



EN Operating instructions pages 1 bis 8
Original

Content

1 About this document
 1.1 Function 1
 1.2 Target group: authorised qualified personnel 1
 1.3 Explanation of the symbols used 1
 1.4 General safety instructions 1
 1.5 Warning about misuse 1
 1.6 Exclusion of liability 1

2 Product description
 2.1 Ordering code 1
 2.2 Special versions 2
 2.3 Purpose and use 2

3 Mounting
 3.1 General mounting instructions 2
 3.2 Representation of installation options 2
 3.3 Dimensions 3
 3.4 Sequence of the steps 4

4 Appendix
 4.1 Set-up checklist 8

1. About this document

1.1 Function

This operating instructions manual provides all the information you need for the mounting, set-up and commissioning to ensure the safe operation and disassembly of the switchgear. The operating instructions must be available in a legible condition and a complete version in the vicinity of the device.

1.2 Target group: authorised qualified personnel

All operations described in this operating instructions manual must be carried out by trained specialist personnel, authorised by the plant operator only.

Please make sure that you have read and understood these operating instructions and that you know all applicable legislations regarding occupational safety and accident prevention prior to installation and putting the component into operation.

The machine builder must carefully select the harmonised standards to be complied with as well as other technical specifications for the selection, mounting and integration of the components.

1.3 Explanation of the symbols used



Information, hint, note:

This symbol indicates useful additional information.



Caution: Failure to comply with this warning notice could lead to failures or malfunctions.

Warning: Failure to comply with this warning notice could lead to physical injury and/or damage to the machine.

1.4 General safety instructions

The user must observe the safety instructions in this operating instructions manual, the country specific installation standards as well as all prevailing safety regulations and accident prevention rules.



Further technical information can be found in the Schmersal catalogues or in the online catalogue on the Internet: products.schmersal.com.

The information contained in this operating instructions manual is provided without liability and is subject to technical modifications.

There are no residual risks, provided that the safety instructions as well as the instructions regarding mounting, commissioning, operation and maintenance are observed.

1.5 Warning about misuse



In case of inadequate or improper use or manipulations of the component, personal hazards or damage to machinery or plant components cannot be excluded.

1.6 Exclusion of liability

We shall accept no liability for damages or malfunctions resulting from defective mounting or failure to comply with this operating instructions manual. We shall accept no liability for damages or malfunctions resulting from defective mounting or failure to comply with this operating instructions manual.

For safety reasons, invasive work on the device as well as arbitrary repairs, conversions and modifications to the device are strictly forbidden, the manufacturer shall accept no liability for damages resulting from such invasive work, arbitrary repairs, conversions and/or modifications to the device.

2. Product description

2.1 Ordering code

This operating instructions manual applies to the following types:

AZ/AZM201-B40-①TA②③

No.	Option	Description
①	L	Door hinge on left-hand side
	R	Door hinge on right-hand side
②	G1	with doorhandle
	G2	with rotating knob
③	P1	with emergency exit
	P20	with emergency exit metal
	P25	with emergency exit inset handle



The actuator unit AZ/AZM201-B40... is intended exclusively for combination with the AZ/AZM201 series basic component.



Only if the information described in this operating instructions manual are followed correctly, the safety function and therefore the compliance of the entire system with the Machinery Directive is maintained.

2.2 Special versions

For special versions, which are not listed in the ordering code below 2.1, these specifications apply accordingly, provided that they correspond to the standard version.

2.3 Purpose and use

In conjunction with the solenoid interlock or switch, the actuator unit is suitable for hinged and sliding safety guards, especially for hinged doors with overlapping folds. The safety guard can be opened and closed from outside by turning the door-handle.

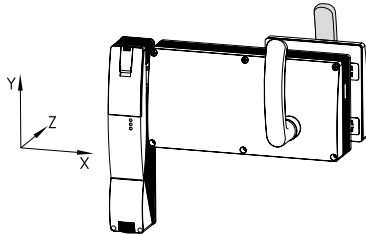
The actuator is pulled into the actuator unit by a spring. The actuator unit with emergency exit is used to open the safety guard inside the hazardous area. By actuating the emergency exit, the safety guard can be opened from within the hazardous area without the need for unlocking the solenoid interlock. The safety guard cannot be locked from inside.

