

MECHANICAL TWO POSITION SENSOR HIGH PRECISION – SEALED – ROBUST

MP601 SERIES

- 1 Device – 2 switching points
- Very high precision mechanism
- M8 and M12 cylindrical housing
- Easy mounting and adjustment
- Extremely low hysteresis
- Operating temperature -30°C to +130°C
- Degree of protection IP67



Main specifications

Conformity - certification	UL 61058-1	UL file E314075			
Housing	Brass, nickel plated				
Membrane	HMBR elastomer				
Contact material	Gold plated				
Actuator	Polymer pin				
	Metallic Stainless steel pin				
	Ball				
	Telescopic				
Mechanism contacts	Slow action				
Circuit	NC+NO, NC or NO				

Characteristics

Power rating	24VDC / 5 to 100 mA
Contact distance NC-NO	0.5 to 1.5 mm
Repeatability	± 5 µm
Hysteresis	< 7 µm
Operating temperature range	-30°C to +130°C depending cable or connector
Life span	10 Mio cycles
B _{10d} (24VDC – 10mA, 100 cycles/min)	> 10 Mio
Standards	UL61058 50'000 cycles
Degree of protection	IP50 or IP67
Class of protection	II
Micro-disconnection	µ

Termination

Cable material Standard 0.14mm ² / 26 AWG	PVC -20°C to +105°C
	PUR -30°C to +80°C
	SI -30°C to +130°C
Cable – Standard length	0.5 m, 1 m and 2 m
Circular connector 4 pins male – PUR cable	M8 – M12 available, -25°C to +85°C

Product adaptations

- Housing : special shapes and material
- Membrane : other material up to -55°C
- Contact distance NC-NO : customized
- Cable/Wires : custom length – other material
- Other adaptations on demand

Description

On free position the contact NC is activated.
 No pre-travel of the pin plunger to open the NC contact.
 The NO contact closes after a standard travel of 0.5mm, 1mm or 1.5mm.



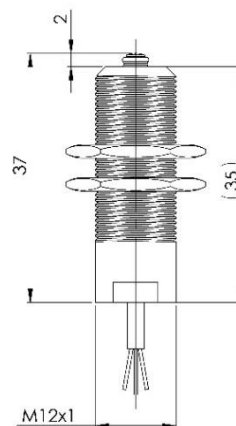
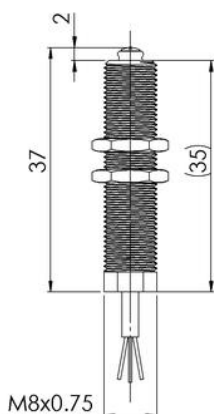
Actuator - Circuit configuration

Actuator Type
L0X : Polymer pin
L2X : Metallic pin

Sensor configuration

MP601L... : M8 IP67
MP651L... : M8 IP50

MP621L... : M12 IP67
MP671L... : M12 IP50

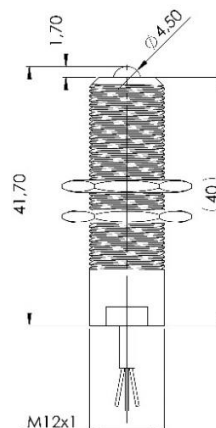
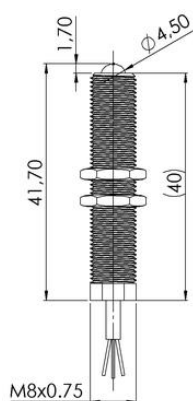


Code	Circuit	Contact distance	Over-travel min.	Fa max.
L00 L20	NC+NO	0.5 mm to close NO	1.5 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L01 L21	NC+NO	1 mm to close NO	1 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L02 L22	NC+NO	1.5 mm to close NO	0.5 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L03 L23	NC only	0 mm to open NC	2 mm	1.2 (N) to open NC
L04 L24	NO only	0.5 mm to close NO	1.5 mm after NO signal	3 (N) to close NO
L05 L25	NO only	1 mm to close NO	1 mm after NO signal	3 (N) to close NO
L06 L26	NO only	1.5 mm to close NO	0.5 mm after NO signal	3 (N) to close NO

