# DATASHEET - LSR-S02-1-I/TKG



Hasp-operated safety switch, 2 N/C, insulated material

Part no. Catalog No. Eaton Catalog No. EL-Nummer (Norway)

LSR-S02-1-I/TKG 106848 LSR-S02-1-I/TKG 4356190



Delivery program		
Basic function		Position switches Safety position switches
Part group reference		LSR
Product range		Hasp-operated safety switch
Degree of Protection		IP65
Features		Complete unit
Ambient temperature	°C	-25 - +70
Approval		ET 17042 Sicherheit geprüft tested safety
Contacts		
N/C = Normally closed		2 NC \ominus
Notes		$\Theta$ = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		<b>o</b> <i>fffffff</i>
Contact travel = Contact closed = Contact open		$ \begin{array}{c}             0^{\circ} & & \\             21 - 22 & & \\             11 - 12 & & \\             90^{\circ} & & 90^{\circ} \\             Zw = 10^{\circ} & & \\         \end{array} $
Housing		Insulated material
Connection type		Screw terminal

## **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		IP65
Terminal capacities	mm <sup>2</sup>	

Solid		mm <sup>2</sup>	1 x (0.75 - 2.5) 2 x (0.75 - 1.5)	
Flexible with ferrule		mm <sup>2</sup>	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)	
Contacts/switching capacity				
Rated impulse withstand voltage	U <sub>imp</sub>	V AC	6000	
Rated insulation voltage	Ui	V	500	
Rated operational current	le	А		
AC-15				
24 V	le	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	0.8	
220 V	le	А	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	0.02	
Rated conditional short-circuit current		kA	1	
Mechanical variables				
Lifespan, mechanical	Operations	x 10 <sup>6</sup>	1	
Mechanical shock resistance (half-sinusoidal shock, 20 ms)				
Standard-action contact		g	25	
Operating frequency	Operations/h		≦ 1800	

# Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	А	6
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0.13
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
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

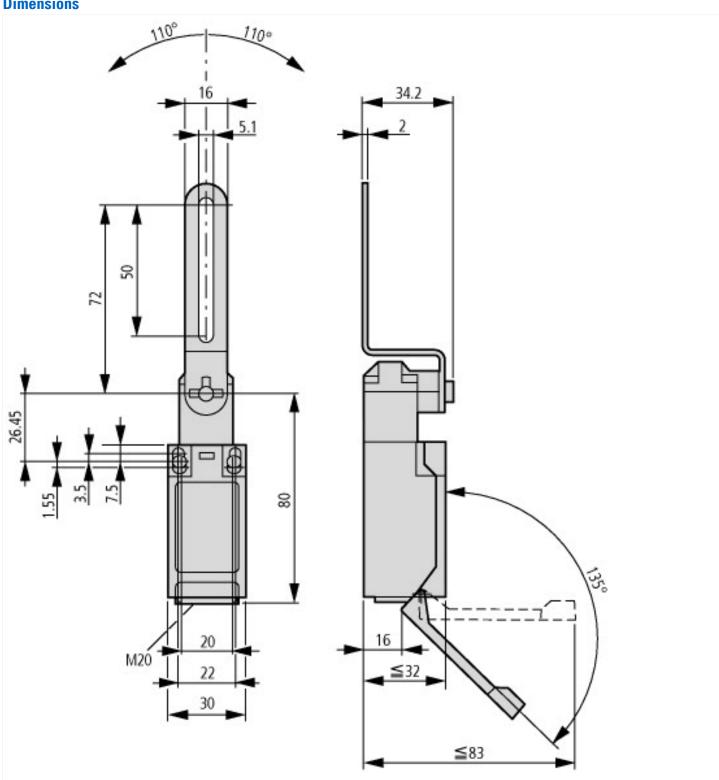
#### Sensors (EG000026) / End switch (EC000030)

Electric engineering, automation, process control engineering / Binary sensor tech (ecl@ss10.0.1-27-27-06-01 [AGZ382015])	nology, safety-rela	ited ser	nsor technology / Position switch / Position switch (Type 1)
Width sensor	mn	n	30
Diameter sensor	mn	n	0
Height of sensor	mn	n	91
Length of sensor	mn	n	32
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		0.3
Rated operation current le at DC-13, 230 V	А		0
Switching function			Slow-action switch
Switching function latching			No
Output electronic			No
Forced opening			Yes
Number of safety auxiliary contacts			0
Number of contacts as normally closed contact			2
Number of contacts as normally open contact			0
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			Rotary lever
Alignment of the control element			Other
Type of electric connection			Cable entry metrical
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
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**



### **Additional product information (links)**

IL05208006Z (AWA1310-2363) Hasp-Operated and Hinge-Operated Safty Switches

IL05208006Z (AWA1310-2363) Hasp-Operated ftp://ftp.moeller.net/DOCUMENTATION/AWA\_INSTRUCTIONS/IL05208006Z2018\_09.pdf and Hinge-Operated Safty Switches

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