DATASHEET - LS-S11/LB

Position switch, Roller lever, Complete unit, 1 N/O, 1 NC, Screw terminal, Yellow, Insulated material, -25 - +70 °C, Large



Part no.	LS-S11/LB
	106786
EL Number	4315204
(Norway)	

General specifications

General specifications	
Product name	Eaton Moeller® series LS Position switch
Part no.	LS-S11/LB
EAN	4015081065530
Product Length/Depth	33.5 millimetre
Product height	108 millimetre
Product width	31 millimetre
Product weight	0.064 kilogram
Certifications	IEC/EN 60947 CSA File No.: 012528 IEC/EN 60947-5 UL UL Category Control No.: NKCR UL File No.: E29184 CSA CSA Class No.: 3211-03 CE UL 508 CSA-C22.2 No. 14
Product Tradename	LS
Product Type	Position switch
Product Sub Type	None
Catalog Notes	Contacts with safety function, by positive opening to IEC/EN 60947-5-1 Large 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	Plastic Insulated material
Features	Forced opening Positive opening
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	
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
Туре	Position switch 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	
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
Terminal capacity (solid)	1 x (0.5 - 2.5) mm ²
Electrical rating	
Rated conditional short-circuit current (Iq)	1 kA
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	0.6 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
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 5,000,000 switching operations (statistically determined, at 5 V DC/1
	mA) 1 failure per 10,000,000 switching operations (Statistically determined, at 24 V DC/5
	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 Pvid	0 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	0.17 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.
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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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Height of sensorImmeImm	Width sensor	mm	31
Laph of sensor nm 3.5 Bated operation current le at AC-15,24V A 6 Rated operation current le at AC-15,25V A 6 Rated operation current le at AC-15,25V A 6 Rated operation current le at AC-15,25V A 6 Rated operation current le at CD-13,25V A 8 Rated operation current le at CD-13,25V A 8 Switching function A 8 Switching function A 8 Output decrimation stating A 8 Output decrimation stating A 8 Number of contacts as normally closed contact A 8 Number of contacts as normally closed contact A 1 Number of contacts as normally closed contact A 8 Number of contacts as normally closed contact A 8 Number of contacts as normally closed contact A 8 Number of contacts as normally closed contact A 8 Number of contacts as normally closed contact A 8 Number of contacts	Diameter sensor	mm	0
Rate operation current leat AC-15, 24V Image: A image:	Height of sensor	mm	61
Reted operation current te ALC-15, 250 V A 6 Reted operation current te ALC-15, 230 V A 6 Reted operation current te ALC-13, 24V A 8 Reted operation current te ALC-13, 25V V A 8 Reted operation current te ALC-13, 25V V A 8 Switching function Book excloss which Book excloss which Switching function latching Book excloss which Book exclose which Switching function latching Book exclose which Book exclose which Number of contacts as normally closed contact F Book exclose which Number of contacts as normally closed contact F Book exclose which exclose Book exclo	Length of sensor	mm	33.5
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Rate doperation current le at DC-13, 250 V A 0 Switching function Switching function Switching function Switching function Switching function latching Switching function Switching function Switching function Output electronic Color No Switching function Number of safety axiliary contacts Color Switching function Switching function Number of contacts as normally open contact Switching function Switching function Switching function Number of contacts as normally open contact Switching function Switching function Switching function Number of contacts as normally open contact Switching function Switching function Switching function Number of contacts as normally open contact Switching function Switching function Switching function Number of contacts as normality open contact Switching function Switching function Switching function Number of contacts as normality open contact Switching function Switching function Switching function Number of contacts as normality open contact Switching function Switching function Switching function Switching function Switc	Rated operation current le at AC-15, 230 V	А	6
Rate operation current leat DC-13, 23V A B B Switching function Switching switch Switching switch Output electronic No No Forced opening V Switching switch Number of safety auxiliary contacts Switching switch Switching switch Number of contacts as nomally closed contact Switching switch I Number of contacts as change-over contact Switching switch Switching switch Type of contacts as change-over contact Switching s	Rated operation current le at DC-13, 24 V	А	3
Switching functionImage: space of the space o	Rated operation current le at DC-13, 125 V	А	0.8
Nuclein function latchingImage: set of the set of th	Rated operation current le at DC-13, 230 V	А	0.3
Output electronicImage: sector of the sector of	Switching function		Slow-action switch
