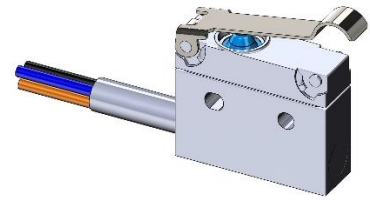




SUBMINIATURE MICROSWITCH (SPDT) ROBUST – SEALED – HIGH PRECISION

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

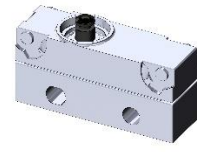
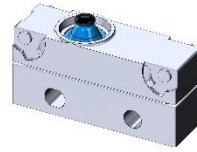
Product adaptations

- 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) *standard*
 Operating force **Fa** max 1.2 (N)

MP500
MP520

MP550
MP570

Actuator

Straight lever stainless steel
MP500L70

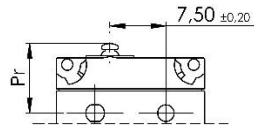
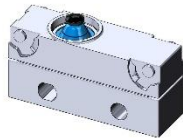
Straight lever with stainless steel
roller
MP500L80

Straight lever stainless steel with
simulated roller
MP500L85



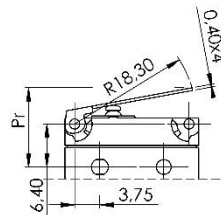
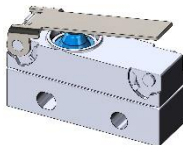
Specifications

Type **L00** : Pin button



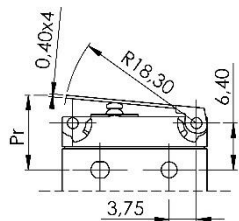
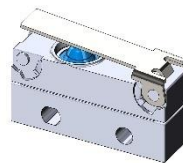
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	2.5	1.2
Release Force Fr min (N)	0.5	0.2
Free Position Pr (mm)	9.2 ± 0.2	9.2 ± 0.2
Operating Position Pa (mm)	8.7 ± 0.2	8.7 ± 0.2
Over-travel sr min. (mm)	0.5	0.5
Differential movement sd max. (mm)	0.05	0.05

Type **A70** : Straight lever MP500L70 - position A



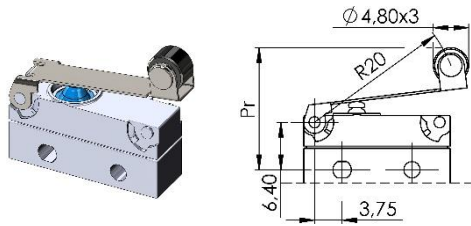
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	1.0	0.6
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	12.0 ± 0.4	12.0 ± 0.4
Operating Position Pa (mm)	10.1 ± 0.4	10.1 ± 0.4
Over-travel sr min. (mm)	1.2	1.2
Differential movement sd max. (mm)	0.40	0.40

Type **B70** : Straight lever MP500L70 - position B



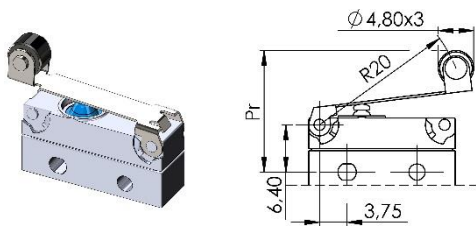
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	2.0	1.0
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	10.4 ± 0.4	10.4 ± 0.4
Operating Position Pa (mm)	9.4 ± 0.4	9.4 ± 0.4
Over-travel sr min. (mm)	0.5	0.5
Differential movement sd max. (mm)	0.20	0.20

Type **A80** : Straight lever with stainless steel roller MP500L80 - position A



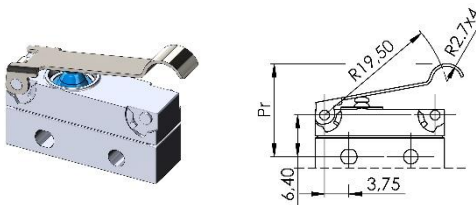
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	1.0	0.6
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	16.6 ± 0.4	16.6 ± 0.4
Operating Position Pa (mm)	14.2 ± 0.4	14.2 ± 0.4
Over-travel sr min. (mm)	1.2	1.2
Differential movement sd max. (mm)	0.40	0.40

