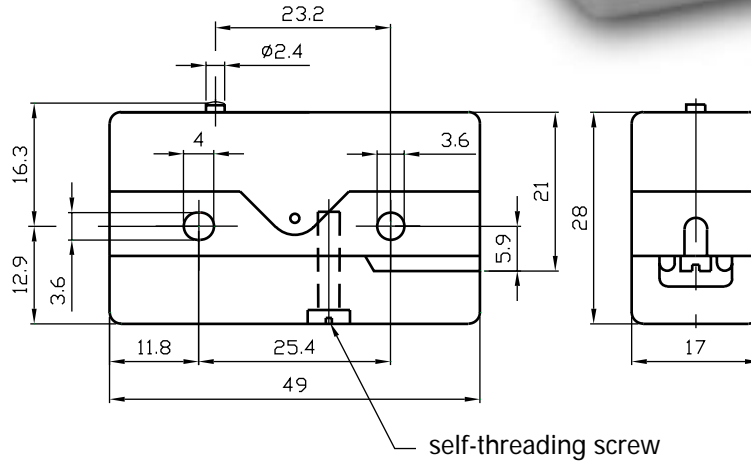


# SERIES MP40 & DERIVATIVES


## MP40

### MICROSWITCHES

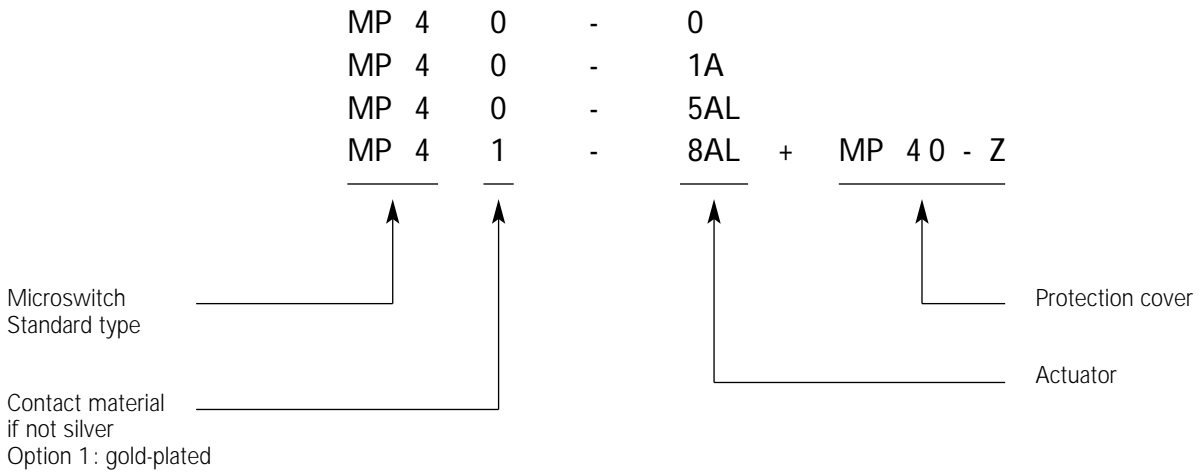
The microswitches MP40 & derivatives are snap-action changeovers, simple switching action, connection by screw lugs.



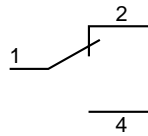
#### GENERAL CHARACTERISTICS, MODELS MP40

Approval	: 
Switching rating	: 10A 400VAC
Degree of protection	: Housing IP40 Terminals IP00 Cover IP20
Class of protection	: II
Micro-switching	: $\mu$
Distance between contacts	: 0,3 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, E-form
Housing	: PA6T/X reinforced with glass fibre Auto-extinguishing according to UL94 V-O
Certified temperature	: - 40°C to +130°C

