

# SERIES 1050 - SUBMINIATURE SNAP-ACTION SWITCHES

TO 10 (1.5) A 250 V AC






## PRODUCT FEATURES

- ◆ Small, efficient snap-action switches up to 10 (1.5) A 250 V AC or 10.1 A 125 - 250 V AC 1/4 HP
- ◆ Lateral approach from both directions possible due to mushroom-shaped actuator
- ◆ Large selection of auxiliary actuators of chrome-nickel steel and plastic

## ON REQUEST

- ◆ Extended overtravel
- ◆ Material conformant with the filament wire test acc. to IEC 60335-1:2001 chap. 30
- ◆ Increased or reduced difference travel
- ◆ Other operating forces and ratings
- ◆ Gold-plated contacts

Design	DIN 41635 B
Mechanical life endurance	10E6 1E6 (versions with auxiliary actuator)
Contact resistance (new condition)	< 100 mOhm (1 A 12 V DC)
Insulation resistance (new condition)	> 100 MOhm (500 V DC)
Proof tracking	175 PTI
Protection type	IP 40 (actuator side)
Ambient temperature	-40 °C ... +100 °C
Flammability	UL 94 V-2
Glow wire test temperature	850 °C
Material	actuator PA additional actuator PA glass fiber-reinforced / stainless steel spring steel housing PBTP terminals tinned / silver plated / blank (product-dependent)
Bounce time	< 5 ms
Approval marks	 /  / 
Suitable for appliances of protection class II under compliance with the installation conditions required on the equipment side	



ROCKER SWITCHES

PUSHBUTTON SWITCHES

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MICRO-SIGNAL SWITCHES

SENSORS

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		10 (1.5) A 250 V AC 1E4	5 A 250 V AC 5E4	2 (0.5) A 250 V AC 25E3	10.1 A 125 - 250 V AC 1/4 HP	5 A 125 - 250 V AC 1/10 HP	2 A 125 - 250 V AC	Terminal type	Terminal description	Contact material	Operating force in N	Operating position (OP) in mm	Difference travel max. in mm	Free position (FP) max. in mm	Permissible total travel position (TP) in mm	Actuator description	Lever drawing	Miscellaneous	Stock version
<b>Normally closed contact (SPNC)</b>																			
1050.1142		●			●				2.8 x 0.5	Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			
<b>Normally open contact (SPNO)</b>																			
1050.0122		●			●					Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.1122		●			●				2.8 x 0.5	Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.2122		●			●				sealed	Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			
1050.1426									2.8 x 0.5	Ag	≤ 1.5	9.9 ± 0.3	0.2	10.8	8.6			greater overtravel without approval mark	
<b>Changeover switch (SPDT momentary)</b>																			
1050.0103		●			●					Ag	≤ 2.2	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.2403		●			●				sealed	Ag	≤ 2.2	8.4 ± 0.3	0.1	9.3	7	□		greater overtravel	
1050.0102		●			●				sealed	Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.0202		●			●					Ag	≤ 1.5	9.9 ± 0.3	0.2	10.8	9.1				●
1050.0802		●			●					Ag	≤ 5	9.9 ± 0.3	0.2	10.8	9.3			foam sealing ring around pushbutton	
1050.1102		●			●				2.8 x 0.5	Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.1202		●			●				2.8 x 0.5	Ag	≤ 1.5	9.9 ± 0.3	0.2	10.8	9.1				●
1050.2102		●			●				sealed	Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.2202		●			●				sealed	Ag	≤ 1.5	9.9 ± 0.3	0.2	10.8	9.1				●
1050.3102		●			●					Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□		fixing pin	●
1050.4102		●			●					Ag	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□		fixing pin	●
1050.5202		●			●				sealed	Ag	≤ 0.5	11.1 ± 1.5	1.0	15	7.4		L02		●
1050.5702		●			●				sealed	Ag	≤ 0.6	16.2 ± 1.5	1.0	20	13		L12		●
1050.6702		●			●				2.8 x 0.5	Ag	≤ 0.6	16.2 ± 1.5	1.0	20	13		L12		●
1050.7202		●			●				sealed	Ag	≤ 0.5	11.1 ± 1.5	1.0	15	7.4		L02		●
1050.7702		●			●				sealed	Ag	≤ 0.6	16.2 ± 1.5	1.0	20	13		L12		●
1050.0151			●		●				sealed	Au	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.1151			●		●				2.8 x 0.5	Au	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.2151			●		●				sealed	Au	≤ 1.5	8.4 ± 0.3	0.2	9.3	7.5	□			●
1050.5251			●		●				sealed	Au	≤ 0.5	11.1 ± 1.5	1.0	15	7.4		L02		●
1050.5305			●		●				sealed	Au	≤ 0.6	16.6 ± 0.2	1.0	20	13.6		L43		●

