


## Datasheet - AZM 161SK-12/12RKED/TU-024

Solenoid interlock / AZM 161



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

- 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, cover-side and Emergency exit, rear
- cable entries 4 M 16 x 1.5

### Ordering details

Product type description	AZM 161SK-12/12RKED/TU-024
Article number	101187866
EAN Code	4030661357188
eCl@ss	27-27-26-03

### Approval

Approval	BG USA/CAN CCC EAC
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### Classification

Standards	EN ISO 13849-1
B10d Normally-closed contact (NC)	2.000.000
Mission time	20 Years
notice	$MTTF_d = \frac{B_{10d}}{0,1 \times n_{op}}$ $n_{op} = \frac{d_{op} \times h_{cp} \times 3600 \text{ s/h}}{t_{cycle}}$

### Global Properties

Permanent light	AZM 161
Standards	EN 60947-5-1, BG-GS-ET-19
Compliance with the Directives (Y/N) 	Yes
Number of actuating directions	3

Active principle	electromechanical
Duty cycle ED	Magnet 100 %
Materials	
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
- Material of the contacts	Silver
Housing coating	None
Weight	500

## 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
- Max. Cable section	1 x 1.5
Mechanical life	> 1.000.000 operations
notice	All indications about the cable section are including the conductor ferrules.
Emergency unlocking device (Y/N)	Yes
Manual release (Y/N)	Yes
Emergency release (Y/N)	No
Latching force	30
Positive break force	20
positive break travel	10
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
Number of safety contacts	4
Power to unlock	Yes
Power to lock	No
Rated control voltage $U_s$	24 VAC/DC
Power consumption	max. 10 W
Power consumption	max. 10 W
Rated impulse withstand voltage $U_{imp}$	4 kV
Rated insulation voltage $U_i$	250 V
Thermal test current $I_{the}$	6 A
Utilisation category	AC-15: 230 V / 4 A, DC-13: 24 V / 2,5 A
Required rated short-circuit current	1000 A
Max. fuse rating	6 A gG D-fuse To DIN EN 60269-1

## ATEX

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

Miscellaneous data

Applications	<div> sliding safety guard,         </div> <div> removable guard,         </div> <div> hinged safety guard         </div>
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Dimensions

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

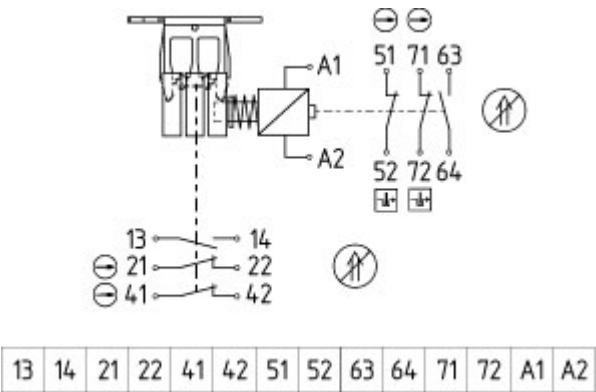
notice






- Manual release
- For maintenance, installation, etc.
  - For manual release using M5 triangular key, available as accessory
  - Top-side (ordering suffix -ED) or rear-side (ordering suffix -EU) mounting possible

- Emergency exit
- The emergency exit is used where an intervention in an already locked hazardous area is required
  - Emergency exit by pressing the red push button
  - Resetting by pulling on the latched button
  - Top-side (ordering suffix -TD) or rear-side (ordering suffix -TU) mounting possible

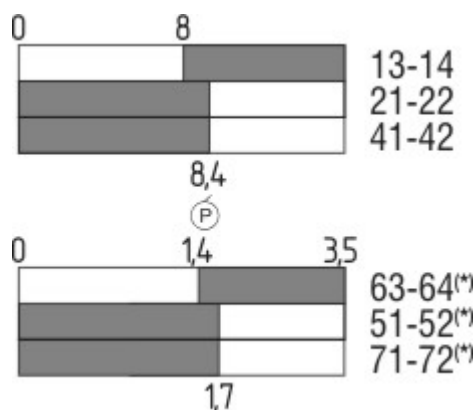
A combination of manual release and emergency exit in different mounting directions in only possible for the following variants: -ED/-TU and -TD/-EU

