

Position switch, 2 N/C, basic, magnet-powered interlock

Powering Business Worldwide™

Part no. LS-S02-24DMT-ZBZ/X Article no. 106824 Catalog No. LS-S02-24DMT-ZBZX

Delivery programme			
Basic function			Position switches Safety position switches
Part group reference			LSZBZ/X
Product range			Basic devices with magnet-powered interlock (open-circuit principle)
Degree of Protection			IP65
Features			Basic device, expandable
Ambient temperature		°C	-25 - +40
Description			With interlock monitoring Monitoring of door position: continuous Time control of the release operation possible using ESR5-NV3-30
Approval			Prülz A
Contacts			
N/C = Normally closed			2 NC →
Notes			e safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence			11 A1 A2 L 21 12 22
Rated control voltage for magnetic drive	U _s	V	24 V DC
Housing			Insulated material
Connection type			Screw terminal

Notes Switch must never be used as a mechanical stop!

The operating head can be rotated manually in 90° steps without tools 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 - +40
Mounting position		As required
Degree of Protection		IP65
Terminal capacities	mm^2	
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)

Contacts/switching capacity Rated impulse withstand voltage

	- IIIIp		
Rated insulation voltage	Ui	V	400
Overvoltage category/pollution degree			III/3
Rated operational current	l _e	Α	
AC-15			
24 V	l _e	Α	6
220 V 230 V 240 V	I _e	Α	6
380 V 400 V 415 V	I _e	Α	4
DC-13			
24 V	le	Α	3
110 V	l _e	Α	0.8
220 V	l _e	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	0.02
Rated conditional short-circuit current		kA	1
Mechanical variables			
Lifespan, mechanical	Operations	x 10 ⁶	1
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	10
Operating frequency	Operations/h		≤ 800
Actuation			
Mechanical			
Actuating force at beginning/end of stroke		N	25/15 (plug-in/pull-out)
Mechanical holding force acc. to GS-ET-19 (04/2004)			
XG, XW, XNG		N	1700
XWA, XFG, XF		N	1600
XF		N	750
XNW		N	1200

V AC 4000

 U_{imp}

Design verification as per IEC/EN 61439

Electromechanical For magnet

Power consumption at 120 V AC

at 230 V AC

at 24 V DC

Magnet duty factor

Pick-up and drop-out values

In	Α	6
P _{vid}	W	0.13
P _{vid}	W	0
P_{vs}	W	0
P _{diss}	W	0
	°C	-25
	°C	40
		Meets the product standard's requirements.
		Meets the product standard's requirements.
		Meets the product standard's requirements.
	P _{vid} P _{vid} P _{vs}	P _{vid} W P _{vid} W P _{vs} W P _{diss} W °C

VA

VA

W

 $x\,U_s$

% ED

8

11

8

100

0.85 - 1.1

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 6.0

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@ss8.1-27-27-06-01 [AGZ382012])

