

# MINIATURE LIMIT SWITCHES LM

## DATA SHEET

no: KK-ŁK\_LM



Miniature position switches (limit switches) are intended to operate as part of various auxiliary circuits of control, signaling, measuring, and monitoring systems. The following factors are decisive, when selecting the appropriate type of a position switch:

- Place of installation (the required protection class)
- The shape and travelling method of control elements that operate the switch
- Electrical parameters of a circuit
- Mechanical parameters of the switch.

The LM miniature position switches are manufactured according to two climatic designs:

- Standard – for moderate climate 2
- Special – for tropical climate 6.


Each position switch is comprised of a drive part and a contact based connection element. Each drive can be made according to one of the following designs: basic, lever-based, telescopic, or pusher-based. The contact element contains a change-over contact (NC+NO).

## TECHNICAL DATA:

Parameter	Value	
<b>Rated insulation voltage <math>U_i</math></b>		400V
<b>Rated continuous current <math>I_U</math></b>		16A – basic 6A – in enclosure
<b>Rated switched currents <math>I_e</math></b>	AC 15 - $U_e$ 110V/230V/400V DC 13 - $U_e$ 48V/110V/220V	1A 0,25A
<b>Limited withstand current</b>		1000A
<b>Type and the highest rating of a safety device that protects against the effects of short-circuit current impact</b>		Bi - Wts 16A
<b>Speed of the drive element</b>		2x10 <sup>-4</sup> ... 0,2 m/s
<b>Frequency of switching per hour</b>		1,200 switches/h
<b>Mechanical life (in cycles)</b>	LM - 1	5x10 <sup>6</sup>
<b>Type of terminals</b>		Screw type
<b>Cross-sections of conductors</b>	- Wire - Cord	1x1 ... 2,5 mm <sup>2</sup> 1x0,75 ... 1,5 mm <sup>2</sup>
<b>Type of stuffing-box (LM-10 switch)</b>		Dp11 (Max diameter of cable – 7mm)
<b>Ambient temperature</b>	- No enclosure - In an enclosure	-25 ... +85 °C -25 ... +65 °C
<b>Protection class</b>	- Body of a switch - Terminals - Switch in an enclosure	IP 40 IP 00 IP 56
<b>Operation of contacts</b>		snap action



The product conforms to the following standard PN-EN 60947-5-1.

**TYPES OF MINIATURE LIMIT SWITCHES LM**

Type of switch	Description	Forces and travels				Climatic designs	Catalogue no.	Weight (g)
		FC max	CA max	CT mm	CD max			
 LM-1	Basic switch	1,6.. ..3,5	0,5... ..1,2	Min. 1,4	0,2	standard	59-291002	18
						special	59-291006	

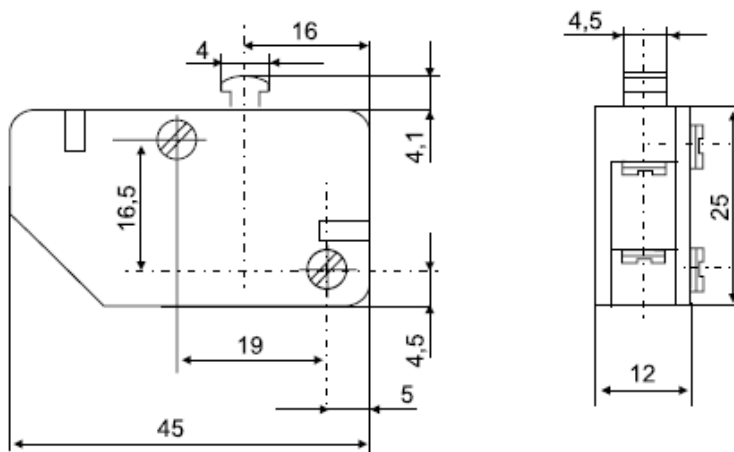
Type of switch	Description	Forces and travels		Climatic designs	Catalogue no.	Weight (g)
		FC max	CA max			
 LM-1D	Switch with a flat lever	1,6	3,5	standard	59-281012	27
				special	59-281016	
 LM-1DK	Switch with a lever with the end deflected at 90°	1,8	2,5	standard	59-281022	25
				special	59-281026	
 LM-1DR	Switch with a lever and a roll	3,2	2	standard	59-281032	27
				special	59-281036	
 LM-1P	Switch with a pusher-based drive	8	3,5	standard	59-281072	80
				special	59-281076	
 LM-1PS	Switch with a sealed pusher-based drive	8	3,5	standard	59-281082	83
				special	59-281086	

