exit rear
<b>N</b>		Emergency release
<b>(6)</b>		
<b>024</b>		Us: 24 VAC/DC
<b>110/230</b>		Us: 110/230 VAC
<b>(7)</b>		
<b>G</b>		with LED ( <i>Only for Us: 24 VAC/DC</i> )

## Documents

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**Operating instructions and Declaration of conformity** (sv) 423 kB, 15.08.2012

Code: mrl\_azm161\_sv

**Operating instructions and Declaration of conformity** (es) 566 kB, 09.03.2016

Code: mrl\_azm161\_es

**Operating instructions and Declaration of conformity** (de) 439 kB, 29.01.2016

Code: mrl\_azm161\_de

**Operating instructions and Declaration of conformity** (pt) 402 kB, 10.07.2014

Code: mrl\_azm161\_pt

**Operating instructions and Declaration of conformity** (en) 443 kB, 29.01.2016

Code: mrl\_azm161\_en

**Operating instructions and Declaration of conformity** (pl) 424 kB, 24.03.2014

Code: mrl\_azm161\_pl

**Operating instructions and Declaration of conformity** (fr) 401 kB, 14.04.2014

Code: mrl\_azm161\_fr

**Operating instructions and Declaration of conformity** (cs) 425 kB, 15.08.2012

Code: mrl\_azm161\_cs

**Operating instructions and Declaration of conformity** (jp) 481 kB, 11.03.2014

Code: mrl\_azm161\_jp

**Operating instructions and Declaration of conformity** (it) 392 kB, 11.03.2014

Code: mrl\_azm161\_it

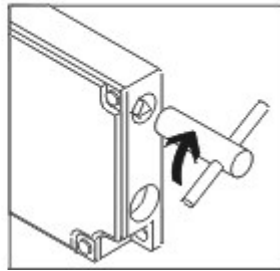
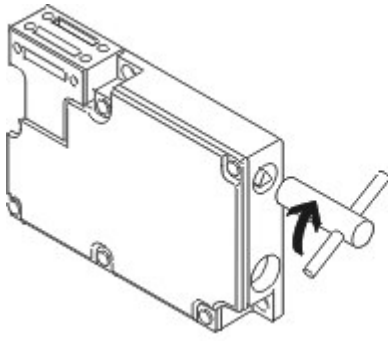
**Operating instructions and Declaration of conformity** (nl) 425 kB, 15.08.2012

Code: mrl\_azm161\_nl

**BG-test certificate** (de) 140 kB, 20.05.2015

Code: z\_m16p01





Operating principle

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## System components

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### Actuator

101145117 - AZM 161-B1



101144416 - AZM 161-B1E



101171859 - AZM 161-B1ES



101175431 - AZM 161-B1F



101171125 - AZM 161-B1S



101173089 - AZM 161-B1-2053 WITH BALL LATCH



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**101164100 - AZM 161-B1-1747 WITH MAGNETIC LATCH**



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**101178199 - AZM 161-B1-2024**



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**101176642 - AZM 161-B1-2177 WITH CENTERING GUIDE**



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**101174113 - AZM 161-B6-2177 WITH CENTERING GUIDE**

- For very small actuating radii



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**101170375 - AZM 161-B6S**



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**101144420 - AZM 161-B6**

- For very small actuating radii



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**Door-handle system**

**AZM 161-ST30**

- Latching handle
- Suitable for all types of guard



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## Accessories



### 101100887 - TRIANGULAR KEY TK-M5

- For manual release using M5 triangular key, available as accessory
- For maintenance, installation, etc.



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### 101149213 - Mounting set MS AZM 161 R/P

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### 101150376 - Mounting set MS AZM 161 P



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

The data and values have been checked thoroughly. Technical modifications and errors excepted.

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