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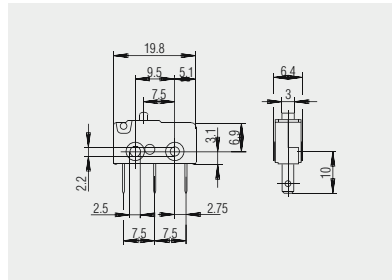
SENSORS

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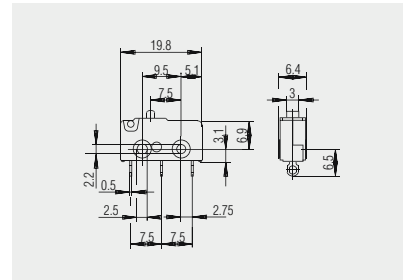
TO 10 (1.5) A 250 V AC



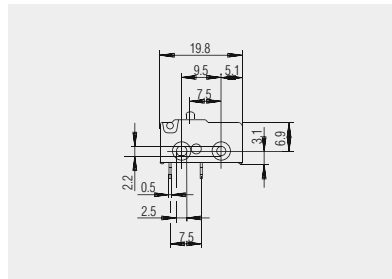
Terminal variants



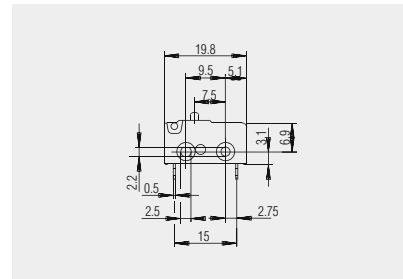
Quick-connect terminal  
2.8 x 0.5



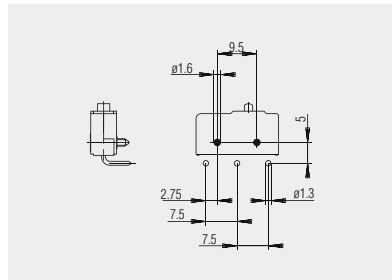
Solder terminal



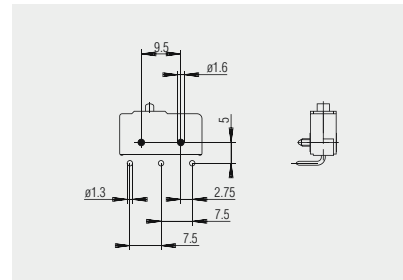
Solder terminal  
normally open contact version



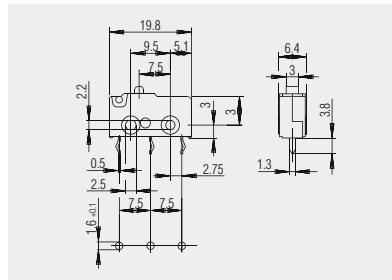
Solder terminal  
normally closed contact version



