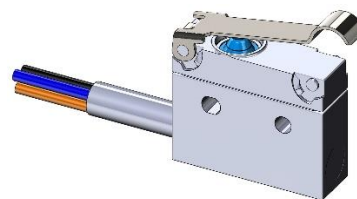


SUBMINIATURE MICROSWITCH (SPDT)

ROBUST – SEALED – HIGH PRECISION

MP 500 SERIES

- High precision snap-action spring mechanism
- Electrical Ratings (resistive load): 0,1A/24VDC, 5A/250VAC
- Reliable operation, even at extremely slow actuating speed
- Very low differential travel: down to 0,02 mm max (0,0008 in)
- Operating temperatures: -40°C to +125°C
- Degree of protection: IP67/IP69
- Choice of terminals and cable configurations
- Wide range of actuators on 2 fixing positions (A & B)



Main specifications

Termination Options

Solder terminals

PCB terminals

Cable materials: PVC/PUR/SI up to 0.5 mm² (5A)

EN /UL Certifications

Electrical Rating max (resistive load) 5RA 250 VAC

Electrical Rating max (resistive load) for gold plated terminals 0.1RA 24 VDC

Number of cycles certified 50 000

Mechanical characteristics

Operating force max 2.5 N – optional 1.2 N

Release force min 0.5 N

Free position 9.2 ± 0.2 mm

Operating position 8.7 ± 0.2 mm

Differential travel max 0.05 mm – optional 0.02 mm

Overtravel min 0.5 mm

Operating temperature -40 °C to 125 °C

Mechanical life 10 000 0000

B_{10d} (24VDC – 10mA, 100 cycles/min) < 5 Mio

Contact gap Min 0.25 mm

Additional specifications

Conformity/ certification EN/UL 61058-1-1

UL file E314075



Degree of protection IP67 / IP69

Housing & button PBT + 30% fiberglass UL94-V0

Dimensions DIN 41 635, form B (20x16x6.5 mm)
(0.7874 x 0.6299 x 0.2559 in)

Moving blade Beryllium copper

Contacts Silver alloy

Terminals material brass

Pollution degree 3

Proof tracking index PTI 250V

Rated Impulse Withstand Voltage 2.5 kV

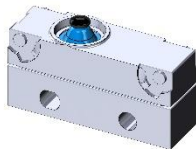
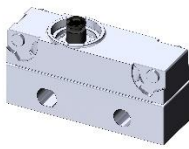
Glow-wire temp. 850°C

Micro-disconnection μ

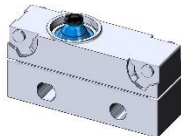
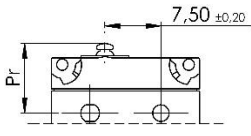
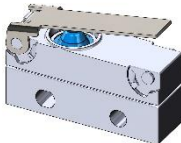
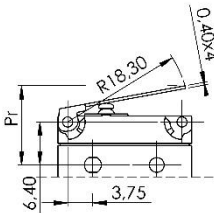
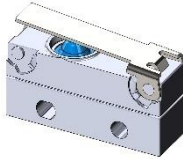
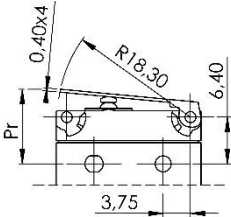
Electric shock class II / U imp. 2500 V

Product adaptations

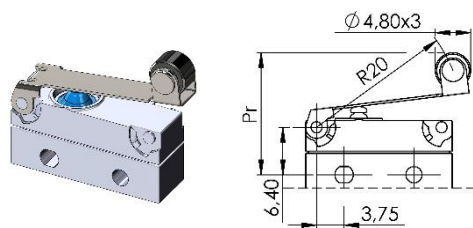
- Special actuators: special shapes and lengths
- Special cable exit, length and material
- Increased or reduced differential travel.
- Low actuating force
- Gold plated contacts
- Other adaptations on demand

Housing		
	IP67 /69	IP40
		
Operating force Fa max 2.5 (N) <i>standard</i>	MP500	MP550
Operating force Fa max 1.2 (N)	MP520	MP570

Actuator		
Flat lever stainless steel MP500L70	Flat lever with stainless steel roller MP500L80	Flat lever stainless steel with dummy roller MP500L85
		

