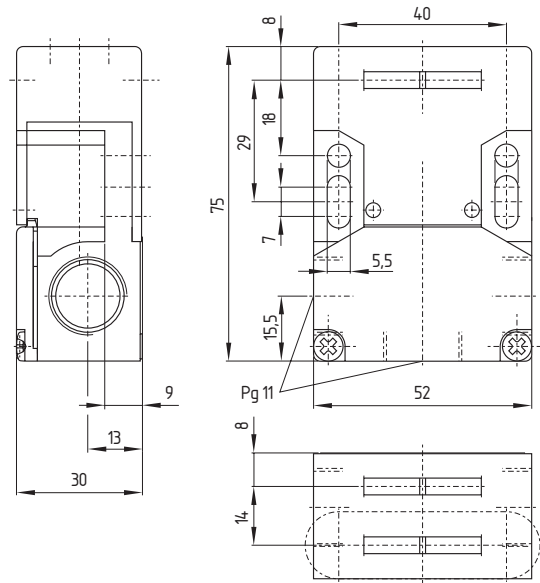


**1. Safety switches with separate actuator / Class 2**  
**1.1 AZ 15 range**



**Features**

- Thermoplastic enclosure
- Multiple coding
- Long life
- Double insulated
- 3 cable entries
- Large wiring compartment
- High level of contact reliability with low voltages and currents
- Not sensitive to dirty conditions by virtue of patented roller system
- Slotted holes for adjustment, circular holes for location

**Contacts/  
Switch travel**

**1 NC**

11-12

With ejection force  
With latching force 30 N

**AZ 15zvK**  
**AZ 15zvrK**

**Notes**

Inserted position of actuator = 0 in switch travel diagram.  
Actuators must be ordered separately.  
A selection of suitable actuators can be found in 1.4.

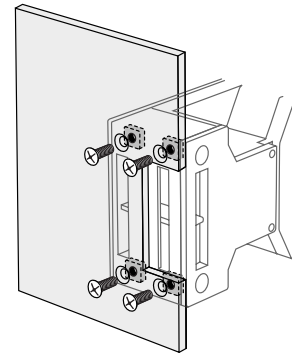
# 1. Safety switches with separate actuator / Class 2

## 1.1 AZ 15 range



### Version with M5 nuts

- For front fixing of safety switch, e.g. on sheet-steel covers
- Suitable for use with actuators AZ 15/16-B1, -B2, -B3 and -B6
- Nuts cannot be retrofitted
- Ordering suffix -1762



### Ordering details

To order, select the part number of the desired switch from the table "Contacts/Switch travel", e.g. safety switch with latching force 30 N: AZ 15zvrk

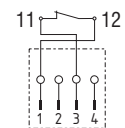
Actuators and accessories are ordered separately, e.g. straight actuator with magnetic latch: AZ 15/16-B1-1747

The applicable ordering suffix is added at the end of the part number of the safety switch. Further variants not shown here are available on enquiry.

### Plug-in connection

- Available with connector M 12 x 1, ordering suffix -ST
- For suitable connector plugs, see 1.5

### Diagram



### Info

- With cable entry M 16 x 1.5, ordering suffix -M16
- Available with 5 N latching force, ordering suffix -2254
- With gold-plated contacts (0.3 µm), ordering suffix -1637
- Alignment kit to simplify fitting, part number: Alignment kit AZ 15/16

### Approvals



1.  
1.4

Safety switches with separate actuator / Class 2  
Actuators

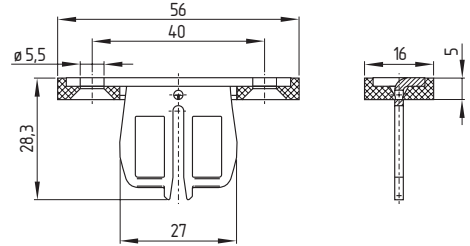


**Straight actuator AZ 15/16-B1**

- Particularly suitable for sliding doors
- Minimum actuating radius on hinged guards 150 mm

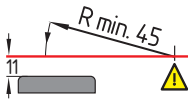


- The axis of the hinge should be 5 mm above the top edge of the safety switch and in the same plane

