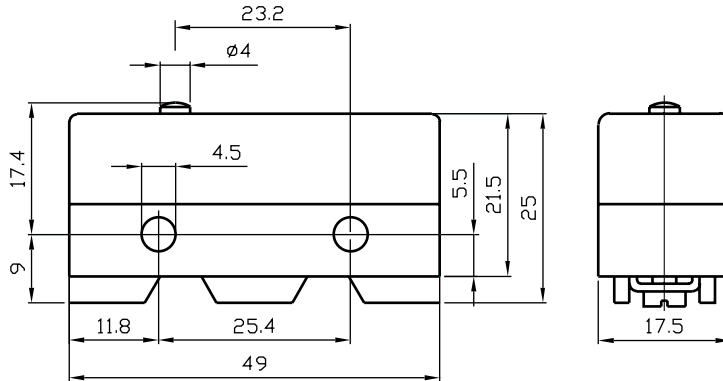


# SERIES MP90 & DERIVATIVES


## MP90

### MICROSWITCHES

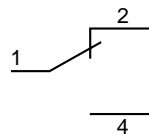
The microswitches MP90 & derivatives are snap-action changeovers, simple switching action, connection by screw lugs.

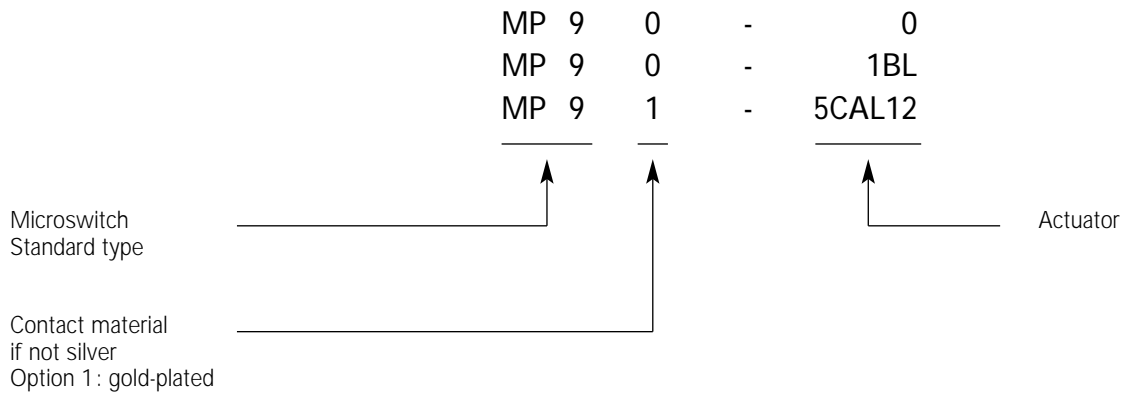


#### GENERAL CHARACTERISTICS, MODELS MP90

Approval	: 
Switching rating	: 10A 400VAC
Degree of protection	: Housing IP67 Terminals IP00
Class of protection	: II
Micro-switching	: $\mu$
Distance between contacts	: 0,5 mm
Up to standard	: EN61058-1:92 + A1:93
Frequent functioning	: 50 E3
Mechanical life	: 50 x 10 <sup>6</sup> operations
Snap-action mechanism	: Beryllium coppers leaf spring with self-cleaning contacts
Actuators	: Overall dimensions in stainless steel
Dimensions	: DIN 41 635, ES-form

#### SWITCHING DIAGRAM





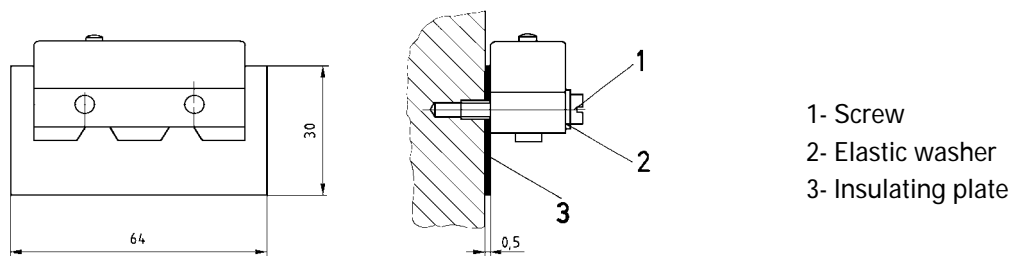
<b>Housing:</b>	PA6T/X reinforced with glass fibre Auto-extinguishing according to UL94V-O Certified temperature	- 40°C to + 130°C
<b>Membrane:</b>	Fluorsilicone rubber MFQ	- 40°C to + 175°C

**MP90 DEGREE OF PROTECTION**

This type is perfectly sealed: the switching mechanism is completely protected by the housing, which is itself assembled by ultrasonic welding. However, as it has protruding connection terminals which could come in contact with parts of the human body (IEC-529, 1st numeral), it is not eligible for an IP67 approval.

