

Eaton 106859

Eaton Moeller® series LS4 Safety position switch, LS(4)...ZB, Safety position switches, Complete unit, 1 N/O, 2 NC, Insulated material, Screw terminal, -25 - +70 °C

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| PRODUCT NAME | Eaton Moeller® series LS4 Safety position switch |
| CATALOG NUMBER | 106859 |
| PRODUCT LENGTH/DEPTH | 43 mm |
| PRODUCT HEIGHT | 157 mm |
| PRODUCT WIDTH | 56 mm |
| PRODUCT WEIGHT | 0.287 kg |
| CERTIFICATIONS | CE CSA File No.: 012528 UL UL File No.: E29184 UL 508 UL Category Control No.: NKCR CSA CSA-C22.2 No. 14 IEC/EN 60947-5 CSA Class No.: 3211-03 IEC/EN 60947 |



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| ТҮРЕ | Position switchSafety position switch |
| FEATURES | Forced opening |
| 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. |
| 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 | Does not apply, since the |

| DECLARATIONS OF CONFORMITY | eaton-safety-position- switch-declaration-of- conformity- uk251047en.pdf |
|----------------------------|---|
| MCAD MODEL | basis Is4 mit b 3.stp |
| 00000 | <u>IL05208004Z</u> |
| 000 | eaton-safety-position- switches-contact-at4- mechanism-wiring- diagram.eps |
| 00000 | eaton-safety-position- switches-ls4-contact- travel-diagram.eps |
| 00 | eaton-safety-position- switches-switch-ls4- dimensions-002.eps eaton-safety-position- switches-actuation-ls4- |
| | dimensions-002.eps eaton-safety-position- switches-actuation-ls4- dimensions.eps |
| | eaton-safety-position- switches-enclosure-ls4-3d- drawing-003.eps |

| PROTECTION OF ASSEMBLIES | entire switchgear needs to be evaluated. |
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| 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 | ls the panel builder's responsibility. |
| 10.8 CONNECTIONS FOR EXTERNAL CONDUCTORS | ls the panel builder's responsibility. |
| 10.9.2 POWER- FREQUENCY ELECTRIC STRENGTH | ls the panel builder's responsibility. |
| 10.9.3 IMPULSE WITHSTAND VOLTAGE | ls the panel builder's responsibility. |
| 10.9.4 TESTING OF ENCLOSURES MADE OF INSULATING MATERIAL | ls the panel builder's responsibility. |
| ELECTRIC CONNECTION TYPE | Cable entry metrical |
| ENCLOSURE MATERIAL FINISHING | Other |
| OPERATING FREQUENCY | 1800 Operations/h |
| POLLUTION DEGREE | 3 |
| ACTUATOR ALIGNMENT | Other |
| CLIMATIC PROOFING | Damp heat, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30 |
| ENCLOSURE MATERIAL | Plastic Insulated material |
| ENCLOSURE TYPE | Cuboid |
| RATED OPERATIONAL CURRENT (IE) AT DC-13, 110 V | 0.8 A |
| RATED OPERATIONAL CURRENT (IE) AT DC-13, 125 V | 0.8 A |
| RATED OPERATIONAL CURRENT (IE) AT DC-13, 220 V, 230 V | 0.3 A |
| RATED OPERATIONAL CURRENT (IE) AT DC-13, 24 V | 3 A |
| RATED OPERATIONAL CURRENT FOR SPECIFIED | 6 A |

| HEAT DISSIPATION (IN) | |
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| SENSOR HEIGHT | 125 mm |
| SENSOR LENGTH | 40 mm |
| STATIC HEAT DISSIPATION, NON- CURRENT-DEPENDENT PVS | 0 W |
| WIDTH SENSOR | 40 mm |
| PRODUCT CATEGORY | Safety position switches |
| ACTION | 2021118113756- Mechanical Limit Switches.xlsm-Data |
| RATED IMPULSE WITHSTAND VOLTAGE (UIMP) | 6000 V AC |
| ACTUATING FORCE AT BEGINNING/END OF STROKE | 15 N/20 N (plug-in/pull- out) |
| EXPLOSION SAFETY CATEGORY FOR DUST | None |
| EXPLOSION SAFETY CATEGORY FOR GAS | None |
| ACTUATOR TYPE | Other |
| AMBIENT OPERATING TEMPERATURE - MAX | 70 °C |
| AMBIENT OPERATING TEMPERATURE - MIN | -25 °C |
| DIAMETER SENSOR | 0 mm |
| EQUIPMENT HEAT DISSIPATION, CURRENT- DEPENDENT PVID | 0 W |
| HEAT DISSIPATION CAPACITY PDISS | 0 W |
| HEAT DISSIPATION PER POLE, CURRENT- DEPENDENT PVID | 0.1 W |
| NUMBER OF CONTACTS (CHANGE-OVER CONTACTS) | 0 |
| NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS) | 0 |
| NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS) | 1 |
| NUMBER OF SAFETY AUXILIARY CONTACTS | 0 |
| RATED INSULATION VOLTAGE (UI) | 500 V |
| RATED OPERATIONAL | 6 A |
| | |

