

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

Powering Business Worldwide™

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

#### **Delivery programme**

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			Prüko A
Contacts			
N/C = Normally closed			2 NC ⊖
Notes			= safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence			11 A1 A2 L 21 L 21 L 22
Rated control voltage for magnetic drive	U <sub>s</sub>	V	24 V DC
Housing			Insulated material
Connection type			Screw terminal
Nates Cuitab must navar be used as a mashanisal stant			

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 <sup>2</sup>	
Solid		1 x (0.75 - 2.5) 2 x (0.75 - 1.5)
Flexible with ferrule		1 x (0.5 - 1.5) 2 x (0.5 - 1.5)

#### **Contacts/switching capacity**

Contacts/Switching capacity						
Rated impulse withstand voltage	$U_{\text{imp}}$	V AC	4000			
Rated insulation voltage	Ui	V	400			
Overvoltage category/pollution degree			III/3			
Rated operational current	l <sub>e</sub>	Α				
AC-15						
24 V	l <sub>e</sub>	Α	6			
220 V 230 V 240 V	l <sub>e</sub>	Α	6			
380 V 400 V 415 V	l <sub>e</sub>	Α	4			
DC-13						
24 V	le	Α	3			
110 V	l <sub>e</sub>	Α	0.8			
220 V	l <sub>e</sub>	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 <sup>6</sup>	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			

# **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

200.g.: 1010ao. ao por 120,211 01 100			
Technical data for design verification			
Rated operational current for specified heat dissipation	In	Α	6
Heat dissipation per pole, current-dependent	$P_{\text{vid}}$	W	0.13
Equipment heat dissipation, current-dependent	$P_{\text{vid}}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	0
Heat dissipation capacity	P <sub>diss</sub>	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	40
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.

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])

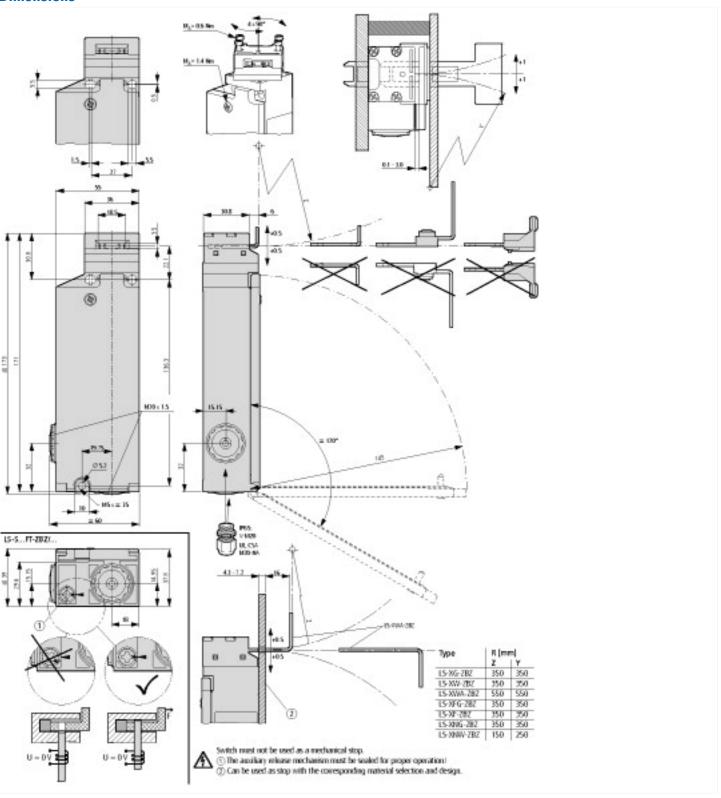
Width sensor	mm	60
Diameter sensor	mm	0
Height of sensor	mm	173
Length of sensor	mm	39
Rated operation current le at AC-15, 24 V	Α	6
Rated operation current le at AC-15, 125 V	Α	6
Rated operation current le at AC-15, 230 V	Α	6
Rated operation current le at DC-13, 24 V	Α	3
Rated operation current le at DC-13, 125 V	Α	0.8
Rated operation current le at DC-13, 230 V	Α	0.3
Switching function		Slow-action switch
Output electronic		No
Forced opening		Yes
Number of safety auxiliary contacts		2
Number of contacts as normally closed contact		2
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		
With status indication		No
Suitable for safety functions		Yes
Explosion safety category for gas		None

Explosion safety category for dust			None
Ambient temperature during operating	٥	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

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