

2.
2.1

Solenoid interlocks
AZM 161 range

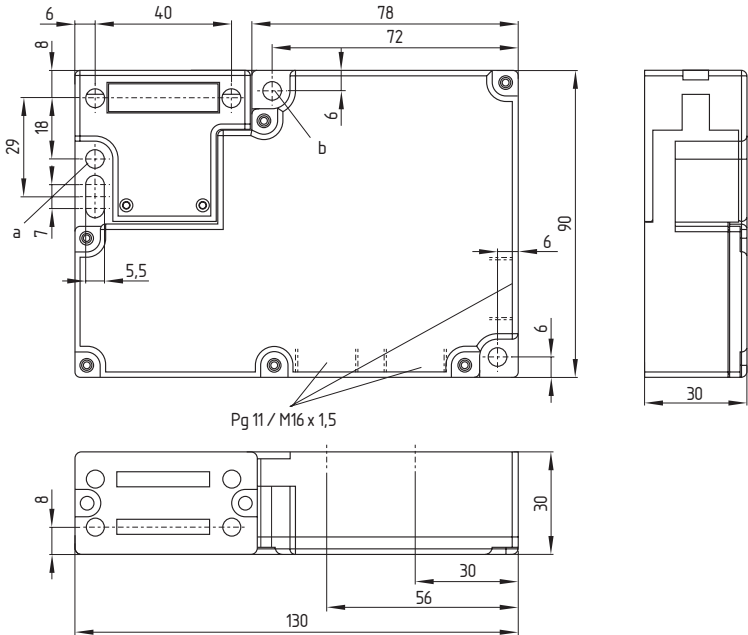


Features

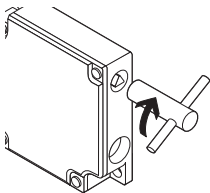
- Thermoplastic enclosure
- Manual and emergency release
- Long life
- Double insulated
- High holding force 2,000 N
- 30 N latching force
- Wiring compartment
- Actuation on de-energisation or energisation
- 3 cable entries
- Actuating play 5.5 mm in direction of actuation

Voltage variants

- 24 VAC/DC
 - 110 VAC/DC
 - 230 VAC/DC
- Always state required supply voltage when ordering

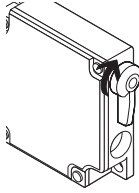


Manual release



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

Emergency release



- For cases of danger
- Fitting only within the guarded area

Approvals



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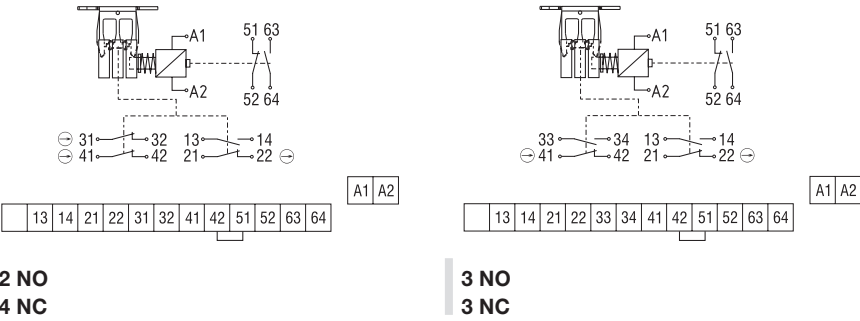
Solenoid interlocks
AZM 161 range



Info

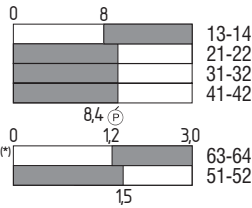
- The applicable ordering suffix is added at the end of the part number of the interlock.
- Available with connector on enquiry
 - With M 16 x 1.5 cable entry, ordering suffix -M16

