

**2.**  
**2.19**

**Solenoid interlocks**  
**AZM 190 range**

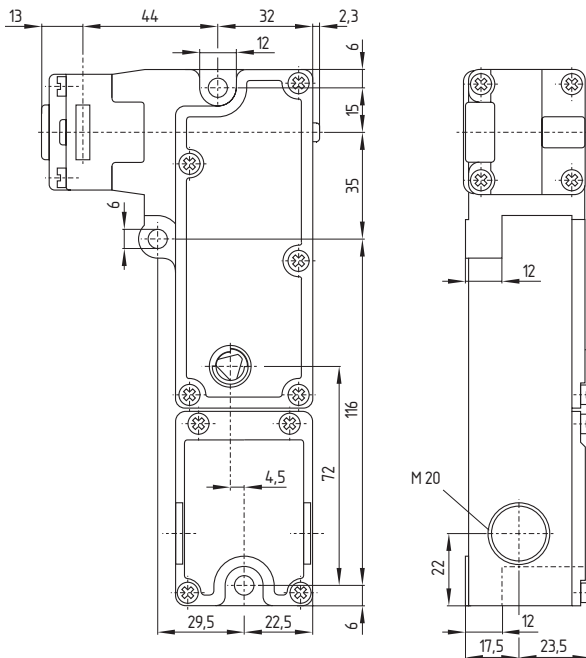


**Features**

- Thermoplastic enclosure
- Manual / Emergency release
- Long life
- Actuation on de-energisation or energisation
- Slim design, particularly suitable for fitting on hinged doors, aluminium profiles and fencing
- Actuating head can be turned in 4 steps of 90°
- Sealing mechanism to prevent the ingress of dirt
- 2 cable entries
- Wiring compartment
- Holding force 1,500 N

**Voltage variants**

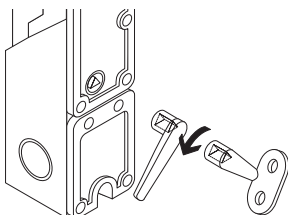
- 24 VDC
  - 24 VAC
  - 48 VAC
  - 110 VAC
  - 230 VAC
- Always state required supply voltage when ordering



**Approvals**

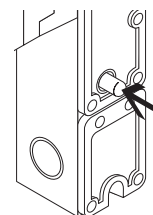


**Manual release**



- For manual release using triangular key
- For maintenance, setting-up, etc.

**Emergency release**

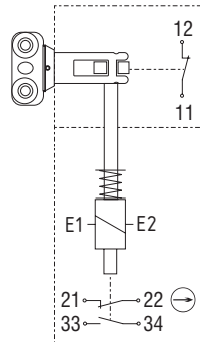


- In case of danger
- Fitting only within the protected area

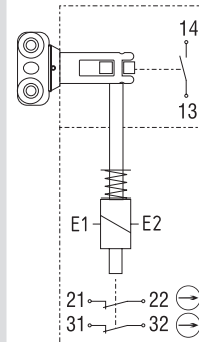
**2. Solenoid interlocks**  
**2.19 AZM 190 range**



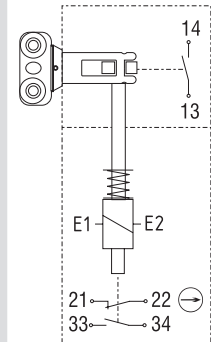
**Actuation on de-energisation**



**1 NC**  
**1 NC / 1 NO**

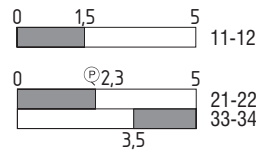


**1 NO**  
**2 NC**

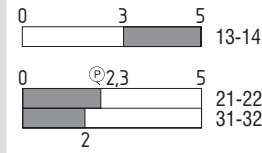


**1 NO**  
**1 NC / 1 NO**

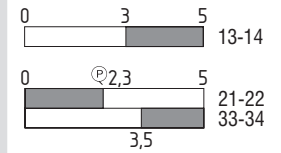
**Contacts/  
Switch travel**



**AZM 190-11/01rk**  
**AZM 190-11/01rkn**



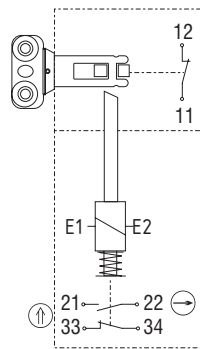
**AZM 190-02/10rk**  
**AZM 190-02/10rkn**