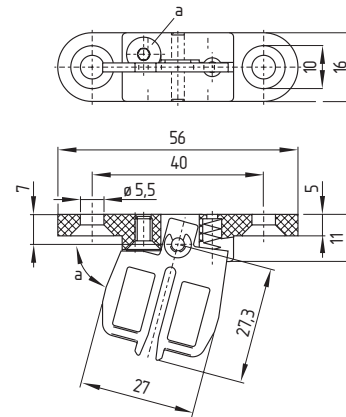


**Adjustable actuator AZ 15/16-B2**

- For very small actuating radii in line with the plane of the actuator
- Actuating radius adjustable, minimum 45 mm, 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 safety switch and in the same plane

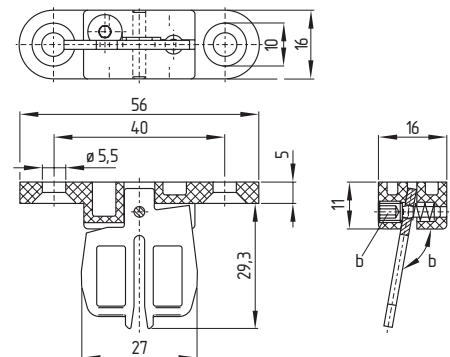


**Adjustable actuator AZ 15/16-B3**

- For very small actuating radii at 90° to the plane of the actuator
- Actuating radius adjustable, minimum 32 mm, using an hexagonal key wrench 2.5 mm A/F (b)



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



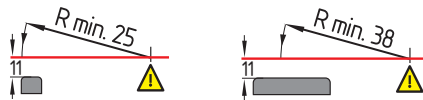
# 1. Safety switches with separate actuator / Class 2

## 1.4 Actuators

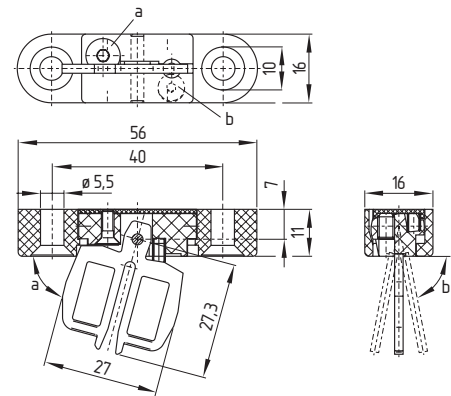


### Adjustable actuator AZ 15/16-B6

- For very small actuating radii in line with or at 90° to the plane of the actuator
- Actuating radius adjustable using an hexagonal key wrench 2.5 mm A/F (a and b), minimum 25 mm at 90° to the plane of the actuator and minimum 38 mm in line with the plane of the actuator

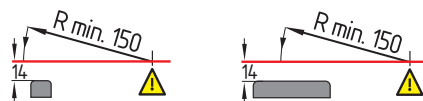


- The axis of the hinge should be 11 mm above the top edge of the safety switch and in the same plane

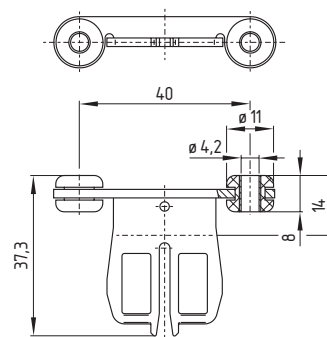


### Straight actuator with rubber mountings AZ 15/16-B1-2245

- Particularly suitable for sliding doors
- Minimum actuating radius on hinged guards 150 mm
- Damps vibration on guard devices



- The axis of the hinge should be 14 mm above the top edge of the safety switch and in the same plane
- Max. 200 Ncm tightening torque for fixing the actuator



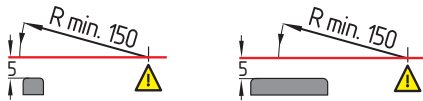
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Safety switches with separate actuator / Class 2  
Actuators

