

**Safety position switch, LS(4)...ZB, Safety position switches, Complete unit, 2 NC, Insulated material, Cage Clamp, -25 - +70 °C**

**Part no.**                    **LS-02-ZB**

**106817**

**EL Number**

**4356194**

**(Norway)**

<b>General specifications</b>	
Product name	Eaton Moeller® series LS Safety position switch
Part no.	LS-02-ZB
EAN	4015081066308
Product Length/Depth	30 millimetre
Product height	95 millimetre
Product width	30 millimetre
Product weight	0.08 kilogram
Certifications	UL 508 CSA-C22.2 No. 14 IEC/EN 60947 UL IEC/EN 60947-5 CSA File No.: 012528 UL File No.: E29184 UL Category Control No.: NKCR CSA CSA Class No.: 3211-03 CE
Product Tradename	LS
Product Type	Safety position switch
Product Sub Type	None
Catalog Notes	Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402 Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany Contacts with safety function, by positive opening to IEC/EN 60947-5-1 For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length. The operating heads can be turned manually in 90° steps to suit the specified level of actuation. With the actuator inserted, the N/O contact is open and the N/C contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed.
<b>Features &amp; Functions</b>	
Electric connection type	Cable entry metrical
Enclosure material	Insulated material Plastic
Features	Forced opening
Switch function type	Slow-action switch
<b>General information</b>	
Connection type	Cage Clamp
Degree of protection	IP66 NEMA Other
Lifespan	1,500,000 mechanical Operations
Operating frequency	1800 Operations/h
Overvoltage category	III
Pollution degree	3
Product category	Safety position switches
Rated impulse withstand voltage (Uimp)	4000 V AC
Repetition accuracy	0.15 mm (Contacts/switching capacity)
Suitable for	Safety functions
Type	Position switch Safety position switch
<b>Ambient conditions, mechanical</b>	
Mounting position	As required Vertical Horizontal

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, constant, to IEC 60068-2-78 Damp heat, cyclic, to IEC 60068-2-30
<b>Terminal capacities</b>		
Terminal capacity (flexible with ferrule)		1 x (0.5 - 1.5) mm <sup>2</sup> 2 x (0.5 - 1.5) mm <sup>2</sup>
Terminal capacity (solid)		1 x (0.5 - 1.5) mm <sup>2</sup> 2 x (0.5 - 1.5) mm <sup>2</sup>
Screw size		PH1, Terminal screw
Tightening torque		0.4 Nm, Screw terminals
<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		10 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		10 N/5 N (plug-in/pull-out)
Actuator type		Other
<b>Contacts</b>		
Number of contacts (change-over contacts)		0
Number of contacts (normally closed contacts)		2
Number of contacts (normally open contacts)		0
<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	30
Diameter sensor	mm	0
Height of sensor	mm	96
Length of sensor	mm	33.35
Rated operation current I <sub>e</sub> at AC-15, 24 V	A	10
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		0
Number of contacts as normally closed contact		2
Number of contacts as normally open contact		0
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		Other
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
Degree of protection (NEMA)		Other