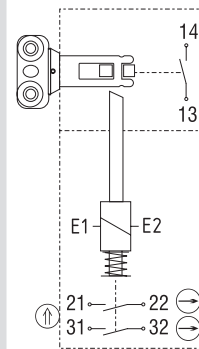
**AZM 190-11/10rk**  
**AZM 190-11/10rkn**

With manual release  
With emergency release

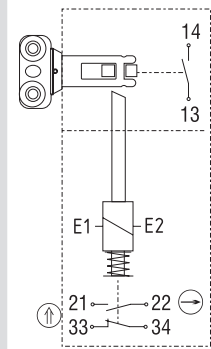
**Actuation on energisation**



**1 NC**  
**1 NC / 1 NO**

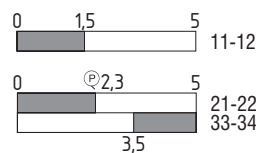


**1 NO**  
**2 NC**

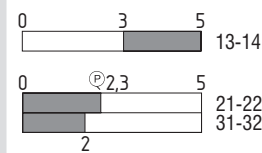


**1 NO**  
**1 NC / 1 NO**

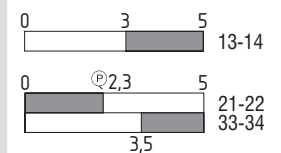
**Contacts/  
Switch travel**



**AZM 190-11/01rka**



**AZM 190-02/10rka**



**≠AZM 190-11/10rka**

With manual release

**Notes**

Circuit diagrams show de-energised condition with actuator inserted (0 in switch travel diagram). Actuators must be ordered separately. A selection of suitable actuators can be found in 2.20. 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.

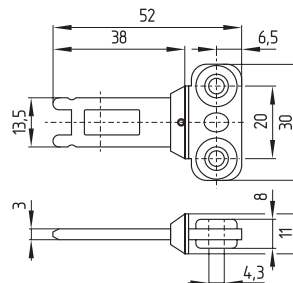
**Info**

- LED version on enquiry



### Straight actuator AZM 190-B1

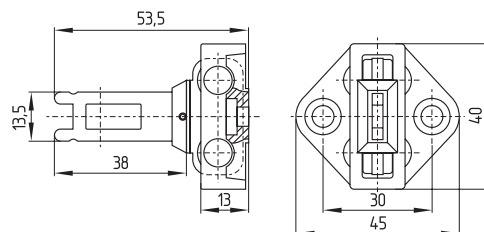
- Particularly suitable for sliding doors
- Compensation for tolerances by means of rubber buffers
- Play of key in interlocked condition approx. 5 mm
- On hinged guards, minimum actuating radius at 90° to the plane of the actuator 175 mm, minimum actuating radius in line with the plane of the actuator 650 mm



- The axis of the hinge should be 7.5 mm above the top edge of the solenoid interlock and in the same plane

### Actuator with front fixing AZM 190-B5

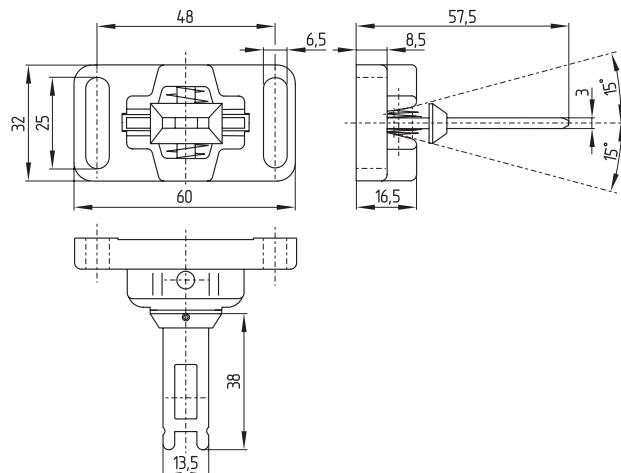
- Particularly suitable for front mounting e.g. on hinged guards
- Play of key in interlocked condition approx. 5 mm
- On hinged guards, minimum actuating radius at 90° to the plane of the actuator 250 mm, minimum actuating radius in line with the plane of the actuator 650 mm



- The axis of the hinge should be 15.5 mm above the top edge of the solenoid interlock and in the same plane

