DATASHEET - LS-S11S/RL



Position switch, Rotary lever, Complete unit, 1 N/O, 1 NC, Snap-action contact - Yes, Screw terminal, Yellow, Insulated material, -25 - +70 °C, EN 50047 Form A



Part no.LS-S11S/RLCatalog No.106802Alternate CatalogLS-S11S-RLNo.EL-NummerEL-Nummer4315215(Norway)4315215

Delivery program

Part group reference Fast group reference Safety position switches Part group reference ESIM	Denter, program		
Product range Product range Podary lover Degree of Protection Pode, P67 Reture s Complete unit Ambient temperature Complete unit Design Complete unit Snap-action contact Complete unit Not = Normally open Ves Not = Normally open Ves Notes Notes Contact targe = Contact lossod = Contact open Ves Contact targe = Contact lossod = Contact open Ves Positive opening (ZV) Ves Colour Ves Enclosure covers Ves Enclosure covers Ves Banseq Ves Housing Ves Rusary Ves Contact targe Ves Contact covers Ves Contact covers Ves Enclosure covers Ves Rusary Ves Rusary Ves Rusary Ves Contact targe Ves Postow covers Ves Enclosure covers Ves Rusa	Basic function		
Degree of Protection PR6/ PF3 Fatures Complete unit Ambient tamperature Complete unit Design Complete unit Star-action contact EN 50047 Form A Contacts EN 50047 Form A Normally open IN/O Normally closed IN/O Notes IN/O Ontest sequence IN/O Contact target function, by positive opening to IEC/EN 60047-5-1 Contact sequence In/O Notes In/O Contact target function, by positive opening to IEC/EN 60047-5-1 Contact sequence In/O Positive opening (ZW) In/O Positive opening (ZW) In/O Enclosure covers In/O Enclosure covers In/O Masing In/O In/O Reside In/O In/O In/O In/O In/O In/O In/O In/O In/O In/O In/O In/O In/O <thin o<="" th=""> In/O</thin>	Part group reference		LS(M)
Features Complete unit Ambient temperature 25 - 70 Design EN 50047 Form A Snap-action contact EN 50047 Form A Contacts 1N0 Not - Normally open 1N0 Notes 1N0 Ontacts Inc O Notes Inc O Contact sequence Inc O Enclosure covers Inc O Enclosure covers Inc O Rusing I	Product range		Rotary lever
Anheint temperature 25 - 70 Design K 50007 Form A Snap-action contact Yes Contacts N/O NO = Normally open N/O Notes Notes Contact sequence INO Contact sequence Ino Postive opening (ZW) Ino Postive covers Yes Enclosure covers Yes Enclosure covers Yes Rutos Yes House Yes Notes Yes Contact sequence Ino Positive opening (ZW) Yes Positive opening (ZW) Yes Enclosure covers Yes Enclosure covers Yes Enclosure covers Yes Manage Yes Housing Yes Rutost Yes <td>Degree of Protection</td> <td></td> <td>IP66, IP67</td>	Degree of Protection		IP66, IP67
Besign K 50047 Form A Snap-action contact Yes Contacts INC NG - Normally open INC Notes INC ® Contact sequence INC ® Contact sequence INC * Positive opening (ZW) Yes Positive opening (ZW) Yes Enclosure covers Yes Enclosure covers Yes Enclosure covers Yes Notes Yes Notes Yes Notes Yes Colour Yes Enclosure covers Yes Enclosure covers Yes Notes Yes Antional (CM) Yes Enclosure covers Yes Inclosure covers Yes Notes Yes Inclosure covers Yes Inclosure covers Yes Notes Yes Inclosure covers Yes Notes Yes Inclosure covers Yes<	Features		Complete unit
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Contacts INC NO = Normally closed INC Notes INC Notes INC Contact sequence INC Contact travell = Contact closed = Contact open INC Positive opening (ZW) INC Enclosure covers INC Enclosure covers INC Housing INC Housing INC Contact travell INC Section Covers INC Enclosure covers INC Housing INC Rousing Covers INC Housing INC Contact travell INC Section Covers INC Enclosure covers INC Enclosure covers INC Housing INC Enclosure covers	Design		EN 50047 Form A
N/O = Normally logen N/O N/C = Normally closed IN/O Notes INC I Ontex Image: Image	Snap-action contact		Yes
NC = Normally closed Image: Rest of the closed of the	Contacts		
Notes Image: Context requence Image: Context requence Contact sequence Image: Context requence Image: Context requence Image: Context requence Contact trave = Contact closed = Contact open Image: Context requence Image: Context requence Image: Context requence Contact trave = Contact closed = Contact open Image: Context requence Image: Context requence Image: Context requence Positive opening (ZW) Image: Context requence Image: Context requence Image: Context requence Image: Context requence Positive opening (ZW) Image: Context requence	N/O = Normally open		1 N/O
Contact sequence Image: Contact open ing to IEC/EN 60947-5-1 Contact trave = Contact closed = Contact open Image: Contact trave = Contact closed = Contact open Contact trave = Contact closed = Contact open Image: Contact trave = Contact closed = Contact open Positive opening (ZW) Image: Contact closed = Contact open Positive opening (ZW) Image: Contact closed = Contact open Enclosure covers Image: Contact closed = Contact open Enclosure covers Image: Contact closed = Contact open Housing Image: Contact closed = Contact open Contact trave = Contact closed = Contact open Image: Contact closed = Contact open Rusing Image: Contact closed = Contact closed	N/C = Normally closed		1 NC 🕀
Contact trave = Contact closed =	Notes		Θ = safety function, by positive opening to IEC/EN 60947-5-1
Positive opening (ZW) yes Colour yes Enclosure covers Yellow Enclosure covers Yellow Enclosure covers Yellow Housing Joint Colour Kousing Yellow Yellow Yellow Ye	Contact sequence		~+ <u>+</u> <u>7</u>
Colour Image: Colour covers Image: Colour covers Yellow Enclosure covers Image: Colour covers Image: Colour covers Image: Colour covers Housing Image: Colour covers Image: Colour covers Image: Colour covers Connection type Image: Colour covers Image: Colour covers Image: Colour covers	Contact travel = Contact closed = Contact open		$\begin{array}{c} 13.14 \\ 21.22 \\ 13.14 \\ 15^{\circ} \end{array} \qquad \longleftarrow$
Enclosure covers Yellow Enclosure covers Yellow Housing Insulated material Connection type Image: Terminal	Positive opening (ZW)		yes
Enclosure covers Housing Connection type Insulated material Screw terminal	Colour		
HousingInsulated materialConnection typeImage: Section type	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

