

**Position switch, Rounded plunger, Basic device, expandable, 2 N/O,
Screw terminal, Yellow, Insulated material, -25 - +70 °C, version A**

Part no. LS-S20A
106810
EL Number 4315220
(Norway)

| General specifications | |
|---|---|
| Product name | Eaton Moeller® series LS Position switch |
| Part no. | LS-S20A |
| EAN | 4015081065776 |
| Product Length/Depth | 33.5 millimetre |
| Product height | 76.5 millimetre |
| Product width | 31 millimetre |
| Product weight | 0.045 kilogram |
| Certifications | IEC/EN 60947 CSA-C22.2 No. 14 UL Category Control No.: NKCR CSA UL UL File No.: E29184 CE UL 508 IEC/EN 60947-5 CSA File No.: 012528 CSA Class No.: 3211-03 |
| Product Tradename | LS |
| Product Type | Position switch |
| Product Sub Type | None |
| Features & Functions | |
| Electric connection type | Cable entry metrical |
| Enclosure color | Yellow Cover |
| Enclosure material | Plastic Insulated material |
| Features | Expandable |
| Switch function type | Slow-action switch |
| General information | |
| Connection type | Screw terminal |
| 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 | Rounded plunger |
| Rated impulse withstand voltage (Uimp) | 4000 V AC |
| Repetition accuracy | 0.15 mm (Contacts/switching capacity) |
| Type | Position switch |
| Ambient conditions, mechanical | |
| Mounting position | As required |
| Shock resistance | 25 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms |
| Temperature resistance | 100 °C, Contact temperature of roller head |
| Climatic environmental conditions | |
| Ambient operating temperature - min | -25 °C |
| Ambient operating temperature - max | 70 °C |
| Climatic proofing | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| Terminal capacities | |
| Terminal capacity (flexible with ferrule) | 1 x (0.5 - 1.5) mm ² |

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| 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 | | Plunger |
| Operating speed | | Max. 1/0.5 m/s (with DIN cam, mechanical actuation) For angle of actuation $\alpha = 0^\circ/30^\circ$ |
| 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) | | 0 |
| Number of contacts (normally open contacts) | | 2 |
| 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. |
| 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. |

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| 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

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| 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]) | | |
| 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 | | No |
| Number of safety auxiliary contacts | | 0 |
| Number of contacts as normally closed contact | | 0 |
| Number of contacts as normally open contact | | 2 |
| 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 | | Plunger |
| Alignment of the control element | | Roller cam straight |
| Type of electric connection | | Cable entry metrical |
| With status indication | | No |
| Suitable for safety functions | | No |
| 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 |