Actuator unit play

X = ± 1.5 mm

Y = ± 5.0 mm

Z = ± 1.0 mm



3. Mounting

3.1 General mounting instructions



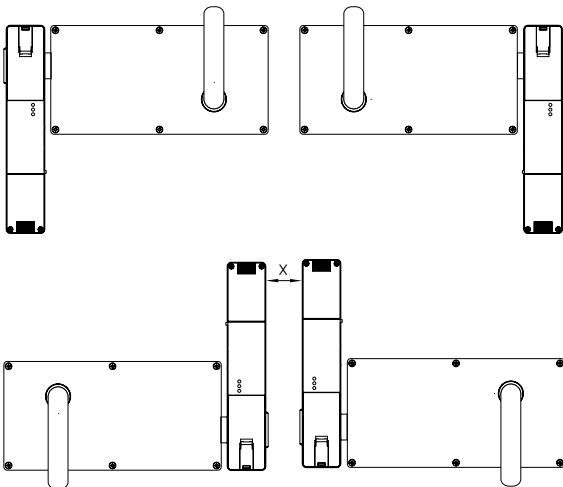
The installation may only be carried out by authorised personnel.

Minimum distance X between two devices: 100 mm

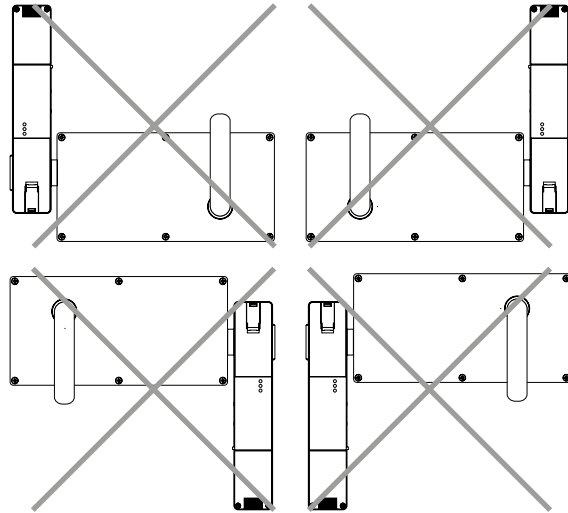
For ergonomic reasons, a vertical handle position is recommended when closed.

Admissible mounting set-up

The actuator unit AZ/AZM201-B40 must be fitted onto a flat surface by means of 4 screws.



Inadmissible mounting set-up



3.2 Representation of installation options

With emergency exit	Right hinged door	
	Left hinged door	
Without emergency exit	Right hinged door	
	Left hinged door	



The minimum radius of the door is 400 mm.

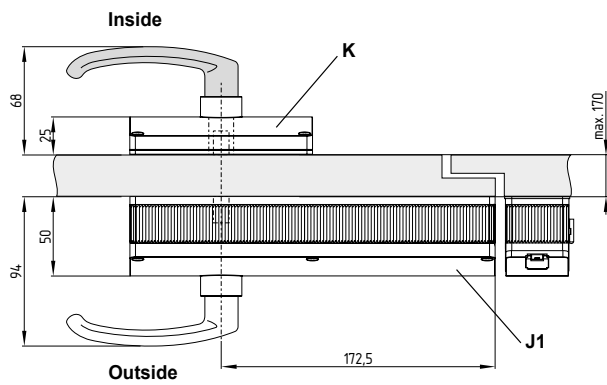
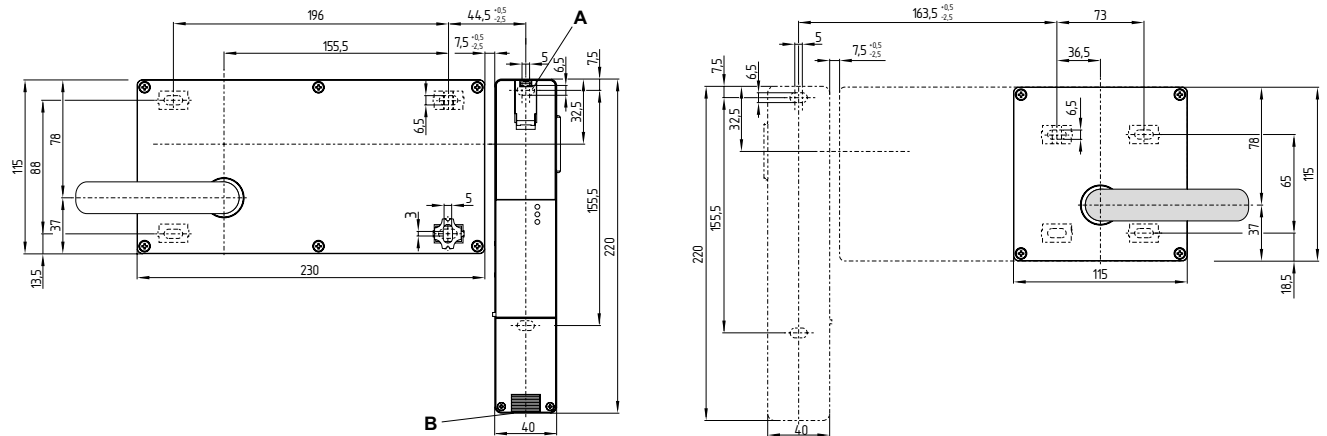
Assumptions:

- 40 mm Profile
- Distance between solenoid interlock and actuator unit 7.5 mm
- Use standard hinge for 40 mm profile

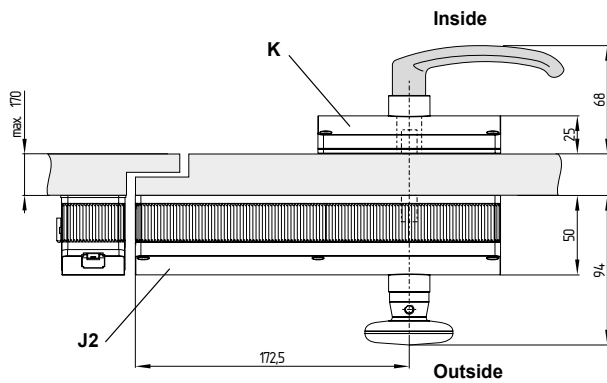
3.3 Dimensions

All measurements in mm.

AZ/AZM201 with actuator unit G1 and emergency exit P1



AZ/AZM201 mit Betätigereinheit G2 und Fluchtentriegelung P1

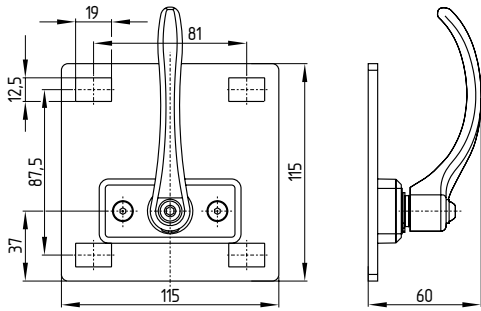


Key

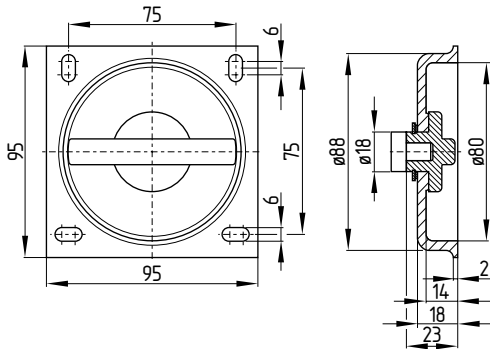
- A = Manual release
- B = Cable entry M20 x 1.5
- J1 = Actuator unit with door-handle G1
- J2 = Actuator unit with door-handle G2
- K = Emergency exit P1

Instead of the emergency exit P1 the following emergency exits can be used.

Emergency exit (metal) P20



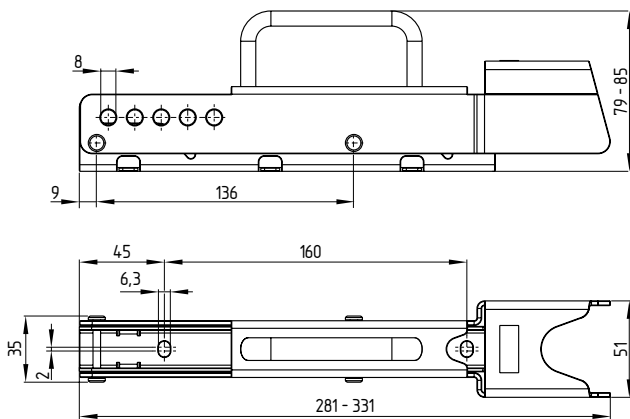
Emergency exit inset handle P25



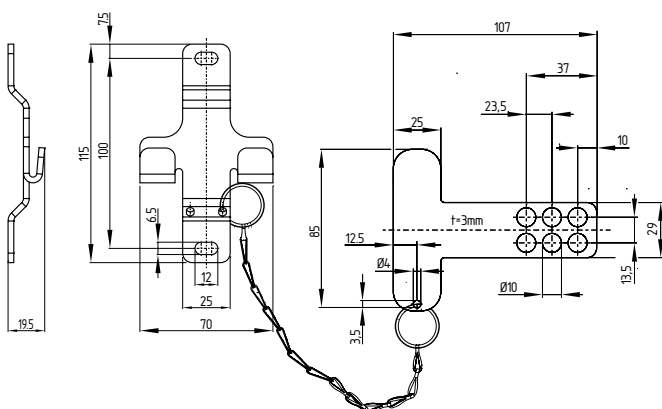
Accessories

The lockout tags SZ 200 and SZ 200-1 are optional available as accessory.

