

# CONTACTLESS LINEAR MEMBRANE SENSOR MMP



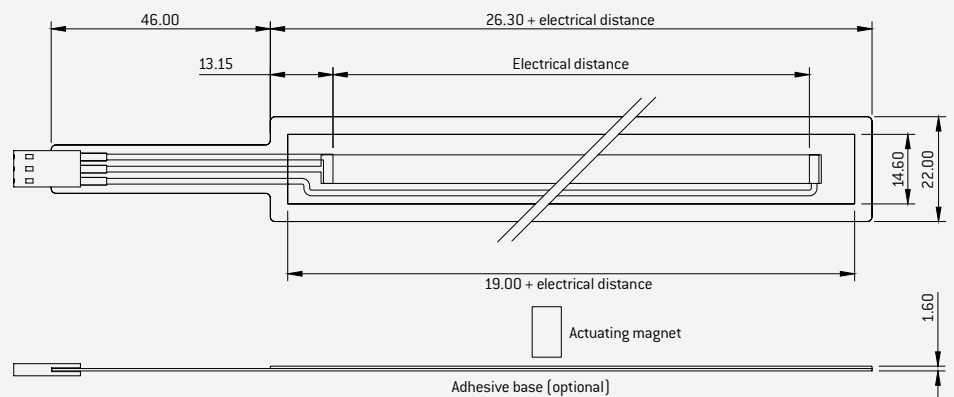
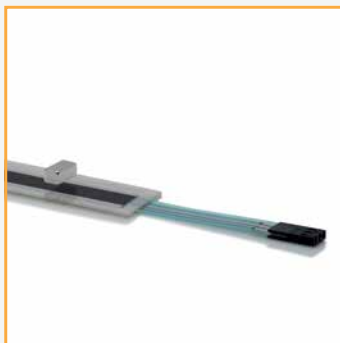
The technology of the MMP series is based on the MTP series. The linear, contactless Metallux membrane sensors can be used for position sensing in a wide range of applications. The contactless measurement is performed by means of a layer of metal foil integrated in the sensor and a magnet positioned at a set distance from the sensor.

## FEATURES

- Contactless magnetic coupling
- Flat design
- IP 65, electrical connection and plug excluded
- Long lifetime

## APPLICATIONS

- Linear position sensing, for instance in cylinders
- Servo systems
- Industrial applications



## ELECTRICAL SPECIFICATIONS

<b>Resistance range (Rn)</b>	2.5 kΩ/100 mm distance
<b>Resistance tolerance</b>	± 30 %
<b>Electrical distance</b>	50 – 500 mm
<b>Independent linearity</b>	± 2 % **
<b>Resolution</b>	< 0.1mm **
<b>Load resistance</b>	> 100* Rn
<b>Max. load current in case of fault</b>	5 mA
<b>Typical supply voltage</b>	5 VDC

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

<b>Lifetime</b>	50 million cycles
<b>Travel speed</b>	≤ 3 m/s *
<b>Cable connection</b>	L: 46 mm; W: 10.16 mm
<b>Max. measuring distance from magnet to sensor</b>	2 mm
<b>Type of mount</b>	Adhesive film

## AMBIENT CONDITIONS

<b>Operating temperature</b>	–10°C ... +70°C **
<b>Protection class</b>	IP 65 according to DIN EN 60529, electrical connection and plug excluded

## MATERIALS

<b>Substrates</b>	PET, PEEK, 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
E090100100	MMP	2.5 K	100 mm	Female crimp contacts
Z704000001	Block magnet 10 x 5 x 4 mm 80° C			
Z704000004	Block magnet 10 x 5 x 4 mm 150° C			

# ASSEMBLY: CONTACT-FREE MEMBRANE SENSORS AND MAGNET



Proper installation of our products is important for ensuring reliable operation and a long lifetime. Please note the installation criteria listed below.

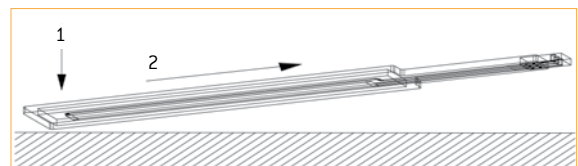


## PREPARING THE SURFACE

- 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.

## MOUNTING THE MEMBRANE SENSOR

- Remove the protection paper from the adhesive film and place the membrane sensor at the desired position. Take care not to warp the sensor (bending or twisting).
- Gently press on one side of the membrane sensor (see point 1 in the drawing).
- Applying even pressure, move across the membrane sensor from the point of application until the sensor lies flush against the surface, without air bubbles (see point 2 in the drawing).



## MOUNTING THE MAGNET FOR CONTACTLESS MEMBRANE SENSORS

**In order to ensure proper actuation of the MMP, the magnet has to be mounted as follows:**

- In order for the measuring signal to be optimal and faultless, the magnet needs to be centred above the MMP.
- The magnet should be positioned at a distance of  $< 2.0 \text{ mm}$  from the surface of the MMP.
- The magnet should be securely, permanently fixed in place. The magnet can be glued on or sealed in.