 LM-1PR	Switch with a pusher-based drive and a roll	8	3,5	standard	59-281092	79
				special	59-281096	
 LM-1P2	A set of two switches with a pusher-based drive	12	4	standard	59-281142	100
				special	59-281146	
 LM-1P2R	A set of two switches with a pusher-based drive and a roll	12	4	standard	59-281152	100
				special	59-281156	
 LM-10	Switch with a pusher-based drive, in enclosure	8	1,6	standard	59-251012	157
				special	59-251016	
 LM-10R	Switch with a pusher-based drive and a longitudinal roll, in enclosure	8	1,6	standard	59-251086	170
				special	59-251086	
 LM-10K	Switch with a pusher-based drive and a transverse roll, in enclosure	8	1,6	standard	59-251092	170
				special	59-251096	
 LM-10D	Switch with a flat lever drive, in enclosure	3,5	14	standard	59-251022	220
				special	59-251026	

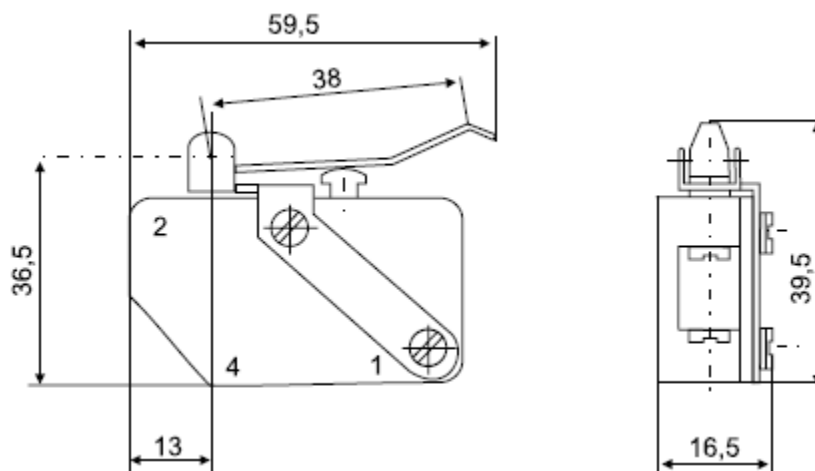
 LM-10DR	Switch with a flat lever drive and a roll, in enclosure	6,5	4	standard	59-251032	199
				special	59-251036	
 LM-10W	Switch with an angle lever drive and a roll, in enclosure	6,5	4	standard	59-251042	186
				special	59-251046	