Type **B80** : Straight lever with stainless steel roller MP500L80 - position B



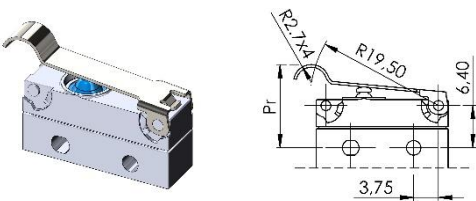
	MP500 MP550	MP520 MP570
Actuating Force Fa max. (N)	2.0	1.0
Release Force Fr min (N)	0.3	0.2
Free Position Pr (mm)	15.5 ± 0.4	15.5 ± 0.4
Operating Position Pa (mm)	14.2 ± 0.4	14.2 ± 0.4
Over-travel sr min. (mm)	0.6	0.6
Differential movement sd max. (mm)	0.20	0.20

Type **A85** : Straight lever with simulated roller MP500L85 - position A



	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

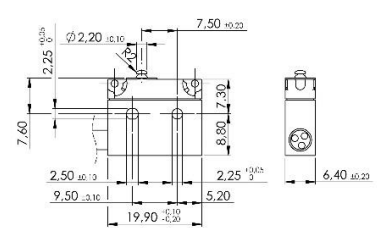
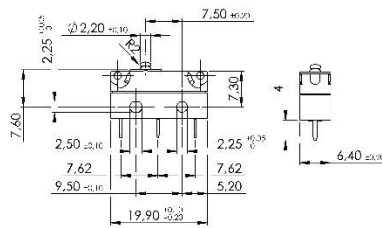
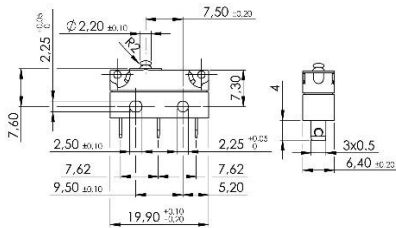
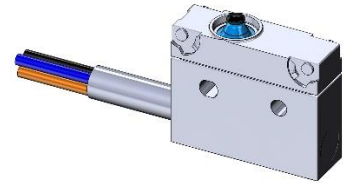
Type **B85** : Straight lever with simulated roller MP500L85 - position A



	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
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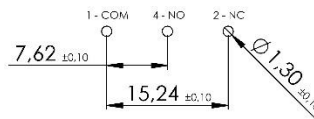
Flexible conductors to be used.

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

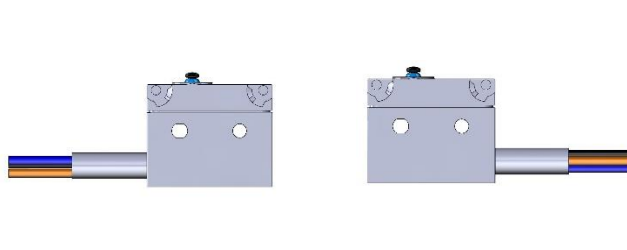
Remark : Avoid overheating as this may damage the switch.

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

Print PCB



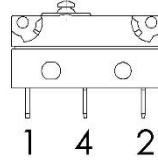
	Cable standard exit	Cable opposite exit	Cable underside exit
Cable	CXXX	DXXX	FXXX
Wires	GXXX	KXXX	NXXX



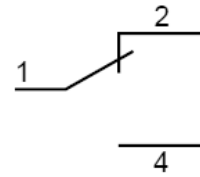
Standard wiring diagram

**Solder terminal
PCB**

**T000
T001**



			2A - 0.25 mm²	5A - 0.50 mm²
	PVC EN/UL certified -20°C to 105°C	XXXP	1 - Brown 2 - Black 4 - Blue	1 - Black 2 - Grey 4 - Blue
Cable Wires	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

	<u>MP5</u>	<u>0</u>	<u>0</u>	<u>A70</u>	<u>C10P</u>
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 : Straight lever MP500L70 - position A B70 : Straight lever MP500L70 - position B A80 : Straight lever with stainless steel roller MP500L80 - position A B80 : Straight lever with stainless steel roller MP500L80 - position B A85 : Straight lever with simulated roller MP500L85 – position A B85 : Straight lever with simulated roller MP500L85 – position B					
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					