| CURRENT (IE) AT AC-15, 125 V RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V RATED OPERATIONAL CURRENT (IE) AT AC-15, 24 V RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V MOUNTING POSITION As required RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ) OVERVOLTAGE CATEGORY CONNECTION TYPE Screw terminal DEGREE OF PROTECTION PEGNET None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw LIFESPAN 1,500,000 mechanical Operations REPETITION ACCURACY Contacts Sultrable FOR Safety functions SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT MAX. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY (SOLID) 1 x (0.75 - 1.5) mm² 1 x (0.75 - 2.5) mm² | | |
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| CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V RATED OPERATIONAL CURRENT (IE) AT AC-15, 24 V RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V MOUNTING POSITION As required RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ) OVERVOLTAGE CATEGORY CONNECTION TYPE Screw terminal DEGREE OF PROTECTION PERMA Other INTERFACE TYPE None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw LIFESPAN 1,500,000 mechanical Operations O.02 mm (Contacts/switching capacity) SHOCK RESISTANCE 5 g, Standard-action contact, Mechanical, Halfsinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY (2 × (0.75 - 1.5) mm² 1 x (0.5 - 1.5) mm² TERMINAL CAPACITY (7 × 1.5) mm² 1 x (0.5 - 1.5) mm² | | |
| CURRENT (IE) AT AC-15, 24 V RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V MOUNTING POSITION AS required RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ) OVERVOLTAGE CATEGORY CONNECTION TYPE Screw terminal DEGREE OF PROTECTION IP65 NEMA Other INTERFACE TYPE None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw LIFESPAN 1,500,000 mechanical Operations CODUMN (Contacts/switching capacity) SHOCK RESISTANCE 5, S, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² TERMINAL CAPACITY (5.2 x (0.75 - 1.5) mm² TERMINAL CAPACITY 2 x (0.75 - 1.5) mm² | CURRENT (IE) AT AC-15, | 6 A |
| CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V MOUNTING POSITION RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ) OVERVOLTAGE CATEGORY CONNECTION TYPE DEGREE OF PROTECTION INTERFACE TYPE None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw LIFESPAN 1,500,000 mechanical Operations REPETITION ACCURACY COntacts/switching capacity) SHOCK RESISTANCE SIGN Safety functions TIGHTENING TORQUE SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² TERMINAL CAPACITY (2 x (0.5 - 1.5) mm² TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² | CURRENT (IE) AT AC-15, | 10 A |
| RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ) OVERVOLTAGE CATEGORY CONNECTION TYPE DEGREE OF PROTECTION INTERFACE TYPE None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw 1,500,000 mechanical Operations O.02 mm (Contacts/switching capacity) SHOCK RESISTANCE SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR TIGHTENING TORQUE SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² | CURRENT (IE) AT AC-15, | 4 A |
| SHORT-CIRCUIT CURRENT (IQ) OVERVOLTAGE CATEGORY CONNECTION TYPE Screw terminal IP65 NEMA Other INTERFACE TYPE None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw LIFESPAN 1,500,000 mechanical Operations O.02 mm (Contacts/switching capacity) SHOCK RESISTANCE 5, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 × (0.5 - 1.5) mm² 1 × (0.5 - 1.5) mm² 1 × (0.5 - 1.5) mm² 1 × (0.5 - 1.5) mm² | MOUNTING POSITION | As required |
| CATEGORY CONNECTION TYPE Screw terminal IP65 NEMA Other INTERFACE TYPE None SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw 1,500,000 mechanical Operations 0.02 mm (Contacts/switching capacity) SHOCK RESISTANCE Supply Frequency Supply Frequency Max. 400 Hz, Contacts Suitable for Tightening Torque SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY TERMINAL CAPACITY TIGHTENING TORQUE Screw terminal Ava. 400 Hz, Contacts Max. 10 A gG/gL, Fuse, Contacts 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² | SHORT-CIRCUIT CURRENT | 1 kA |
