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Worldwide English



LS-S11S/RLA - Position switch, Adjustable roller lever, Complete unit, 1 NO, 1 NC, Snap-action contact - Yes, Screw terminal, Yellow, Insulated material, -25 - +70 °C



106803 LS-S11S/RLA

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- Delivery program
- Technical data
- Design verification as per IEC/EN 61439
- Technical data ETIM 7.0
- Approvals
- Dimensions

106803 LS-S11S/RLA

Position switch, Adjustable roller lever, Complete unit, 1 NO, 1 NC, Snap-action contact - Yes, Screw terminal, Yellow, Insulated material, -25 - +70 °C

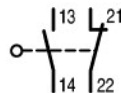
Alternate Catalog No.
EL-Nummer (Norway)

LS-S11S-RLA
4315216

Position switch, Basic function: Position switches, Safety position switches, Part group reference: LS(M)-..., Product range: Adjustable roller lever, Degree of Protection: IP66, IP67, Features: Complete unit, Ambient temperature: -25 - +70 °C, Snap-action contact: Yes, 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, Positive opening (ZW): yes, Colour Enclosure covers: Yellow, Housing: Insulated material, Connection type: Screw terminal, Standards: IEC/EN 60947

Delivery program

Basic function
Position switches
Safety position switches
Part group reference
LS(M)-...
Product range
Adjustable roller lever
Degree of Protection
IP66, IP67
Features
Complete unit
Ambient temperature
-25 - +70 °C
Snap-action contact
Yes
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



Contact travel ■ = Contact closed □ = Contact open



Positive opening (ZW)

yes

Colour

Enclosure covers

Yellow

Enclosure covers



Housing

Insulated material
Connection type
Screw terminal

Notes

The operating head can be rotated at 90° intervals to adapt to the specified approach direction.

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 - +70 °C

Mounting position

As required

Degree of Protection

IP66, IP67

Terminal capacities

Solid
1 x (0.5 - 2.5) mm²

Terminal capacities

Flexible with ferrule
1 x (0.5 - 1.5) mm²

Repetition accuracy

0.15 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_b] AC-1524 V [I_b]

6 A

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

6 A

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

4 A

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

3 A

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

0.6 A

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

0.3 A

Control circuit reliability at 24 V DC/5 mA [H_f]

< 10⁻⁷, < 1 fault in 10⁷ operations Fault probability

Control circuit reliability at 5 V DC/1 mA [H_f]

< 5 x 10⁻⁶, < 1 failure at 5 x 10⁶ operations Fault probability

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]

8 x 10⁶

Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact

25 g

Operating frequency [Operations/h]

□ 6000

Actuation

Mechanical Actuating force at beginning/end of stroke

1.0/8.0 N

Mechanical Actuating torque of rotary drives

0.2 Nm

Mechanical Max. operating speed with DIN cam

1.5 m/s

Mechanical Notes

for angle of actuation α = 30°, L = 125 mm

Design verification as per IEC/EN 61439

Technical data for design verification

Rated operational current for specified heat dissipation [I_n]

6 A

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

0.17 W

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

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.

+70 °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 properties 10.9.2 Power-frequency electric strength

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.3 Impulse withstand voltage

Is the panel builder's responsibility.

10.9 Insulation properties 10.9.4 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

31 mm

Diameter sensor

0 mm

Height of sensor

61 mm

Length of sensor

33.5 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

Quick-break 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

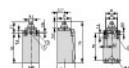
Type of interface

None
 Type of interface for safety communication
 None
 Construction type housing
 Cuboid
 Material housing
 Plastic
 Coating housing
 Other
 Type of control element
 Adjustable roller lever
 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)
 IP67
 Degree of protection (NEMA)
 4X

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: IP66, 67, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



- ☐ Tightening torque of cover screws: 0.8 Nm±0.2 Nm
- ☐ only with LS (insulated version)
- ☐ Fixing screws 2 x M4 ☐ 30
- $M_A = 1.5 \text{ Nm}$
- ☐ Setting range of 54.5 to 97

CAD data

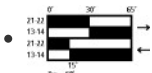
- [Product-specific CAD data](#)
(Web)
- [3D Preview](#)
(Web)
- [DA-CD-Is_ria](#)
CAD data
DWG files
(Web)
- [DA-CE-ETNLS-S11S_RLA](#)
CAD data
edz files
(Web)
- [DA-CS-Is_ria](#)
CAD data
Step files
(Web)

Wiring diagram

- Contact sequence
Wiring diagram

Line drawing
1 make contact, 1 break contact

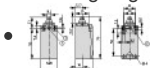
Contact travel diagram



Contact diagram
Contact travel diagram
Coordinate visualization
Contact path diagram: roller lever, adjustable roller lever, actuating rod

Dimensions single product

- 131X110
Dimensions single product
Line drawing
Adjustable roller lever
□ Setting range of 54.5 to 97



131X117
Dimensions single product
Line drawing
Roller plunger
□ Tightening torque of cover screws: 0.8 Nm±0.2 Nm
□ only with LS (insulated version)
□ Fixing screws 2 x M4 □ 30

3D drawing

- 131I194
3D drawing
Line drawing
Adjustable roller lever

Product photo



Photo
Product photo
Photo
Position switches

Instruction Leaflet

- LS-Titan Position switches: Basic device (IL053001ZU)
Instruction Leaflet
(PDF, 06/2018, Language independent)

Symbol



Enclosure covers
Symbol
Graphic
Button plate, yellow

Declaration of Conformity

- DA-DC-00003068
Declaration of Conformity
(PDF)

Download-Center

- Download-Center (this item)
Eaton EMEA Download-Center - download data for this item
- Download-Center
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