DATASHEET - LS-S11/P



Position switch, Roller plunger, Complete unit, 1 N/O, 1 NC, Screw terminal, Yellow, Insulated material, -25 - +70 °C, EN 50047 Form C



| Part no. | LS-S11/P |
|-------------------|----------|
| Catalog No. | 106788 |
| Alternate Catalog | LS-S11-P |
| No. | |
| EL-Nummer | 4315206 |
| (Norway) | |
| | |

Delivery program

| Basic function Position switches Part group reference LSIM Product range LSIM Degree of Protection FeB. [F67 Features Complete unit Anbient temperature Complete unit Degree of Protection Complete unit Robient temperature Complete unit Degree of Protection Complete unit Robient temperature Complete unit Degree of Protection Complete unit Robient temperature Complete unit Degree of Protection EN 5047 Form C Contracts EN 5047 Form C NO = Normally open INC Notes INC Notes INC Contact sequence Sector of Secto | | | |
|--|--|----|---|
| Product range Image: Product r | Basic function | | Position switches Safety position switches |
| Degree of Protection P66, IP67 Features Complete unit Ambient tamperature PC 25 - 70 Design EN 50647 Form C Contacts INO NO = Normally open INO Notes INC • Contact sequence • Contact trave • Positive opening (ZW) Image: Section of the sect | Part group reference | | LS(M) |
| Features Complete unit Ambient temperature 25 - 70 Design EN 50047 Form C Contacts EN 50047 Form C NO = Normally open 1N/0 NC = Normally closed 1N/0 Notes Image: State | Product range | | Roller plunger |
| Anbient temperature -25 - 70 Design EN 50047 Form C Contacts INO NO = Normally open INO NCE = Normally closed INO Notes INO Contact sequence INO Contact travell = Contact closed_l = Contact open Image: State sequence Positive opening (ZW) Vers Colour Enclosure covers Vers Enclosure covers Vers Housing Image: State sequence Housing Image: State sequence | Degree of Protection | | IP66, IP67 |
| Design EN 50047 Form C Contacts INO N/O = Normally closed INO Notes INC Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact sequence Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact sequence Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact sequence Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact sequence Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact rave Image: Contact closed Image: Select function, by positive opening to IEC/EN 60947-5-1 Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact rave Image: Select function open Image: Select function, by positive opening to IEC/EN 60947-5-1 Image: Select function, by positive opening to IEC/EN 60947-5-1 Contact trave Image: Select function open Image: Select function open Image: Select function, by positive open Image: Select funct | Features | | Complete unit |
| Contacts Image: sequence Notes Image: sequence Contact sequence Image: sequence Contact travel = Contact open Image: sequence Positive opening (ZW) Image: sequence Colour Image: sequence Enclosure covers Image: sequence Enclosure covers Image: sequence Housing Image: sequence | Ambient temperature | °C | -25 - +70 |
| N/0 = Normally openIN/0N/c = Normally closedIN/0NotesIn CContact sequenceImage: Second Secon | Design | | EN 50047 Form C |
| V/C = Normally closed INC Notes INC Contact sequence Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Contact sequence Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Contact travel = Contact closed = Contact open Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Contact travel = Contact closed = Contact open Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Positive opening (ZW) Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Positive opening (ZW) Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Colour Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Enclosure covers Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Enclosure covers Image: Seafery function, by positive opening to IEC/EN 60947-5-1 Housing Image: Seafery function, by positive opening to IEC/EN 60947-5-1 For transmit opening (ZW) Image: Seafery function, by opening to IEC/EN 60947-5-1 For transmit opening (ZW) Image: Seafery function, by opening to IEC/EN 60947-5-1 For transmit opening (ZW) Image: Seafery function, by opening to IEC/EN 60947-5-1 For transmit opening (ZW) Image: Seafery function, by opening to IEC/EN 60947-5-1 | Contacts | | |
| Notes Inc C Notes Image: Second s | N/O = Normally open | | 1 N/O |
| Contact sequenceImage: Contact sequenceContact travellere Contact closedContact travellere Contact closedContact travellere Contact closedContact travellere Contact closedPositive opening (ZW)yesColouryesEnclosure coversFollowEnclosure coversFollowEnclosure coversFollowHousingImage: Contact closedHousingImage: Contact closedHous | N/C = Normally closed | | 1 NC 🕀 |
| Image: Section of the section of th | Notes | | Θ = safety function, by positive opening to IEC/EN 60947-5-1 |
| Positive opening (ZW) yes Colour Yellow Enclosure covers Yellow Enclosure covers Yellow Model and | Contact sequence | | ~ \ - \ |
| Colour Enclosure covers Yellow Enclosure covers Image: Colour covers Housing Image: Colour covers | Contact travel = Contact closed = Contact open | | 13-14 NO 21-22 NC 3.0 |
| Enclosure covers Yellow Enclosure covers Image: Comparison of the sector of the secto | Positive opening (ZW) | | yes |
| Enclosure covers Image: Covers of the second seco | Colour | | |
| Housing Insulated material | Enclosure covers | | Yellow |
| | Enclosure covers | | |
| Connection type Screw terminal | 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 | °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 | | | 111/3 |
| Rated operational current | Ie | Α | |
| AC-15 | | | |
| 24 V | Ι _e | А | 6 |
| 220 V 230 V 240 V | Ι _e | А | 6 |
| 380 V 400 V 415 V | Ι _e | А | 4 |
| DC-13 | | | |
| 24 V | le | Α | 3 |
| 110 V | Ι _e | Α | 0.6 |
| 220 V | Ι _e | Α | 0.3 |
| Control circuit reliability | | | |
| at 24 V DC/5 mA | H _F | Fault probabilit | |
| at 5 V DC/1 mA | H _F | Fault probabilit | < 5 x 10 ⁻⁶ , < 1 failure at 5 x 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 |
| 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 | | Ν | 1.0/8.0 |
| Actuating torque of rotary drives | | Nm | 0.2 |
| Max. operating speed with DIN cam | | m/s | 1/1 |
| Notes | | | for angle of actuation $\alpha = 0^{\circ}/30^{\circ}$ |

