DATASHEET - LS-11S-ZB



Safety position switch, 1N/O+1N/C, insulated material, +actuator ZB, spring clamp connection

Powering Business Worldwide

LS-11S-ZB Part no. Catalog No. 106870 Eaton Catalog No. LS-11S-ZB **EL-Nummer** 0004356198

(Norway)

Delivery program

Safety position switches LSI4L2B Safety position switches LSI4L2B Safety position switches Safety position switches LSI4L2B Safety position switches Safety position switches LSI4L2B Safety position switches LSI4L2B Safety position switches LSI4L2B Safety position switches LSI4L2B Complete unit Complete unit Yes With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. TIN/O IN/O IN/O IN/O Safety position switches LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. TIN/O IN/O IN/O Safety position switches LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. TIN/O IN/O IN/O Safety position switches LSIAL2B With the actuator inserted, the N/O contact is open and the NC contact is closed. TIN/O IN/O IN/O Safety position switches LSIAL2B LSIAL	Delivery program		
Product range Degree of Protection Protecti	Basic function		
Degree of Protection Features In P66 Complete unit Compl	Part group reference		LS(4)ZB
Features Ambient temperature Ambient temperature Consection contact Description Approval Approval Contacts NO = Normally open NC = Normally closed Notes Contact sequence Conta	Product range		Safety position switches
Ambient temperature Snap-action contact Description Approval Contacts N/O = Normally open N/C = Normally closed Notes Connection sequence Housing Connection type Notes Connection type Mode Snap action contact Snap action contact With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is open and the NC contact is closed. With the actuator inserted, the N/O contact is closed. With the actuator inserted, the N/O contact is closed. With the actuator inserted, the N/O contact is closed. With the actuator inserted, the N/O contact is closed. With the actuator inserted, the N/O contact is closed. With the actuator inserted, the N/O contact is closed.	Degree of Protection		IP66
Sinap-action contact Description With the actuator inserted, the N/O contact is open and the NC contact is closed. Approval Approval Contacts N/O = Normally open N/C = Normally closed Notes Ontes Contacts sequence Housing Connection type Notes Connection type Connection type Notes Cage Clamp Cage-Clamp is a registered trademark of Wago Kontakttechnik, 324322 Minden, Germany, Arcsessorias for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402 Nate of the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Features		Complete unit
With the actuator inserted, the N/O contact is open and the NC contact is closed. Approval Ap	Ambient temperature	°C	-25 - +70
Approval Approv	Snap-action contact		Yes
Contacts N/O = Normally open N/C = Normally closed Notes Contact sequence Ontact sequence Insulated material Connection type Cage Clamp Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Description		With the actuator inserted, the N/O contact is open and the NC contact is closed.
N/O = Normally open N/O = Normally closed Notes Notes Contact sequence Housing Connection type Cage Clamp Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Approval		Sicherheit geprüft tested safety
Notes Notes Contact sequence Housing Connection type Notes Insulated material Cage Clamp Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Contacts		
Notes Description Notes Notes Description Insulated material Connection type Cage Clamp Cage Clamp Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	N/O = Normally open		1 N/O
Contact sequence 13	N/C = Normally closed		1 NC →
Contact sequence Housing Insulated material Connection type Notes Cage Clamp Cage Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Notes		= safety function, by positive opening to IEC/EN 60947-5-1
Connection type Cage Clamp Cage Clamp Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Contact sequence		1 L 21
Notes Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Housing		Insulated material
Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402	Connection type		Cage Clamp
	Notes		Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago

Notes Switch must never be used as a mechanical stop! Actuator can be repositioned for horizontal or vertical mounting.

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. For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.