| DEGREE OF PROTECTION INTERFACE TYPE SWITCH FUNCTION TYPE Slow-action switch SCREW SIZE PH1, Terminal screw 1,500,000 mechanical Operations 0.02 mm (Contacts/switching capacity) SHOCK RESISTANCE SUPPLY FREQUENCY SUITABLE FOR TIGHTENING TORQUE SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 1PH1, Terminal Clow-action switch Contacts // Slow-action switch Contacts // Slow-action switch Available screw None 1,500,000 mechanical Operations 0.02 mm (Contacts/switching capacity) 5 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms Max. 400 Hz, Contacts Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.75 - 1.5) mm² | | III |
| INTERFACE TYPE SWITCH FUNCTION TYPE SCREW SIZE LIFESPAN REPETITION ACCURACY SHOCK RESISTANCE SUPPLY FREQUENCY SUITABLE FOR TIGHTENING TORQUE SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (ELEXIBLE WITH FERRULE) TERMINAL CAPACITY INDEX SIOW-action switch Slow-action switch O.02 mm (Contacts/switching capacity) 5 g, Standard-action contact, Mechanical, Halfsinusoidal shock 20 ms Max. 400 Hz, Contacts 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.75 - 1.5) mm² 1 x (0.5 - 1.5) mm² | CONNECTION TYPE | Screw terminal |
| SWITCH FUNCTION TYPE Slow-action switch PH1, Terminal screw 1,500,000 mechanical Operations 0.02 mm (Contacts/switching capacity) SHOCK RESISTANCE Supply Frequency Supply Frequency Max. 400 Hz, Contacts Suitable for Tightening Torque Short-circuit PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1,500,000 mechanical Operations Max. 400 Hz, Contacts Safety functions Max. 400 Hz, Contacts 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.5 - 1.5) mm² | DEGREE OF PROTECTION | |
| LIFESPAN 1,500,000 mechanical Operations 0.02 mm (Contacts/switching capacity) SHOCK RESISTANCE 5 g, Standard-action contact, Mechanical, Halfsinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR TIGHTENING TORQUE SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² | INTERFACE TYPE | None |
| LIFESPAN 1,500,000 mechanical Operations 0.02 mm (Contacts/switching capacity) 5 g, Standard-action contact, Mechanical, Halfsinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² | SWITCH FUNCTION TYPE | Slow-action switch |
| REPETITION ACCURACY Operations 0.02 mm (Contacts/switching capacity) 5 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.75 - 1.5) mm² | SCREW SIZE | PH1, Terminal screw |
| REPETITION ACCURACY (Contacts/switching capacity) 5 g, Standard-action contact, Mechanical, Halfsinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts SUITABLE FOR Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² | LIFESPAN | |
| SHOCK RESISTANCE contact, Mechanical, Half-sinusoidal shock 20 ms SUPPLY FREQUENCY Max. 400 Hz, Contacts Suitable for Safety functions TIGHTENING TORQUE 0.9 Nm, Screw terminals Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² | REPETITION ACCURACY | (Contacts/switching |
| SUITABLE FOR TIGHTENING TORQUE 0.9 Nm, Screw terminals SHORT-CIRCUIT PROTECTION RATING TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.75 - 1.5) mm² | SHOCK RESISTANCE | contact, Mechanical, Half- |
| TIGHTENING TORQUE O.9 Nm, Screw terminals Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.75 - 1.5) mm² | SUPPLY FREQUENCY | Max. 400 Hz, Contacts |
| SHORT-CIRCUIT PROTECTION RATING Max. 10 A gG/gL, Fuse, Contacts TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² TERMINAL CAPACITY 2 x (0.75 - 1.5) mm² | SUITABLE FOR | Safety functions |
| TERMINAL CAPACITY (FLEXIBLE WITH FERRULE) TERMINAL CAPACITY 2 x (0.5 - 1.5) mm ² 1 x (0.5 - 1.5) mm ² 2 x (0.75 - 1.5) mm ² | TIGHTENING TORQUE | 0.9 Nm, Screw terminals |
| (FLEXIBLE WITH FERRULE) 2 x (0.5 - 1.5) mm² 1 x (0.5 - 1.5) mm² 2 x (0.75 - 1.5) mm² | | |
| | (FLEXIBLE WITH | |
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| PROJECT NAME: | |
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| PROJECT NUMBER: | |
| PREPARED BY: | |
| ПП: | |



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