DATASHEET - LS4/S12-7/IB/ZB

Part no.

(Norway)



Safety position switch, 1N/O+2N/C, insulated material, + actuator ZB



LS4/S12-7/IB/ZB Catalog No. 106859 LS4/S12-7/IB/ZB Eaton Catalog No. **EL-Nummer** 4315222

Delivery program

Dentery program	
Basic function	Position switches Safety position switches
Part group reference	LS(4)ZB
Product range	Safety position switches
Degree of Protection	IP65
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 17039 Sicherheit geprüft tested safety
Contacts	
N/O = Normally open	1 N/O
N/C = Normally closed	2 NC 🟵
Notes	Θ = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence	$\begin{array}{c} \uparrow \uparrow \downarrow 1^{13} \downarrow 2^{21} \downarrow 3^{31} \\ \hline \downarrow \downarrow \downarrow \downarrow 14 \downarrow 22 \downarrow 32 \end{array}$
Contact travel = Contact closed = Contact open	13-14 21-22 31-32 0 2.6 3.6 6.05 Zw = 3.9 mm
Housing	Insulated material
Connection type	Screw terminal

Connect operating elements permanently with the protective device, e.g., with non-reusable screws or rivets. Operating head can be rotated 90°.

Technical data oral

General		
Standards	IEC	C/EN 60947
Climatic proofing	Da	amp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30
Ambient temperature	°C -25	5 - +70
Mounting position	As	s required
Degree of Protection	IPe	65
Terminal capacities	mm ²	
Solid		< (0.75 - 2.5) < (0.75 - 1.5)
Flexible with ferrule		< (0.5 - 1.5) < (0.5 - 1.5)
Terminal screw	PH	11

Tightening torque for terminal screw		Nm	0.9	
Contacts/switching capacity		INIII	0.9	
Rated impulse withstand voltage	н	V AC	6000	
	U _{imp}			
Rated insulation voltage	Ui	V	500	
Overvoltage category/pollution degree			111/3	
Rated operational current	l _e	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	10	
Repetition accuracy		mm	0.02	
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	5	
Operating frequency	Operations/h		≦ 1800	
Actuation				
Mechanical				
Actuating force at beginning/end of stroke		Ν	15/20 (plug-in/pull-out)	

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 _{vid}	W	0.1
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

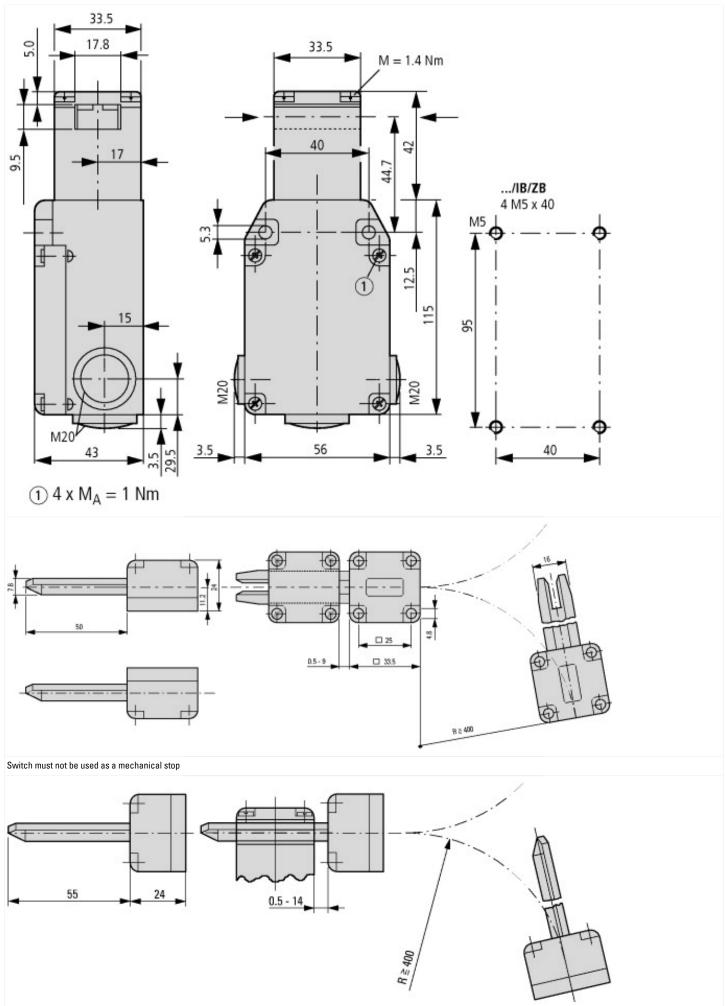
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position s	witch / Position switch (Type 1)
(ecl@ss10.0.1-27-27-06-01 [AGZ382015])	