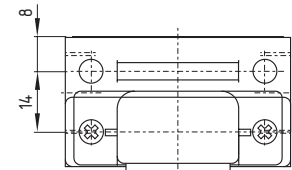
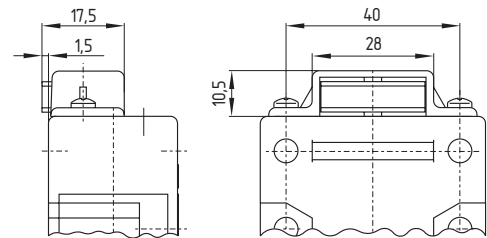
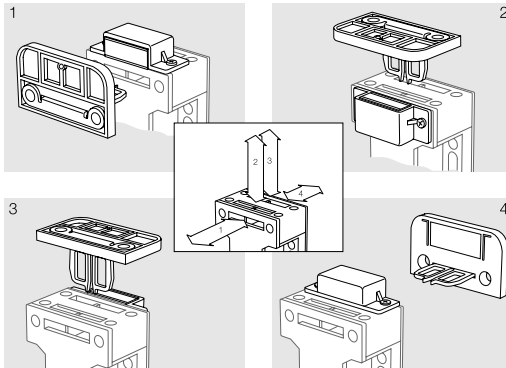
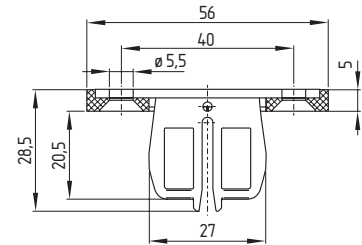
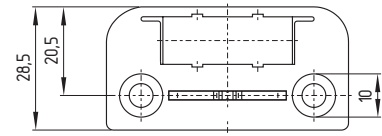


**Straight actuator with magnetic latch AZ 15/16-B1-1747**

- For play-free interlocking of light guards
- Latching force 30 N
- The magnetic latch can be easily fitted in any actuating plane
- Suitable for retrofitting
- Particularly suitable for sliding doors
- Minimum actuating radius on hinged guards 150 mm



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



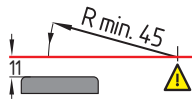
# 1. Safety switches with separate actuator / Class 2

## 1.4 Actuators

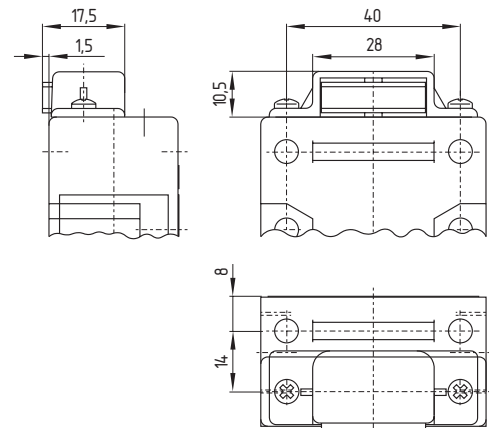
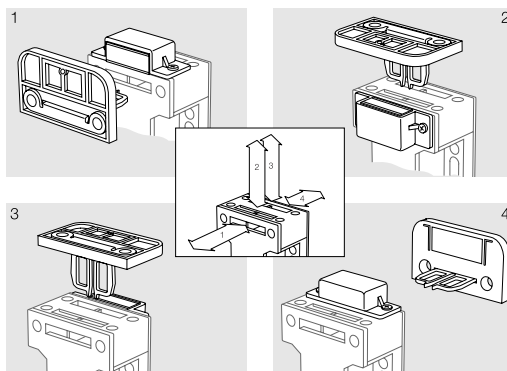
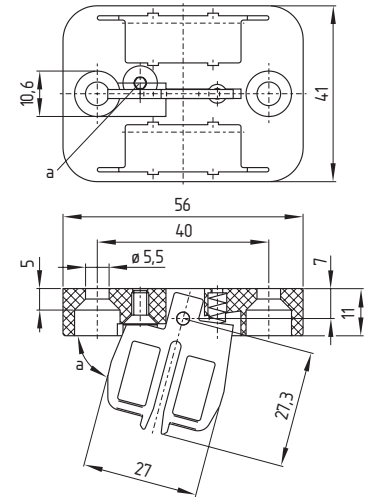