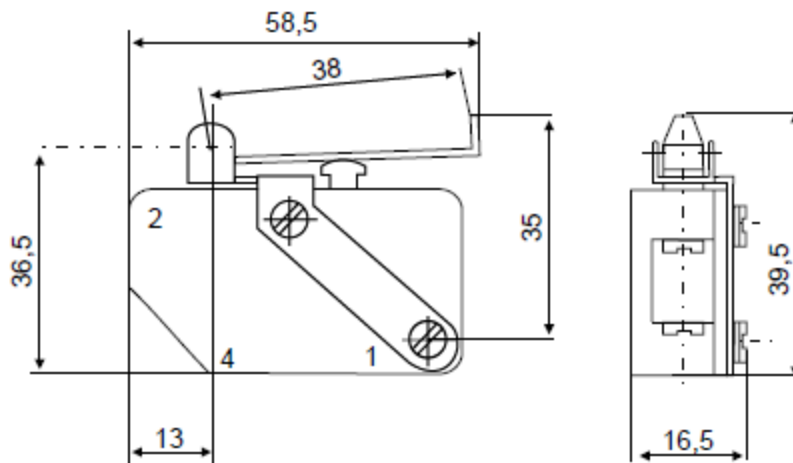
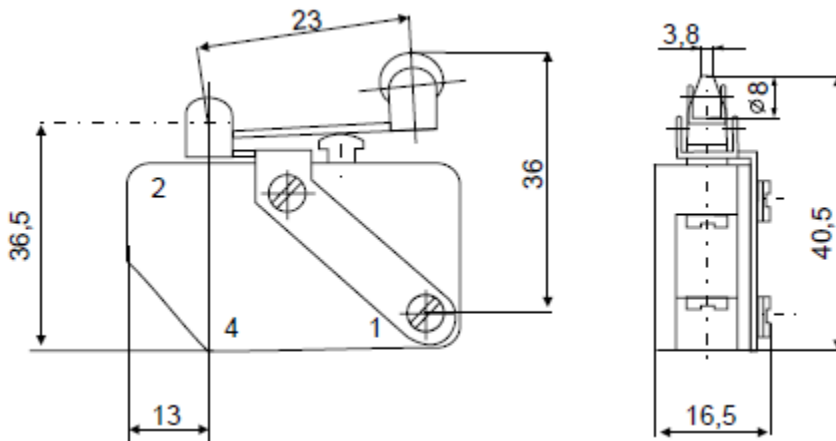
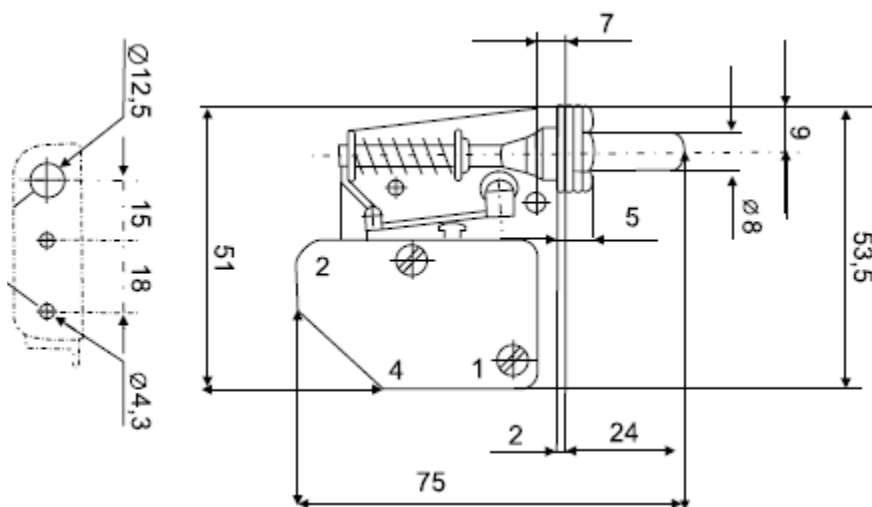
## DIMENSIONS

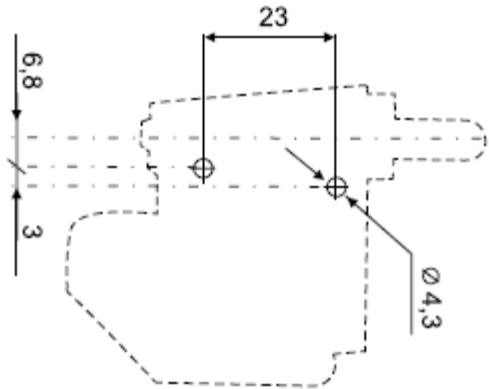
### LM-1



### LM-1D

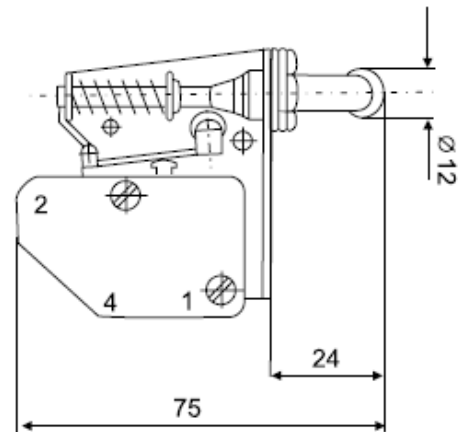
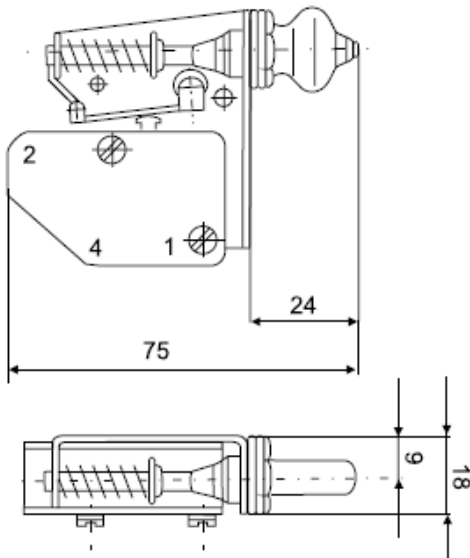