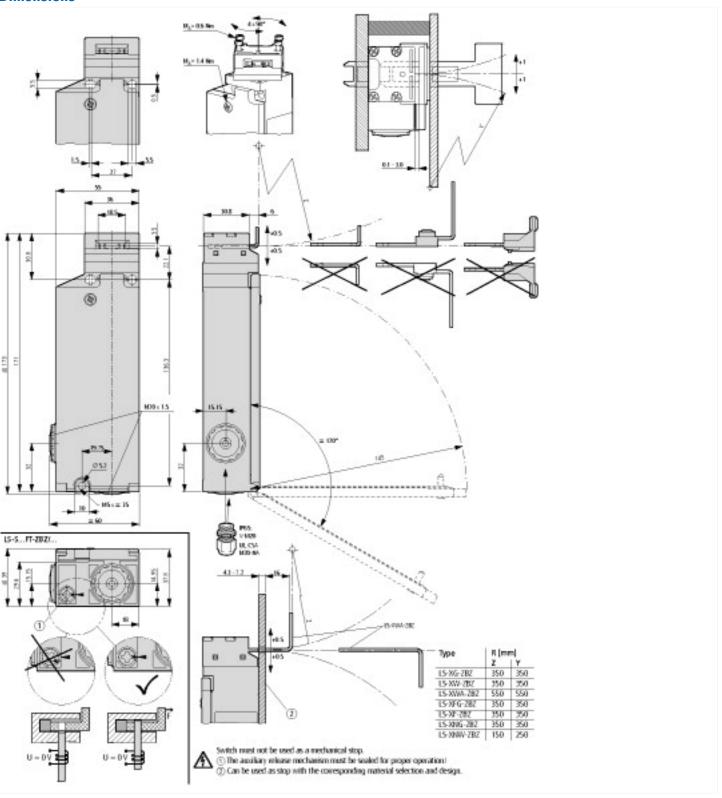
Width sensor mm 60 Diameter sensors mm 0 Height of sensor mm 33 Rated operation current le at AC-15, 24 V A 6 Rated operation current le at AC-15, 25 V A 6 Rated operation current le at AC-15, 230 V A 6 Rated operation current le at DC-13, 24 V A 8 Rated operation current le at DC-13, 25 V A 9 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Number of safety susiliary contacts V 0 0 Number of safety susiliary contacts V 0 0 Number of contacts as normally open contact V 0 0 Number of contacts as change-over contact V 0 0 Yope of interface for safety communication <t< th=""><th>[AU2302012])</th><th></th><th></th></t<>	[AU2302012])		
Height of sensor mm 173 Length of sensor mm 39 Rated operation current le at AC-15, 24 V A 6 Rated operation current le at AC-15, 125 V A 6 Rated operation current le at DC-13, 24 V A 3 Rated operation current le at DC-13, 125 V A 0.8 Rated operation current le at DC-13, 230 V A 3 Switching function B Yes 1000 Output electronic Yes 1000 1000 1000 Number of safety suxiliary contacts Yes 2 1000 <t< td=""><td>Width sensor</td><td>mm</td><td>60</td></t<>	Width sensor	mm	60
Length of sensor mm 39 Rated operation current le at AC-15, 24 V A 6 Rated operation current le at AC-15, 25 V A 6 Rated operation current le at AC-15, 230 V A 6 Rated operation current le at DC-13, 24 V A 0 Rated operation current le at DC-13, 25 V A 0 Rated operation current le at DC-13, 25 V A 0 Switching function B 100-action switch Output electronic B 100-action switch Forced opening B 100-action switch Number of safety auxiliary contacts B 2 Number of contacts as normally closed contact B 2 Number of contacts as normally closed contact B 0 Number of contacts as normally closed contact B 0 Number of contacts as normally closed contact B 0 Type of interface B 0 0 Type of interface for safety communication B 0 0 Material busing B 0 0 </td <td>Diameter sensor</td> <td>mm</td> <td>0</td>	Diameter sensor	mm	0
Rated operation current le at AC-15, 24 V A 6 Rated operation current le at AC-15, 250 V A 6 Rated operation current le at AC-15, 230 V A 6 Rated operation current le at DC-12, 24 V A 3 Rated operation current le at DC-13, 250 V A 0 Rated operation current le at DC-13, 230 V A 0 Switching function F Non-action switch Output electronic F Non-action switch Forced opening F 2 Non-Action switch Number of contacts as normally closed contact F 2 2 Number of contacts as normally open contact F 0 0 Number of contacts as normally open contact F 0 0 Number of contacts as ordang-over contact F 0 0 Type of interface for safety communication F None 0 Type of interface for safety communication F 0 None Conting housing F 0 None Conting housing F	Height of sensor	mm	173
Rated operation current le at AC-15, 125 V A 6 Rated operation current le at AC-15, 230 V A 3 Rated operation current le at DC-13, 24 V A 3 Rated operation current le at DC-13, 125 V A B Rated operation current le at DC-13, 230 V A B Switching function A Slow-action switch Output electronic No No Forced opening No No Number of safety auxiliary contacts 2 2 Number of contacts as normally closed contact 2 2 Number of contacts as change-over contact 0 No Type of interface for safety communication 0 No Type of interface for safety communication 0 No Housing according to norm 0 No Construction type housing 0 No Material housing 0 No Type of control element 0 No Alignment of the control element 0 No Type of electric connection 0	Length of sensor	mm	39
Rated operation current le at AC-15, 230 V Rated operation current le at DC-13, 24 V Rated operation current le at DC-13, 125 V Rated operation current le at DC-13, 230 V Rated operation current le at DC-13, 230 V Roted operation current le at DC-13, 240 V Roted operation current le	Rated operation current le at AC-15, 24 V	Α	6