Technical data

General

delicitat		
Standards		IEC/EN 60947
Climatic proofing		Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30
Ambient temperature	°C	-25 - +70
Mounting position		As required
Degree of Protection		IP66

Terminal capacities		mm ²	
Solid		mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Flexible with ferrule		mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Terminal screw			PH1
Tightening torque for terminal screw		Nm	0.4
Contacts/switching capacity			
Rated impulse withstand voltage	U_{imp}	V AC	4000
Rated insulation voltage	Ui	V	400
Overvoltage category/pollution degree			III/3
Rated operational current	le	Α	
AC-15			
24 V	I _e	Α	6
220 V 230 V 240 V	Ie	Α	6
380 V 400 V 415 V	Ie	Α	4
DC-13			
24 V	Ie	Α	3
110 V	le	Α	0.6
220 V	Ie	Α	0.3
Supply frequency		Hz	max. 400
Short-circuit rating to IEC/EN 60947-5-1			
max. fuse		A gG/gL	6
Repetition accuracy		mm	0.15
Rated conditional short-circuit current		kA	1
Mechanical variables			
Lifespan, mechanical	Operations	x 10 ⁶	1.5
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	25
Operating frequency	Operations/h		≦ 1800
Actuation			
Mechanical			
Actuating force at beginning/end of stroke		N	10/5 (plug-in/pull-out)

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	6
Heat dissipation per pole, current-dependent	P_{vid}	W	0.17
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	0
Heat dissipation capacity	P _{diss}	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70
EC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties	
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 7.0

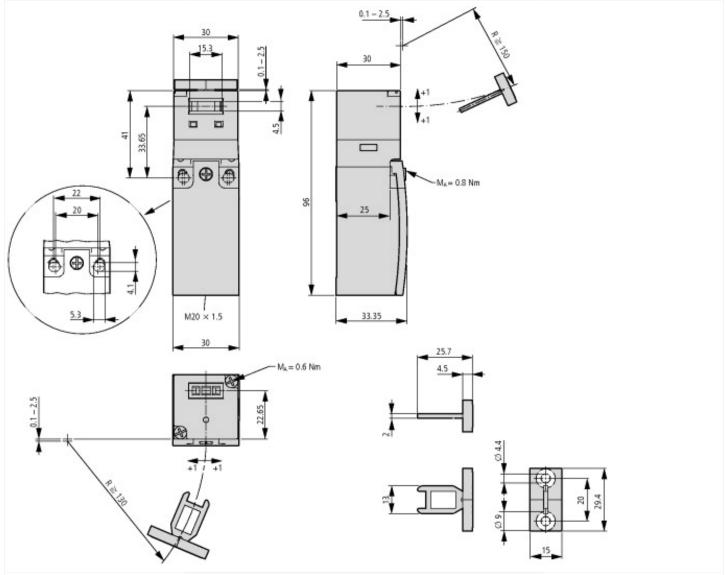
recimical data ettivi 7.0		
Sensors (EG000026) / End switch (EC000030)		
Electric engineering, automation, process control engineering / Binary sensor tech (ecl@ss10.0.1-27-27-06-01 [AGZ382015])	inology, safety-relate	ed sensor technology / Position switch / Position switch (Type 1)
Width sensor	mm	30
Diameter sensor	mm	0
Height of sensor	mm	96
Length of sensor	mm	33.35
Rated operation current le at AC-15, 24 V	А	10
Rated operation current le at AC-15, 125 V	Α	6
Rated operation current le at AC-15, 230 V	А	6
Rated operation current le at DC-13, 24 V	Α	3
Rated operation current le at DC-13, 125 V	А	0.8
Rated operation current le at DC-13, 230 V	Α	0.3
Switching function		Quick-break 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
Material housing		Plastic
Coating housing		Other
Type of control element		Other
Alignment of the control element		Other
Type of electric connection		Other
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)		IP65
Degree of protection (NEMA)		13

Approvals

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
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UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	12528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Degree of Protection	IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



Switch must not be used as a mechanical stop
Terminal marking according to EN 50 013
Travel [mm]
= Contact closed
= Contact open
Zw = Positive opening sequence

Additional product information (links)

IL05208003Z (AWA1310-2374) Safety position switch

IL05208003Z (AWA1310-2374) Safety position switch

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208003Z2019_01.pdf