



**Position switches; 2N/C; rounded plunger; M12A**



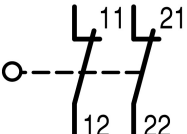


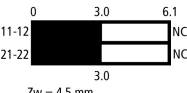
<b>Part no.</b>	<b>LS-02-M12A</b>
<b>Article no.</b>	<b>178128</b>
<b>Catalog No.</b>	<b>LS-02-M12A</b>



## Delivery program

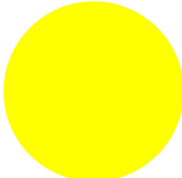
Basic function			Position switches Safety position switches
Part group reference			LS(M)-...
Product range			Rounded plunger
Degree of Protection			IP66
Equipment supplied			with M12 connector
Features			Basic device, expandable
Ambient temperature		°C	-25 - +70

## Contacts

N/C = Normally closed		2 NC 
Notes		 = safety function, by positive opening to IEC/EN 60947-5-1
Contact sequence		
Contact travel  = Contact closed  = Contact open		

Positive opening (ZW)			yes
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### Colour

Enclosure covers		Yellow
Enclosure covers		
Housing		Insulated material
Connection type		Cage Clamp
<b>Notes</b>		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 <sup>2</sup>	
Solid		mm <sup>2</sup>	1 x (0.5 - 2.5)
Flexible with ferrule		mm <sup>2</sup>	1 x (0.5 - 1.5)

### Contacts/switching capacity

Rated impulse withstand voltage	$U_{imp}$	V AC	2500
Rated insulation voltage	$U_i$	V	250
Overvoltage category/pollution degree			III/3
Rated operational current	$I_e$	A	

AC-15			
24 V	I <sub>e</sub>	A	6
115 V	I <sub>e</sub>	A	4
220 V 230 V 240 V	I <sub>e</sub>	A	1
380 V 400 V 415 V	I <sub>e</sub>	A	4
DC-13			
24 V	I <sub>e</sub>	A	3
110 V	I <sub>e</sub>	A	0.8
220 V	I <sub>e</sub>	A	0.3
Control circuit reliability			
at 24 V DC/5 mA	H <sub>F</sub>	Fault probability	< 10 <sup>-7</sup> , < 1 fault in 107 operations
at 5 V DC/1 mA	H <sub>F</sub>	Fault probability	< 10 <sup>-6</sup> , < 1 failure at 5 x 10 <sup>6</sup> operations
Supply frequency		Hz	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	x 10 <sup>6</sup>	8
Contact temperature of roller head		°C	≦ 100
Mechanical shock resistance (half-sinusoidal shock, 20 ms)			
Standard-action contact		g	25
Operating frequency	Operations/h		≦ 6000

Actuation

Mechanical			
Actuating torque of rotary drives		Nm	0.2
Max. operating speed with DIN cam		m/s	1/0.5
Notes			for angle of actuation α = 0°/30°

Design verification as per IEC/EN 61439

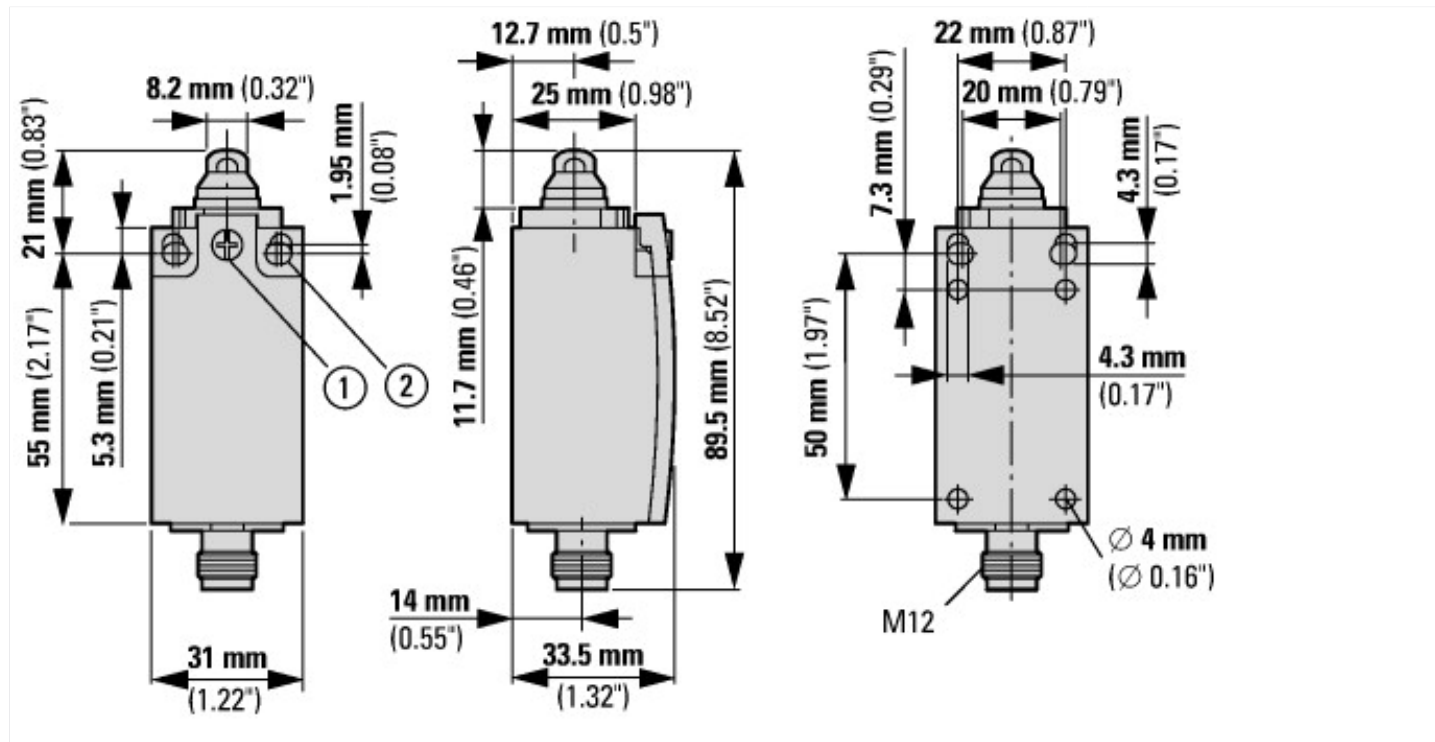
Technical data for design verification			
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	70

Technical data ETIM 6.0

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	31
Diameter sensor		mm	0
Height of sensor		mm	86
Length of sensor		mm	33.5
Rated operation current I <sub>e</sub> at AC-15, 24 V		A	6
Rated operation current I <sub>e</sub> at AC-15, 125 V		A	6
Rated operation current I <sub>e</sub> at AC-15, 230 V		A	6
Rated operation current I <sub>e</sub> at DC-13, 24 V		A	3
Rated operation current I <sub>e</sub> at DC-13, 125 V		A	0.6
Rated operation current I <sub>e</sub> at DC-13, 230 V		A	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			Plunger
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		°C	-25 - 70
Degree of protection (IP)			IP66

## Dimensions



① Tightening torque Cover screw: 0.8 Nm ±0.2 Nm

② Fixing screw 2 x M4  $\geq$  30

## 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](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL053001ZU2013_08.pdf)