Actuation on
de-energisation

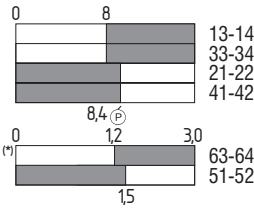


Contacts/
Switch travel

With screw terminals
With cage clamps

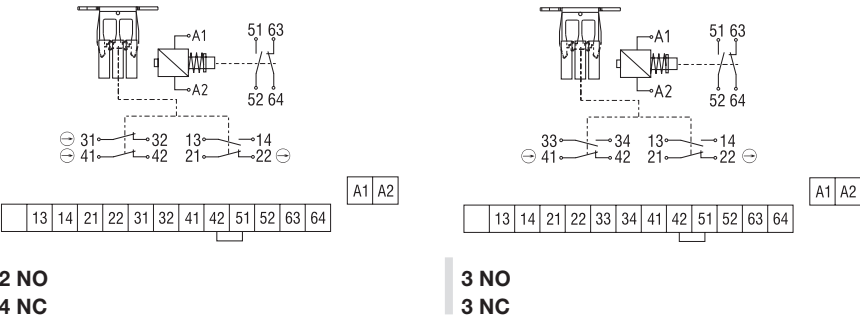


AZM 161SK-24rk
AZM 161CC-24rk



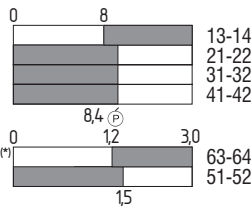
AZM 161SK-33rk
AZM 161CC-33rk

Actuation on
energisation

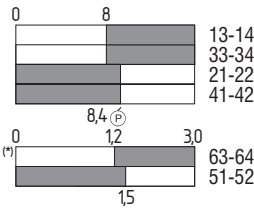


Contacts/
Switch travel

With screw terminals
With cage clamps



AZM 161SK-24rka
AZM 161CC-24rka



AZM 161SK-33rka
AZM 161CC-33rka

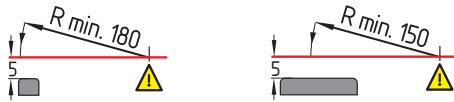
Notes

(*) The contacts 51-52 and 63-64 are solenoid locking principle or de-energisation of the coil A1-A2. Circuit diagrams show de-energised condition with actuator inserted (0 in switch travel diagram). Interlocks with actuation on energisation may only be used in special cases after a thorough evaluation of the accident risk, since the guarding device can immediately be opened on failure of the electrical power supply or when the main switch is opened. Actuators must be ordered separately. A selection of suitable actuators can be found in 2.2.

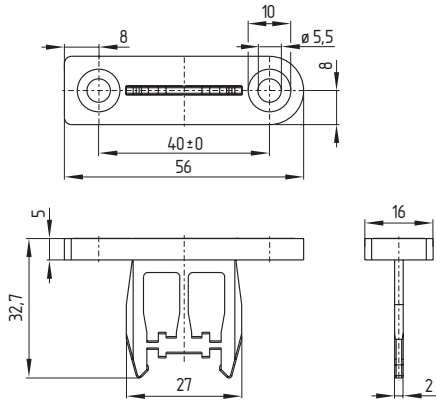


Straight actuator AZM 161-B1

- On hinged guards, minimum actuating radius 180 mm at 90° to the plane of the actuator
- Similarly, minimum actuating radius 150 mm in line with the plane of the actuator



- The axis of the hinge should be 5 mm above the top edge of the solenoid interlock and in the same plane

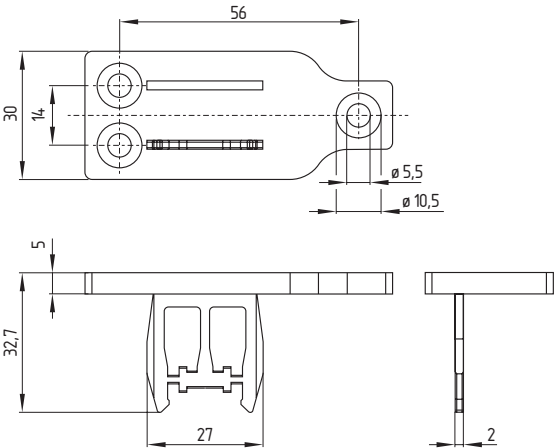


Straight actuator AZM 161-B1E

- On hinged guards, minimum actuating radius 180 mm at 90° to the plane of the actuator
- Similarly, minimum actuating radius 150 mm in line with the plane of the actuator



- The axis of the hinge should be 5 mm above the top edge of the solenoid interlock and in the same plane
- Mounting details as for AZM 160-B1S

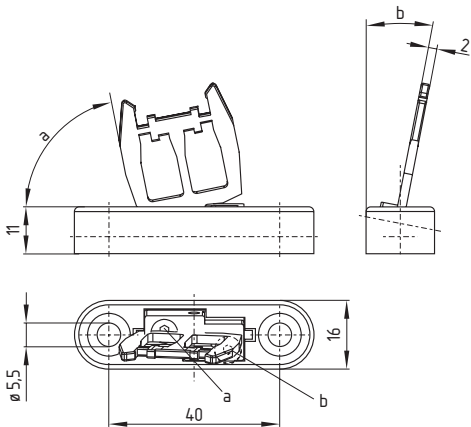


Adjustable actuator AZM 161-B6

- Adjustable actuator for very small actuating radii.
- On hinged guards, minimum actuating radius 95 mm at 90° to the plane of the actuator, adjustable using an hexagonal key wrench 2.5 mm A/F (b)
- Similarly, minimum actuating radius 95 mm in line with the plane of the actuator, adjustable using an hexagonal key wrench 2.5 mm A/F (a)



