DATASHEET - LS4/S12-7/IB/ZB



Safety position switch, LS(4)...ZB, Safety position switches, Complete unit, 1 N/O, 2 NC, Insulated material, Screw terminal, -25 - +70 $^\circ\text{C}$



Part no.	LS4/S12-7/IB/ZB
Catalog No.	106859
Alternate Catalog	LS4/S12-7/IB/ZB
No.	
EL-Nummer	4315222
(Norway)	

Delivery 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) = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence	$\begin{array}{c} \textcircled{1}{} 13 \\ H \\ $
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
Notes Do not, under any circumstance, use the switch as a mechanical stop or trans	

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

Technical data

Climatic proofing Image: Part of the proof of the pro	General		
Ambient temperature °C -25 - +70 Mounting position IMA As required Degree of Protection IMA IMA Terminal capacities IMA IMA Solid IMA ImA Flexible with ferrule ImA Ix (0.75 - 1.5)	Standards		IEC/EN 60947
Mounting position As required Degree of Protection Imm ² Terminal capacities Imm ² Solid Imm ² Flexible with ferrule Imm ²	Climatic proofing		Damp heat, constant, to IEC 60068-2-78; damp heat, cyclical, to IEC 60068-2-30
Degree of Protection IP65 Terminal capacities mm ² Solid mm ² Flexible with ferrule mm ² Imm ² 1x (0.75 - 2.5) 2x (0.75 - 1.5)	Ambient temperature	°C	-25 - +70
Terminal capacities mm ² Solid mm ² Flexible with ferrule mm ² 1 x (0.5 - 1.5) x (0.5 - 1.5) x (0.5 - 1.5)	Mounting position		As required
Solid mm ² 1 x (0.75 - 2.5) 2 x (0.75 - 1.5) Flexible with ferrule mm ² 1 x (0.5 - 1.5) 2 x (0.5 - 1.5)	Degree of Protection		IP65
Flexible with ferrule mm ² 1 x (0.5 - 1.5) x (0.5 - 1.5) 1 x (0.5 - 1.5)	Terminal capacities	mm ²	
2 x (0.5 - 1.5)	Solid	mm ²	
Terminal screw PH1	Flexible with ferrule	mm ²	
	Terminal screw		PH1

Tightening torque for terminal screw		Nm	0.9
Repetition accuracy		mm	0.02
Contacts/switching capacity			
Rated impulse withstand voltage	U _{imp}	V AC	6000
Rated insulation voltage	Ui	V	500
Overvoltage category/pollution degree			111/3
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	10
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	I _n	А	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

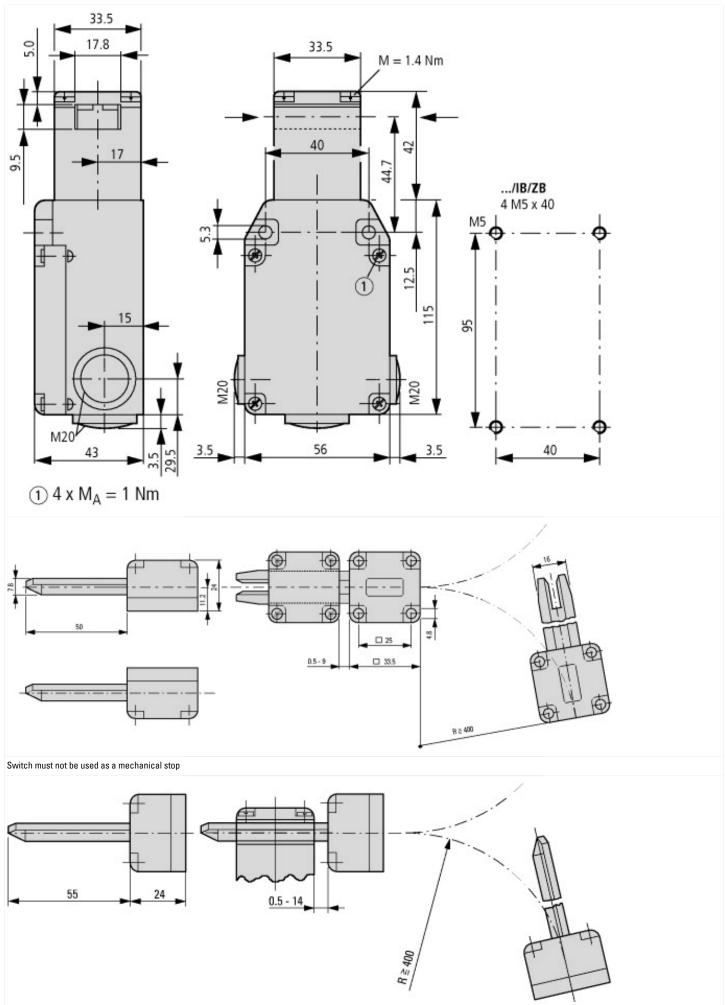
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1)
(ecl@ss10.0.1-27-27-06-01 [AGZ382015])