PCB terminal (cover side)  
right angled



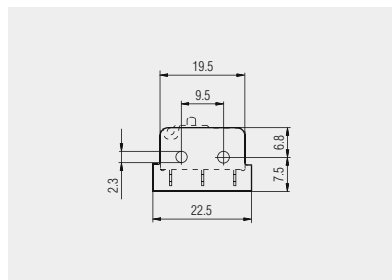
PCB terminal (base side)  
left angled



PCB terminal  
sealed



Additional parts



Insulating plate for solder terminal  
0.5 mm: 231.005.021

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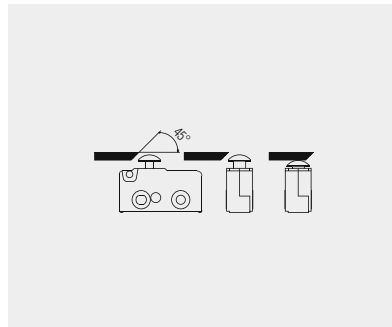
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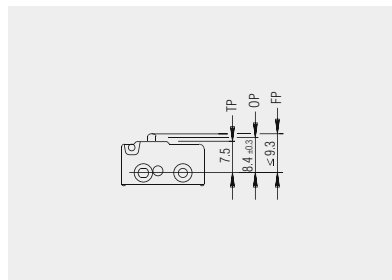
Mushroom-shaped actuator



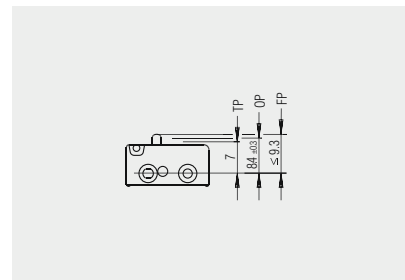
The mushroom-shaped actuator allows, in addition to the vertical actuation from above, lateral approach from any direction. In such application cases, an angle of  $< 45^\circ$  is necessary on the actuating element (angle for versions with extended overtravel on request). To keep the friction here to a minimum, we recommend the use of materials with a low friction coefficient in relation to the material PA. In addition, the surface of the actuating element should be free from valleys. The mechanical life endurance depends on the material and surface properties as well as on the form of the slide.



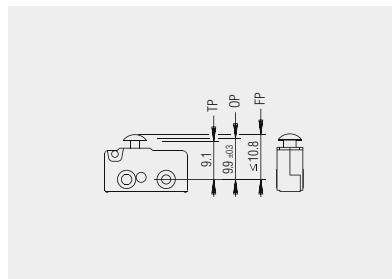
Switching positions



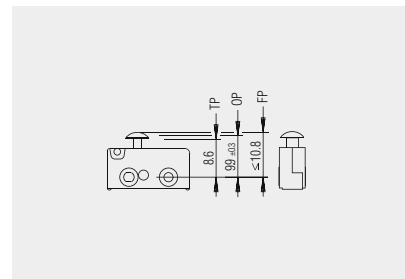
Standard actuator



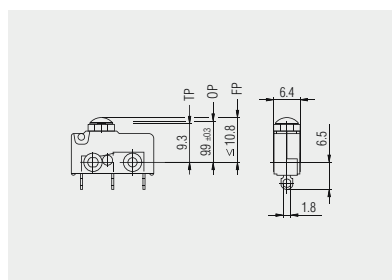
Standard actuator and extended overtravel



Mushroom-shaped actuator



Mushroom-shaped actuator and extended overtravel



Mushroom-shaped actuator with foam sealing ring

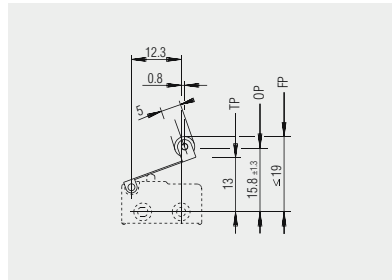
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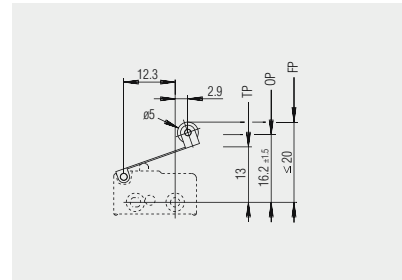