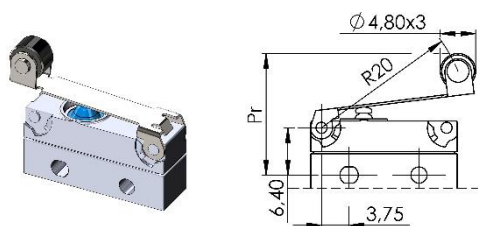
Specifications			
Type L00 : Pin button			
 		MP500	MP520
		MP550	MP570
	Actuating Force Fa max. (N)	2.5	1.2
	Release Force Fr min (N)	0.5	0.2
	Free Position Pr (mm)	9.2 ± 0.2	9.2 ± 0.2
	Operating Position Pa (mm)	8.7 ± 0.2	8.7 ± 0.2
	Over-travel sr min. (mm)	0.5	0.5
	Differential movement sd max. (mm)	0.05	0.05
Type A70 : Flat lever MP500L70 - standard position			
 		MP500	MP520
		MP550	MP570
	Actuating Force Fa max. (N)	1.0	0.6
	Release Force Fr min (N)	0.3	0.2
	Free Position Pr (mm)	12.0 ± 0.4	12.0 ± 0.4
	Operating Position Pa (mm)	10.1 ± 0.4	10.1 ± 0.4
	Over-travel sr min. (mm)	1.2	1.2
	Differential movement sd max. (mm)	0.40	0.40
Type B70 : Flat lever MP500L70 - opposite position			
 		MP500	MP520
		MP550	MP570
	Actuating Force Fa max. (N)	2.0	1.0
	Release Force Fr min (N)	0.3	0.2
	Free Position Pr (mm)	10.4 ± 0.4	10.4 ± 0.4
	Operating Position Pa (mm)	9.4 ± 0.4	9.4 ± 0.4
	Over-travel sr min. (mm)	0.5	0.5
	Differential movement sd max. (mm)	0.20	0.20

Type **A80** : Flat lever with stainless steel roller MP500L80 - standard position



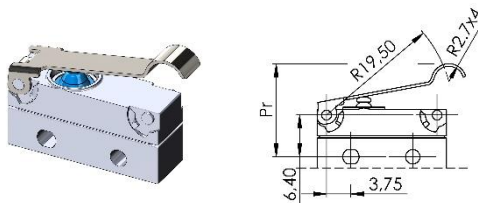
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	1.0	0.6
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	16.6 ± 0.4	16.6 ± 0.4
Operating Position Pa (mm)	14.2 ± 0.4	14.2 ± 0.4
Over-travel sr min. (mm)	1.2	1.2
Differential movement sd max. (mm)	0.40	0.40

Type **B80** : Flat lever with stainless steel roller MP500L80 - opposite position



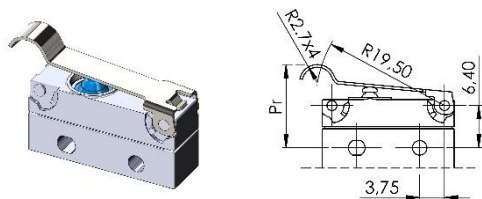
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	2.0	1.0
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	15.5 ± 0.4	15.5 ± 0.4
Operating Position Pa (mm)	14.2 ± 0.4	14.2 ± 0.4
Over-travel sr min. (mm)	0.6	0.6
Differential movement sd max. (mm)	0.20	0.20

Type **A85** : Flat lever with dummy roller MP500L85 – standard position



	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	1.0	0.6
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	14.6 ± 0.4	14.6 ± 0.4
Operating Position Pa (mm)	12.6 ± 0.4	12.6 ± 0.4
Over-travel sr min. (mm)	1.2	1.2
Differential movement sd max. (mm)	0.40	0.40

Type **B85** : Flat lever with dummy roller MP500L85 – opposite position



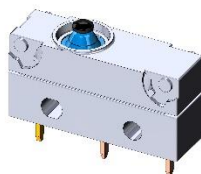
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	2.0	1.0
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	12.9 ± 0.4	12.9 ± 0.4
Operating Position Pa (mm)	11.8 ± 0.4	11.8 ± 0.4
Over-travel sr min. (mm)	0.6	0.6
Differential movement sd max. (mm)	0.20	0.20

