



Position switch, 1N/O+1N/C, basic, spring-powered interlock

Part no. LS-S11-24DFT-ZBZ/X
106829
EL Number 4356170
(Norway)

General specifications		
Product name		Eaton Moeller® series LS Position switch
Part no.		LS-S11-24DFT-ZBZ/X
EAN		4015081065899
Product Length/Depth		55 millimetre
Product height		170 millimetre
Product width		37 millimetre
Product weight		0.43 kilogram
Certifications		UL UL File No.: E29184 CE IEC/EN 60947-5 CSA Class No.: 3211-03 CSA-C22.2 No. 14 CSA IEC/EN 60947 UL Category Control No.: NKCR UL 508 CSA File No.: 012528
Product Tradename		LS
Product Type		Position switch
Product Sub Type		None
Features & Functions		
Electric connection type		Cable entry metrical
Enclosure material		Insulated material Plastic
Features		Forced opening Expandable
Fitted with:		Interlock monitoring Auxiliary release mechanism
Switch function type		Slow-action switch
General information		
Connection type		Screw terminal
Degree of protection		NEMA Other IP65
Duty factor		100 % (Magnet)
Lifespan		1,000,000 mechanical Operations
Operating frequency		800 Operations/h
Overvoltage category		III
Pollution degree		3
Product category		Basic units with spring-powered interlock (closed-circuit principle)
Rated impulse withstand voltage (Uimp)		4000 V AC
Repetition accuracy		0.02 mm (Contacts/switching capacity)
Suitable for		Safety functions
Type		Safety position switch Position switch
Ambient conditions, mechanical		
Mounting position		As required
Shock resistance		10 g, Standard-action contact, Mechanical, Half-Sinusoidal shock 20 ms
Climatic environmental conditions		
Ambient operating temperature - min		-25 °C
Ambient operating temperature - max		70 °C
Climatic proofing		Damp heat, cyclic, to IEC 60068-2-30 Damp heat, constant, to IEC 60068-2-78

Terminal capacities		
Terminal capacity (flexible with ferrule)		2 x (0.5 - 1.5) mm ² 1 x (0.5 - 1.5) mm ²
Terminal capacity (solid)		2 x (0.75 - 1.5) mm ² 1 x (0.75 - 2.5) mm ²
Screw size		PH1, Terminal screw
Tightening torque		0.9 Nm, Screw terminals
Electrical rating		
Power consumption		11 VA at 230 V AC (electromechanical actuation) 8 VA at 120 V AC (electromechanical actuation) 8 W at 24 V DC (electromechanical actuation)
Rated conditional short-circuit current (I _q)		1 kA
Rated control supply voltage		24 V DC (Us, for magnet drive)
Rated insulation voltage (Ui)		400 V
Rated operational current (Ie) at AC-15, 220 V, 230 V, 240 V		6 A
Rated operational current (Ie) at AC-15, 24 V		6 A
Rated operational current (Ie) at AC-15, 380 V, 400 V, 415 V		4 A
Rated operational current (Ie) at DC-13, 110 V		0.8 A
Rated operational current (Ie) at DC-13, 125 V		0.8 A
Rated operational current (Ie) at DC-13, 220 V, 230 V		0.3 A
Rated operational current (Ie) at DC-13, 24 V		3 A
Short-circuit protection rating		Max. 6 A gG/gL, Fuse, Contacts
Supply frequency		Max. 400 Hz, Contacts
Voltage tolerance		0.85 x Us, Pick-up and drop-out values 1.1 x Us, Pick-up and drop-out values
Actuator		
Actuating force at beginning/end of stroke		25 N/15 N (plug-in/pull-out)
Actuator type		None
Mechanical holding force		1200 N (according to GS-ET-19 (04/2004), XNW) 1700 N (according to GS-ET-19 (04/2004), XG, XW, XNG) 1600 N (according to GS-ET-19 (04/2004), XWA, XFG, XF)
Contacts		
Number of contacts (change-over contacts)		0
Number of contacts (normally closed contacts)		1
Number of contacts (normally open contacts)		1
Safety		
Explosion safety category for gas		None
Explosion safety category for dust		None
Design verification		
Equipment heat dissipation, current-dependent P _{vid}		0 W
Heat dissipation capacity P _{diss}		0 W
Heat dissipation per pole, current-dependent P _{vid}		0.13 W
Rated operational current for specified heat dissipation (I _n)		6 A
Static heat dissipation, non-current-dependent P _{vs}		0 W
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 Resist. of insul. mat. to abnormal heat/fire by internal elect. 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.
10.9.2 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 9.0

Sensors (EG000026) / End switch (EC000030)			
Electric engineering, automation, process control engineering / Sensor technology, safety-related sensor technology / Safety-related mechanical switch (sensor technology) / Safety position switch (Type 1) (ec/ss13-27-27-26-01 [AKE640018])			
Width sensor	mm	60	
Diameter sensor	mm	0	
Height of sensor	mm	173	
Length of sensor	mm	39	
Rated operation current I _e at AC-15, 24 V	A	6	
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	
Switching function latching		No	
Output electronic		No	
Forced opening		Yes	
Number of safety auxiliary contacts		1	
Number of contacts as normally closed contact		1	
Number of contacts as normally open contact		1	
Number of contacts as change-over contact		0	
Type of interface		None	
Type of interface for safety communication		None	
Construction type housing		Cuboid	
Housing material		Plastic	
Coating housing		Other	
Type of control element		None	
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	
Explosion safety category for dust		None	
Ambient temperature during operating	°C	-25 - 70	
Degree of protection (IP)		IP65	
Degree of protection (NEMA)		Other	