### Adjustable actuator with magnetic latch AZ 15/16-B2-1747

- For play-free interlocking of light guards
- Latching force 30 N
- The magnetic latch can be easily fitted in any actuating plane
- Suitable for retrofitting
- For very small actuating radii in line with the plane of the actuator
- Actuating radius adjustable, minimum 45 mm, 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 safety switch and in the same plane



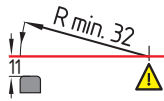
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Safety switches with separate actuator / Class 2  
Actuators

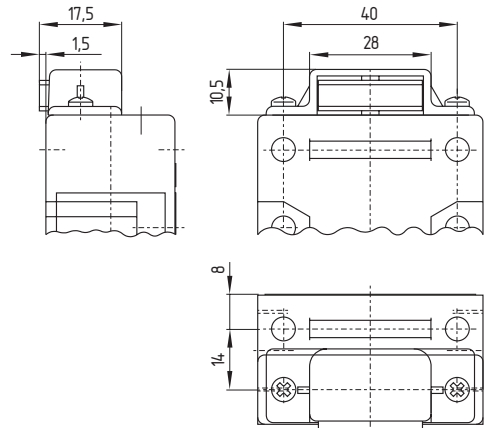
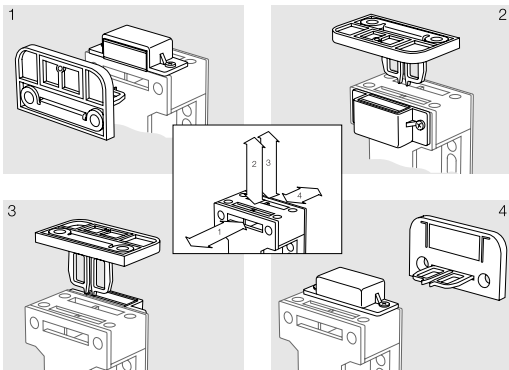
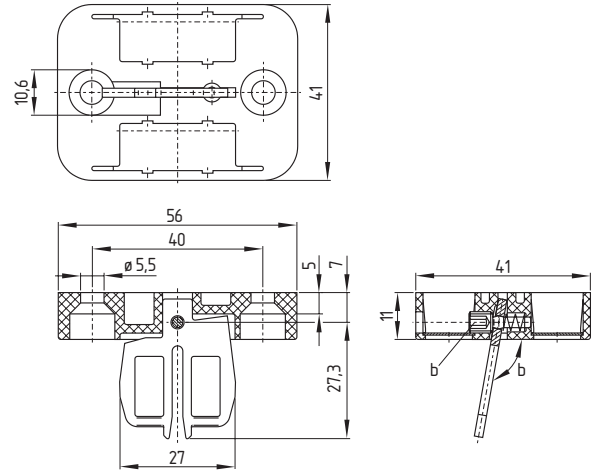


Adjustable actuator with magnetic latch AZ 15/16-B3-1747

- For play-free interlocking of light guards
- Latching force 30 N
- The magnetic latch can be easily fitted in any actuating plane
- Suitable for retrofitting
- For very small actuating radii at 90° to the plane of the actuator
- Actuating radius adjustable, minimum 32 mm, using an hexagonal key wrench 2.5 mm A/F (b)