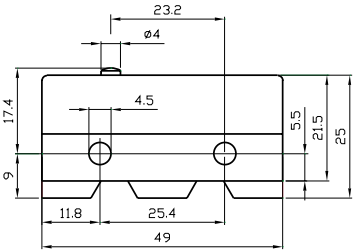
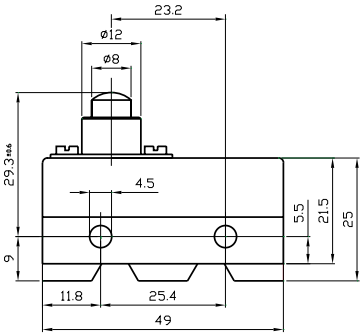
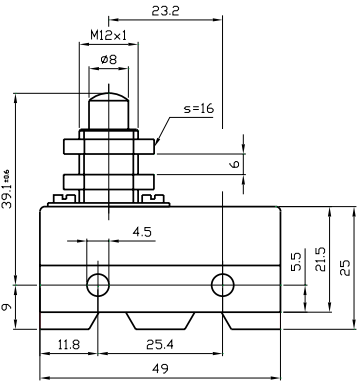
**LATERAL FIXING**

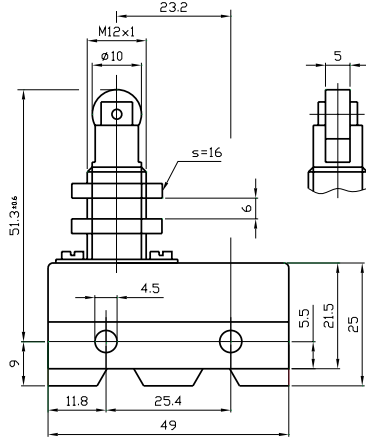
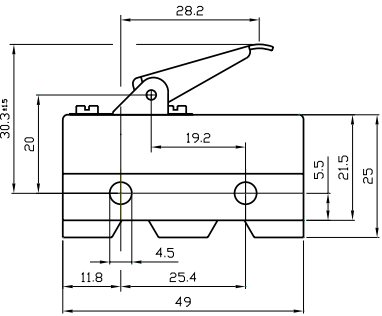
An **insulating plate** must be inserted between a microswitch with **protruding terminals** and **the fixing surface** if the surface is **metal**



The tightening torque applied to the fixing screws must comply with the following:

Fixing screw	M3	M3.5	M4
Tightening torque in Nm	0.5	0.8	1.2

DESIGNATION	ACTUATING FORCE Fa max. (N)	RELEASE FORCE Fr min (N)	FREE POSITION Pr (mm)	OPERATING POSITION Pa (mm)	OVER-TRAVEL sr min. (mm)	DIFFERENTIAL MOVEMENT sd max. (mm)
	6,0	3,0	17,4 ± 0,5	16,7 ± 0,3	0,25	0,06
	6,0	3,0	29,3 ± 0,6	28,5 ± 0,3	2,0	0,08
	6,0	3,0	39,1 ± 0,6	38,4 ± 0,3	5,0	0,08

ACTUATING FORCE Fa max. (N)	RELEASE FORCE Fr min (N)	FREE POSITION Pr (mm)	OPERATING POSITION Pa (mm)	OVER-TRAVEL sr min. (mm)	DIFFERENTIAL MOVEMENT sd max. (mm)	DESIGNATION
6,0	3,0	51,3 ± 0,6	50,6 ± 0,3	5,0	0,08	<b>MP90-1BL</b> <b>MP90-1BLA</b> 
4,5	1,2	30,3 ± 1,5	28,5 ± 1,5	3,5	0,50	<b>MP90-3A</b> 
4,5	1,2	34,4 ± 1,5	31,9 ± 1,5	3,5	0,60	<b>MP90-5AL</b> 