Diagram



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

Switch travel diagram



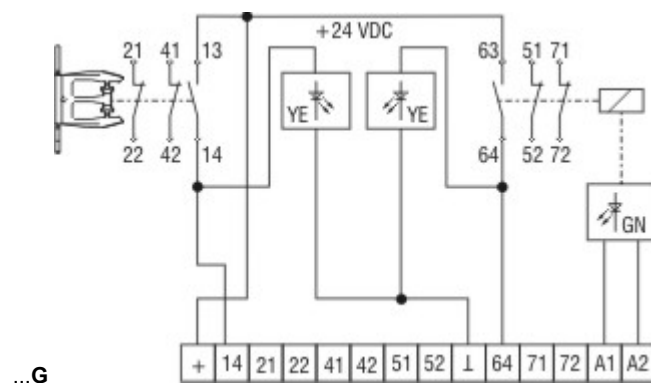
Notes Switch travel diagram

- 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-12/12RKED/TU-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

CC

ST

(2)

12/12

12/11

11/12

(3)

without

Screw connection

Cage clamps

male connector M12, 8- and 4-poles (Only for Us: 24 VAC/DC)

2 Normally open contact (NO) / 4 Opener (NC)

2 Normally open contact (NO) / 3 Opener (NC) (Plug-in connection)

2 Normally open contact (NO) / 3 Opener (NC) (Plug-in connection)

Latching force 5 N

<b>R</b>	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) 544 kB, 31.05.2019

Code: mrl\_azm161\_es

**Operating instructions and Declaration of conformity** (de) 490 kB, 22.05.2019

Code: mrl\_azm161\_de

**Operating instructions and Declaration of conformity** (pt) 525 kB, 29.01.2019

Code: mrl\_azm161\_pt

**Operating instructions and Declaration of conformity** (cn) 773 kB, 05.04.2019

Code: mrl\_azm161\_cn

**Operating instructions and Declaration of conformity** (en) 524 kB, 22.05.2019

Code: mrl\_azm161\_en

**Operating instructions and Declaration of conformity** (pl) 546 kB, 20.02.2019

Code: mrl\_azm161\_pl

**Operating instructions and Declaration of conformity** (fr) 526 kB, 24.05.2019

Code: mrl\_azm161\_fr

**Operating instructions and Declaration of conformity** (cs) 464 kB, 23.08.2017

Code: mrl\_azm161\_cs

**Operating instructions and Declaration of conformity** (jp) 728 kB, 23.08.2016

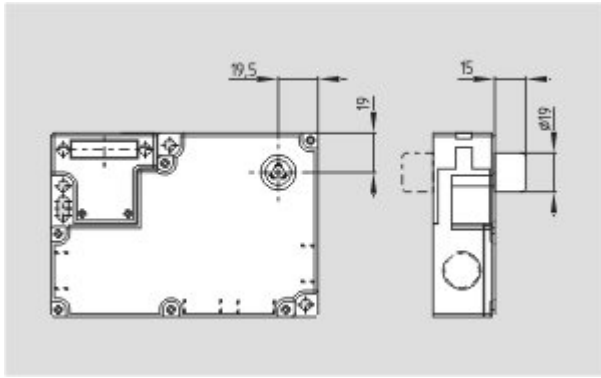
Code: mrl\_azm161\_jp

**Operating instructions and Declaration of conformity** (it) 518 kB, 28.05.2019

Code: mrl\_azm161\_it

**Operating instructions and Declaration of conformity** (nl) 527 kB, 08.02.2019





Operating principle

System components

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



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



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



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



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

- For very small actuating radii



**101170375 - AZM 161-B6S**



**101144420 - AZM 161-B6**

- For very small actuating radii

## Door-handle system

### **AZM 161-STS30**

- Latching handle
- Suitable for all types of guard
- Max. 110 °C





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## Accessories



### 101100887 - TRIANGULAR KEY TK-M5

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



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



### 101150376 - Mounting set MS AZM 161 P

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

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