**LM-1DK**

**LM-1DR**

**LM-1P**


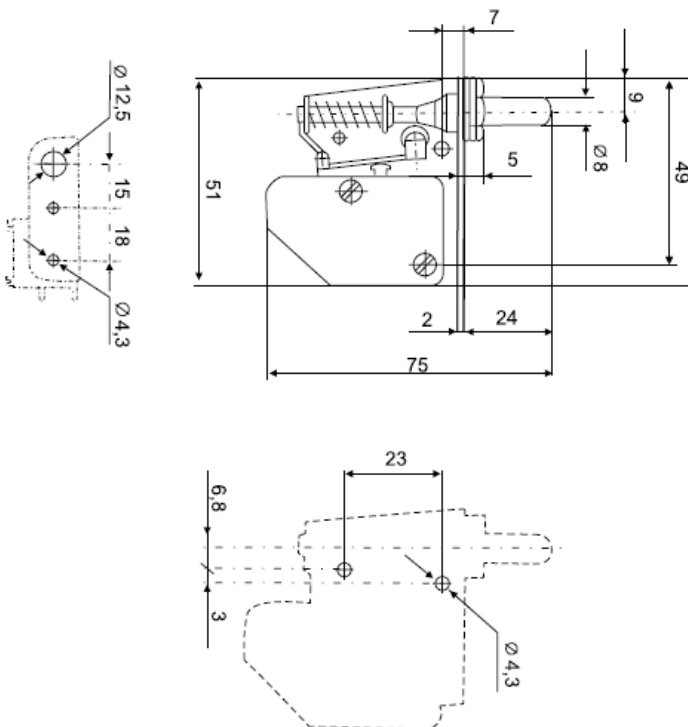


**LM-1PS**

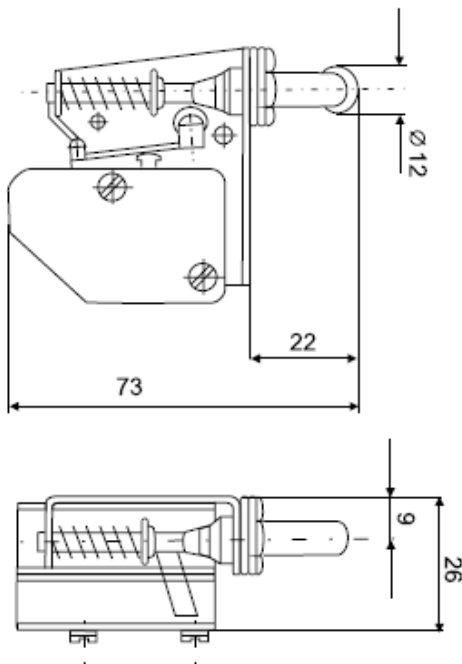
**LM-1PR**



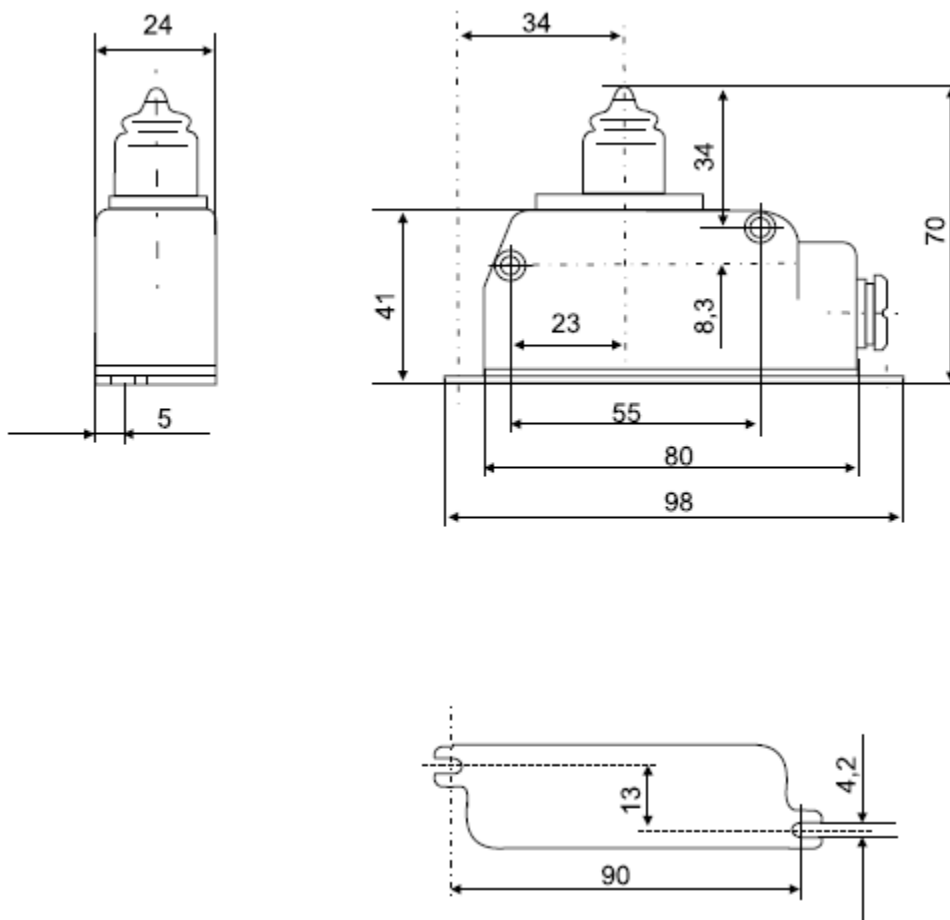
**LM-1P2**



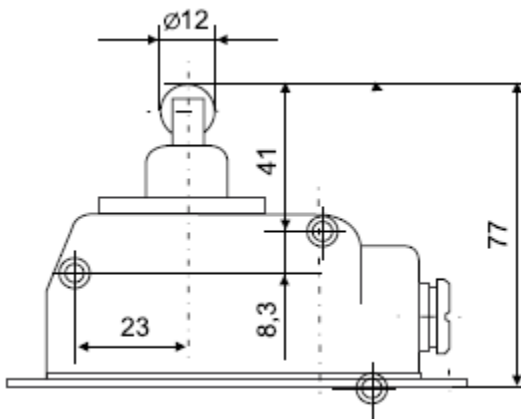
