

METAPOT LINEAR MEMBRANE SENSOR MTP-L



The linear membrane sensors are well suited for precision position sensing applications in a variety of industries. The MTP-L membrane sensors are non-wearing, easy to install and offer wide possibilities for integration, as well as an IP65 protection class.

FEATURES

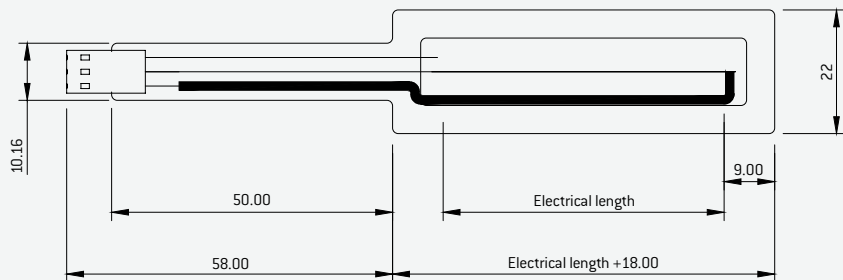
- Wide range of possibilities for integration
- Simple mounting

FEATURES

- Electrical measuring range of 30 – 500 mm
- Very flat

APPLICATIONS

- Medical technology
- Cylinder stroke measurement
- Flap control
- Valve control
- Accu driven devices



Spring loaded pin (optional)

Adhesive covered by protective paper (optional)

ELECTRICAL SPECIFICATIONS

Resistance range (Rn)	2.5 kΩ per 100 mm distance
Resistance tolerance	± 30 %
Electrical distance	30 – 500 mm
Independent linearity	± 2 % **
Resolution	< 0,05mm **
Maximum wiper current	5 mA in case of malfunction
Typical supply voltage	3 – 30 VDC
Wiper load	> 100 x Rn
Spring loaded pin	Mechanical wiper pin as M6 threaded part with spring-loaded ball

Mechanical and electrical characteristics are customizable. Specifications are subject to change without notice. * Others on request. ** Specifications may deviate according to temperature and installation conditions.

MECHANICAL SPECIFICATIONS

Lifetime	> 5 million cycles **
Travel speed	0.1 m/s **
Max. sensor thickness	0.5 mm
Actuation force	1 – 3 N **
Wiper	See mounting recommendation for MTP

AMBIENT CONDITIONS

Operating temperature	– 25°C...+85°C **
Protection class	IP65 according to DIN EN 60529, electrical connection and plug excluded

MATERIALS

Substrates	PET polyester film, FR4
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ELECTRICAL CONNECTION

Female crimp contacts, Crimpflex solder pads* (Poka Yoke)

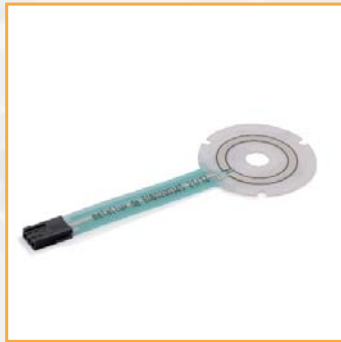
SAMPLE ORDER

Part no.	Type series	Resistance range	Elect. measuring range	Elect. connection
E080200099	MTP	2.5K	100 mm	Female crimp contacts
H959000000	Spring loaded pin			

MOUNTING RECOMMENDATION FOR MTP-L, MTP-R, MTP-LX



Selecting the correct type of actuation and the correct materials is essential for ensuring the operational reliability of our MetaPot membrane sensors. Below, you will find the most important information for mounting. Our development team will be happy to assist you with your application.



PREPARING THE SURFACE

- The surface on which the membrane sensor is to be mounted has to be free of moisture, oil, grease and dust. Avoid change in temperature between the membrane sensor and the supporting surface.
- In addition, the surface should be flat in order to ensure faultless mounting and operation of the membrane sensor.
- Depending on the material of the supporting surface, isopropanol or butanone may be used as a cleaning agent.

MATERIALS	BALL	SPRING FORCE
POM/ Stainless steel	R 8 – 10 mm	0.5 N – ...5 N *

* **Contact force:** The contact force is the force required in order to establish the first electrical contact.
Optimal spring force: =1.5 x contact force

EXAMPLE:

Contact force	0.4 N
Max. contact force	5 N

FACTORS THAT INFLUENCE THE SPRING FORCE:

- Active measuring width
- Film material
- Travel speed

STANDARD OPERATION SPRING LOADED PIN FOR MTP/MTP-LX ARTICLE NO. H95900000