Lockout tag SZ 200



Lockout tag SZ 200-1



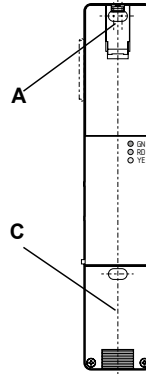
3.4 Sequence of the steps

Step 1

To free mounting holes unscrew the cover C for the wiring compartment and open flap A for the manual release.

To be observed:

- Actuation of manual release (beneath flap) with triangular key (included in delivery)

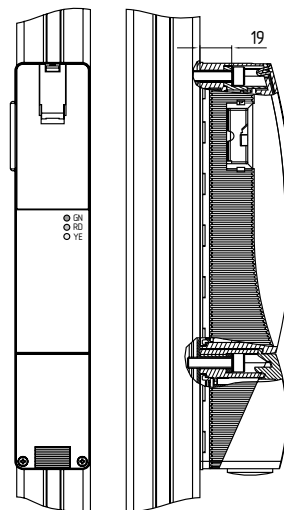


Step 2

Enclosure of the safety switchgear AZ/AZM 201 must be flush-mounted with the doorpost.

To be observed:

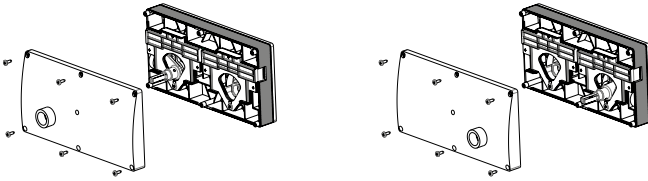
- Screws: M6
- Max. tightening torque for safety switchgear = 8 Nm, cover screw = 0.7...1 Nm (Torx T10)
- Wall thickness of the device 19 mm
- Washers ISO 7089 - 6 (included in delivery)
- For applications with strong vibrations, please observe the screws are correctly secured.



Mounting tolerance
- horizontal: ± 2.5 mm

Step 3

- Unscrew the cover of the actuator unit

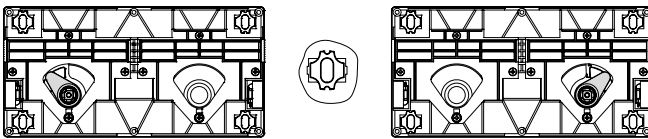


Step 4

Insert sliding blocks (included in delivery with actuator unit AZ/AZM) as shown.

To be observed:

- Observe the alignment (notch) of the sliding blocks

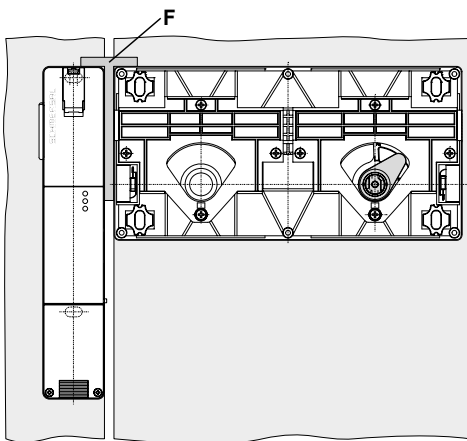


Step 5

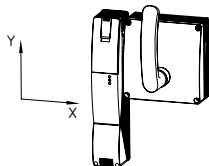
- Fit the actuator unit to the doorpost by means of the spacer **F** (7.5 mm)

To be observed:

- Actuator unit completely retracted
- Distance between solenoid interlock and actuator unit = 7.5 +0.5/-2.5 mm
- Fix the actuator enclosure onto a flat surface by means of 4 screws M6
- Tightening torque = 8 Nm
- Wall thickness of the device 8 mm (see step 11)
- Washers ISO 7089 - 6 (included in delivery)
- For applications with strong vibrations, please observe a proper securing of the screws