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



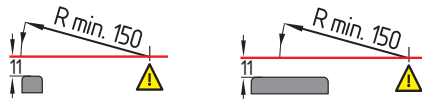
**1.**  
**1.4**

**Safety switches with separate actuator / Class 2 Actuators**

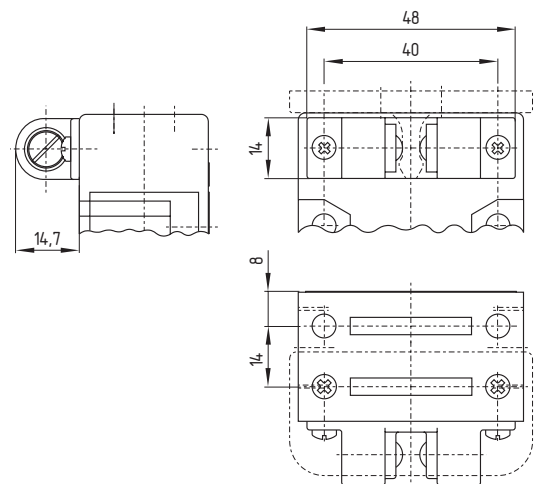
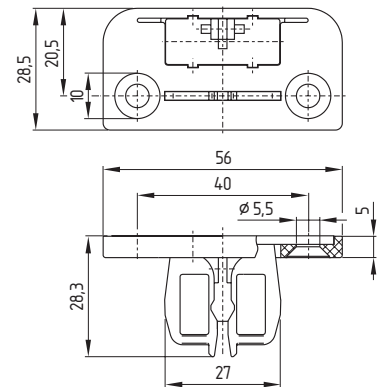
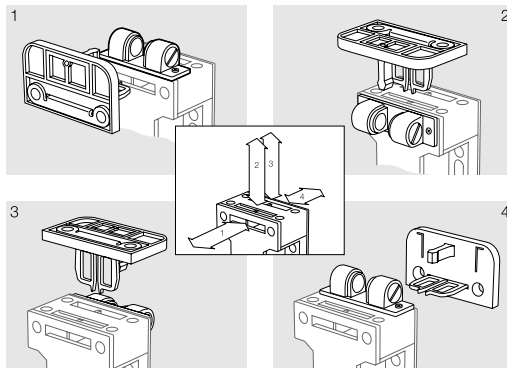


**Straight actuator with ball latch AZ 15/16-B1-2053**

- For interlocking of light to medium-weight guards
- Latching force adjustable up to 100 N
- Particularly suitable for sliding doors
- Minimum actuating radius on hinged guards 150 mm



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





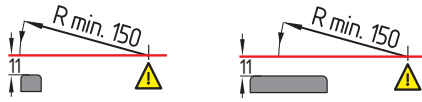
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Safety switches with separate actuator / Class 2  
Actuators

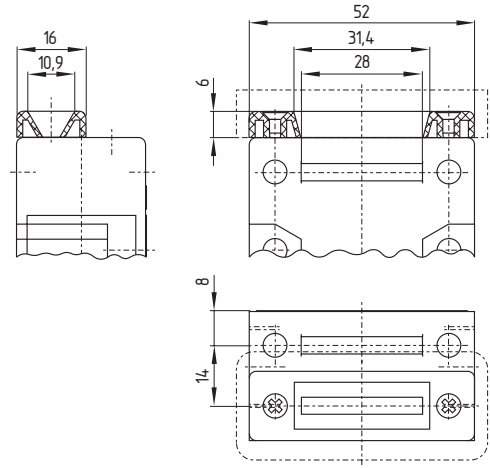
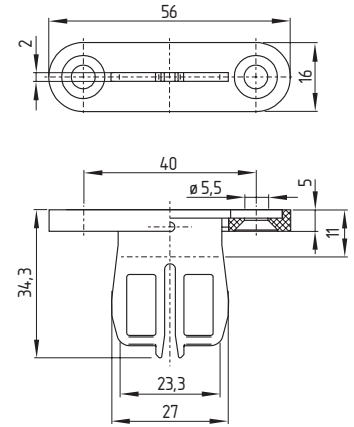
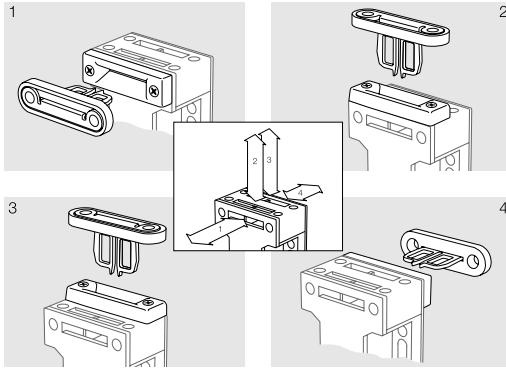