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Rate doeration current le at AC-15, 250 V A 6 Rate doeration current le at AC-15, 250 V A 6 Rate doeration current le at DC-13, 24 V A 8 Rate doeration current le at DC-13, 250 V A 0 Rate doeration current le at DC-13, 250 V A 0 Switching function Slowazion switch Switching function Slowazion switch Switching function No No Dupt electronic V No Forced opaning V No Number of contacts as normally closed contact V No Number of contacts as normally closed contact V No Number of contacts as normally closed contact V No Storiting function V No Subsching function V No Number of contacts as normally closed contact V No Subsching function No No Subsching function No No Subsching function	Length of sensor	mm	40
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Switching function latching No Output electronic No Forced opening Yes Number of safety auxiliary contacts 0 Number of contacts as normally closed contact 0 Number of contacts as change-over contact 0 Type of interface None Construction type housing Cuboid Naterial housing Cuboid Augenent of the control element Other Alignment of the control element None Suitable for safety functions Cubei of the control element Suitable for safety functions None Suitable for safety functions Yes Suitable for safety functions None Suitable for safety category for dust None Augenetic for safety category for dust None Suitable for safety category for	Rated operation current le at DC-13, 230 V	А	0.3
Output electronic No Forced opening Yes Number of safety auxiliary contacts 0 Number of contacts as normally closed contact 0 Number of contacts as change-over contact 0 Number of contact seas change-over contact 0 Nage contact seas change-over contact 0 Nage control element 0 Number of contact seagony for dust	Switching function		Slow-action switch
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Number of contacts as change-over contact Image: Section of the s	Number of contacts as normally closed contact		0
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Type of control element Other Alignment of the control element Other Type of electric connection Other With status indication Cable entry metrical Suitable for safety functions Image: Section of the safety functions Explosion safety category for gas Image: Section of the safety functions Ambient temperature during operating Image: Section of the safety functions	Material housing		Plastic
Alignment of the control elementOtherType of electric connectionCable entry metricalWith status indicationNoSuitable for safety functionsYesExplosion safety category for gasNoneExplosion safety category for dustNoneAmbient temperature during operatingCable or C	Coating housing		Other
Type of electric connection Cable entry metrical With status indication No Suitable for safety functions Yes Explosion safety category for gas Mone Explosion safety category for dust None Ambient temperature during operating °C 25 - 70	Type of control element		Other
With status indicationImage: Sector Sect	Alignment of the control element		Other
Suitable for safety functionsYesExplosion safety category for gasMoneExplosion safety category for dustMoneAmbient temperature during operating°C25 - 70	Type of electric connection		Cable entry metrical
Explosion safety category for gas Mone Explosion safety category for dust Mone Ambient temperature during operating C 25 - 70	With status indication		No
Explosion safety category for dust Image: Comparison of the second of	Suitable for safety functions		Yes
Ambient temperature during operating °C 25 - 70	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 (IP)		IP65
Degree of protection (NEMA) 13	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

Dimensions



Additional product information (links)

IL05208004Z (AWA1310-2367) Safety position switch

IL05208004Z (AWA1310-2367) Safety position ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208004Z2018_09.pdf

switch

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