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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	le	А	
AC-15			
24 V	I _e	А	6
220 V 230 V 240 V	le	А	6
380 V 400 V 415 V	le	А	4
DC-13			
24 V	le	А	3
110 V	le	А	0.6
220 V	le	А	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
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	1.5
Notes			for angle of actuation $\alpha = 0^{\circ}$

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.

10.0 C Marchanical impact	Description of the sector suits because do to be such stad
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

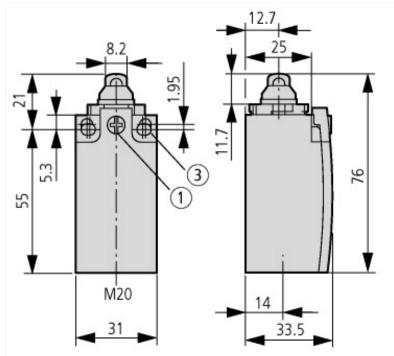
Sensors (EG000026) / End switch (EC000030)

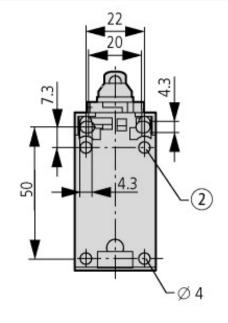
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])			
Width sensor	mm	n :	31
Diameter sensor	mm	n (0
Height of sensor	mm	n (61
Length of sensor	mm	n :	33.5
Rated operation current le at AC-15, 24 V	А	l	6
Rated operation current le at AC-15, 125 V	А	I	6
Rated operation current le at AC-15, 230 V	А	I	6
Rated operation current le at DC-13, 24 V	А	:	3
Rated operation current le at DC-13, 125 V	Α	I	0.8
Rated operation current le at DC-13, 230 V	А	(0.3
Switching function		1	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		I	None
Type of interface for safety communication		l	None
Construction type housing			Cuboid
Material housing		I	Plastic
Coating housing			Other
Type of control element		1	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	°C	1	25 - 70
Degree of protection (IP)		I	IP67

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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





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