Rated operation current le at DC-13, 234 V A 3 Rated operation current le at DC-13, 125 V A 0.8 Rated operation current le at DC-13, 230 V A 0.3 Switching function Solw-action switch Output electronic No No Forced opening Yes Number of safety auxiliary contacts 2 2 Number of safety auxiliary contacts 2 2 2 Number of contacts as normally closed contact 2 2 Number of contacts as normally open contact 0 0 Number of contacts as change-over contact 0 None Type of interface for safety communication 0 None Pusing according to norm Construction type housing Cubid Cubid Material housing Plastic Cubid Containg housing Plastic Cubid Contain plusing Plastic Cubid Coloration lelement Plastic Cubid Alignment of the control element Plastic Cubid Vigor of electric connection	Rated operation current le at AC-15, 125 V	Α	6
Rated operation current le at DC-13, 125 V A 0.8 Rated operation current le at DC-13, 230 V A 0.3 Switching function Book Slow-action switch Output electronic Ves Forced opening Yes Number of safety auxiliary contacts 2 Number of contacts as normally closed contact 2 2 Number of contacts as normally open contact 0 0 Number of contacts as change-over contact 0 0 Type of interface None None Type of interface for safety communication None None Housing according to norm Cuboid Cuboid Construction type housing Plastic Cuboid Material housing Plastic Cuboid Coating housing - - Type of control element - - Type of electric connection - - With status indication - - Suitable for safety functions - - Plastic - -	Rated operation current le at AC-15, 230 V	Α	6
Rated operation current le at DC-13, 230 V Switching function Output electronic Forced opening Number of safety auxiliary contacts Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as change-over contact Type of interface Type of interface for safety communication Housing according to norm Construction type housing Material housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions	Rated operation current le at DC-13, 24 V	Α	3
Switching functionSlow-action switchOutput electronicNoForced openingYesNumber of safety auxiliary contacts2Number of contacts as normally closed contact2Number of contacts as normally open contact0Number of contacts as normally open contact0Number of contacts as change-over contactNoneType of interfaceNoneType of interface for safety communicationNoneHousing according to normCuboidConstruction type housingCuboidMaterial housingPlasticCoating housing-Type of control element-Alignment of the control element-Type of electric connectionNoWith status indicationNoSuitable for safety functionsYes	Rated operation current le at DC-13, 125 V	Α	0.8
Output electronicNoForced openingYesNumber of safety auxiliary contacts2Number of contacts as normally closed contact2Number of contacts as normally open contact0Number of contacts as change-over contact0Number of contacts as change-over contactNoneType of interfaceNoneType of interface for safety communicationNoneHousing according to normCuboidConstruction type housingCuboidMaterial housingPlasticCoating housing-Type of control element-Alignment of the control element-Alignment of the control element-Type of electric connection-With status indicationNoStubble for safety functionsYes	Rated operation current le at DC-13, 230 V	Α	0.3
Forced opening Number of safety auxiliary contacts Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as change-over contact Number of contacts as change-over contact One Type of interface Type of interface for safety communication None Construction type housing Material housing Coating housing Coating housing Type of control element Type of control element Type of electric connection Vith status indication Suitable for safety functions Yes Yes Yes Yes O O O O O O O O O O O O O	Switching function		Slow-action switch
Number of safety auxiliary contacts Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as normally open contact Number of contacts as change-over contact Type of interface Type of interface Type of interface for safety communication None Tousing according to norm Construction type housing Material housing Coating housing Coating housing Type of control element Alignment of the control element Type of lectric connection With status indication Suitable for safety functions 2	Output electronic		No
