## **DATASHEET - LS-11S/S**



Position switch, Spring-rod actuator, Complete unit, 1 N/O, 1 NC, Snapaction contact - Yes, Cage Clamp, Yellow, Insulated material, -25 - +70 °C, Not to be used as a safety position switch

Powering Business Worldwide\*

Part no. LS-11S/S Catalog No. 266104 Alternate Catalog LS-11S/S

No.

**EL-Nummer** 4356031

(Norway)

ard group reference reduct range reduct rang	Delivery program		
roduct range  legree of Protection    P66, P67	Basic function		Position switches
legree of Protection seatures  Complete unit  Compl	Part group reference		LS(M)
complete unit  whitent temperature  "C -25 - x70  Not to be used as a safety position switch  Contacts  N/O = Normally open  NC = Normally closed  Ontact sequence  Contact travel = Contact closed = Contact open  Colour  Enclosure covers  Enclosur	Product range		Spring-rod actuator
Ambient temperature Ambien	Degree of Protection		IP66, IP67
Ansp-action contact  Alescription  Contacts  NO = Normally open  NC = Normally closed  Contact sequence  Contact trave = Contact closed = Contact open  Contact trave = Contact closed = Contact open  Colour  Enclosure covers  Enclosure covers  Enclosure covers  Colour  Enclosure covers  Colour  Enclosure covers  Colour  Enclosure covers  Colour  Col	Features		Complete unit
Not to be used as a safety position switch  Contacts  N/O = Normally open  Not C = Normally closed  I NC  I NC  Contact travel = Contact closed = Contact open  Colour  Enclosure covers Enclosur	Ambient temperature	°C	-25 - +70
N/O = Normally open N/C = Normally closed Interest closed = Contact closed = Contact open Interest closed = Contact	Snap-action contact		Yes
N/O = Normally open  N/C = Normally closed  Interest ravel = Contact closed = Contact open  Interest ravel = Contact closed = Contact open  Inclusive covers  Inclusive covers  Insulated material  Insulated material  Cage Clamp  Insulated material  Cage Clamp terminals from Wagopower comb, gray, Wago  Accessories for the Cage-Clamp terminals from Wagopower comb, gray, Wago	Description		Not to be used as a safety position switch
N/C = Normally closed Contact sequence Contact trave = Contact closed = Contact open    1	Contacts		
Contact sequence  Contact trave = Contact closed = Contact open  Colour  Enclosure covers  Enclosure covers  Colour  C	N/O = Normally open		1 N/0
Colour  Enclosure covers Enclosure covers Insulated material Connection type Cage Clamp Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago	N/C = Normally closed		1 NC
Colour  Enclosure covers  Final Article Programment of Mago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago	Contact sequence		<u></u>
Enclosure covers  Enclosure covers  Final Part of the Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago	Contact travel = Contact closed = Contact open		21-22 13-14 21-22
Enclosure covers    Comparison of the Cage Clamp   Cage C	Colour		
Insulated material 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	Enclosure covers		Yellow
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	Enclosure covers		
Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany.  Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago	Housing		Insulated material
Germany.  Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago	Connection type		Cage Clamp
	Notes		Germany.  Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago
lod length mm 126	Rod length	mm	126

## **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 <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (0.5 - 2.5)
Flexible with ferrule		$\text{mm}^2$	1 x (0.5 - 1.5)
Repetition accuracy		mm	0.15
Contacts/switching capacity			
Rated impulse withstand voltage	Uimp	V AC	4000

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	l <sub>e</sub>	Α	
AC-15			
24 V	l <sub>e</sub>	Α	6
220 V 230 V 240 V	l <sub>e</sub>	Α	6
380 V 400 V 415 V	l <sub>e</sub>	Α	4
DC-13			
24 V	le	Α	3
110 V	l <sub>e</sub>	Α	0.6
220 V	l <sub>e</sub>	Α	0.3
Control circuit reliability			
at 24 V DC/5 mA	H <sub>F</sub>	Fault probabilit	$< 10^{-7}, < 1$ fault in $10^7$ operations
at 5 V DC/1 mA	H <sub>F</sub>	Fault probabilit	$< 5 \times 10^{-6}$ , $< 1$ failure at $5 \times 10^{6}$ operations
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
Machanical variables			

#### **Mechanical variables**

Lifespan, mechanical	Operations	x 10 <sup>6</sup>	8
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	25
Operating frequency	Operations/h		≦ 6000
And in the second secon			

#### **Actuation**

Mechanical		
Actuating force at beginning/end of stroke	N	1.0/8.0
Actuating torque of rotary drives	Nm	0.2

# 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 <sub>vid</sub>	W	0.17
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	0
Heat dissipation capacity	P <sub>diss</sub>	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.
0.9 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 mus observed.
10.12 Electromagnetic compatibility	Is the panel builder's responsibility. The specifications for the switchgear mus 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

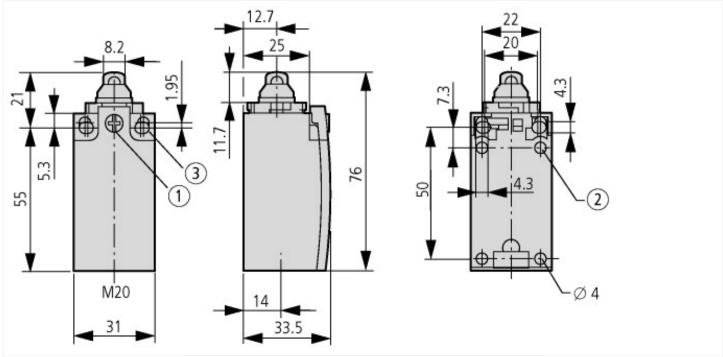
Technical data ETIM 7.0				
Sensors (EG000026) / End switch (EC000030)				
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss10.0.1-27-27-06-01 [AGZ382015])				
Width sensor		mm	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		Α	6	
Rated operation current le at AC-15, 125 V		Α	6	
Rated operation current le at AC-15, 230 V		Α	6	
Rated operation current le at DC-13, 24 V		Α	3	
Rated operation current le at DC-13, 125 V		Α	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			No	
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			Spring-rod	
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**



- ① Tightening torque of cover screws: 0.8 Nm  $\pm 0.2$  Nm ② only with LS (insulated version) ③ Fixing screws 2 x M4  $\ge$  30 M<sub>A</sub> = 1.5 Nm

