Specifications

Photo is representative

Eaton 106820

Eaton Moeller® series LS Position switch, 2 N/C, basic, magnet-powered interlock LS-S02-120AMT-ZBZ/X

General specifications

PRODUCT NAME	Eaton Moeller® series LS Position switch
CATALOG NUMBER	106820
MODEL CODE	LS-S02-120AMT-ZBZ/X
EAN	4015081065806
PRODUCT LENGTH/DEPTH	55 mm
PRODUCT HEIGHT	170 mm
PRODUCT WIDTH	37 mm
PRODUCT WEIGHT	0.417 kg
CERTIFICATIONS	CE IEC/EN 60947 UL CSA Class No.: 3211-03 UL Category Control No.: NKCR CSA File No.: 012528 CSA UL 508 UL File No.: E29184 CSA-C22.2 No. 14 IEC/EN 60947-5

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Features & Functions

ELECTRIC CONNECTION TYPE	Cable entry metrical
ENCLOSURE MATERIAL	Insulated material Plastic
FEATURES	Forced opening Expandable
FITTED WITH:	Interlock monitoring
SWITCH FUNCTION TYPE	Slow-action switch

General

CONNECTION TYPE	Screw terminal
DEGREE OF PROTECTION	IP65 NEMA Other
DUTY FACTOR	100 % (Magnet)
OPERATING FREQUENCY	800 Operations/h
OVERVOLTAGE CATEGORY	III
POLLUTION DEGREE	3
PRODUCT CATEGORY	Basic devices with magnet-powered interlock (open-circuit principle)
RATED IMPULSE WITHSTAND VOLTAGE (UIMP)	4000 V AC
REPETITION ACCURACY	0.02 mm (Contacts/switching capacity)
SUITABLE FOR	Safety functions
TYPE	• Position switch • Safety position switch

Ambient conditions, mechanical

MOUNTING POSITION	As required
SHOCK RESISTANCE	10 g, Standard-action contact, Mechanical, Half-Sinusoidal shock 20 ms

Climatic environmental conditions

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)	2 x (0.5 - 1.5) mm^2 1 x (0.5 - 1.5) mm^2
TERMINAL CAPACITY (SOLID)	1 x (0.75 - 2.5) mm^2 2 x (0.75 - 1.5) mm^2

Electrical rating

POWER CONSUMPTION	11 VA at 230 V AC (electromechanical actuation) 8 W at 24 V DC (electromechanical actuation) 8 VA at 120 V AC (electromechanical actuation)
RATED CONDITIONAL	1 kA

SHORT-CIRCUIT CURRENT (IQ)	
RATED CONTROL SUPPLY VOLTAGE	120 V 50/60 Hz (Us, for magnet drive)
RATED INSULATION VOLTAGE (UI)	400 V
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
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
SHORT-CIRCUIT PROTECTION RATING	Max. 6 A gG/gL, Fuse, Contacts
SUPPLY FREQUENCY	Max. 400 Hz, Contacts
VOLTAGE TOLERANCE	0.85 x Us, Pick-up and drop-out values 1.1 x Us, Pick-up and drop-out values

Actuator

ACTUATING FORCE AT BEGINNING/END OF STROKE	25 N/15 N (plug-in/pull-out)
ACTUATOR TYPE	None
MECHANICAL HOLDING FORCE	1200 N (according to GS-ET-19 (04/2004), XNW) 1700 N (according to GS-ET-19 (04/2004), XG, XW, XNG) 1600 N (according to GS-ET-19 (04/2004), XWA, XFG, XF)

Contacts

NUMBER OF CONTACTS (CHANGE-OVER CONTACTS)	0
NUMBER OF CONTACTS (NORMALLY CLOSED CONTACTS)	2
NUMBER OF CONTACTS (NORMALLY OPEN CONTACTS)	0

Safety

EXPLOSION SAFETY CATEGORY FOR GAS	None
EXPLOSION SAFETY CATEGORY FOR DUST	None

Design verification

EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	0 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0.13 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	6 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	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.
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.

Resources

CATALOGUES	eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf eaton-pushbuttons-signal-towers-sensors-assortment-overview-catalog-ca047003en-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-position-switch-declaration-of-conformity-uk251040en.pdf DA-DC-00004360.pdf eaton-position-switch-declaration-of-conformity-eu250557en.pdf DA-DC-00004361.pdf
DRAWINGS	eaton-position-switches-ls-dimensions.eps
ECAD MODEL	ETN.106820.edz
INSTALLATION INSTRUCTIONS	eaton-ls-s-zbz-safety-position-switch-instruction-leaflet-il05208005z.pdf
MCAD MODEL	DA-CD-zbz DA-CS-zbz
SALES NOTES	eaton-safety-switches-rs-titan-flyer-fl053001en-en-us.pdf
WIRING DIAGRAMS	eaton-position-switches-contact-ls-wiring-diagram-006.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	

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