Fored opening Yes Number of safety auxiliary contacts 1 Number of contacts as normally closed contact Yes Number of contacts as normally open contact Yes Number of contacts as change-over contact Yes Number of contacts as change-over contact Yes Statistic for safety communication Yes Construction type housing Yes None Yes Rougn material Yes None Yes Nagen and the control element Yes Nye of electric connection Yes With status indication Yes Stapolison safety ca	Switching function latching		No
Number of safety auxiliary contacts I I Number of contacts as normally closed contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I Number of contacts as normally open contact I I I Number of contacts as normally open contact I I I I Not contact as normally open contact I I I I I I I I I I I I I I	Output electronic		No
Number of contacts as normally closed contact I Number of contacts as normally open contact None Type of interface None Construction type housing Cobid Housing material I Coating housing I Type of enterface I Alignment of the control element I Note I Suitable for safety functions I Suitable for safety functions I Suitable for safety functions I Explosion safety category for dust None Antimetemperature during operating I None Explosion safety category for dust None Antimetemperature during operating I I Degree of protection (IP) I I	Forced opening		Yes
Number of contacts as onanally open contact Image: space open contact Image: space open contact Number of contacts as change-over contact Image: space open contact Image: space open contact Type of interface Space open contact Image: space open contact Image: space open contact Type of interface for safety communication Image: space open contact Image: space open contact Image: space open contact Construction type housing Image: space open contact Image: space open	Number of safety auxiliary contacts		1
Number of contacts as change-over contact Image: Sector Secto	Number of contacts as normally closed contact		1
Type of interface None Type of interface for safety communication None Construction type housing None Housing material Cuboid Coating housing Image: Communication Type of control element Type of electric connection Alignment of the control element Image: Communication Type of electric connection Image: Communication Vith status indication Image: Communication Suitable for safety category for gas Image: Communication Explosion safety category for dust Image: Communication Ambient temperature during operating Image: Communication Degree of protection (IP) Image: Communication	Number of contacts as normally open contact		1
Type of interface for safety communication Mone Construction type housing Cuboid Housing material Plastic Coating housing Other Type of control element Boller lever Alignment of the control element Cube of the control element Ype of electric connection Vith status indication Vith status indication Self element Suitable for safety functions Yes Explosion safety category for gas None Ambient temperature during operating Self energet Parter of protection (IP) Protection (IP)	Number of contacts as change-over contact		0
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Housing material Image: Control Report to the contecont to the c	Type of interface for safety communication		None
Coating housingOtherType of control elementFile of a control elementAlignment of the control elementOtherType of electric connectionOtherWith status indicationSole of a control elementSuitable for safety functionsSole of a control elementExplosion safety category for gasSole of a control elementAmbient temperature during operatingSole of a control elementDegree of protection (IP)Sole of a control element	Construction type housing		Cuboid
Type of control element Roller lever Alignment of the control element Other Type of electric connection Cable entry metrical Vith status indication Sold Suitable for safety functions Yes Explosion safety category for gas None Ambient temperature during operating Sold None Degree of protection (IP) Image: Sold Sold Sold Sold Sold Sold Sold Sold	Housing material		Plastic
Alignment of the control elementOtherType of electric connectionCable entry metricalWith status indicationSet of the set of the se	Coating housing		Other
Type of electric connectionCable entry metricalWith status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operatingPer CDegree of protection (IP)For March and M	Type of control element		Roller lever
With status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operatingYesDegree of protection (IP)P66/IP67	Alignment of the control element		Other
Suitable for safety functionsPersonYesExplosion safety category for gasNoneNoneExplosion safety category for dustNoneSoneAmbient temperature during operatingPerson25 70Degree of protection (IP)PersonPerson	Type of electric connection		Cable entry metrical
Explosion safety category for gas Mone Explosion safety category for dust None Ambient temperature during operating C -25 - 70 Degree of protection (IP) Image: Content operation op	With status indication		No
Explosion safety category for dustNoneAmbient temperature during operating°C-25 - 70Degree of protection (IP)IP66/IP67IP66/IP67	Suitable for safety functions		Yes
Ambient temperature during operating °C -25 - 70 Degree of protection (IP) IP66/IP67	Explosion safety category for gas		None
Degree of protection (IP) IP66/IP67	Explosion safety category for dust		None
	Ambient temperature during operating	°C	-25 - 70
Degree of protection (NEMA) Other	Degree of protection (IP)		IP66/IP67
	Degree of protection (NEMA)		Other