Sensor configuration

MP601L1... : M8 IP67
MP651L1... : M8 IP50

MP621L1... : M12 IP67
MP671L1... : M12 IP50

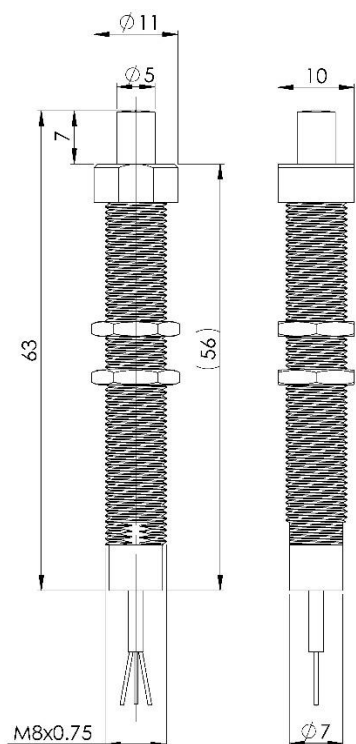


Code	Circuit	Contact distance	Over-travel min.	Fa max.
L10	NC+NO	0.5 mm to close NO	1.2 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L11	NC+NO	1 mm to close NO	0.7 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L12	NC+NO	1.5 mm to close NO	0.2 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L13	NC only	0 mm to open NC	1.7 mm	1.2 (N) to open NC
L14	NO only	0.5 mm to close NO	1.2 mm after NO signal	3 (N) to close NO
L15	NO only	1 mm to close NO	0.7 mm after NO signal	3 (N) to close NO
L16	NO only	1.5 mm to close NO	0.2 mm after NO signal	3 (N) to close NO

Actuator Type
L5X : Telescopic

Sensor configuration

MP601L5... : M8 IP67
MP651L5... : M8 IP50



Code	Circuit	Contact distance	Over-travel min.	Fa max.
L50	NC+NO	0.5 mm to close NO	6 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L51	NC+NO	1 mm to close NO	5.5 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L52	NC+NO	1.5 mm to close NO	5 mm after NO signal	1.2 (N) to open NC 3 (N) to close NO
L53	NC only	0 mm to open NC	6.5 mm	1.2 (N) to open NC
L54	NO only	0.5 mm to close NO	6 mm after NO signal	3 (N) to close NO
L55	NO only	1 mm to close NO	5.5 mm after NO signal	3 (N) to close NO
L56	NO only	1.5 mm to close NO	5 mm after NO signal	3 (N) to close NO

Termination

Cable		Circular connector 4 pins male	
COM	Brown / Brown	1	
NC	Black / White	2	
NO	Blue / Green	4	

MP6 X **1** **L** X X **C** X X X

Housing

- 0** M8 Metal IP67
- 2** M12 Metal IP67
- 5** M8 Metal IP50
- 7** M12 Metal IP50

Contact

- 1** Gold plated contact 1μ

Actuator

- 0** Polymer pin
- 1** Ball
- 2** Metallic pin
- 5** Telescopic – not available with M12 housing or connector

Contact Circuit - Distance

- 0** NC+NO 0.5 mm
- 1** NC+NO 1.0 mm
- 2** NC+NO 1.5 mm
- 3** NC only
- 4** NO only 0.5 mm
- 5** NO only 1.0 mm
- 6** NO only 1.5 mm

Termination

- C** Cable

Cable length

- 0** 0.5 m
- 1** 1 m
- 2** 2 m

Connector

- 0** Without
- 1** Circular M12 - 4 pins PUR Cable
- 2** Circular M8 - 4 pins PUR Cable

Cable material

- P** Polyvinyl Chloride
- U** Polyurethane
- S** Silicone