



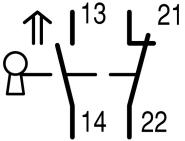
Safety position switch, 1N/O+1N/C, insulated material, +actuator ZB, spring clamp connection

EATON[®]

Powering Business Worldwide™

Part no. LS-11-ZB
Article no. 106819
Catalog No. LS-11-ZB

Delivery programme

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/O = Normally open		1 N/O
N/C = Normally closed		1 NC 
Notes		 = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		
Housing		Insulated material
Connection type		Cage Clamp
Notes		Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany. Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402
<p>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 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.</p>		

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

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	6000
Rated insulation voltage	U _i	V	500
Overvoltage category/pollution degree			III/3
Rated operational current	I _e	A	
AC-15			
24 V	I _e	A	6
220 V 230 V 240 V	I _e	A	6
380 V 400 V 415 V	I _e	A	4
DC-13			
24 V	I _e	A	3
110 V	I _e	A	0.6
220 V	I _e	A	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		N	10/5 (plug-in/pull-out)

Data for design verification according to IEC/EN 61439

Technical data for design verification	P _{diss}	W	0
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.

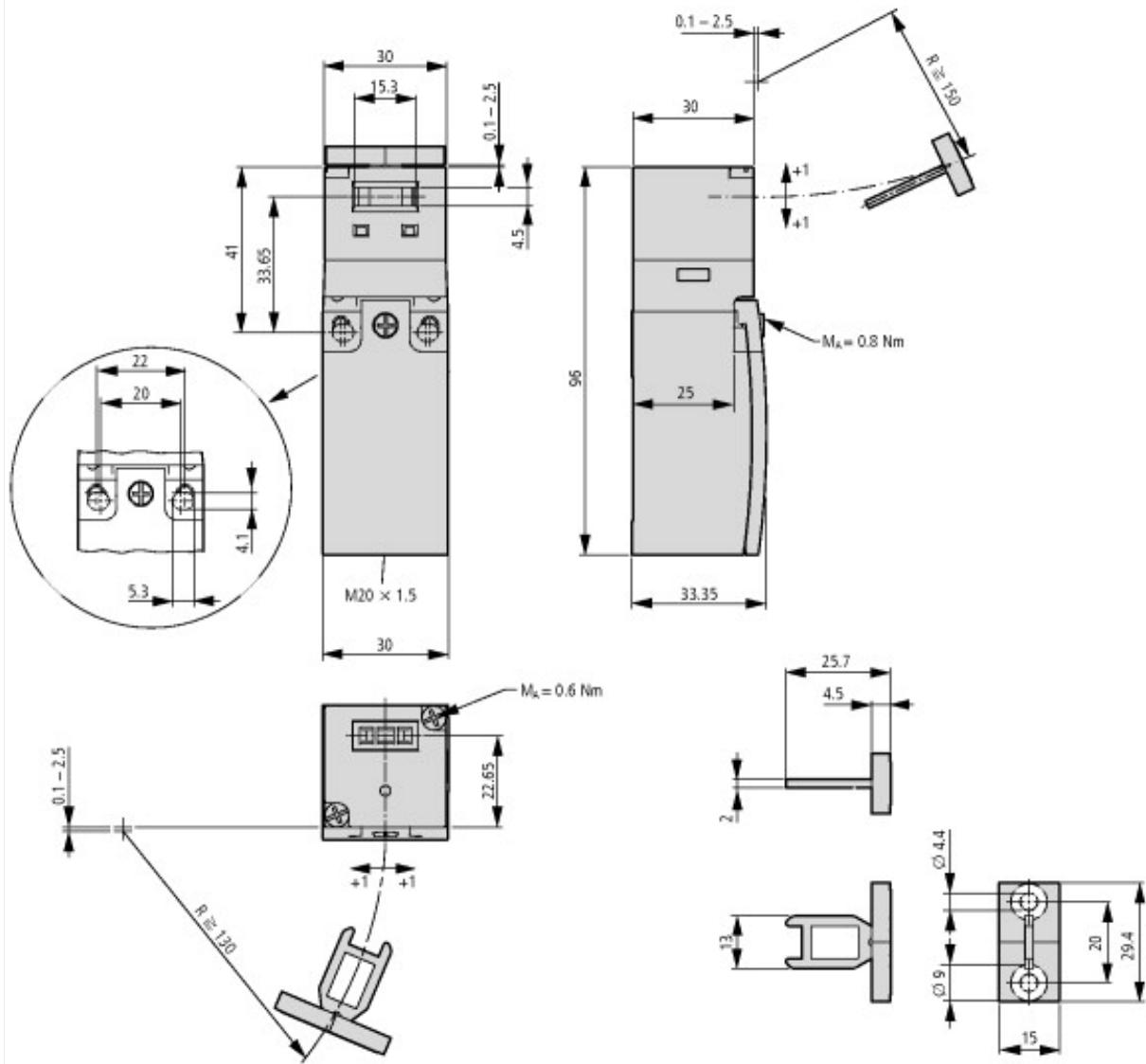
Technical data ETIM 5.0

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@ss8-27-27-06-01 [AGZ382011])

Width sensor	mm	30
Diameter sensor	mm	0
Height of sensor	mm	96
Length of sensor	mm	33.35
Rated operation current I_e at AC-15, 24 V	A	10
Rated operation current I_e at AC-15, 125 V	A	6
Rated operation current I_e at AC-15, 230 V	A	6
Rated operation current I_e at DC-13, 24 V	A	3
Rated operation current I_e at DC-13, 125 V	A	0.8
Rated operation current I_e at DC-13, 230 V	A	0.3
Switching function		Slow-action switch
Output electronic		No
Forced opening		Yes
Number of safety auxiliary contacts		0
Number of contacts as normally closed contact		0
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
Housing according to norm		-
Construction type housing		Cuboid
Material housing		Plastic
Coating housing		-
Type of control element		-
Alignment of the control element		-
Type of electric connection		Cable entry metrical
With status indication		No
Suited 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

Dimensions



Switch must not be used as a mechanical stop
 Terminal marking according to EN 50 013

Travel [mm]

= Contact closed

= Contact open

Zw = Positive opening sequence

Additional product information (links)

IL05208003Z (AWA1310-2374) Safety position switch

IL05208003Z (AWA1310-2374) Safety position switch ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208003Z2012_12.pdf

IL05208004Z (AWA1310-2367) Safety position switch

IL05208004Z (AWA1310-2367) Safety position switch ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208004Z2012_12.pdf