Auxiliary actuators

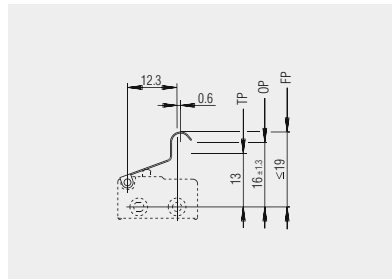
The auxiliary actuators are available as additional parts for later assembly or are already pre-assembled depending on the product. In the adjustable versions the operating position can be set application-specifically by the set screw.



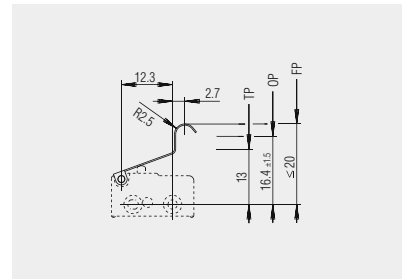
L11: roller lever  
191.078.013



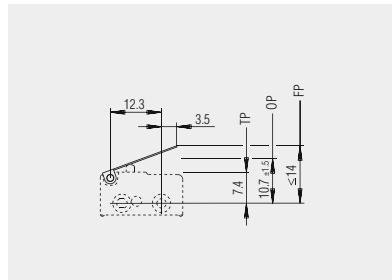
L12: roller lever  
191.078.023



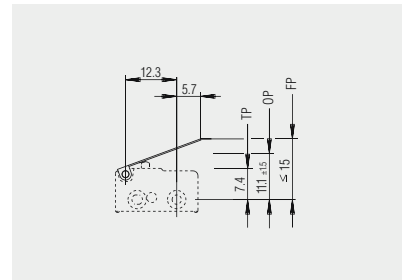
L21: simulated roller  
191.071.041



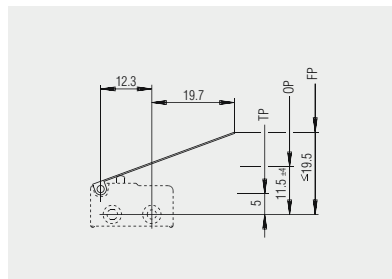
L22: simulated roller  
191.071.051



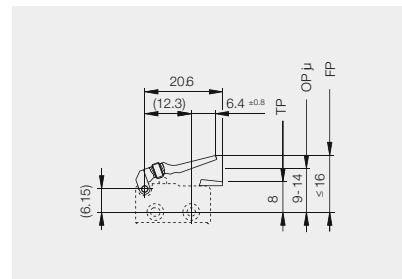
L01: straight lever  
191.071.011



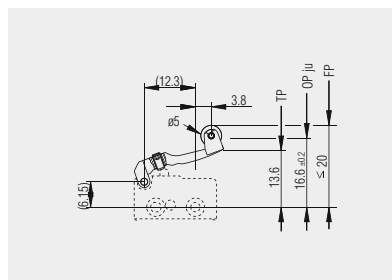
L02: straight lever  
191.071.021



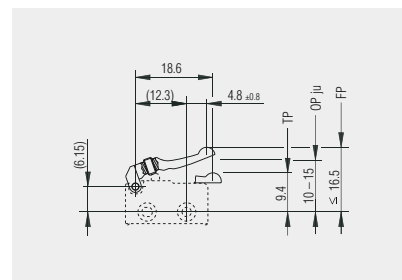
L03: straight lever  
191.071.101



L41: adjustable plastic lever  
190.075.013



L43: adjustable roller lever  
190.072.013



L45: adjustable simulated roller  
190.074.013

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