

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

**Part no. LS-11/LB**

**290175**

**EL Number**

**4315233**

**(Norway)**

<b>General specifications</b>		
Product name		Eaton Moeller® series LS Position switch
Part no.		LS-11/LB
EAN		4015082901752
Product Length/Depth		33.5 millimetre
Product height		108 millimetre
Product width		31 millimetre
Product weight		0.062 kilogram
Compliances		CE Marked
Certifications		IEC 60947-5 EN 60947-5 UL 508 CSA Std. C22.2 No. 14 UL CSA-C22.2 No. 14 IEC/EN 60947-5 UL File No.: E29184 CSA Class No.: 3211-03 CE IEC/EN 60947 CSA CSA File No.: 012528 UL Category Control No.: NKCR
Product Tradename		LS
Product Type		Position switch
Product Sub Type		None
Catalog Notes		The operating head can be rotated 90° to enable adaptation to the specified approach direction
<b>Features &amp; Functions</b>		
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
<b>General information</b>		
Connection type		Cage Clamp
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		Roller lever
Rated impulse withstand voltage (Uimp)		4000 V AC
Repetition accuracy		0.15 mm (Contacts/switching capacity)
Suitable for		Safety functions
Type		Safety position switch
<b>Ambient conditions, mechanical</b>		
Mounting position		As required
Shock resistance		25 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms
<b>Climatic environmental conditions</b>		

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
<b>Terminal capacities</b>		
Terminal capacity (flexible with ferrule)		1 x (0.5 - 1.5) mm <sup>2</sup>
Terminal capacity (solid)		1 x (0.5 - 2.5) mm <sup>2</sup>
<b>Electrical rating</b>		
Rated conditional short-circuit current (I <sub>q</sub> )		1 kA
Rated insulation voltage (U <sub>i</sub> )		400 V
Rated operational current (I <sub>e</sub> ) at AC-15, 220 V, 230 V, 240 V		6 A
Rated operational current (I <sub>e</sub> ) at AC-15, 24 V		6 A
Rated operational current (I <sub>e</sub> ) at AC-15, 380 V, 400 V, 415 V		4 A
Rated operational current (I <sub>e</sub> ) at DC-13, 110 V		0.6 A
Rated operational current (I <sub>e</sub> ) at DC-13, 125 V		0.8 A
Rated operational current (I <sub>e</sub> ) at DC-13, 220 V, 230 V		0.3 A
Rated operational current (I <sub>e</sub> ) at DC-13, 24 V		3 A
Short-circuit protection rating		Max. 6 A gG/gL, Fuse, Contacts
Supply frequency		Max. 400 Hz, Contacts
<b>Actuator</b>		
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		For angle of actuation $\alpha = 30^\circ/45^\circ$ Max. 1 m/s (with DIN cam, mechanical actuation)
<b>Contacts</b>		
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)		1
Number of contacts (normally open contacts)		1
<b>Safety</b>		
Explosion safety category for gas		None
Explosion safety category for dust		None
<b>Design verification</b>		
Equipment heat dissipation, current-dependent P <sub>vid</sub>		0 W
Heat dissipation capacity P <sub>diss</sub>		0 W
Heat dissipation per pole, current-dependent P <sub>vid</sub>		0.17 W
Rated operational current for specified heat dissipation (I <sub>n</sub> )		6 A
Static heat dissipation, non-current-dependent P <sub>vs</sub>		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.

## 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])

Width sensor	mm	31
Diameter sensor	mm	0
Height of sensor	mm	61
Length of sensor	mm	33.5
Rated operation current I <sub>e</sub> at AC-15, 24 V	A	6
Rated operation current I <sub>e</sub> at AC-15, 125 V	A	6
Rated operation current I <sub>e</sub> at AC-15, 230 V	A	6
Rated operation current I <sub>e</sub> at DC-13, 24 V	A	3
Rated operation current I <sub>e</sub> at DC-13, 125 V	A	0.8
Rated operation current I <sub>e</sub> at DC-13, 230 V	A	0.3
Switching function		Slow-action switch
Switching function latching		No
Output electronic		No
Forced opening		Yes
Number of safety auxiliary contacts		1
Number of contacts as normally closed contact		1
Number of contacts as normally open contact		1
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		Roller lever
Alignment of the control element		Other
Type of electric connection		Cable entry metrical
With status indication		No
Suitable for safety functions		Yes
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