Number of contacts as normally closed contact Number of contacts as normally open contact Number of contacts as change-over contact Type of interface None Type of interface for safety communication Housing according to norm Construction type housing Material housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions 2 Contact as normally open contact Do O O O O O O O O O O O O O	Forced opening		Yes
Number of contacts as normally open contact Number of contacts as change-over contact Type of interface None Type of interface for safety communication Housing according to norm Construction type housing Material housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication No Suitable for safety functions O O O O O O O O O O O O O	Number of safety auxiliary contacts		2
Number of contacts as change-over contact Type of interface None Type of interface for safety communication None Housing according to norm Construction type housing Material housing Coating housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions O O O O O O O O O O O O O	Number of contacts as normally closed contact		2
Type of interface Type of interface for safety communication Housing according to norm Construction type housing Material housing Coating housing Coating housing Coating housing Type of control element Type of control element Type of electric connection With status indication Suitable for safety functions None None None Cuboid Cuboid Plastic	Number of contacts as normally open contact		0
Type of interface for safety communication Housing according to norm Construction type housing Material housing Coating housing Coating housing Type of control element Alignment of the control element Type of electric connection With status indication Suitable for safety functions None N	Number of contacts as change-over contact		0
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Construction type housing Cuboid Material housing Plastic Coating housing - Type of control element Alignment of the control element - Type of electric connection Vith status indication No Suitable for safety functions Cuboid Cuboid Cuboid Cuboid Cuboid Cuboid Plastic - - No Suitable for safety functions Cuboid Cuboid Cuboid Cuboid Cuboid Cuboid Cuboid Alignment - No Suitable for safety functions Cuboid Cuboid No Plastic - No Ves	Type of interface for safety communication		None
Material housing Coating housing - Type of control element - Alignment of the control element - Type of electric connection - With status indication Suitable for safety functions Plastic - Plastic - No Yes	Housing according to norm		
Coating housing - Type of control element - Alignment of the control element - Type of electric connection - With status indication No Suitable for safety functions - Suitable for safety functions	Construction type housing		Cuboid
Type of control element - Alignment of the control element - Type of electric connection - With status indication No Suitable for safety functions Yes	Material housing		Plastic
Alignment of the control element - Type of electric connection - With status indication No Suitable for safety functions Yes	Coating housing		
Type of electric connection - With status indication No Suitable for safety functions Yes	Type of control element		
With status indication No Suitable for safety functions Yes	Alignment of the control element		
Suitable for safety functions Yes	Type of electric connection		
	With status indication		No
Evolucion cafaty extrangly for race	Suitable for safety functions		Yes
Explosion safety category for gas	Explosion safety category for gas		None

Explosion safety category for dust			None
Ambient temperature during operating	0	°C	-25 - 70
Degree of protection (IP)			IP65

Approvals

 IEC/EN 60947-5; UL 508; CSA-C22.2 No. 14; CE marking
E29184
NKCR
12528
3211-03
UL listed, CSA certified
IEC: IP65, UL/CSA Type 3R, 4X (indoor use only), 12, 13

Dimensions



Additional product information (links)

IL05208005Z (AWA1310-2354) Safety position switch

IL05208005Z (AWA1310-2354) Safety position switch

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05208005Z2012_12.pdf