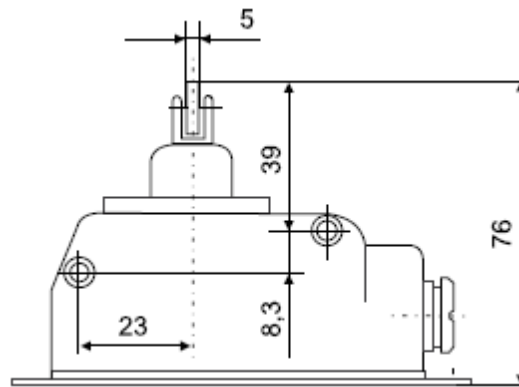
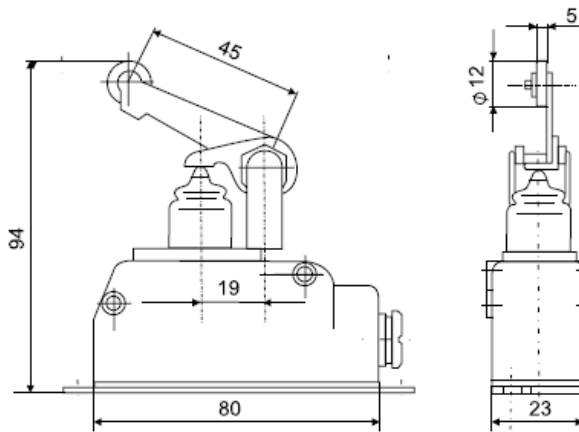
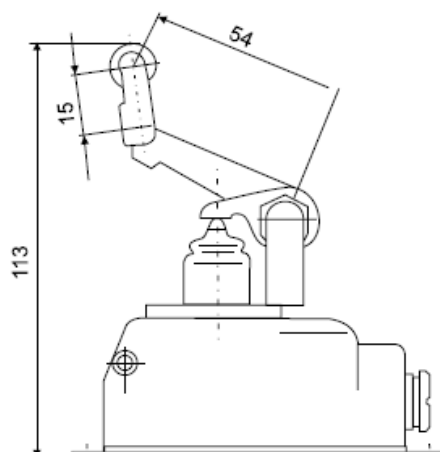
**LM-1P2R**



**LM-10**





**LM-10R**

**LM-10K**

**LM-10DR**

**LM-10W**

**LM-10D**
