DATASHEET - LS-S02-ZB



Safety position switch, LS(4)...ZB, Safety position switches, Complete unit, 2 NC, Insulated material, Screw terminal, -25 - +70 $^\circ\text{C}$



Part no. LS-S02-ZB Catalog No. 106874 Alternate Catalog LS-S02-ZB No. EL-Nummer 4356195 (Norway)

Delivery program

Derivery 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		
Contacts		
N/C = Normally closed		2 NC 🛞
Notes) = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		$ \begin{array}{c} \uparrow & \downarrow^{11} \downarrow^{21} \\ \downarrow^{-} & \uparrow^{-} \\ \downarrow^{-} \\ \downarrow^$
Housing		Insulated material
Connection type		Screw terminal
Notes Switch must never be used as a mechanical stop! Actuator can be repositioned for horizontal or vertical mounting. The operating heads can be turned manually in 90° steps to suit the specified leve With the actuator inserted, the N/O contact is open and the N/C contact is closed	l.	

For degree of protection IP65, use V-M20 (206910) cable glands with connecting thread of max. 9 mm length.

Technical data

		IEC/EN 60947
		Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30
	°C	-25 - +70
		As required
		IP66
	mm ²	
	mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
	mm ²	1 x (0.5 - 1.5) 2 x (0.5 - 1.5)
		PH1
	Nm	0.4
	mm	0.15
U _{imp}	V AC	4000
Ui	V	400
		III/3
	•	mm ² mm ² mm ² mm ² Vm mm

Poted energianal surrent	1	А	
Rated operational current	le	А	
AC-15			
24 V	Ι _e	А	6
220 V 230 V 240 V	Ι _e	А	6
380 V 400 V 415 V	Ie	А	4
DC-13			
24 V	Ie	А	3
110 V	Ie	А	0.6
220 V	Ι _e	А	0.3
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	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

Design vernication as per ILG/LIV 01455			
Technical data for design verification			
Rated operational current for specified heat dissipation	l _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.

10.13 Mechanical function

Is the panel builder's responsibility. The specifications for the switchgear must be observed.

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)

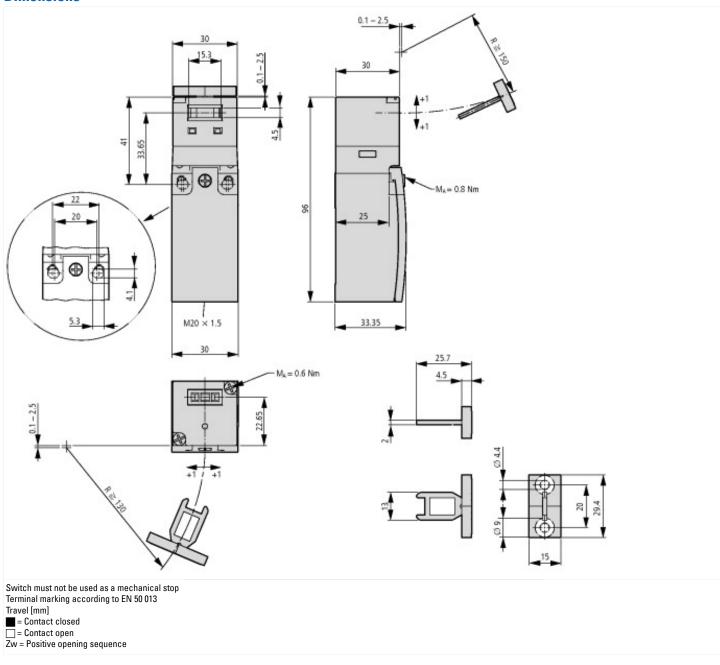
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position si	witch / Position switch (Type 1)
(ecl@ss10.0.1-27-27-06-01 [AGZ382015])	

Widh searchImpBDanker searchImpGHaip d searchGGRaid operation carrent is at AC 15, 24 VAGRaid operation carrent is at AC 15, 25 VAGNation for the ConstructionFMRaid operation carrent is at AC 16, 25 VMGNother of catchingFMGNumber of catching at ConstructionFMGNumber of catching at ConstructionFMG	(80/83310.0.1-21-21-00-01 [A02302013])		
Height desardI <br< td=""><td>Width sensor</td><td>mm</td><td>30</td></br<>	Width sensor	mm	30
Lendr of sensorImage333Reted operation current le at AC-15, 24 VA9Reted operation current le at AC-15, 25 VA6Reted operation current le at AC-15, 23 VA3Reted operation current le at CD-13, 24 VA8Switching functionA8Switching functionB8Switching functionB <td>Diameter sensor</td> <td>mm</td> <td>0</td>	Diameter sensor	mm	0
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Rate operation current le at DC-13, 25V A 3 Switching function A 03 Switching function autrent le at DC-13, 250 V A 03 Switching function A 03 Switching function latching M Non-action switch Output eleteronic Non-action switch Non-action switch Rated operation current le at DC-13, 250 V Non-action switch Switching function latching Non-action switch Non-action switch Output eleteronic Non-action switch Non-action switch Switching function latching M Non-action switch Number of actex as normally closed contact M Non-Action switch Number of actex as normally closed contact M Non-Action switch Yee of interace for safety communication M Non-Action switch Number of actex as normally closed contact Mon-Action switch Non-Action switch System of actex as normality closed contact Mon-Action switch Non-Action switch Number of actex as normality closed contact Mon-Action switch Non-Action switch System of actex as normality closed contact Mon-Action switch Non-Action switc	Rated operation current le at AC-15, 125 V	А	6
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Ret doperation current la DC-13, 23 V Image: Status in the status in	Rated operation current le at DC-13, 24 V	А	3
Switching functionMode and	Rated operation current le at DC-13, 125 V	А	0.8
Switching function latchingImage: space s	Rated operation current le at DC-13, 230 V	А	0.3
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Construction type housingCubidConstruction type housingPasticCoating housingOtherType of control elementOtherAlignment of the control elementMaterial housingType of electric connectionMaterial housingWith status indicationMoreSuitable for safety functionsMoreExplosion safety category for gasMoreAnbient temperature during operatingMoreDegree of protection (IP)More	Type of interface		None
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Type of control element Other Alignment of the control element Other Type of electric connection Other Vith status indication Other Suitable for safety functions Image: Safety category for gas Explosion safety category for dust Image: Safety category for dust Ambient temperature during operating Image: Safety category for gas Begree of protection (IP) Image: Safety category for gas	Material housing		Plastic
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Type of electric connectionMericaWith status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operating°CDegree of protection (IP)Image: State	Type of control element		Other
With status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operatingCDegree of protection (IP)Image: State	Alignment of the control element		Other
Suitable for safety functionsModeYesExplosion safety category for gasMoeNoneExplosion safety category for dustMoeNoneAmbient temperature during operatingC25 - 70Degree of protection (IP)Image: Same Same Same Same Same Same Same Same	Type of electric connection		Other
Explosion safety category for gas None Explosion safety category for dust None Ambient temperature during operating C Degree of protection (IP) P65	With status indication		No
Explosion safety category for dust None Ambient temperature during operating C 25 - 70 Degree 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
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)

IL05208003Z (AWA1310-2374) Safety position switch

IL05208003Z (AWA1310-2374) Safety position switch	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208003Z2019_01.pdf
IL05208003Z (AWA1310-2374) Safety position switch	https://es-assets.eaton.com/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208003Z2020_12.pdf