REFERENCE CODE OF THE ARTICLE

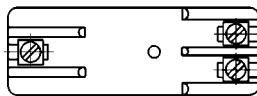


CIRCUIT DIAGRAM

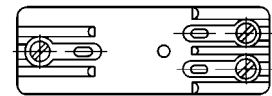


CONNECTION TYPE

MP40  
Screw terminals

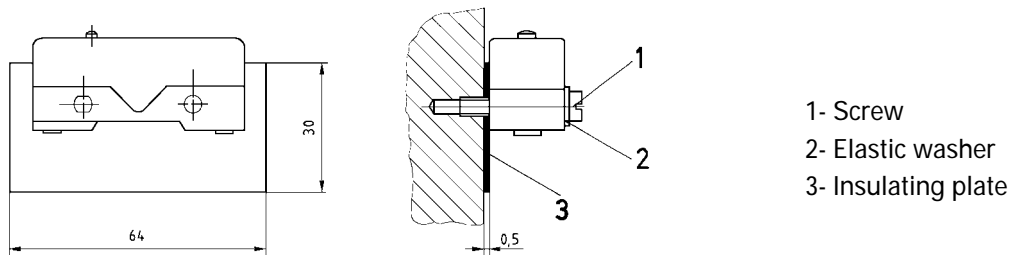


MP50  
Terminals with soldering lugs



LATERAL FIXING

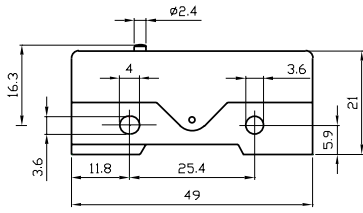
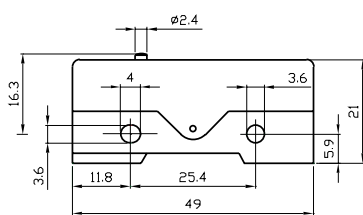
An **insulating plate** must be inserted between a microswitch with **protruding terminals** and the **fixing surface** if the surface is **metal**



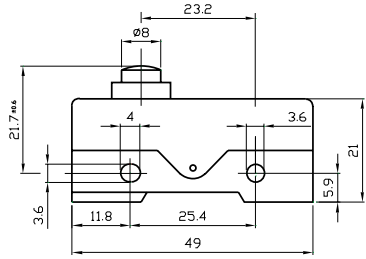
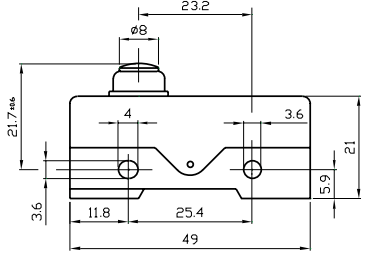
The tightening torque applied to the fixing screws must comply with the following:

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

## SERIES MP40 & DERIVATIVES

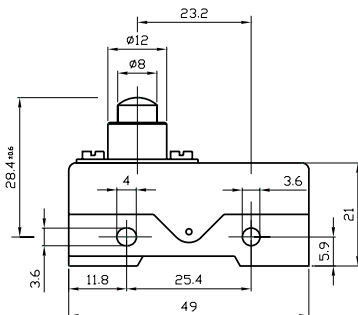
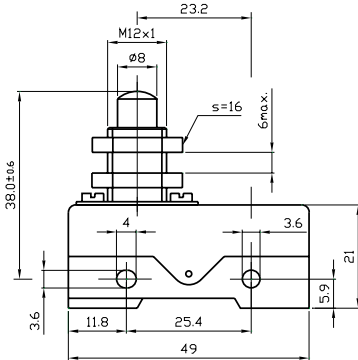
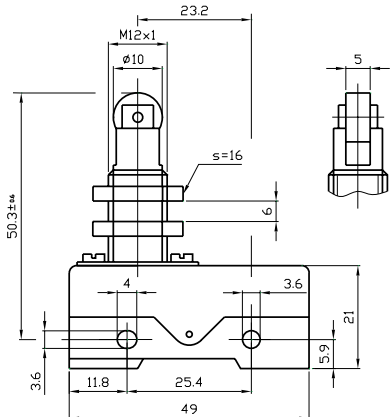
	DESIGNATION	ACTUATING FORCE $F_a$ max. (N)	RELEASE FORCE $F_r$ min (N)	FREE POSITION $P_r$ (mm)	OPERATING POSITION $P_a$ (mm)	OVER-TRAVEL $s_r$ min. (mm)	DIFFERENTIAL MOVEMENT $s_d$ max. (mm)
	<b>MP40-0</b> <b>MP50-0</b>	5,0	2,5	$16,3 \pm 0,5$	$15,9 \pm 0,3$	0,25	0,05
	<b>MP44-0</b>	1,5	0,6	$16,3 \pm 0,5$	$15,9 \pm 0,3$	0,25	0,05