Straight actuator with centering guide AZ 15/16-B1-2177

- For interlocking of light, unguided guards
- Particularly suitable for sliding doors
- Minimum actuating radius on hinged guards 150 mm



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



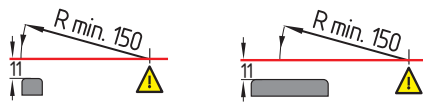
**1.**  
**1.4**

**Safety switches with separate actuator / Class 2 Actuators**

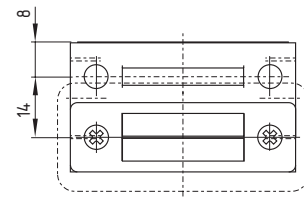
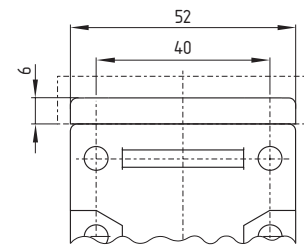
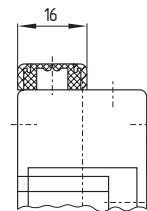
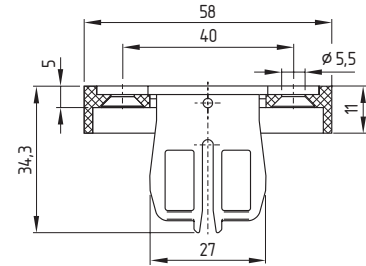
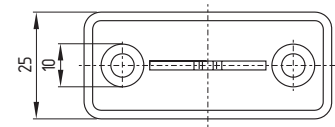
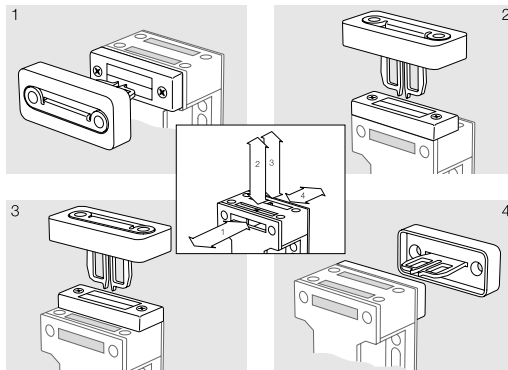


**Straight actuator with slot lip-seal AZ 15/16-B1-2024**

- For protection against the ingress of coarse dirt
- Particularly suitable for sliding doors
- Minimum actuating radius on hinged guards 150 mm



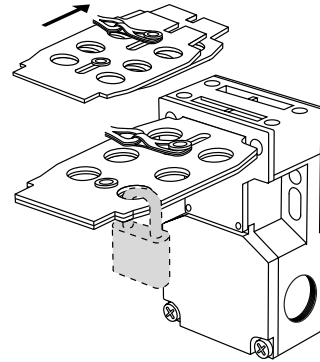
- The axis of the hinge should be 11 mm above the top edge of the safety switch and in the same plane





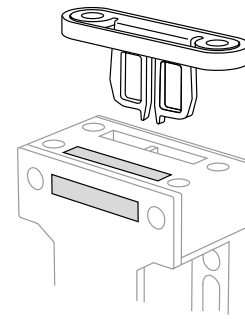
### Lockout tag SZ 16/335

- To prevent inadvertent closing, e.g. during maintenance
- For complex plant
- Prevents actuation of the switch
- Up to 6 padlocks can be fitted
- The lockout tag can be fixed on a chain near to the safety switch



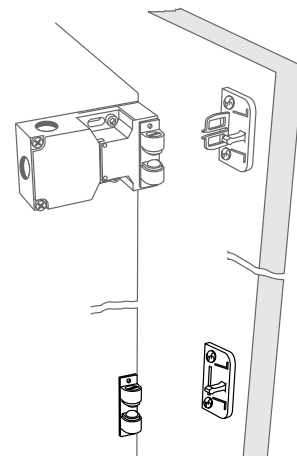
### Slot sealing plug AZ 15/16-1476

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



### Ball latch 2053-2

- Additional ball latch for stable latching of light to medium-weight guards
- For separate mounting on the guard
- Latching force adjustable up to 100 N





