DATASHEET - LS-11S



Position switch, Rounded plunger, Basic device, expandable, 1 N/O, 1 NC, Cage Clamp, Yellow, Insulated material, -25 - +70 °C, EN 50047 Form B



Part no. LS-11S Catalog No. 266105 Alternate Catalog LS-11S

No.

EL-Nummer 4356032

(Norway)

Delivery program

| Delivery program | | |
|--|----|--|
| Basic function | | Position switches Safety position switches |
| Part group reference | | LS(M) |
| Product range | | Rounded plunger |
| Degree of Protection | | IP66, IP67 |
| Features | | Basic device, expandable |
| Ambient temperature | °C | -25 - +70 |
| Design | | EN 50047 Form B |
| Snap-action contact | | Yes |
| Contacts | | |
| N/0 = Normally open | | 1 N/0 |
| N/C = Normally closed | | 1 NC ⊕ |
| Notes | | e safety function, by positive opening to IEC/EN 60947-5-1 |
| Contact sequence | | $0 - \frac{13}{14} = \frac{1}{22}$ |
| Contact travel = Contact closed = Contact open | | 0 3.0 6.1 21-22 13-14 |
| Positive opening (ZW) | | yes |
| Colour | | |
| Enclosure covers | | Yellow |
| Enclosure covers | | |
| Housing | | Insulated material |
| Connection type | | Cage Clamp |
| Notes | | Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402 |

Technical data

General

| delleral | | |
|----------------------|----|--|
| Standards | | IEC/EN 60947 |
| Climatic proofing | | Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30 |
| Ambient temperature | °C | -25 - +70 |
| Mounting position | | As required |
| Degree of Protection | | IP66, IP67 |

| Terminal capacities | | mm^2 | |
|--|----------------|--------------------|---|
| Solid | | mm^2 | 1 x (0.5 - 2.5) |
| Flexible with ferrule | | mm ² | 1 x (0.5 - 1.5) |
| Repetition accuracy | | mm | 0.15 |
| Contacts/switching capacity | | | |
| Rated impulse withstand voltage | U_{imp} | V AC | 4000 |
| Rated insulation voltage | Ui | V | 400 |
| Overvoltage category/pollution degree | | | III/3 |
| Rated operational current | le | Α | |
| AC-15 | | | |
| 24 V | l _e | Α | 6 |
| 220 V 230 V 240 V | l _e | Α | 6 |
| 380 V 400 V 415 V | I _e | Α | 4 |
| DC-13 | | | |
| 24 V | I _e | Α | 3 |
| 110 V | Ie | Α | 0.6 |
| 220 V | I _e | Α | 0.3 |
| Control circuit reliability | | | |
| at 24 V DC/5 mA | H _F | Fault probabili | $< 10^{-7}$, < 1 fault in 10^7 operations |
| at 5 V DC/1 mA | H _F | Fault probabili | $< 5 \times 10^{-6}$, < 1 failure at 5×10^{6} operations ty |
| Supply frequency | | Hz | max. 400 |
| Short-circuit rating to IEC/EN 60947-5-1 | | | |
| max. fuse | | A gG/gL | 6 |
| Rated conditional short-circuit current | | kA | 1 |
| Mechanical variables | | | |
| Lifespan, mechanical | Operations | x 10 ⁶ | 8 |
| Contact temperature of roller head | | °C | ≦ 100 |
| Mechanical shock resistance (half-sinusoidal shock, 20 ms) | | | |
| Standard-action contact | | g | 25 |
| Operating frequency | Operations/h | | ≦ 6000 |
| Actuation | | | |
| Mechanical | | | |
| Actuating force at beginning/end of stroke | | N | 1.0/8.0 |
| Actuating torque of rotary drives | | Nm | 0.2 |
| Max. operating speed with DIN cam | | m/s | 1/0.5 |
| | | | |

Design verification as per IEC/EN 61439

Notes

| Technical data for design verification | | | |
|---|-------------------|----|--|
| Rated operational current for specified heat dissipation | In | Α | 6 |
| Heat dissipation per pole, current-dependent | P _{vid} | W | 0.17 |
| Equipment heat dissipation, current-dependent | P _{vid} | W | 0 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 0 |
| Heat dissipation capacity | P _{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 70 |
| IEC/EN 61439 design verification | | | |
| 10.2 Strength of materials and parts | | | |
| 10.2.2 Corrosion resistance | | | Meets the product standard's requirements. |
| 10.2.3.1 Verification of thermal stability of enclosures | | | Meets the product standard's requirements. |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat | | | Meets the product standard's requirements. |
| 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. |
| | | | |

for angle of actuation α = 0°/30°

| 10.2.4 Resistance to ultra-violet (UV) radiation | Meets the product standard's requirements. |
|--|--|
| 10.2.5 Lifting | Does not apply, since the entire switchgear needs to be evaluated. |
| 10.2.6 Mechanical impact | Does not apply, since the entire switchgear needs to be evaluated. |
| 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. |
| 10.9.3 Impulse withstand voltage | Is the panel builder's responsibility. |
| 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)

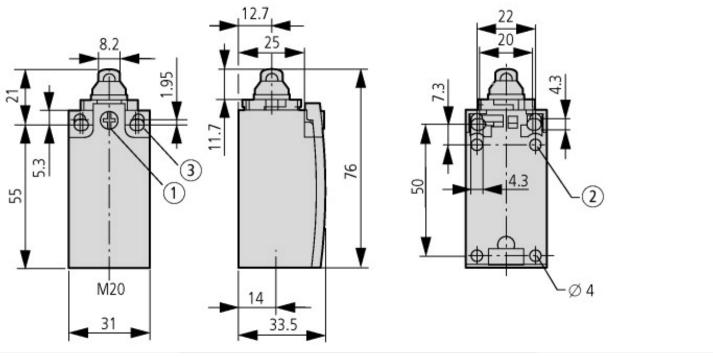
| (ecl@ss10.0.1-27-27-06-01 [AGZ382015]) | | a sonsor toolinology / 1 ostaon switch / 1 ostaon switch (1996-17 |
|---|----|---|
| Width sensor | mm | 31 |
| Diameter sensor | mm | 0 |
| Height of sensor | mm | 61 |
| Length of sensor | mm | 33.5 |
| Rated operation current le at AC-15, 24 V | А | 6 |
| Rated operation current le at AC-15, 125 V | А | 6 |
| Rated operation current le at AC-15, 230 V | А | 6 |
| Rated operation current le at DC-13, 24 V | А | 3 |
| Rated operation current le at DC-13, 125 V | А | 0.8 |
| Rated operation current le at DC-13, 230 V | А | 0.3 |
| 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 | | Plunger |
| 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 | °C | 25 - 70 |
|--------------------------------------|----|---------|
| 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



- ① Tightening torque of cover screws: 0.8 Nm \pm 0.2 Nm ② only with LS (insulated version) ③ Fixing screws $2 \times M4 \ge 30$ $M_A = 1.5$ Nm

