DATASHEET - LS-20-M12A

Position switch, Rounded plunger, Basic device, expandable, 2 N/O, Cage Clamp, Yellow, Insulated material, -25 - +70 °C, with M12 connector

Powering Business Worldwide

Part no. **LS-20-M12A**
178133

Product name	Eaton Moeller® series LS Position switch
Part no.	LS-20-M12A
EAN	4015081734566
Product Length/Depth	33.5 millimetre
Product height	91.5 millimetre
Product width	31 millimetre
Product weight	0.059 kilogram
Certifications	IEC/EN 60947
Product Tradename	LS
Product Type	Position switch
Product Sub Type	None
Catalog Notes	Accessories for the Cage-Clamp terminals from Wago:power comb, gray, Wago Article No. 264-402 Cage-Clamp is a registered trademark of Wago Kontakttechnik, 32432 Minden, Germany
Electric connection type	Connector M12
Enclosure color	Yellow Cover
Enclosure material	Plastic Insulated material
Features	Forced opening Expandable
Switch function type	Slow-action switch
Accessories	M12 connector included.
Connection type	Cage Clamp
Degree of protection	IP66 NEMA Other
Lifespan	8,000,000 mechanical Operations
Operating frequency	6000 Operations/h
Overvoltage category	III
Pollution degree	3
Product category	Rounded plunger
Rated impulse withstand voltage (Uimp)	2500 V AC
Repetition accuracy	0.15 mm (Contacts/switching capacity)
Type	Position switch
Mounting position	As required
Shock resistance	25 g, Standard-action contact, Mechanical, Half-sinusoidal shock 20 ms
Temperature resistance	100 °C, Contact temperature of roller head
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 capacity (flexible with ferrule)	1 x (0.5 - 1.5) mm^2
Terminal capacity (solid)	1 x (0.5 - 2.5) mm^2
Rated conditional short-circuit current (Iq)	1 kA

Rated insulation voltage (Ui)	250 V
Rated operational current (Ie) at AC-15, 115 V	4 A
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	0.6 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. 4 A gG/gL, Fuse, Contacts
Supply frequency	Max. 400 Hz, Contacts
Actuating torque of rotary drives	0.2 N·m
Actuator type	Plunger
Operating speed	Max. 1/0.5 m/s (with DIN cam, mechanical actuation) For angle of actuation α = 0°/30°
Control circuit reliability	1 failure per 10,000,000 switching operations (Statistically determined, at 24 V DC/5 mA) 1 failure per 5,000,000 switching operations (statistically determined, at 5 V DC/1 mA)
Number of contacts (change-over contacts)	0
Number of contacts (normally closed contacts)	0
Number of contacts (normally open contacts)	2
Explosion safety category for gas	None
Explosion safety category for dust	None
Equipment heat dissipation, current-dependent Pvid	0 W
Heat dissipation capacity Pdiss	0 W
Heat dissipation per pole, current-dependent Pvid	0.17 W
Rated operational current for specified heat dissipation (In)	6 A
Static heat dissipation, non-current-dependent Pvs	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 8.0

Sensors (EG000026) / End switch (EC000030)

Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Safety-related position switch / Safety position switch (Type 1) (ecl@ss10.0.1-27-27-26-01 [AKE640013])

Width sensor		mm	31
Diameter sensor		mm	0
Height of sensor		mm	86
Length of sensor		mm	33.5
Rated operation current Ie at AC-15, 24 V		A	6
Rated operation current Ie at AC-15, 125 V		A	6
Rated operation current Ie at AC-15, 230 V		A	6
Rated operation current Ie at DC-13, 24 V		A	3
Rated operation current Ie at DC-13, 125 V		A	0.6
Rated operation current Ie 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			0
Number of contacts as normally closed contact			0
Number of contacts as normally open contact			2
Number of contacts as change-over contact			0
Type of interface			None
Type of interface for safety communication			None
Construction type housing			Cuboid
Material housing			Plastic
Coating housing			Other
Type of control element			Plunger
Alignment of the control element			Roller cam straight
Type of electric connection			Connector M12
With status indication			No
Suitable for safety functions			No
Explosion safety category for gas			None
Explosion safety category for dust			None
Ambient temperature during operating		°C	-25 - 70
Degree of protection (IP)			IP66
Degree of protection (NEMA)			Other

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