### Tamperproof screws



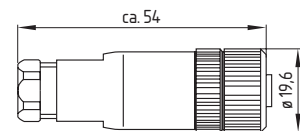
**Screw lengths**

Countersunk-head screws  
 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

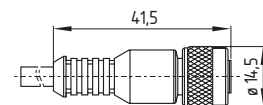
- To mount the actuator
- Higher protection against tampering with interlock
- Protects against unauthorised removal of actuator
- Available in various lengths

### Connector plug M 12 x 1 for AZ 16-ST with connector



- Straight connector plug
- Unwired
- A-coding: part number Series 713

### Connector plug M 12 x 1 for AZ 16-ST with connector



- Straight connector plug with pre-wired cable
- Cable 5 m long
- Conductors: 4 x 0.75 mm<sup>2</sup>
- A-coding: part number Series 763

# 1. Safety switches with separate actuator / Class 2

## 1.5 Accessories



### Mounting set MS AZ 15/16

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

#### Hinweis

- The mounting sets can only be used in conjunction with actuator AZ 15/16-B6.
- Safety switch and actuator are **not included** in delivery.

#### Legend

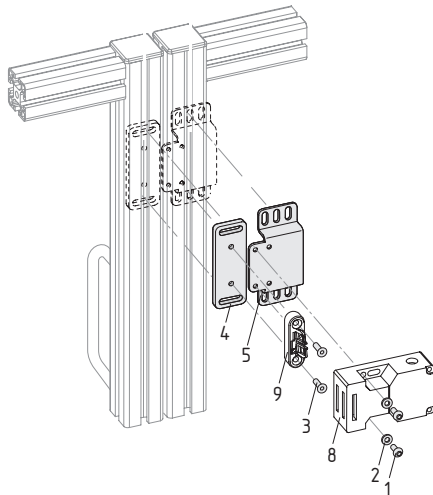
- 1 Roundhead screw M5 x 16 per ISO 7380
- 2 Washer per DIN 125-5,3
- 3 Counter sunk screw M5 x 16 per DIN 7991
- 4 Mounting plate AZ 16/AZM 161
- 5 U-profile AZ 16
- 6 Mounting angle AZ 16
- 7 Roundhead screw M5 x 10 per ISO 7380