Tolerance
 $X = \pm 1.5 \text{ mm}$
 $Y = \pm 5.0 \text{ mm}$

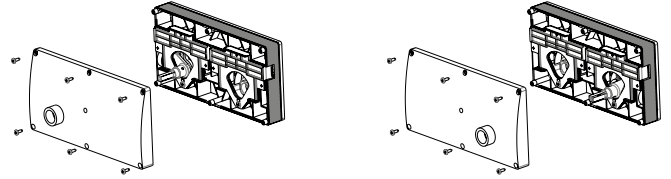


Step 6

- Mount the cover on the actuator unit

To be observed:

- Actuator unit completely retracted

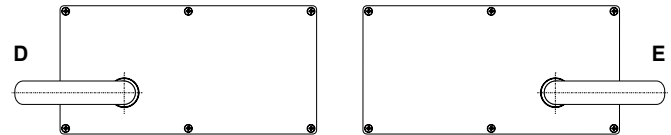


Step 7

- Fit the door-handle

To be observed:

- Fit the door-handle P1 horizontal
- **D** = for left hinged doors
- **E** = for right hinged door
- Hexagonal screw A/F 3 with screw-lock (included in delivery)
- When fitted without emergency exit, proceed with step 16

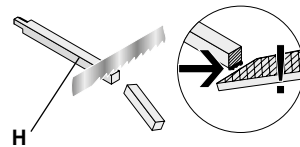


Step 8

If an emergency exit is available, cut square tube **H** at length. De-burr the cut sides.

To be observed:

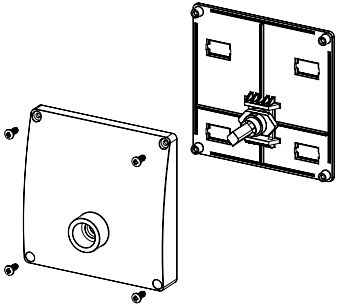
- Max. door leaf thickness $S = 170 \text{ mm}$
- Length of the cut square tube **H**
 P1: $L = S + 22 - 2 \text{ mm}$
 P20: $L = S + 28 \text{ mm}$
 P25: $L = S + 24 \text{ mm}$
- Through-hole for square tube **H** $\varnothing 16 \text{ mm}$



- For mounting with emergency exit P20 continue from paragraph 14
 emergency exit P25 continue from paragraph 16

Step 9 - Mounting emergency exit P1

- Unscrew the cover of the emergency exit P1

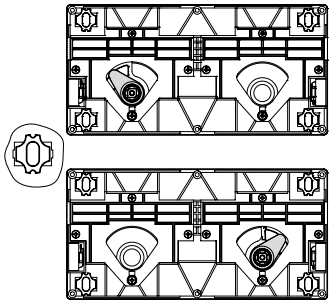


Step 10 - Mounting emergency exit P1

For emergency exit, insert sliding blocks as shown (included in delivery)

To be observed:

- Observe the alignment (notch) of the sliding blocks

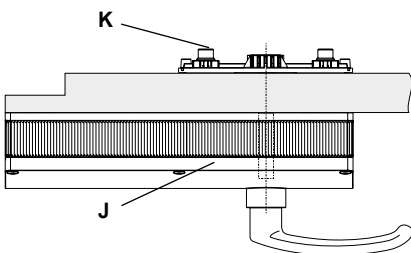


Step 11 - Mounting emergency exit P1

- Fit the bottom plate of the emergency exit P1 to the door

To be observed:

- Actuator completely inserted into the actuator unit J
- Arrange emergency exit K to actuator unit J parallel
- Screws M6
- Tightening torque = 8 Nm
- Wall thickness of the device 8 mm
- Washers ISO 7089 - 6 (included in delivery)
- For applications with strong vibrations, please observe a proper securing of the screws

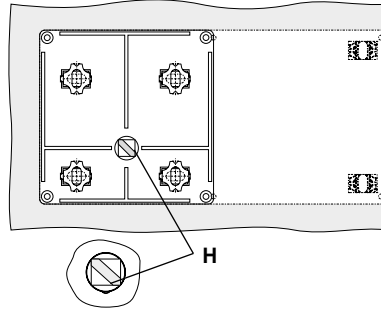


Step 12 - Mounting emergency exit P1

- Insert square rod H in the rear of the actuator unit

To be observed:

- Insert chamfer of the square into the emergency exit either the cut side of the square into the actuator unit. Position of the chamfer as shown, when actuator unit is actuated.



