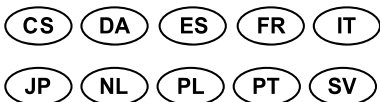




EN Operating instructions pages 1 to 2
Original



Detailed user information at products.schmersal.com.

1. About this document

This document 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 enclosed with the device must always be kept in a legible condition and accessible.

All operations described in the 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 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.

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

Products in Schmersal's range are not intended to be used by private end consumers.

2. Product description

2.1 Purpose

The safety switches with separate actuator are suitable for sliding, hinged and removable safety guards, which need to be closed in order to ensure the necessary operational safety.

The safety switches are used for applications, in which the hazardous situation is terminated without delay when the safety guard is opened.

2.2 Warning about misuse



In case of improper use or manipulation of the safety switchgear, personal hazards or damages to machinery or plant components cannot be excluded. There are no residual risks, provided that the safety instructions as well as the instructions regarding mounting, commissioning, operation and maintenance are observed.

2.3 Exclusion of liability

We shall accept no liability for damages and malfunctions resulting from defective mounting or failure to comply with the operating instructions manual. The manufacturer shall accept no liability for damages resulting from the use of unauthorised spare parts or accessories.

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.

2.4 Technical Data

General data

Standards EN ISO 13849-1,
EN ISO 14119,
EN IEC 60947-5-1

Switching principle slow action, positive break
NC contact

Coding level according to EN ISO 14119 Low

Safety classification

Standards EN ISO 13849-1

B_{10D} Normally-closed contact (NC) 2,000,000 Operations

B_{10D} Normally open contact (NO) 1,000,000 Operations

Note (B_{10D} Normally open contact (NO)) at 10% I_e and ohmic load

Mission time 20 Year(s)

Mechanical data

Connection type Screw terminals, Connector
plug M12, 4-pole, (A-coding),
Connector plug M12, 8-pole, (A-coding)

Cable section, minimum 0.25 mm²

Cable section, maximum 2.5 mm²

Note (Cable section) All indications including the
conductor ferrules.

Positive break force per NC contact,
minimum 10 N

Positive break travel 8 mm

Actuating speed, maximum 2 m/s

Mechanical life, minimum 1,000,000 Operations

Electrical data

Utilisation category AC-15 230 VAC / 4 A

Utilisation category DC-13 24 VDC / 4 A / without
connector
24 VDC / 4 A / Connector
4-pole
24 VDC / 2 A / Connector
8-pole

Max. fuse rating 6 A gG D-fuse

Ambient conditions

Degree of protection IP67

Ambient temperature -30 ... +80 °C

Overvoltage category III

Degree of pollution to IEC/EN 60664-1 3

3. Mounting

3.1 General mounting instructions



Please observe the relevant requirements of the standards ISO 12100, ISO 14119 and ISO 14120.

The mounting dimensions are indicated on the rear of the component. The enclosure must not be used as an end stop. Any mounting position. The mounting position however must be chosen so that the ingress of dirt and soiling in the used opening is avoided. The unused openings must be sealed by means of slot sealing plugs (AZ 15/16 - 1476-1 available as accessory) after fitting.

3.2 Mounting of the actuator

See operating instructions Actuator.

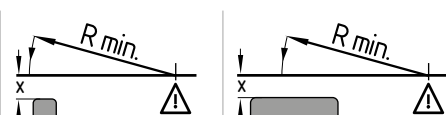


The actuator must be permanently fitted to the safety guards and protected against displacement by suitable measures (tamperproof screws, gluing, drilling of the screw heads).

Actuator B2, B3, B6 for swing doors

The axis of the hinge must be d mm above and in a parallel plane to the top surface of the safety switch. The basis setting provides a minimum radius of R_{min} .

Actuating radii [mm]



over the small edge of the actuator over the wide edge of the actuator

	R_{min}	d	R_{min}	d
AZ 15/16-B2	-	-	45	11
AZ 15/16-B2-1747	-	-	45	11
AZ 15/16-B3	32	11	-	-
AZ 15/16-B3-1747	32	11	-	-
AZ 15/16-B6	25	11	38	11

4. Electrical connection

4.1 General information for electrical connection



The electrical connection may only be carried out by authorised personnel in a de-energised condition.

The contact labelling can be found in the wiring compartment of the switch. Appropriate cable glands with a suitable degree of protection are to be used.

Settle length x of the conductor: 6 mm

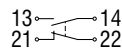


After wiring, dust and soiling must be removed from the wiring compartment. The safety switch is double insulated. The use of a protective ground connector therefore is not authorised.

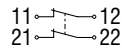
4.2 Contact Options

Contacts are shown with safety guard closed. All NC contacts have positive break \ominus .

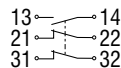
AZ 16ZV.K



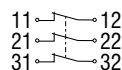
AZ 16-02ZV.K



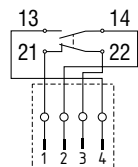
AZ 16-12ZV.K



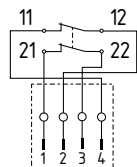
AZ 16-03ZV.K



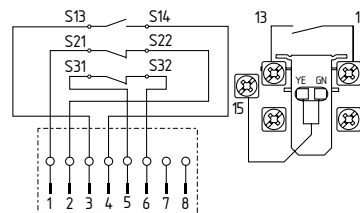
AZ 16ZV.K-ST



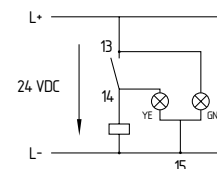
AZ 16-02ZV.K-ST



AZ 16-12ZV.K-ST LED



LED



5. Set-up and maintenance

The safety function of the safety components must be tested. In the case of correct installation and adequate use, the safety switchgear features maintenance-free functionality. A regular visual inspection and functional test, including the following steps, is recommended:

1. Check for free movement of the actuating element
2. Check cable entry and connections
3. Check the switch enclosure for damage
4. Remove particles of dust and soiling



Adequate measures must be taken to ensure protection against tampering either to prevent tampering of the safety guard, for instance by means of replacement actuators.



Damaged or defective components must be replaced.

6. Disassembly and disposal

6.1 Disassembly

The safety switchgear must be disassembled in a de-energised condition only.

6.2 Disposal



The safety switchgear must be disposed of in an appropriate manner in accordance with the national prescriptions and legislations.

7. Declaration of conformity

We declare under our sole responsibility that the products mentioned comply with all relevant provisions of the directives and regulations listed below and conform to the following standards.

Relevant Directives:

2006/42/EC SI 2008/1597
2011/65/EU SI 2012/3032

Applied standards:

EN 60947-5-1:2017
ISO 14119:2013



The currently valid declaration of conformity can be downloaded from the internet at products.schmersal.com.

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