

Specifications



Eaton 290176

Eaton Moeller® series LS Position switch, Rounded plunger, Basic device, not expandable, 1 N/O, 1 NC, Cage Clamp, Yellow, Insulated material, -25 - +70 °C LS-11/F

General specifications

PRODUCT NAME	Eaton Moeller® series LS Position switch
CATALOG NUMBER	290176
MODEL CODE	LS-11/F
EAN	4015082901769
PRODUCT LENGTH/DEPTH	33.5 mm
PRODUCT HEIGHT	76.5 mm
PRODUCT WIDTH	31 mm
PRODUCT WEIGHT	0.05 kg
CERTIFICATIONS	CSA Class No.: 3211-03 IEC/EN 60947 CE UL 508 CSA File No.: 012528 CSA IEC/EN 60947-5 UL Category Control No.: NKCR UL UL File No.: E29184 CSA-C22.2 No. 14
GLOBAL CATALOG	290176



Powering Business Worldwide

Product specifications

TYPE	Safety position switch
FEATURES	Positive opening 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 PROTECTION OF ASSEMBLIES	Does not apply, since the entire switchgear needs to be evaluated.

Resources

	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf
CATALOGS	eaton-pushbuttons-signal-towers-sensors-assortment-overview-catalog-ca047003en-en-us.pdf
CONTROL TRAVEL DIAGRAM	eaton-position-switches-diagram-ls-contact-travel-diagram-011.eps
DECLARATIONS OF CONFORMITY	eaton-position-switch-declaration-of-conformity-eu250549en.pdf eaton-position-switch-declaration-of-conformity-uk251032en.pdf
DRAWINGS	eaton-position-switches-plunger-ls-dimensions.eps eaton-position-switches-switch-ls-dimensions.eps eaton-operating-button-symbol-008.eps eaton-position-switches-ls-3d-drawing.eps
ECAD MODEL	ETN.290176.edz
INSTALLATION INSTRUCTIONS	IL053001ZU
MCAD MODEL	DA-CS-ls front DA-CD-ls front
SALES NOTES	eaton-safety-switches-rs-titan-flyer-fl053001en-en-us.pdf
WIRING DIAGRAMS	eaton-position-switches-contact-ls-wiring-diagram.eps

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.
ELECTRIC CONNECTION TYPE	Cable entry metrical
ENCLOSURE MATERIAL FINISHING	Other
OPERATING FREQUENCY	6000 Operations/h
POLLUTION DEGREE	3
ACTUATOR ALIGNMENT	Roller cam straight
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	0.6 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 HEAT DISSIPATION (IN)	6 A
SENSOR HEIGHT	61 mm

SENSOR LENGTH	33.5 mm
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	0 W
WIDTH SENSOR	31 mm
PRODUCT CATEGORY	Rounded plunger
ACTION	2020122120328-Mechanical Limit Switches.xlsm-Data
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4000 V AC
ENCLOSURE COLOR	Yellow Cover
ACTUATING FORCE AT BEGINNING/END OF STROKE	1.0 N/8.0 N
EXPLOSION SAFETY CATEGORY FOR DUST	None
EXPLOSION SAFETY CATEGORY FOR GAS	None
ACTUATOR TYPE	Plunger
ACTUATING TORQUE OF ROTARY DRIVES	0.2 Nm
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	0.17 W
NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	1
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	1
NUMBER OF SAFETY AUXILIARY CONTACTS	1
RATED INSULATION VOLTAGE (UI)	400 V

RATED OPERATIONAL CURRENT (IE) AT AC-15, 125 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 220 V, 230 V, 240 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 24 V	6 A
RATED OPERATIONAL CURRENT (IE) AT AC-15, 380 V, 400 V, 415 V	4 A
MOUNTING POSITION	As required
RATED CONDITIONAL SHORT-CIRCUIT CURRENT (IQ)	1 kA
OVERVOLTAGE CATEGORY	III
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)
CONNECTION TYPE	Cage Clamp
TEMPERATURE RESISTANCE	100 °C, Contact temperature of roller head
DEGREE OF PROTECTION	IP66/IP67 NEMA Other
INTERFACE TYPE	None
SWITCH FUNCTION TYPE	Slow-action switch
LIFESPAN	8,000,000 mechanical Operations
REPETITION ACCURACY	0.15 mm (Contacts/switching capacity)
SHOCK RESISTANCE	25 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms
SUPPLY FREQUENCY	Max. 400 Hz, Contacts
SUITABLE FOR	Safety functions
OPERATING SPEED	Max. 1/0.5 m/s (with DIN cam, mechanical actuation) For angle of actuation $\alpha = 0^\circ/30^\circ$
SHORT-CIRCUIT PROTECTION RATING	Max. 6 A gG/gL, Fuse, Contacts
TERMINAL CAPACITY	1 x (0.5 - 1.5) mm ²

**(FLEXIBLE WITH
FERRULE)**

**TERMINAL CAPACITY
(SOLID)**

1 x (0.5 - 2.5) mm²

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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