

Position switches; 1N/O+1N/C; roller lever; M12A

Powering Business Worldwide*

Part no. LS-11/L-M12A Article no. 178136 Catalog No. LS-11/L-M12A

Delivery program

Delivery program		
Basic function		Position switches Safety position switches
Part group reference		LS(M)
Product range		Roller lever
Degree of Protection		IP66
Equipment supplied		with M12 connector
Features		Complete device
Ambient temperature	°C	-25 - +70
Design		EN 50047 Form E
Description		Long
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		0-13 1-21
Contact travel ■ = Contact closed = Contact open		0 6.5 9.6 13-14 NO 21-22 NC 4.7 Zw = 7.1 mm
Positive opening (ZW)		yes
Colour		
Enclosure covers		Yellow
Enclosure covers		
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

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 - +70
Mounting position		As required
Degree of Protection		IP66
Terminal capacities	mm^2	
Solid	mm^2	1 x (0.5 - 2.5)
Flexible with ferrule	mm^2	1 x (0.5 - 1.5)
Contacts/switching consoity		

|--|--|--|--|--|

Note				
Rated operational current	Rated insulation voltage	Ui	V	250
AC-15 24 V	Overvoltage category/pollution degree			III/3
24 \	Rated operational current	I _e	Α	
115 V 10	AC-15			
10	24 V	I _e	Α	6
18	115 V	I _e	Α	4
DC-13 24 V 1e A 0.8 220 V 1e A 0.3 Control circuit reliability at 24 V DC/5 mA HF Fault probability	220 V 230 V 240 V	I _e	Α	1
24 \	380 V 400 V 415 V	I _e	Α	4
le A 0.8 Control circuit reliability at 24 V DC/5 mA HF Fault probability 10 -7, < 1 fault in 107 operations at 5 V DC/1 mA HF Fault probability 10 -7, < 1 fault in 107 operations Supply frequency HF Fault probability 10 -7, < 1 fault in 107 operations Supply frequency Max. 400 Short-circuit rating to IEC/EN 60947-5-1 max. fuse A gG/gL 4 Repetition accuracy mm 0.15 Rated conditional short-circuit current kA 1 Mechanical variables Lifespan, mechanical Operations Standard-action contact Operations Standard-action contact Qperations x 10 8 Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical Max. operating speed with DIN cam in Max. 400 Nechanical	DC-13			
220 V Control circuit reliability at 24 V DC/5 mA the first and probability at 5 V DC/1 mA the first and probability at 5 V DC/1 mA the first and probability the first and prob	24 V	I _e	Α	3
Control circuit reliability at 24 V DC/5 mA the fault probability at 5 V DC/1 mA He fault probability at 5 V DC/1 mA He fault probability Hz max. 400 Supply frequency Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Reted conditional short-circuit current Mechanical variables Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operations Standard-action contact Operations/ Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam He fault probability 10 -7, < 1 fault in 107 operations max. 400 max. 400 10 -5 10 -5 10 -6, < 1 failure at 5 x 10 ⁶ operations max. 400 10 -5 10 -6 10 -7, < 1 fault in 107 operations max. 400 10 -5 10 -6 10 -7, < 1 fault in 107 operations max. 400 10 -5 10 -6 10 -7, < 1 fault in 107 operations max. 400 10 -7, < 1 fault in 107 operations max. 400 10 -7, < 1 fault in 107 operations max. 400 10 -5 10 -6 10 -7, < 1 fault in 107 operations max. 400 10 -7, < 1 fault in 107 operations max. 400 10 -7, < 1 fault in 107 operations max. 400 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7 10 -7, < 1 fault in 107 operations max. 400 10 -7	110 V	I _e	Α	0.8
HF Fault probability of operations at 5 V DC/1 mA HF Fault probability of operations supply frequency Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operations Standard-action contact Operations Mechanical Actuation Mechanical Actuating to IEC/EN 60947-5-1 max. fuse Fault probability 10°-7, < 1 fault in 107 operations max. 400 ** ** ** ** ** ** ** ** **	220 V	I _e	Α	0.3
at 5 V DC/1 mA HF Fault probability 10 ° < 1 failure at 5 x 10 ° operations Supply frequency Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Rated conditional short-circuit current Mechanical variables Standard-action contact Operations Standard-action contact Operations frequency Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam HF Fault probability Food-actions Hz In 0 ° < 1 failure at 5 x 10 ° operations max. 400 A GG/gL 4 4 4 4 4 4 4 4 4 4 4 4 4	Control circuit reliability			
Supply frequency Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Standard-action contact Operations frequency Operations frequency Actuation Actuating torque of rotary drives Max. 400 Hz max. 400 4 4 4 4 4 4 4 4 4 4 4 4	at 24 V DC/5 mA	H _F	probabilit	ry
Short-circuit rating to IEC/EN 60947-5-1 max. fuse Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Standard-action contact Operations Operations/h Actuating torque of rotary drives Max. operating speed with DIN cam A gG/gL 4 4 A gG/gL 4 A galance substance (naif-sinusoidal shock, 20 ms) B g g g galance substance (naif-sinusoidal shock, 20 ms) B g g g g g g g g g g g g g g g g g g	at 5 V DC/1 mA	H _F	Fault probabilit	$< 10^{-6}$, < 1 failure at 5 x 10^{6} operations
max. fuse Repetition accuracy Repetition accuracy Repetition accuracy Repetition accuracy Reted conditional short-circuit current Mechanical variables Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operations Partions/h Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam A g g/g 25 6000 Actuation Nm 0.2 m/s 1	Supply frequency		Hz	max. 400
Repetition accuracy Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam mm 0.15 kA 1 25 6000 Nm 0.2	Short-circuit rating to IEC/EN 60947-5-1			
Rated conditional short-circuit current Mechanical variables Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operations/h Standard-action contact Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam kA 1 1 Actual torque of rotary drives Max. operating speed with DIN cam kA 1 1 1 1 1 1 1 1 1 1 1 1 1	max. fuse		A gG/gL	4
Mechanical variables Lifespan, mechanical Operations x 10 ⁶ 8 Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operating frequency Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Operations x 10 ⁶ 8 Actuality 25 6000 Nm 0.2 m/s 1	Repetition accuracy		mm	0.15
Lifespan, mechanical Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operations/h Standard-action contact Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Operations/h Actualion Nm 0.2 m/s 1	Rated conditional short-circuit current		kA	1
Mechanical shock resistance (half-sinusoidal shock, 20 ms) Standard-action contact Operating frequency Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Actual shock resistance (half-sinusoidal shock, 20 ms) g 25 6000 Actuation Nm 0.2 m/s 1	Mechanical variables			
Standard-action contact Operating frequency Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Actual operating speed with DIN cam Max. operating speed with DIN cam Actual operating speed with DIN cam Actual operating speed with DIN cam Actual operating speed with DIN cam By 25 6000 Nm 0.2 m/s 1	Lifespan, mechanical	Operations	x 10 ⁶	8
Operating frequency Operations/h Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Operations/h Section 2 Nm 0.2 m/s 1	Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Max. operating speed with DIN cam Mys 1	Standard-action contact		g	25
Actuation Mechanical Actuating torque of rotary drives Max. operating speed with DIN cam Max. operating speed with DIN cam Mys 1	Operating frequency	Operations/h		≦ ₆₀₀₀
Actuating torque of rotary drives Nm 0.2 Max. operating speed with DIN cam m/s 1	Actuation			
Max. operating speed with DIN cam m/s 1	Mechanical			
	Actuating torque of rotary drives		Nm	0.2
Notes for angle of actuation $\alpha = 30^{\circ}/45^{\circ}$	Max. operating speed with DIN cam		m/s	1
	Notes			for angle of actuation α = 30°/45°