Terminations

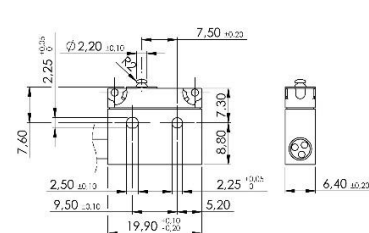
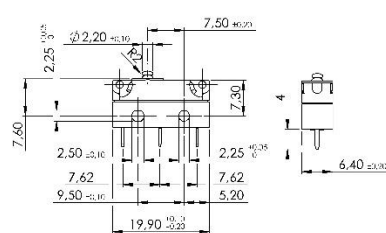
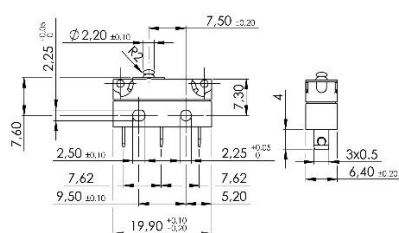
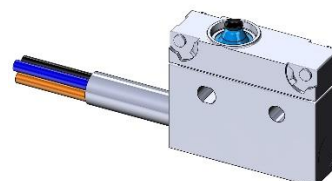
T000
Solder terminals



T001
PCB terminals



CXXX
Cable overmould



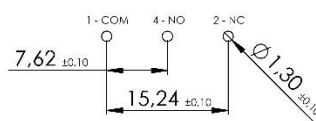
Flexible conductors to be used.

With provisions for securing the conductor by mechanical means and providing circuit continuity by soldering.
Soldering by hand with a soldering iron.

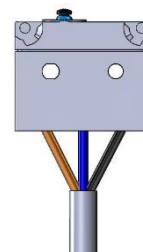
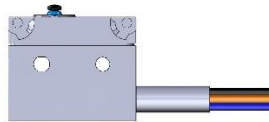
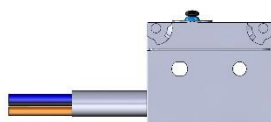
Remark : Avoid overheating as this may damage the switch.

Recommendation: Temperature of soldering iron max. 340 ° C for 4 seconds, using a welding wire preferably without Chlore

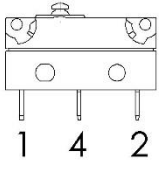
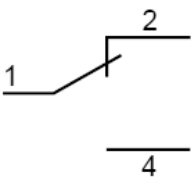
Print PCB



	Cable standard exit	Cable opposite exit	Cable underside exit
Cable	CXXX	DXXX	FXXX
Wires	GXXX	KXXX	NXXX



Standard wiring diagram

	Solder terminal PCB	T000 T001			
			2A - 0.25 mm²	5A - 0.50 mm²	
Cable Wires	PVC EN/UL certified -20°C to 105°C	XXXP	1 - Brown 2 - Black 4 - Blue	1 - Black 2 - Grey 4 - Blue	
	Polyurethane EN certified -40°C to 80°C	XXXU	1 - Brown 2 - White 4 - Green	/	
	Silicon EN certified -40°C to 125°C	XXXS	1 - Brown 2 - White 4 - Green	/	

Ordering information

	MP5	X	X	XXX	XXXX
Protection – Force 0 : IP67/IP69 Standard force 2 : IP67/IP69 Low force 5 : IP40 Standard force 7 : IP40 Low force					
Contact 0 : Silver Contact 2A - Wire 0,25 mm ² 1 : Gold Contact 1μ - Wire 0,25 mm ² or Solder lugs or PCB 5 : Silver Contact 5A - Wire 0,50 mm ² or Solder lugs or PCB					
Actuator L00 : Pin button A70 : Flat lever MP500L70 - standard position B70 : Flat lever MP500L70 - opposite position A80 : Flat lever with stainless steel roller MP500L80 - standard position B80 : Flat lever with stainless steel roller MP500L80 - opposite position A85 : Flat lever with dummy roller MP500L85 – standard position B85 : Flat lever with dummy roller MP500L85 – opposite position					
Terminals without cable or wires T000 : Solder terminals T001 : PCB					
Termination with cable / wires C : Cable standard exit D : Cable opposite exit F : Cable underside exit G : Single wires standard exit - only PVC K : Single wires opposite exit - only PVC N : Single wires underside exit - only PVC					
Cable length 05 : 0.5 m 10 : 1 m 20 : 2 m					
Cable material P : PVC U : PUR - only 2A - Section 0,25 mm ² S : Silicon - only 2A - Section 0,25 mm ²					