### Adjustable actuator AZM 190-B3/2x15

- For very small actuating radii at 90° to or in line with the plane of the actuator
- Play of key in interlocked condition approx. 5 mm
- On hinged guards, minimum actuating radius at 90° to the plane of the actuator 275 mm, minimum actuating radius in line with the plane of the actuator 350 mm



- The axis of the hinge should be 20 mm above the top edge of the solenoid interlock and in the same plane

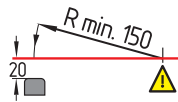
**2.**  
**2.20**

**Solenoid interlocks**  
**Actuators**

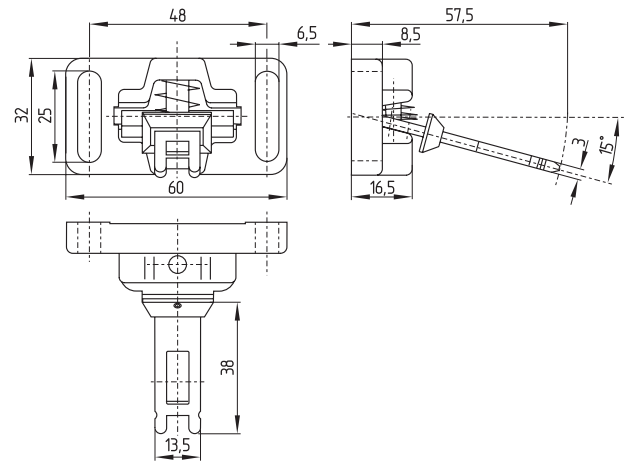


**Adjustable actuator AZM 190-B3/15**

- With actuator preset at 15° for small actuating radii
- Play of key in interlocked condition approx. 5 mm
- On hinged guards, minimum actuating radius at 90° to the plane of the actuator 150 mm

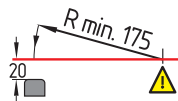


- The axis of the hinge should be 20 mm above the top edge of the solenoid interlock and in the same plane

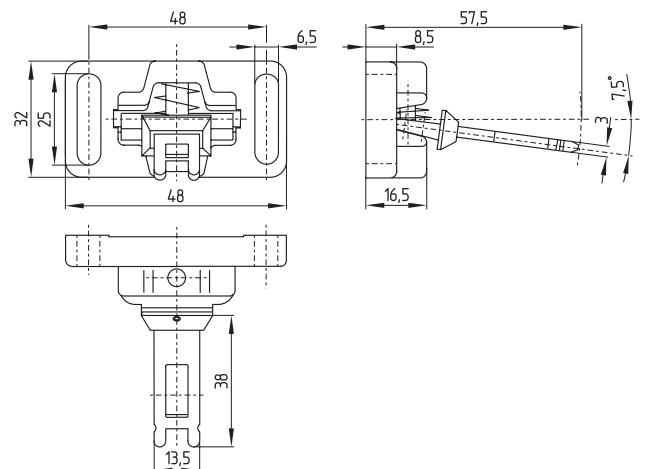


**Adjustable actuator AZM 190-B3/7.5**

- With actuator preset at 7.5°
- Play of key in interlocked condition approx. 5 mm
- On hinged guards, minimum actuating radius at 90° to the plane of the actuator 175 mm



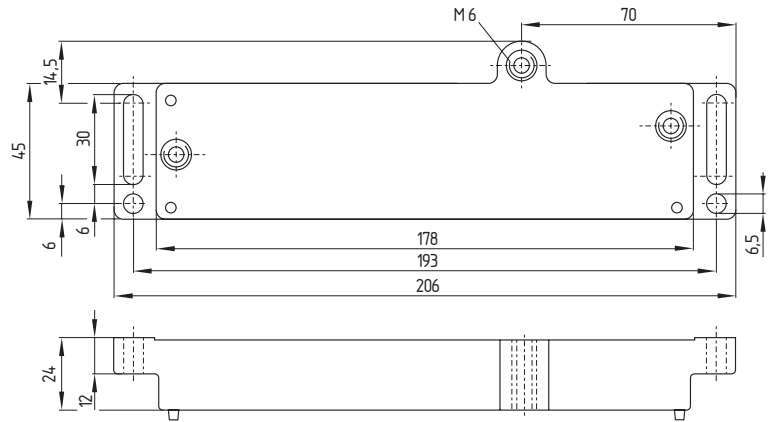
- The axis of the hinge should be 20 mm above the top edge of the solenoid interlock and in the same plane





