DATASHEET - LS-S02-ZB



Safety position switch, 2 N/C, insulated material, +actuator ZB, screw connection



Part no.	LS-S02-ZB
Catalog No.	106874
Eaton Catalog No.	LS-S02-ZB
EL-Nummer	0004356195
(Norway)	

Delivery program

Delivery program	
Basic function	Position switches Safety position switches
Part group reference	LS(4)ZB
Product range	Safety position switches
Degree of Protection	IP66
Features	Complete unit
Ambient temperature	°C -25 - +70
Description	With the actuator inserted, the N/O contact is open and the NC contact is closed.
Approval	ET 18072 Sicherheit geprüft tested safety
Contacts	
N/C = Normally closed	2 NC \ominus
Notes) = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence	$ \begin{array}{c} \uparrow & L^{11} & L^{21} \\ P $
Housing	Insulated material
Connection type	Screw terminal

The operating heads can be turned manually in 90° steps to suit the specified level of actuation. With the actuator inserted, the N/O contact is open and the N/C contact is closed. For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.

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
Terminal capacities	mm ²	
Solid	mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
Flexible with ferrule	mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)

Terminal screw			PH1	
Tightening torque for terminal screw		Nm	0.4	
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	A		
AC-15				
24 V	le	А	6	
220 V 230 V 240 V	Ie	А	6	
380 V 400 V 415 V	Ι _e	А	4	
DC-13				
24 V	le	А	3	
110 V	le	A	0.6	
220 V	le	Α	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	0.15	
Rated conditional short-circuit current		kA	1	
Mechanical variables				
Lifespan, mechanical	Operations	x 10 ⁶	1.5	
Mechanical shock resistance (half-sinusoidal shock, 20 ms)				
Standard-action contact		g	25	
Operating frequency	Operations/h		≦ 1800	
Actuation				
Mechanical				
Actuating force at beginning/end of stroke		Ν	10/5 (plug-in/pull-out)	

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)

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])

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Switching functionImage: Some Some Some Some Some Some Some Some	Rated operation current le at DC-13, 125 V	А	0.8
Nuclein function latchingImage: state in the	Rated operation current le at DC-13, 230 V	А	0.3
Output electronicImage: set of the set of	Switching function		Slow-action switch
Fored opening Name of safety auxiliary contacts New of contacts as normally closed contact	Switching function latching		No
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Number of contacts as onmally open contact0Number of contacts as change-over contact0Type of interfaceNoneType of interface for safety communicationCuboidConstruction type housingCuboidMaterial housingDeterCoting housingOtherType of control elementOtherAlignment of the control elementOtherSuitable for safety functionsOtherSuitable for safety functionsStatesSuitable for safety functionsNoneSuitable for safety functionsNoneSuitable for safety functionsNoneSuitable for safety functionsNoneSuitable for safety category for dustNoneAntient temperature during operatingCategoryDegree of protection (IP)Itel States	Number of safety auxiliary contacts		2
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Type of interface None Type of interface for safety communication None Construction type housing Cuboid Material housing Cuboid Coating housing Other Type of entrol element Other Alignment of the control element Other Type of electric connection Other Vith status indication Suitable for safety functions Suitable for safety category for gas None Explosion safety category for dust None Ambient temperature during operating Other Degree of protection (IP) Image: Suitable for safety contend (IP)	Number of contacts as normally open contact		0
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Explosion safety category for dustNoneAmbient temperature during operating°C25 - 70Degree of protection (IP)IP65	Suitable for safety functions		Yes
Ambient temperature during operating °C 25 - 70 Degree of protection (IP) IP65	Explosion safety category for gas		None
Degree of protection (IP)	Explosion safety category for dust		None
	Ambient temperature during operating	°C	25 - 70
Degree of protection (NEMA) 13	Degree of protection (IP)		IP65
	Degree of protection (NEMA)		13

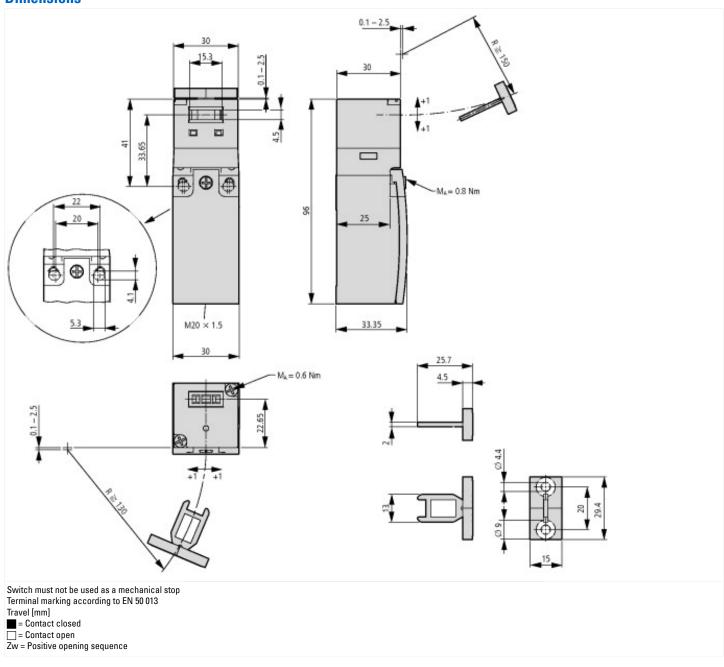
Approvals

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

Degree of Protection

IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



Additional product information (links)

IL05208003Z (AWA1310-2374) Safety position switch

IL05208003Z (AWA1310-2374) Safety position ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208003Z2019_01.pdf switch

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 SMA0129- NO/NO
 R1.188.0640.0
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