Dameter sensorImmImmImmHeight of sensorImmImmImmReted operation current to at AC-15, 22VAImmImmReted operation current to at AC-15, 22VImmImmImmReted operation current to at AC-13, 22VImmImmImmSwitching functionImmImmImmImmSwitching function tachingImmImmImmImmSwitching function tachingImmImmImmImmNumber of contacts a normally toped contactImmImmImmNumber of contacts a normally code contactImmImmImmNumber of con	(ECI@3310.0.1-27-27-00-01 [A02302013])		
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Arad operation current le at AC-15, 230 V A 6 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Rated operation current le at DC-13, 125 V A 0 Switching function S 0 0 Switching function S 0 0 Output electronic M 0 0 Dutput electronic M No 0 Switching function M No 0 Output electronic M No 0 Number of cafafty suviliary contacts M No 0 Number of contacts as normally closed contact M M 0 Number of contacts as normally closed contact M M No Number of contacts as normally closed contact M M No No Number of contacts as normally closed contact M M No No Top of interface M M Mo No No Contact consection M M Mo No No	Rated operation current le at AC-15, 24 V	А	10
Aread operation current le at DC-13, 25 V A 3 Rated operation current le at DC-13, 25 V A 0 Switching function A 0 Switching function A 0 Switching function More action switch Noreaction switch Output electronic More action switch Noreaction switch Switching function latching More action switch Noreaction switch Number of schery swillary contacts More action switch Noreaction switch Number of contacts as normally open contact More action switch Noreaction switch Number of contacts as normally open contact More action switch Noreaction schery swillary communication System function type housing More action schery swillary communication Noreaction schery swillary communication System function type housing More action schery schery communication Noreaction schery	Rated operation current le at AC-15, 125 V	А	6
Aread operation current le at DC-13, 125 V Image: A construction of the DC-13, 230 V A construction of the DC-13, 230 V Switching function Switching function Switching function latching Switching function switch Switching function latching Switching function Switching function Switching function Output elettonic Switching function Switching function Switching function Switching function latching Switching function Switching function Switching function Switching function Switching function Switching function Switching function Switching function Switching function Switching function Switching function Number of catets as normally open contact Switching function Switching function Switching function System of interface for safety communication Switching function Switching function Switching function System of interface for safety communication Switching function Switching function Switching function System of interface for safety communication Switching function Switching function Switching function System of interface for safety communication Switching function Switching function Switching function </td <td>Rated operation current le at AC-15, 230 V</td> <td>А</td> <td>6</td>	Rated operation current le at AC-15, 230 V	А	6
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Switching function Sow-action switch Switching function latching No Output electronic No Forced opening No Number of safety auxiliary contacts No Number of contacts as normally closed contact No Number of contacts as change-over contact No Number of contacts as change-over contact No Type of interface No Source of contacts as change-over contact No Source of contact (one contact of contact	Rated operation current le at DC-13, 125 V	А	0.8
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Number of contacts as change-over contact Image: Propriod interface Output Type of interface for safety communication None None Construction type housing Cubid Cubid Material housing Cubid Description Coating housing Cubid Other Type of control element Cubid Other Alignment of the control element Cubid Cubid Type of electric connection Cubid Cubid With status indication Cubid Cubid Suitable for safety functions Fore Cubid Explosion safety category for dust Mone None Anhient temperature during operating Cubid None Anhient temperature during operating Cubid None	Number of contacts as normally closed contact		0
Type of interface None Type of interface for safety communication None Construction type housing None Material housing Cubid Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Yes Suitable for safety functions Yes Explosion safety category for gas None Explosion safety category for dust Yes Ambient temperature during operating Yes Partiel temperature during operating Yes	Number of contacts as normally open contact		0
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Material housing Plastic Coating housing Other Type of control element Other Alignment of the control element Other Type of electric connection Other With status indication Coale Suitable for safety functions Setter of the control element Explosion safety category for gas Setter of the control element Anbient temperature during operating Setter of the control element Material housing Setter of the control element Suitable for safety category for dust Setter of the control element Ambient temperature during operating Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Setter of the control element Set	Type of interface for safety communication		None
Coating housing Coating housing Other Type of control element Coating housing Other Alignment of the control element Coating housing Other Type of electric connection Coating housing Other With status indication Coating housing Coating housing Suitable for safety functions Fees Sector of the control element Explosion safety category for gas Coating housing None Ambient temperature during operating Coating housing Sector of the control element Pagree of protection (IP) Coating housing Sector of the control element	Construction type housing		Cuboid
Type of control element Mer 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 Anbient temperature during operating Cable of the control element Aubient temperature during operating Cable of the control element Suitable for safety category (IP) Sector of the control element	Material housing		Plastic
Alignment of the control element Image: Control element Other Type of electric connection Cable entry metrical With status indication Image: Control element Suitable for safety functions Image: Control element Explosion safety category for gas Image: Control element Ambient temperature during operating Image: Control element Pagee of protection (IP) Image: Control element	Coating housing		Other
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With status indicationImage: Sector of the status indicationNoSuitable for safety functionsImage: Sector of the status indicationYesExplosion safety category for gasImage: Sector of the status indicationNoneExplosion safety category for dustImage: Sector of the status indicationNoneAmbient temperature during operatingImage: Sector of the status indicationSector of the status indicationDegree of protection (IP)Image: Sector of the status indication of the status	Alignment of the control element		Other
Suitable for safety functionsPage and the saf	Type of electric connection		Cable entry metrical
Explosion safety category for gas None Ambient temperature during operating °C 25 - 70 Degree of protection (IP) Mone 160	With status indication		No
Explosion safety category for dustNoneAmbient temperature during operating°C25 - 70Degree of protection (IP)CIP65	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

Dimensions



Assets (links)

Declaration of CE Conformity 00003114

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