#### Not provided:

- 8 Safety switch AZ 15/16
- 9 Actuator AZ 15/16-B6

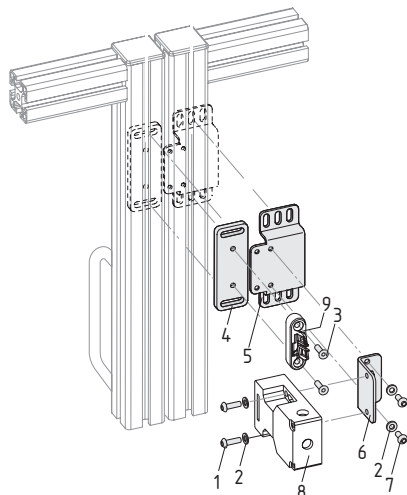
#### MS AZ 15/16 P

Mounting parallel to safety guard

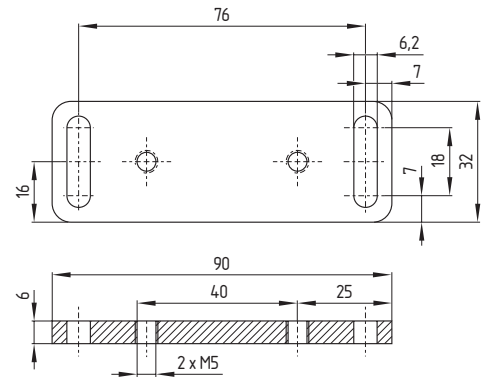


#### MS AZ 15/16 R/P

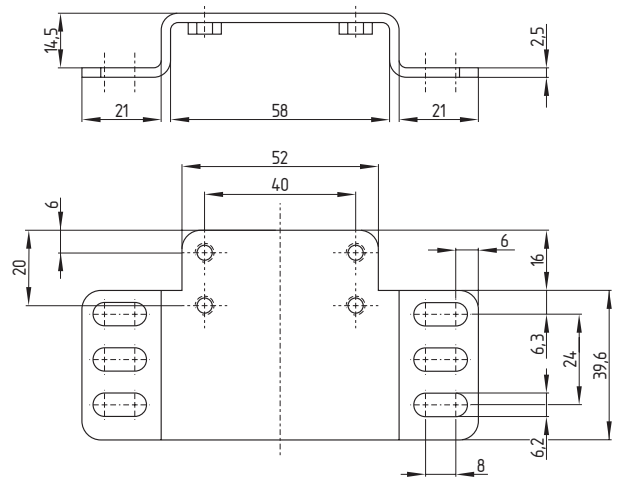
Mounting right-angled to safety guard



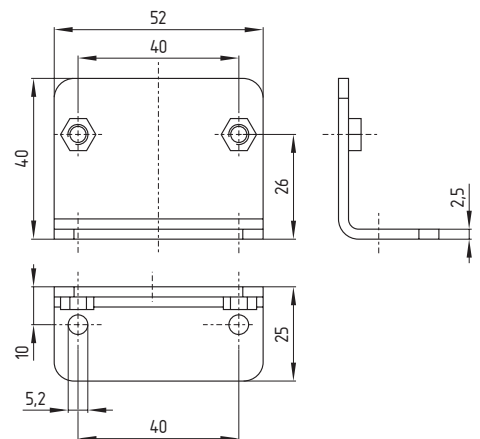
#### Mounting plate AZ 16/AZM 161



#### U-profile AZ 16



#### Mounting angle AZ 16



**1. Safety switches with separate actuator / Class 2**  
**1.29 Technical data**



|   | <b>AZ 15 / AZ 16<br/>AZ 16zi</b>  | <b>AZ 16-ST<br/>AZ 16zi-ST</b>   | <b>AZ 17<br/>AZ 17zi</b>   |
|---|---|----------------------------------|--|
| Standards:  | IEC/EN 60947-5-1; EN 1088; BG-GS-ET-15  |                                  |  |
| Enclosure material:   | Glass-fibre reinforced thermoplastic, self-extinguishing  |                                  |  |
| Actuator:   | Stainless steel 1.4301  |                                  |  |
| Protection class:   | IP 67 to IEC/EN 60529   |                                  |  |
| Contact material:   | Silver  |                                  |  |
| Contact type:   | Change-over with double break Zb or 2 NC or 3 NC contacts,<br>with galvanically separated contact bridges |                                  | Change-over with double break Zb<br>or 2 NC contacts, with galvanically<br>separated contact bridges |
| Switching system:   | ⊖ IEC 60947-5-1; ⊕ BG-GS-ET-15; slow action, NC contact with positive break                               |                                  |  |
| Termination:  | Screw terminals for<br>max. 2.5 mm <sup>2</sup> cables<br>(including conductor ferrules)                  | Connector M 12 x 1,<br>four pole | Cut clamp (IDC) method<br>0.75 to 1.0 mm <sup>2</sup> , flexible                                     |
| Rated impulse<br>withstand voltage U <sub>imp</sub> :               | 6 kV  |                                  | 4 kV   |
| Rated insulation<br>voltage U <sub>i</sub> :                        | 500 V   |                                  | 250 V  |
| Thermal test current I <sub>th</sub> :                              | 10 A  |                                  |  |
| Utilisation category:   | AC-15; DC-13  |                                  | AC-15  |
| Rated operating<br>current/voltage I <sub>g</sub> /U <sub>g</sub> : | 4 A/230 VAC; 4 A/24 VDC   |                                  | 4 A/230 V  |
| Max. fuse rating:   | 6 A gL/gG D-fuse  |                                  | 4 A (slow blow)  |
| Positive break travel:  | 8 mm  |                                  | 11 mm  |
| Positive break force:   | 10 N for each NC contact fitted   |                                  | 17 N for each NC contact fitted  |
| Ambient temperature:  | - 30 °C ... + 80 °C   |                                  |  |
| Mechanical life:  | > 1 million operations  |                                  |  |