Design verification as per IEC/EN 61439

| Technical data for design verification | | | |
|--|-------------------|----|--|
| Rated operational current for specified heat dissipation | I _n | А | 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. |
| 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. |

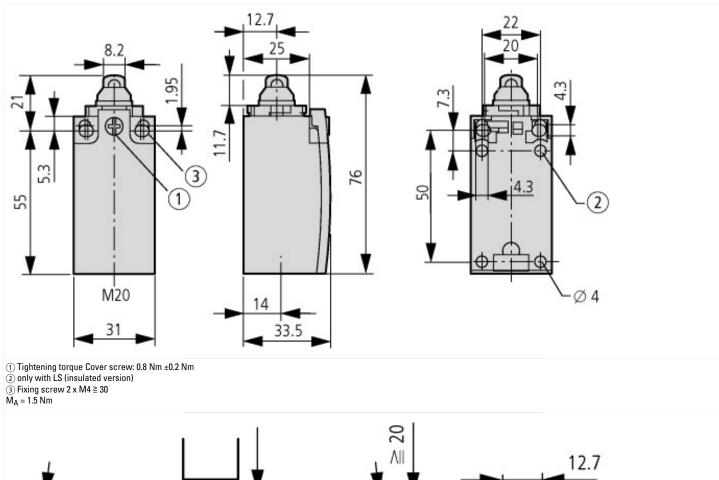
Technical data ETIM 7.0

| 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]) | | | |
| Width sensor | mr | m | 31 |
| Diameter sensor | mr | m | 0 |
| Height of sensor | mr | m | 61 |
| Length of sensor | mr | m | 33.5 |
| Rated operation current le at AC-15, 24 V | A | | 6 |
| Rated operation current le at AC-15, 125 V | A | | 6 |
| Rated operation current le at AC-15, 230 V | A | | 6 |
| Rated operation current le at DC-13, 24 V | A | | 3 |
| Rated operation current le at DC-13, 125 V | A | | 0.8 |
| Rated operation current le at DC-13, 230 V | A | | 0.3 |
| 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 | | | Rotary 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 | °C | 3 | 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



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