- The axis of the hinge should be 11 mm above the top edge of the solenoid interlock and in the same plane





Tamperproof screws



**Screw
lengths**

Countersunk-head screws with unidirectional slots

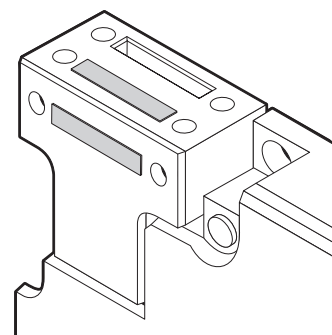
- M 5 x 12, Id. No.: 402 530 3000
- M 5 x 16, Id. No.: 402 530 3001
- M 5 x 20, Id. No.: 402 530 3002

Supplied in sets of 2 screws

- To mount the actuator
- Higher protection against tampering with interlock
- Protect against unauthorised removal of actuator
- Available in various lengths

Slot sealing plug AZM 161

- To cover unused actuator slots
- For protection against the ingress of coarse dirt
- Simple clip-in fitting
- Quantity required: 3 per interlocking device





Mounting set MS AZM 161

- For simple mounting on profile systems
- Mounting of the solenoid interlock parallel or right-angled to the safety guard

Hinweis

- The mounting sets can only be used in conjunction with actuator AZM 161-B6.
- Solenoid interlock and actuator are **not included** in delivery.

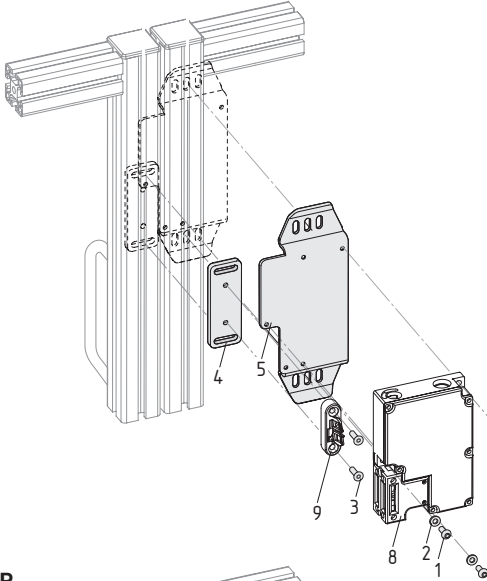
Legend

- 1 Roundhead screw M5 x 16 per ISO 7380
- 2 Washer per DIN 125-5,3
- 3 Counter sunk screw M5 x 16 per DIN 7991
- 4 Mounting plate AZ 16/AZM 161
- 5 U-profile AZM 161
- 6 Mounting angle AZM 161
- 7 Roundhead screw M5 x 10 per ISO 7380

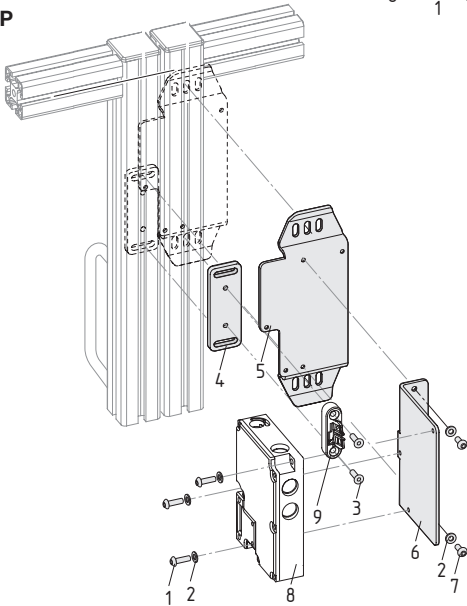
Not provided:

- 8 Solenoid Interlock AZM 161
- 9 Actuator AZM 161-B6

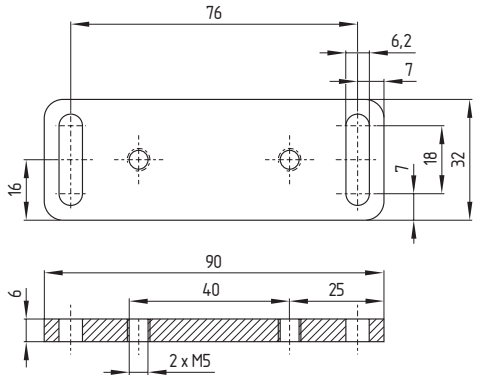
MS AZM 161 P
Mounting
parallel to
safety guard



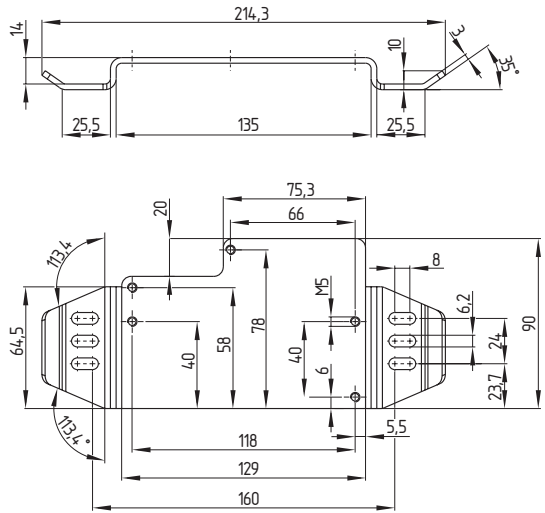
MS AZM 161 R/P
Mounting
right-angled to
safety guard



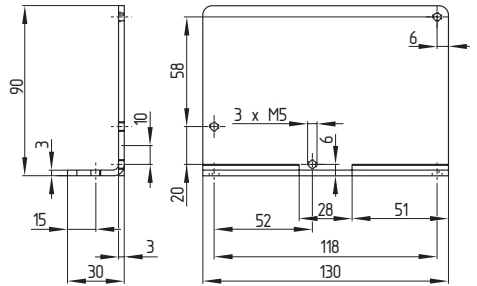
Mounting plate
AZ 16/AZM 161



U-profile
AZM 161



Mounting angle
AZM 161





	AZM 161	AZM 170 AZM 170i AZM 170 SK	AZM 170-ST AZM 170i-ST
Standards:	IEC/EN 60947-5-1/DIN VDE0660-200; EN 1088; BG-GS-ET-19		
Enclosure material:	Glass-fibre reinforced thermoplastic, self-extinguishing		
Actuator and latching bolt:	Stainless steel 1.4301		
Protection class:	IP 67		
	to IEC/EN 60529/DIN VDE 0470-1		
Contact material:	Silver		
Contact type:	Changeover with double break Zb, or 2 NC or 3 NC or 4 NC contacts, with galvanically separated contact bridges		Changeover with double break Zb, with galvanically separated contact bridges
Switching system:	⊖ IEC 60947-5-1; ⊕ BG-GS-ET-19; slow action, NC contacts with positive break		
Termination:	Screw terminals or cage clamps max. 1.5 mm ² (incl. conductor ferrules)	Cut clamp terminals (IDC method) 0.75 ... 1.0 mm ² flexible Ordering suffix SK: Screw terminals 1.5 mm ² flexible	Connector M 12 x 1, four pole
Rated impulse			
withstand voltage U _{imp} :	4 kV		
Rated insulation voltage U _i :	250 V		
Thermal test current rating I _{th} :	10 A		
Utilisation category:	AC-15; DC-13	AC-15	
Rated operating			
current/voltage I _e /U _e :	2.5 A/24 VDC; 4 A/230 VAC	4 A/230 V	
Max. fuse rating:	6 A gL/gG D-fuse		
Positive break travel:	8.8 mm	11 mm	
Positive break force:	10 N for each NC contact fitted (depending on the setting of the ball latch)	6 N for each NC contact fitted	
Solenoid duty rating:	Continuous operation		
Rated control voltage U _S :	24 VAC/DC or 110 VAC/DC, 50/60 Hz or 230 VAC/DC, 50/60 Hz	24 VAC/D or 110 VAC/DC, 50/60 Hz or 230 VAC/DC, 50/60 Hz	
Consumption:	Max. 10 W		
Ambient temperature:	– 25 °C ... + 60 °C		
Mechanical life:	> 1 million operations		
Holding force F _{max.} :	2,000 N	1,000 N	
Holding force of integral ball latch:	–		
Latching force:	30 N for Ordering Suffix r		

