

## MP-TX

### 2-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS VOLTAGE OUTPUT

#### SPECIFICATION DATA & MOUNTING INSTRUCTIONS



MP-TX

#### GENERAL

The differential pressure transmitters of the DPT series are used for measuring differential pressure, positive pressure, and vacuum. The transmitters are suitable for:

- air-conditioning,
- building automation,
- environmental protection,
- valve and flap control,
- filter and blower monitoring,
- fluid and level monitoring, and
- control of air flows.

**NOTE:** These sensors are not suitable for use in installations under periodic inspection by the GERMAN. Food and Drug Administration.

#### Models

order no.	pressure range/ single		overload capacity	burst pressure
	1 <sup>1)</sup>	2		
MP-T1	0...+100 Pa <sup>2)</sup>	n.a.	20 kPa	40 kPa
MP-T2	0...+300 Pa <sup>2)</sup>	n.a.	20 kPa	40 kPa
MP-T3	0...+500 Pa <sup>2)</sup>	n.a.	20 kPa	40 kPa
MP-T4	0...+1000 Pa <sup>3)</sup>	n.a.	40 kPa	70 kPa
MP-T5	0...+2 000Pa <sup>3)</sup>	n.a.	20 kPa	40 kPa
MP-T1-D	0...+100 Pa <sup>2)</sup>	n.a. <sup>2)</sup>	20 kPa	40 kPa
MP-TX	4-20mA	0-10v	20 kPa	40 kPa
MP-TX-D	4-20mA	0-10v	40 kPa	70 kPa

<sup>1)</sup> default setting

<sup>2)</sup> temperature error at 0...50 °C  $\delta \pm 5\%$  of full scale (FS)

<sup>3)</sup> temperature error at 0...50 °C  $\delta \pm 2.5\%$  of full scale (FS)

<sup>4)</sup> pressure displayed in kPa

#### FEATURES

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 40 kPa overload capacity
- Models with display (MP-T1-D)
- Rugged design; protection class IP54
- Easy installation and wiring connection
- single adjustable by jumper
- Response time adjustable by jumper

#### SPECIFICATION

Supply voltage	18...24...30 Vac; 50/60 Hz or 16...24...32 Vdc
Output signal	0...10 Vdc, three-wire
Pressure medium	Air, non-aggressive gases
Working temperature	0...50 °C
Linearity and hysteresis error	$\delta \pm 1.0\%$ of FS
Temperature error at 0...50°C	See section "Models"
Storage temperature	-10...+70 °C
Humidity	0...95% rh, non-condensing
<b>Long-term stability, typical</b>	
MP-TX	$\delta \pm 2.5\%$ of FS per year
Repetition accuracy	$\delta \pm 0.2\%$ of FS
Position dependence	$\delta \pm 0.02\%$ of FS
Response time	1 s (switchable to 100 ms)
Process connection	6 mm hose pipe
Electrical connection	Screw terminal block for wire

Housing material	up to 1.5 mm <sup>2</sup> ABS and POM
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 as per EN60529
EMV	EN60770, EN61326
Weight	approx. 130 g

# CH-BA

## FUNCTION

The differential pressure transmitters of the MP-TX series are equipped with an integrated piezo-resistive pressure transducer designed so that the pressure to be measured is applied to a thin monosilicon membrane, thus deflecting it. The semiconductor resistors on the membrane detect this mechanical deflection and generate an electrical output signal. The arrangement of the resistors simultaneously compensates for the temperature response. The signal of the pressure transducer is converted into the 0...10 V/4-20mA output signal by high-gain operation amplifiers. The electrical output signal changes within the specified error limits in proportion to the applied pressure.

**NOTE:** The devices are factory pre-set to a response time of 1 second. This can be changed to 100 ms by removing the corresponding jumper (see Fig. 1).

**NOTE:** The devices are factory pre-set to pressure range "1". This can be changed to "2" by removing the corresponding jumper (see Fig. 1).

## ACCESSORIES

**DPSK:** Included in delivery. Duct Kit, incl. 2 m of silicone hose and two joining pipes

**DPSL:** Ordered separately. L-shaped mounting brackets with screws.

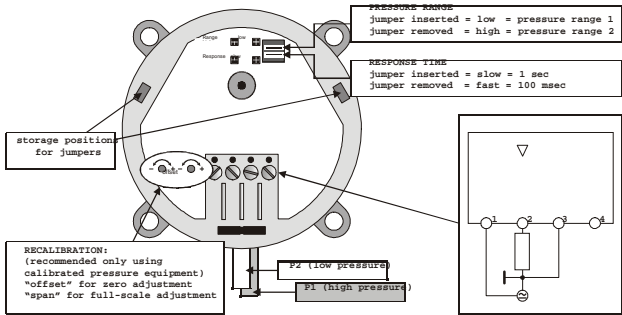


Fig. 1. Wiring details

## MOUNTING

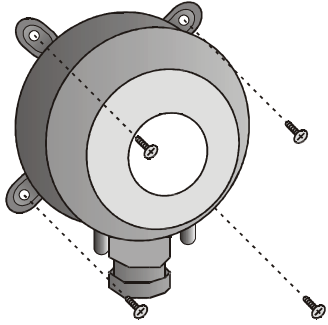


Fig. 2. Mounting

## DIMENSIONS

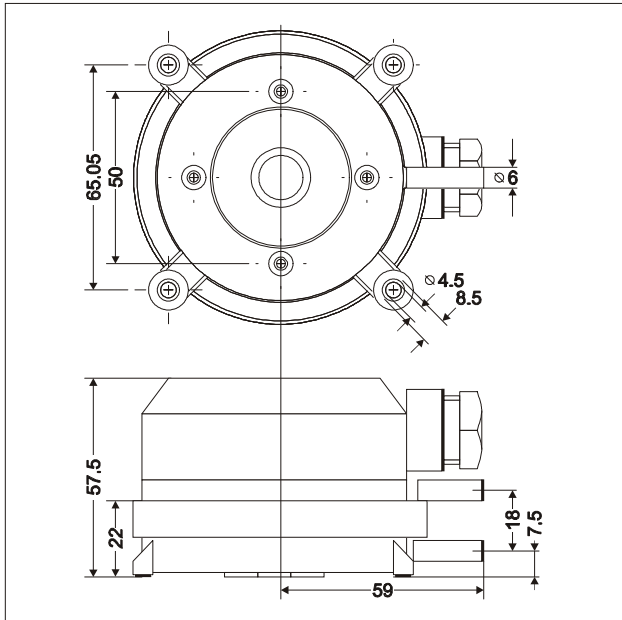


Fig. 3. Dimensions (in mm)

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