Design verification as per IEC/EN 61439

Technical data for design verification		
Operating ambient temperature min.	°C	-25
Operating ambient temperature max.	°C	70

Technical data ETIM 6.0

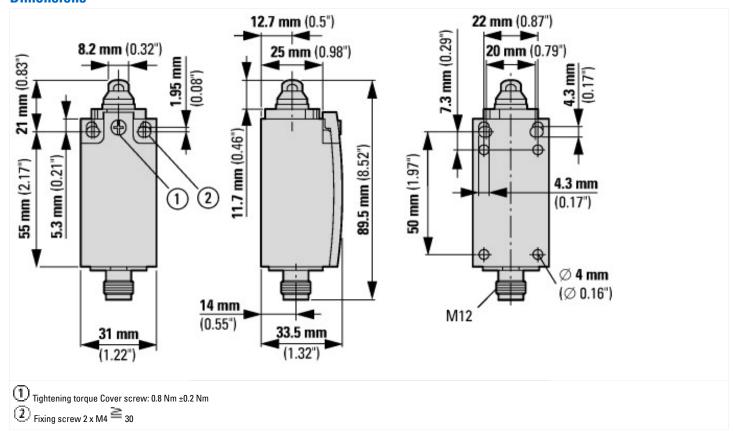
Sansars	(FG000026) /	End switch	(ECUUUU3U)

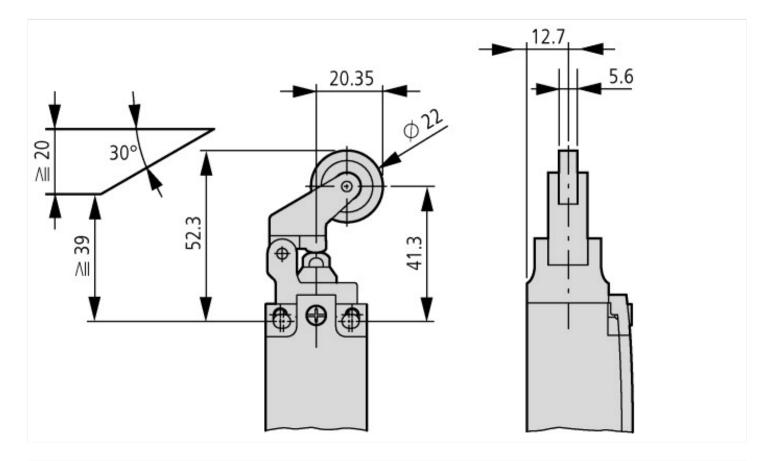
Electric engineering, automation, process control engineering / Binary sensor technology, safety-related sensor technology / Position switch / Position switch (Type 1) (ecl@ss8.1-27-27-06-01 [AGZ382012])

[AGZ382012])		
Width sensor	mm	31
Diameter sensor	mm	0
Height of sensor	mm	86
Length of sensor	mm	33.5
Rated operation current le at AC-15, 24 V	А	6
Rated operation current le at AC-15, 125 V	А	6
Rated operation current le at AC-15, 230 V	А	6
Rated operation current le at DC-13, 24 V	А	3
Rated operation current le at DC-13, 125 V	А	0.6
Rated operation current le at DC-13, 230 V	А	0.3
Switching function		Slow-action switch
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
Housing according to norm			
Construction type housing			Cuboid
Material housing			Plastic
Coating housing			-
Type of control element			Roller lever
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	0	C	-25 - 70
Degree of protection (IP)			IP65

Dimensions





Additional product information (links)

IL053001ZU LS-Titan position switch: basic device

IL053001ZU LS-Titan position switch: basic device

ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL053001ZU2013_08.pdf