

**Position switch, Roller lever, Complete unit, 1 N/O, 1 NC, Cage Clamp,
Yellow, Insulated material, -25 - +70 °C, Short**



Part no. LS-11/LS

290173

EL Number

4315231

(Norway)

| General specifications | | |
|--|--|---|
| Product name | | Eaton Moeller® series LS Position switch |
| Part no. | | LS-11/LS |
| EAN | | 4015082901738 |
| Product Length/Depth | | 33.5 millimetre |
| Product height | | 91 millimetre |
| Product width | | 31 millimetre |
| Product weight | | 0.06 kilogram |
| Compliances | | CE Marked |
| Certifications | | CSA Std. C22.2 No. 14 EN 60947-5 IEC 60947-5 UL 508 CSA-C22.2 No. 14 CE UL IEC/EN 60947 UL File No.: E29184 CSA File No.: 012528 UL Category Control No.: NKCR CSA CSA Class No.: 3211-03 IEC/EN 60947-5 |
| Product Tradename | | LS |
| Product Type | | Position switch |
| Product Sub Type | | None |
| Catalog Notes | | The operating head can be rotated 90° to enable adaptation to the specified approach direction |
| Features & Functions | | |
| Electric connection type | | Cable entry metrical |
| Enclosure color | | Yellow Cover |
| Enclosure material | | Insulated material Plastic |
| Features | | Positive opening Forced opening |
| Switch function type | | Slow-action switch |
| General information | | |
| Connection type | | Cage Clamp |
| Degree of protection | | IP66/IP67 NEMA Other |
| Lifespan | | 8,000,000 mechanical Operations |
| Operating frequency | | 6000 Operations/h |
| Overvoltage category | | III |
| Pollution degree | | 3 |
| Product category | | Roller lever |
| Rated impulse withstand voltage (Uimp) | | 4000 V AC |
| Repetition accuracy | | 0.15 mm (Contacts/switching capacity) |
| Suitable for | | Safety functions |
| Type | | Safety position switch |
| Ambient conditions, mechanical | | |
| Mounting position | | As required |
| Shock resistance | | 25 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms |
| Climatic environmental conditions | | |

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| Ambient operating temperature - min | | -25 °C |
| Ambient operating temperature - max | | 70 °C |
| Climatic proofing | | Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78 |
| Terminal capacities | | |
| Terminal capacity (flexible with ferrule) | | 1 x (0.5 - 1.5) mm ² |
| Terminal capacity (solid) | | 1 x (0.5 - 2.5) mm ² |
| Electrical rating | | |
| Rated conditional short-circuit current (I _q) | | 1 kA |
| Rated insulation voltage (U _i) | | 400 V |
| Rated operational current (I _e) at AC-15, 220 V, 230 V, 240 V | | 6 A |
| Rated operational current (I _e) at AC-15, 24 V | | 6 A |
| Rated operational current (I _e) at AC-15, 380 V, 400 V, 415 V | | 4 A |
| Rated operational current (I _e) at DC-13, 110 V | | 0.6 A |
| Rated operational current (I _e) at DC-13, 125 V | | 0.8 A |
| Rated operational current (I _e) at DC-13, 220 V, 230 V | | 0.3 A |
| Rated operational current (I _e) at DC-13, 24 V | | 3 A |
| Short-circuit protection rating | | Max. 6 A gG/gL, Fuse, Contacts |
| Supply frequency | | Max. 400 Hz, Contacts |
| Actuator | | |
| Actuating force at beginning/end of stroke | | 1.0 N/8.0 N |
| Actuating torque of rotary drives | | 0.2 N·m |
| Actuator type | | Roller lever |
| Operating speed | | Max. 1 m/s (with DIN cam, mechanical actuation) For angle of actuation $\alpha = 30^\circ/45^\circ$ |
| Contacts | | |
| Control circuit reliability | | 1 failure per 10,000,000 switching operations (Statistically determined, at 24 V DC/5 mA) 1 failure per 5,000,000 switching operations (statistically determined, at 5 V DC/1 mA) |
| Number of contacts (change-over contacts) | | 0 |
| Number of contacts (normally closed contacts) | | 1 |
| Number of contacts (normally open contacts) | | 1 |
| Safety | | |
| Explosion safety category for gas | | None |
| Explosion safety category for dust | | None |
| Design verification | | |
| Equipment heat dissipation, current-dependent P _{vid} | | 0 W |
| Heat dissipation capacity P _{diss} | | 0 W |
| Heat dissipation per pole, current-dependent P _{vid} | | 0.17 W |
| Rated operational current for specified heat dissipation (I _n) | | 6 A |
| Static heat dissipation, non-current-dependent P _{vs} | | 0 W |
| 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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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. |

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| 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 9.0

Sensors (EG000026) / End switch (EC000030)

Electric engineering, automation, process control engineering / Sensor technology, safety-related sensor technology / Safety-related mechanical switch (sensor technology) / Safety position switch (Type 1) (ecl@ss13-27-27-26-01 [AKE640018])

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| Width sensor | mm | 31 |
| Diameter sensor | mm | 0 |
| Height of sensor | mm | 61 |
| Length of sensor | mm | 33.5 |
| Rated operation current I _e at AC-15, 24 V | A | 6 |
| Rated operation current I _e at AC-15, 125 V | A | 6 |
| Rated operation current I _e at AC-15, 230 V | A | 6 |
| Rated operation current I _e at DC-13, 24 V | A | 3 |
| Rated operation current I _e at DC-13, 125 V | A | 0.8 |
| Rated operation current I _e 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 |
| Housing material | | Plastic |
| Coating housing | | Other |
| Type of control element | | Roller lever |
| Alignment of the control element | | Other |
| Type of electric connection | | Cable entry metrical |
| 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) | | IP66/IP67 |
| Degree of protection (NEMA) | | Other |