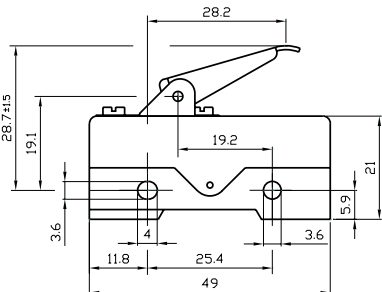
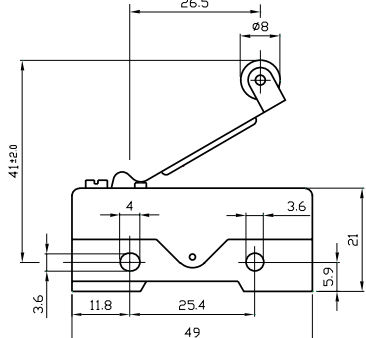


ACTUATING FORCE Fa max. (N)	RELEASE FORCE Fr min (N)	FREE POSITION Pr (mm)	OPERATING POSITION Pa (mm)	OVER-TRAVEL sr min. (mm)	DIFFERENTIAL MOVEMENT sd max. (mm)	DESIGNATION
5,0	2,0	21,7 ± 0,6	21,3 ± 0,3	1,2	0,06	<b>MP61-0</b>
5,0	2,0	21,7 ± 0,6	21,3 ± 0,3	1,2	0,02	<b>*MP61-1-0</b>
5,0	2,0	21,7 ± 0,6	21,3 ± 0,3	1,2	0,10	<b>**MP61-10-0</b>
						
5,0	2,0	21,7 ± 0,6	21,3 ± 0,3	1,0	0,06	<b>MP161-0</b>
5,0	2,0	21,7 ± 0,6	21,3 ± 0,3	1,0	0,02	<b>*MP161-1-0</b>
5,0	1,5	21,7 ± 0,6	21,3 ± 0,3	1,0	0,10	<b>**MP161-10-0</b>
						

\* **Reduced contact gap** – 0.20 to 0.25mm.  
 Designation «1» after series reference number.  
 Example: MP60-1-0, MP61-1-0.  
 Differential movement is between 0.01 and 0.02 mm (low hysteresis).  
 High repetitive switching precision.  
 Reduced switching rating: 110VAC - 15VA max.  
 48 VDC - 5W max.

\*\* **Increased contact gap**  
 Designation «-10» after series reference number.  
 Examples: MP60-10-0, MP161-10-0, MP161-10-0.  
 Differential travel is augmented (large hysteresis).

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)
	5,0	2,5	28,4 ± 0,6	27,9 ± 0,3	2,0	0,05
	5,0	2,5	38,0 ± 0,6	37,5 ± 0,3	5,0	0,05
	5,0	2,5	50,3 ± 0,6	49,8 ± 0,3	5,0	0,05

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
4,5	1,5	28,7 ± 1,5	26,8 ± 1,5	3,5	0,50	MP40-3A 
2,5	0,7	41,0 ± 2,0	37,0 ± 2,0	2,0	0,80	MP40-4AL 
4,5	1,5	32,4 ± 1,5	30,0 ± 1,5	3,5	0,50	MP40-5AL 