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LS-S11-230AFT-ZBZ/X - Position switch, 1NO+1NC, basic, spring-powered interlock



106827 LS-S11-230AFT-ZBZ/X

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106827 LS-S11-230AFT-ZBZ/X

Position switch, 1NO+1NC, basic, spring-powered interlock

Alternate Catalog No.

LS-S11-230AFT-ZBZ/X

EL-Nummer (Norway)

4356174

Position switch, Basic function: Position switches, Safety position switches, Part group reference: LS... ZBZ/X, Product range: Basic units with spring-powered interlock (closed-circuit principle), Degree of Protection: IP65, Features: Basic device, expandable, Ambient temperature: -25 - +40 °C, Description: With interlock monitoring, with auxiliary release mechanism, Monitoring of door position: continuous, Contacts N/O = Normally open: 1 N/O, Contacts N/C = Normally closed: 1 NC, Notes: = safety function, by positive opening to IEC/EN 60947-5-1, Rated control voltage for magnetic drive: U_s = 230 V 50/60 Hz V, Housing: Insulated material, Connection type: Screw terminal, Standards: IEC/EN 60947

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Delivery program

Basic function

Position switches

Safety position switches

Part group reference

LS... ZBZ/X

Product range

Basic units with spring-powered interlock (closed-circuit principle)

Degree of Protection

IP65

Features

Basic device, expandable

Ambient temperature

-25 - +40 °C

Description

With interlock monitoring

with auxiliary release mechanism

Monitoring of door position: continuous

Contacts

N/O = Normally open

1 N/O

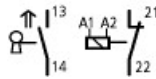
N/C = Normally closed

1 NC

Notes

□ = safety function, by positive opening to IEC/EN 60947-5-1

Contact sequence



Rated control voltage for magnetic drive [U_s]

230 V 50/60 Hz V

Housing

Insulated material

Connection type

Screw terminal

Notes

Switch must never be used as a mechanical stop!

The operating head can be rotated manually in 90° steps without tools to suit the specified level of actuation.

With the actuator inserted, the N/O contact is open and the N/C contact is closed.

For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.

In the event of power failure (e.g., during commissioning), the device can be released with a screwdriver. The auxiliary release mechanism must be sealed! □ Instructional leaflet IL 05208005Z

Technical data

General

Standards

IEC/EN 60947

Climatic proofing

Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30

Ambient temperature

-25 - +40 °C

Mounting position

As required

Degree of Protection

IP65

Terminal capacitiesSolid

1 x (0.75 - 2.5)

2 x (0.75 - 1.5) mm²

Terminal capacitiesFlexible with ferrule

1 x (0.5 - 1.5)

2 x (0.5 - 1.5) mm²

Terminal screw

PH1

Tightening torque for terminal screw

0.9 Nm

Repetition accuracy

0.02 mm

Contacts/switching capacity

Rated impulse withstand voltage [U_{imp}]

4000 V AC

Rated insulation voltage [U_i]

400 V

Overvoltage category/pollution degree

III/3

Rated operational current [I_e] AC-1524 V [I_e]

6 A

Rated operational current [I_e] AC-15220 V 230 V 240 V [I_e]

6 A

Rated operational current [I_e] AC-15380 V 400 V 415 V [I_e]

4 A

Rated operational current [I_e] DC-13 24 V [I_e]

3 A

Rated operational current [I_e] DC-13 110 V [I_e]

0.8 A

Rated operational current [I_e] DC-13 220 V [I_e]

0.3 A

Supply frequency

max. 400 Hz

Short-circuit rating to IEC/EN 60947-5-1 max. fuse

6 A gG/gL

Rated conditional short-circuit current

1 kA

Mechanical variables

Lifespan, mechanical [Operations]

1 x 10⁶

Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact
 10 g
 Operating frequency [Operations/h]
 □ 800
 Actuation
 Mechanical Actuating force at beginning/end of stroke
 25/15 (plug-in/pull-out) N
 Mechanical Mechanical holding force acc. to GS-ET-19 (04/2004) XG, XW, XNG
 1700 N
 Mechanical Mechanical holding force acc. to GS-ET-19 (04/2004) XWA, XFG, XF
 1600 N
 Mechanical Mechanical holding force acc. to GS-ET-19 (04/2004) XNW
 1200 N
 Electromechanical For magnet Power consumption at 120 V AC
 8 VA
 Electromechanical For magnet Power consumption at 230 V AC
 11 VA
 Electromechanical For magnet Power consumption at 24 V DC
 8 W
 Electromechanical Pick-up and drop-out values
 $0.85 - 1.1 \times U_s$
 Electromechanical Magnet duty factor
 100 % ED

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_r]

6 A

Heat dissipation per pole, current-dependent [P_{id}]

0.13 W

Equipment heat dissipation, current-dependent [P_{id}]

0 W

Static heat dissipation, non-current-dependent [P_{vs}]

0 W

Heat dissipation capacity [P_{diss}]

0 W

Operating ambient temperature min.

