DATASHEET - LS-S11S-SW

Position switch, 1N/O+1N/C, rounded plunger

Part no.



LS-S11S-SW Catalog No. 106806 Eaton Catalog No. LS-S11S-SW



Delivery program

Part group reference Safety position switches Part group reference LSMM Product range Posed, Poluoper Degree of Protection Posed, Poluoper Beager of Protection Posed, Poluoper Degree of Protection Posed, Poluoper NO = Normally closed INO Notes INO = Normally closed Notes INO = Normally closed Contact sequence INO = Positive opening to IEC/EN 60947-5-1 Colact tave general closed = Contact open Image: Positive opening to IEC/EN 60947-5-1 Positive opening (ZV) Image: Positive opening to IEC/EN 60947-5-1 Colour Image: Positive opening to IEC/EN 60947-5-1 Enclosure covers Image: Positive opening to IEC/EN 60947-5-1 Enclosure covers Image: Positive opening to IEC/EN 60947-5-1 Enclo	Derivery program		
Product range Rounded plunger Dagree of Protection PE68, IP67 Features Basic device, expandable Ambient temperature PC -25 - 70 Design PC -25 - 70 Contacts NO NO NO = Normally open NO NO Notes NINC © NINC © Contact sequence NINC © NIC © Notes NIC © INC © Contact trave = contact closed = contact opon Set Var	Basic function		Position switches Safety position switches
Degree of Protection P66, P67 Features Basic device, expandable Anhient temperature C Design E Contracts NO = Normally open NO = Normally open NO Notes Notes Contact sequence INC @ Contact sequence INC @ Contact trave = Contact open INC @ Positive opening [ZW) INC @ Enclosure covers INC @ Enclosure covers INC @ Enclosure covers INC @ Housing INC @	Part group reference		LS(M)
Features Image: Image	Product range		Rounded plunger
Anhient temperature • • • • • • • • • • • • • • • • • • •	Degree of Protection		IP66, IP67
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Contacts Image: Contact Sequence Image: Contact Cosed = Contact c	Ambient temperature	°C	-25 - +70
N/0 = Normally closed I/V N/C = Normally closed I/V Notes I/V Notes I/V Contact sequence I/V Contact closed = Contact closed = Contact open I/V Positive opening (ZW) I/V Enclosure covers I/V Enclosure covers I/V Housing I/V	Design		EN 50047 Form B
NC = Normally closed Notes Contact sequence Contact sequence Contact travel = Contact closed = Contact open Positive opening (ZW) Colour Enclosure covers Enclosure covers Enclosure covers Enclosure covers Housing Housing NC = Normally closed In NC (Internation, by positive opening to IEC/EN 60947-5-1 Internation (Internation) Internation (Internat	Contacts		
Notes Image: Contact sequence Image	N/O = Normally open		1 N/O
Contact sequence Image: Sequence <td< td=""><td>N/C = Normally closed</td><td></td><td>1 NC 🏵</td></td<>	N/C = Normally closed		1 NC 🏵
Contact trave Contact closed Contact trave Contact closed Positive opening (ZW) ys Colour ys Enclosure covers Housing Husing Image: Notation of the second of t	Notes		Θ = safety function, by positive opening to IEC/EN 60947-5-1
Positive opening (ZW) yes Colour Total State Stat	Contact sequence		°-+7
Colour Image: Colour section sec	Contact travel = Contact closed = Contact open		$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Enclosure covers Image: Constraint of the constraint o	Positive opening (ZW)		yes
Enclosure covers Image: Cove	Colour		
Housing I I I I I I I I I I I I I I I I I I I	Enclosure covers		Black
	Enclosure covers		
Connection type Screw terminal	Housing		Insulated material
	Connection type		Screw terminal

Technical data Conorol

General		
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, IP67
Terminal capacities	mm ²	
Solid	mm ²	1 x (0.5 - 2.5)
Flexible with ferrule	mm ²	1 x (0.5 - 1.5)

Contacts/switching capacity

Contacts/switching capacity			
Rated impulse withstand voltage	U _{imp}	V AC	4000
Rated insulation voltage	Ui	V	400
Overvoltage category/pollution degree			111/3
Rated operational current	I _e	А	
AC-15			
24 V	I _e	А	6
220 V 230 V 240 V	I _e	А	6
380 V 400 V 415 V	I _e	А	4
DC-13			
24 V	l _e	А	3
110 V	I _e	А	0.6
220 V	I _e	А	0.3
Control circuit reliability			
at 24 V DC/5 mA	H _F	Fault probabili	< 10 ⁻⁷ , < 1 fault in 107 operations ty
at 5 V DC/1 mA	H _F	Fault probabili	< 10 ⁻⁶ , < 1 failure at 5 x 10 ⁶ operations ty
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	8
Contact temperature of roller head		°C	≦ 100
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	25
Operating frequency	Operations/h		≦ 6000
Actuation			
Mechanical			
Actuating force at beginning/end of stroke		N	1.0/8.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1/0.5
Notes			for angle of actuation $\alpha = 0^{\circ}/30^{\circ}$

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I _n	А	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
IEC/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.

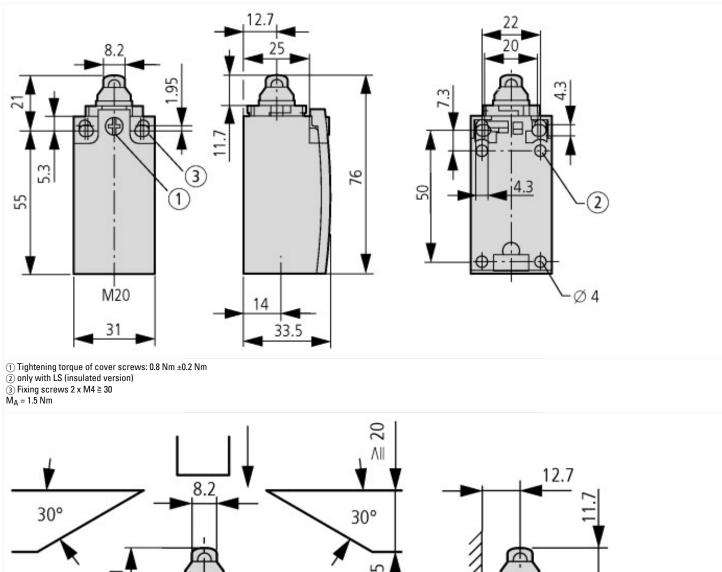
Technical data ETIM 7.0

Sensors (EG000026) / End switch (EC000030)	Sensors (EG000026) / End switch (EC000030)		
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])			
Width sensor	mm	31	
Diameter sensor	mm	0	
Height of sensor	mm	61	
Length of sensor	mm	33.5	
Rated operation current le at AC-15, 24 V	А	6	
Rated operation current le at AC-15, 125 V	А	6	
Rated operation current le at AC-15, 230 V	А	6	
Rated operation current le at DC-13, 24 V	А	3	
Rated operation current le at DC-13, 125 V	А	0.8	
Rated operation current le at DC-13, 230 V	А	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		Plunger	
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)		IP67	
Degree of protection (NEMA)		4X	

Approvals

Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
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: IP66, 67, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



Additional product information (links)

IL053001ZU LS-Titan position switch: basic device

IL053001ZU LS-Titan position switch: basic ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL053001ZU2018_06.pdf device

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