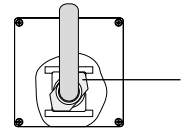
Step 13 - Mounting emergency exit P1

- Fit the cover and the handle onto the emergency exit

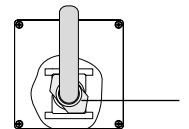
To be observed:

- Position of the driving shaft I as shown, when actuator unit is actuated
- Functional test of the emergency exit handle: it should be possible to open the safety guard inside the hazardous area; it should not be possible to lock the safety guard from inside. The emergency exit handle must be in upright position when closed.
- After successful assembly continue from paragraph 17

For left hinged door



For right hinged door

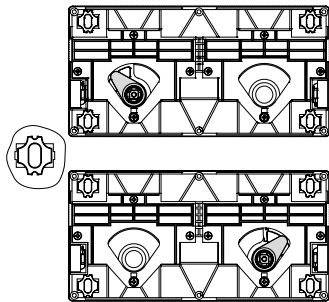


Step 14 - Mounting emergency exit P20

For emergency exit, insert sliding blocks as shown (included in delivery)

To be observed:

- Observe the alignment (notch) of the sliding blocks



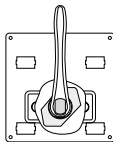
Step 15 - Mounting emergency exit P20

Fit emergency exit P20 to the door.

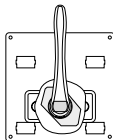
To be observed:

- Insert square rod H in the actuator unit, observe the direction of chamfer (see step 12)
- Observe the position of the slotted hole
- Actuator completely inserted into the actuator unit J
- Emergency exit P20 parallel to actuator unit J
- Screws: M6
- Tightening torque = 8 Nm
- Wall thickness of the device 8 mm
- Washers ISO 7089 - 6 (included in delivery)
- For applications with strong vibrations, please observe a proper securing of the screws
- After the assembly of the emergency exit P20, proceed with step 17

For left hinged door



For right hinged door



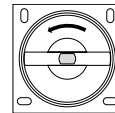
Step 16 - Mounting emergency exit P25

Fit emergency exit P25 to the door.

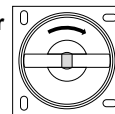
To be observed:

- Insert square rod H in the actuator unit, observe the direction of chamfer (see step 12)
- Observe the position of the slotted hole
- Actuator completely inserted into the actuator unit J
- Emergency exit P25 parallel to actuator unit J
- Screws: M6
- Tightening torque = 8 Nm
- Wall thickness of the device 8 mm
- For applications with strong vibrations, please observe a proper securing of the screws

For left hinged door



For right hinged door

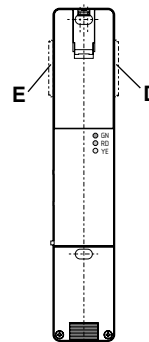


Step 17

Clip the dust-proof flap in the unused side.

To be observed:

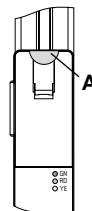
- D = for left hinged door
- E = for right hinged door




Step 18

After being put into operation, the manual release must be secured by installing the seal, which is included in delivery.

- Seal the cover of the manual release A



4.1 Set-up checklist



Checklist

Set-up and maintenance

Checking of the AZ/AZM201 safety door-handle system
Within the scope of commissioning and regular maintenance of the machine, the following items of the safety door-handle system, consisting of AZ/AZM201, the corresponding actuator unit and the emergency exit must be checked and inspected by a specialist:

1. Fixation:
All fixing screws installed and tightened with the specified torque

2. Distance:
Distance 7.5 +0.5/-2.5 mm between safety switchgear AZ/AZM201 and actuator unit must be adhered to.

3. Emergency exit handle:
After locking, the correct closing of the door must be checked.
It should be possible to open the safety guard inside the hazardous area;
it should not be possible to lock the safety guard from inside
It should be possible to open the safety guard inside the hazardous area; it should not be possible to lock the safety guard from inside. The emergency exit handle must be in the upright position when closed.

4. Sticker emergency exit handle (included in delivery):
The sticker is visibly attached.

5. Dust shield cap:
Check tight fitting of the dust-proof flap

6. Functional testing:
The enabling signal is only transmitted to the safety circuit,
if the actuator is within range of the solenoid interlock and locked.

LED	STATUS
green	Operating voltage
yellow	Actuator inserted (and locked for AZM201)
flashes yellow	Actuator inserted and not locked (only for AZM201)
red	Error

7. Cover for manual release:
Access cover or access hole is sealed (only for AZM201).

Date / Signature: