DATASHEET - LS-S11D/L



Position switch, Roller lever, Complete unit, 1 N/O, 1 NC (late-break), Screw terminal, Yellow, Insulated material, -25 - +70 °C, Long



Part no.LS-S11D/LCatalog No.106793Alternate CatalogLS-S11D-LNo.No.

Delivery program

Part group reference Image: Stelly position switches Product range Image: Stelly position switches Deprose of Protocion Image: Stelly position switches Returns Image: Stelly position switches Deprose of Protocion Image: Stelly position switches Returns Image: Stelly position switches Description Image: Stelly position switches Not = Normally closed Image: Stelly position switches Coll			
Product range Roller lever Degree of Protection IP68, IP57 Features Complete unit Ambient temperature Complete unit Bescription - 25 - 7/0 Bescription INO No - Normally open 1NO No - Normally closed INC Normally closed INC Notes INC Contact sequence INC Contact sequence INC Contact trave INC Contact sequence INC Ecolosure covers INC Ecolo	Basic function		Position switches Safety position switches
Degree of vortice of the sector of the se	Part group reference		LS(M)
Fedures Complete unit Ambient temperature Complete unit Description Condiction Notes Contract sequence Notes Contract sequence Contract travel = Contract open Contract open Positive opening (ZW) Contract open Enclosure covers Contract open Enclosure covers Contract open Husing Contract open Husing Contract open Contract open Contract open	Product range		Roller lever
Ambient temperature Contacts Long Description Long No = Normally open N/O Notes NoteS Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Contact sequence Sestery function, by positive opening to IED/EN 60947-5-1 Enclosure covers Sestery function, by positive opening to IED/EN 60947-5-1 Enclosure covers Sestery function, by positive opening to IED/EN 60947-5-1	Degree of Protection		IP66, IP67
Description Ing Contacts Ing N0 = Normally open INC Ing Notes INC Ing Contact sequence Ing Contact trave = Contact open Ing Positive opening (ZW) Ing Colour Ing Enclosure covers Ing Housing Ing Contacts open Ing Contact sequence Ing Ing Ing <	Features		Complete unit
Contacts Contact sequence IN/O Notes In/O In/O Contact sequence In/O In/O Contact travel = Contact closed = Contact open In/O In/O Positive opening (ZW) In/O In/O Colour In/O In/O Enclosure covers In/O In/O Housing In/O In/O Contact sequence In/O In/O In/O In/O In/O In	Ambient temperature	°C	-25 - +70
N0 = Normally closedN/ONotesINOContact sequenceINOContact sequenceINOContact sequenceINOContact closed = Contact closedINOPositive opening (ZW)INOEnclosure coversINOEnclosure coversINOEnclosure coversINOEnclosure coversINOHousingINOContact frageInoHousingInoContact coversInoEnclosure covers	Description		Long
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Contact sequence Image: Contact open sequence Contact traveller Contact closed ler Contact open Image: Contact closed ler Contact open Contact traveller Contact closed ler Contact open Image: Contact closed ler Contact open Positive opening (ZW) Image: Contact closed ler Contact open Colour Image: Contact closed ler Contact open Enclosure covers Image: Contact closed ler Contact open Enclosure covers Image: Contact closed ler Contact open Husing Image: Contact open Contact navel Image: Contact open Contact navel Image: Contact closed ler Contact open Husing Image: Contact open Contact navel Image: Contact closed ler Contact open	N/C = Normally closed		1 NC 🏵
Contact sequence Image: product open sequence Image: product open sequence se	Notes) = safety function, by positive opening to IEC/EN 60947-5-1
Positive opening (ZW) yes Colour Yellow Enclosure covers Yellow Enclosure covers Yellow Housing Insulated material Rousing Yer or terminal	Contact sequence		~ √ 7
Colour Faclosure covers Yellow Enclosure covers Image: Colour covers Image: Colour covers Housing Image: Colour covers Image: Colour covers Yellow Image: Colour covers Image: Colour covers Housing Image: Colour covers Image: Colour covers Yellow Image: Colour covers Image: Colour covers <t< td=""><td>Contact travel = Contact closed = Contact open</td><td></td><td>15-16 NC 27-28 NO 3.3</td></t<>	Contact travel = Contact closed = Contact open		15-16 NC 27-28 NO 3.3
Enclosure covers Enclosure covers Kousing Connection type Function type <td>Positive opening (ZW)</td> <td></td> <td>yes</td>	Positive opening (ZW)		yes
Enclosure covers Housing Connection type Insulated material Screw terminal	Colour		
HousingInsulated materialConnection typeInsulated material	Enclosure covers		Yellow
Connection type Screw terminal	Enclosure covers		
	Housing		Insulated material
Notes The operating head can be rotated at 90° intervals to adapt to the specified approach direction.	Connection type		Screw terminal
	Notes The operating head can be rotated at 90° intervals to adapt to the specified a	approach direction.	

Technical data

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)
Repetition accuracy		mm	0.15
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	Ι _e	Α	
AC-15			
24 V	Ι _e	A	6
220 V 230 V 240 V	۱ _e	Α	6
380 V 400 V 415 V	Ι _e	А	4
DC-13			
24 V	Ie	Α	3
110 V	Ι _e	Α	0.6
220 V	Ι _e	Α	0.3
Control circuit reliability			
at 24 V DC/5 mA	H _F	Fault probabili	< 10 ⁻⁷ , < 1 fault in 10 ⁷ operations ty
at 5 V DC/1 mA	H _F	Fault probabili	< 5 x 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
Rated conditional short-circuit current		kA	1
Mechanical variables			
Lifespan, mechanical	Operations	x 10 ⁶	8
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		Ν	1.0/8.0
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1
Notes			for angle of actuation $\alpha = 30^{\circ}/45^{\circ}$

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	In	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.

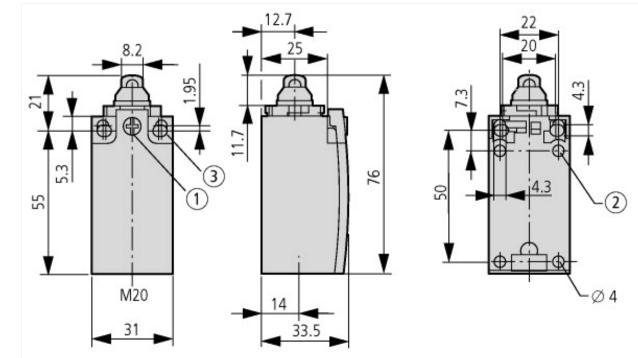
Technical data ETIM 7.0

Sensors (EG000026) / End switch (EC000030)			
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	m	nm	31
Diameter sensor	m	nm	0
Height of sensor	m	nm	61
Length of sensor	m	nm	33.5
Rated operation current le at AC-15, 24 V	A	4	6
Rated operation current le at AC-15, 125 V	А	4	6
Rated operation current le at AC-15, 230 V	А	4	6
Rated operation current le at DC-13, 24 V	А	4	3
Rated operation current le at DC-13, 125 V	A	4	0.8
Rated operation current le at DC-13, 230 V	A	4	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
Material housing			Plastic
Coating housing			Other
Type of control element			Roller lever
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	o	C	25 - 70
Degree of protection (IP)			IP67
Degree of protection (NEMA)			4X

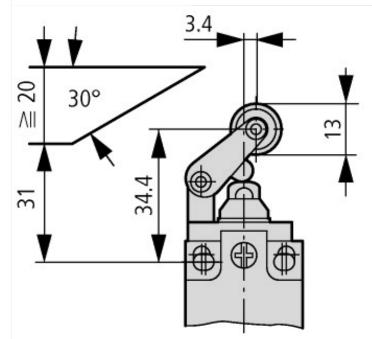
Approvals

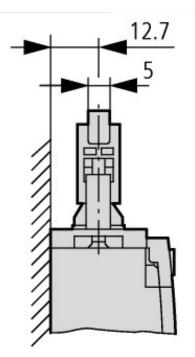
Product Standards	IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
UL File No.	E29184
UL Category Control No.	NKCR
CSA File No.	12528
CSA Class No.	3211-03
North America Certification	UL listed, CSA certified
Degree of Protection	IEC: IP66, 67, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



 $\begin{array}{l} (1) \mbox{ Tightening torque of cover screws: 0.8 Nm \pm 0.2 Nm } \\ (2) \mbox{ only with LS (insulated version)} \\ (3) \mbox{ Fixing screws 2 x M4 } \geq 30 \\ M_{\rm A} = 1.5 \mbox{ Nm} \end{array}$





Assets (links)

Declaration of CE Conformity 00003068 Instruction Leaflets IL053001ZU2018_06

Additional product information (links)

IL053001ZU LS-Titan position switch: basic device

IL053001ZU LS-Titan position switch: basic device

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL053001ZU2018_06.pdf