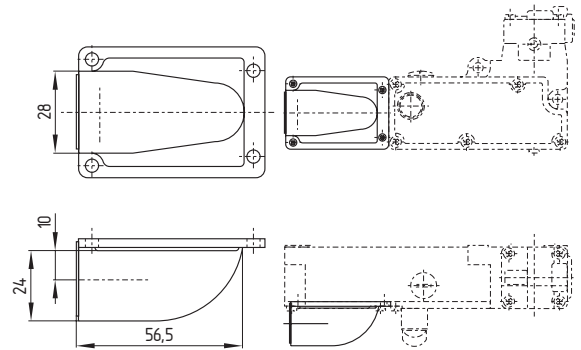
**Mounting plate MP 190**

- For simple mounting of an AZM 190 on profile systems



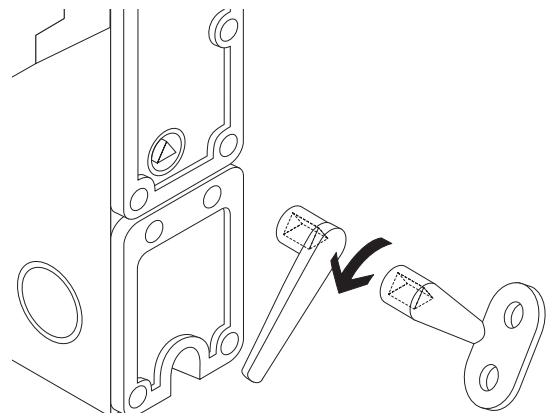
**Additional entry ZPG 190**

- Cover with Pg cable entry



**Triangular key M3**

- For manual release
- Part number:  
 Straight: Triangular key M3 (included in delivery)  
 With lever: Triangular key M3-a



## 2. Solenoid interlocks

### 2.27 Technical data



	AZM 170-F05 AZM 170i-F05	AZM 170-Z05 AZM 170i-Z05	AZM 190
Standards:	IEC/EN 60947-5-1/DIN VDE0660-200; EN 1088; BG-GS-ET-19		
Enclosure material:	Glass-fibre reinforced thermoplastic, self-extinguishing		Glass-fibre reinforced thermoplastic
Actuator and latching bolt:	Stainless steel 1.4301		Zinc-plated metal / aluminium
Protection class:	IP 65 to IEC/EN 60529/DIN VDE 0470-1		IP 67
Contact material:	Silver		
Contact type:	Changeover with double break Zb, with galvanically separated contact bridges		Changeover with double break Zb with galvanically isolated moving contacts
Switching system:	⊖ IEC 60947-5-1; ⊕ BG-GS-ET-19; slow action, NC contacts with positive break		
Termination:	Removable terminal block with cage clamps max. 1.5 mm <sup>2</sup>		Screw terminals for max. 2.5 mm <sup>2</sup> cables (including conductor ferrules)
<b>Rated impulse</b>			
withstand voltage U <sub>imp</sub> :	4 kV		2.5 kV
Rated insulation voltage U <sub>i</sub> :	250 V		400 V
Thermal test current I <sub>th</sub> :	10 A		
Utilisation category:	AC-15		AC-15; DC-13
<b>Rated operating</b>			
current/voltage I <sub>e</sub> /U <sub>e</sub> :	4 A/230 V		8 A/230 V, 5 A/24 VDC
Max. fuse rating:	6 A gL/gG D-fuse		10 A gL/gG D-fuse
Positive break travel:	11 mm		2 x 3.5 mm
Positive break force:	6 N for each NC contact fitted		20 N
<b>Solenoid duty rating:</b> Continuous operation			
Rated control voltage U <sub>S</sub> :	24 VAC/DC or 110 VAC/DC, 50/60 Hz or 230 VAC/DC, 50/60 Hz		24 VDC; 48 VAC; 110 VAC; 230 VAC
Consumption:	Max. 10 W		Max. 8.5 W
Ambient temperature:	0 °C ... + 55 °C		0 °C ... + 50 °C
Mechanical life:	> 1 million operations		2 million operations
<b>Holding force F<sub>max</sub>:</b> 1,000 N			
<b>Holding force of integral ball latch:</b> –			
<b>Latching force:</b> 30 N			