-25 °C

Operating ambient temperature max.

+40 °C

IEC/EN 61439 design verification

10.2 Strength of materials and parts 10.2.2 Corrosion resistance

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.1 Verification of thermal stability of enclosures

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.2 Verification of resistance of insulating materials to normal heat

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.4 Resistance to ultra-violet (UV) radiation

Meets the product standard's requirements.

10.2 Strength of materials and parts 10.2.5 Lifting

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.6 Mechanical impact

Does not apply, since the entire switchgear needs to be evaluated.

10.2 Strength of materials and parts 10.2.7 Inscriptions

Meets the product standard's requirements.

10.3 Degree of protection of ASSEMBLIES

Does not apply, since the entire switchgear needs to be evaluated.

10.4 Clearances and creepage distances

Meets the product standard's requirements.

10.5 Protection against electric shock

Does not apply, since the entire switchgear needs to be evaluated.

10.6 Incorporation of switching devices and components

Does not apply, since the entire switchgear needs to be evaluated.

10.7 Internal electrical circuits and connections

Is the panel builder's responsibility.

10.8 Connections for external conductors

Is the panel builder's responsibility.

10.9 Insulation properties10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties10.9.4 Testing of enclosures made of insulating material

Is the panel builder's responsibility.

10.10 Temperature rise

The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices.

10.11 Short-circuit rating

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.12 Electromagnetic compatibility

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

10.13 Mechanical function

The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.

Technical data ETIM 7.0

Sensors (EG000026) / End switch (EC000030)

Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])

Width sensor

60 mm

Diameter sensor

0 mm

Height of sensor

173 mm

Length of sensor

39 mm

Rated operation current I_e at AC-15, 24 V

6 A

Rated operation current I_e at AC-15, 125 V

6 A

Rated operation current I_e at AC-15, 230 V

6 A

Rated operation current I_e at DC-13, 24 V

3 A

Rated operation current I_e at DC-13, 125 V

0.8 A

Rated operation current I_e at DC-13, 230 V

0.3 A

Switching function

Slow-action switch

Switching function latching

No

Output electronic

No

Forced opening

Yes

Number of safety auxiliary contacts

1

Number of contacts as normally closed contact

1

Number of contacts as normally open contact

1

Number of contacts as change-over contact

0

Type of interface

None

Type of interface for safety communication

None

Construction type housing

Cuboid

Material housing

Plastic

Coating housing

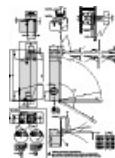
Other

Type of control element
Other
Alignment of the control element
Other
Type of electric connection
Other
With status indication
No
Suitable for safety functions
Yes
Explosion safety category for gas
None
Explosion safety category for dust
None
Ambient temperature during operating
25 - 70 °C
Degree of protection (IP)
IP65
Degree of protection (NEMA)
13

Approvals

Product Standards
IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
UL File No.
E29184
UL Category Control No.
NKCR
CSA File No.
12528
CSA Class No.
3211-03
North America Certification
UL listed, CSA certified
Degree of Protection
IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



CAD data

- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)

DWG files

- [DA-CD-zbz](#)
File
(Web)

edz files

- [DA-CE-ETNLS-S11-230AFT-ZBZ_X](#)
File
(Web)

Step files

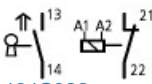
- [DA-CS-zbz](#)
File

(Web)

3D drawing

- 
[131I080](#)
Line drawing
Safety switch

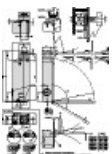
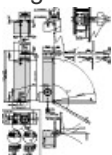
Wiring diagram

- 
[131S022](#)
Line drawing
1 make contact, 1 break contact

Product photo

- 
[1310PIC-232](#)
Photo
Position switches

Dimensions single product

- 
[1310DIM-30](#)
Line drawing
Angled actuator, long
- 
[1310DIM-6](#)
Line drawing
Angled actuator, long

Symbol

- 
[000Z016](#)
Graphic
Certification: Swiss Accident Insurance Institute

Declaration of Conformity

EU

- [DA-DC-00003155](#)
Asset
(PDF)

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