

## DPTExxxxS / DPTExxxx

### 3-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS WITH CURRENT AND VOLTAGE OUTPUT

#### PRODUCT DATA & MOUNTING INSTRUCTIONS



#### FEATURES

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 40 kPa (60 kPa) overload capacity
- Rugged design; protection class IP54
- Easy installation and wiring connection
- Measurement range adjustable by jumper
- Response time adjustable by jumper
- Output signal adjustable by jumper
- Re-zeroing possible by pushbutton

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

#### GENERAL

The differential pressure transmitters of the DPTExxxx 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.

#### MODELS

order no.	pressure range		overload capacity	burst pressure
	1 (pre-set)	2		
DPTE50S	-50...0...+50 Pa <sup>1)</sup>	n.a.	20 kPa	40 kPa
DPTE100S	-100...0...+100 Pa <sup>1)</sup>	n.a.	20 kPa	40 kPa
DPTE500S	-500...0...+500 Pa <sup>1)</sup>	n.a.	20 kPa	40 kPa
DPTE1000S	-1 kPa...0...+1 kPa <sup>2)</sup>	n.a.	40 kPa	70 kPa
DPTE100	0...100 Pa <sup>1)</sup>	0...250 Pa <sup>1)</sup>	20 kPa	40 kPa
DPTE250	0...250 Pa <sup>1)</sup>	0...500 Pa <sup>1)</sup>	20 kPa	40 kPa
DPTE500	0...500 Pa <sup>1)</sup>	0...1 kPa <sup>1)</sup>	20 kPa	40 kPa
DPTE1000	0...1 kPa <sup>2)</sup>	0...2.5 kPa <sup>2)</sup>	40 kPa	70 kPa
DPTE5000	0...5 kPa <sup>3)</sup>	0...10 kPa <sup>3)</sup>	60 kPa	120 kPa

<sup>1)</sup> Temperature error at 0...50 °C ≤ ± 5% of FS  
<sup>2)</sup> Temperature error at 0...50 °C ≤ ± 2.5% of FS  
<sup>3)</sup> Temperature error at 0...50 °C ≤ ± 1% of FS

#### SPECIFICATION

Supply voltage	18...30 Vac/dc, 50/60 Hz
Output signal	0...10 Vdc, 4...20 mA
Pressure medium	Air + non-aggressive gases
Working temperature	0...50 °C
Linearity and hysteresis error	≤ ± 1.0% of FS
Temperature error	see "Models"
Storage temperature	-10...+70 °C
Humidity	0...95% rh, non-condensing
Repetition accuracy	≤ ± 0.2% of FS
Response time	1 s (switchable to 100 ms)
Process connection	6 mm hose pipe
Electrical connection	Screw terminal block for wire up to 1.5 mm <sup>2</sup>
Housing material	ABS and POM
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 as per EN60529
EMV	EN60770, EN61326
Weight	approx. 130 g

## FUNCTION

DPTExxxxS / DPTExxxx Three-Wire Differential Pressure Transmitters are equipped with an integrated piezo-resistive pressure transducer. The pressure to be measured is applied to and thus deflects a thin membrane made of mono-silicon. The membrane's semiconductor resistors (arranged to simultaneously compensate for the temperature response) detect this deflection and generate an electrical output signal. The output signal is converted into a 0...10 V or 4...20 mA analog signal which changes (within the specified error limits) in proportion to the applied pressure.

**NOTE:** The devices are factory pre-set to pressure range 1. This can be changed (except for +/- models) to pressure range 2 by removing the corresponding jumper (see Fig. 3).

**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. 3).

**NOTE:** The devices are factory pre-set to an output signal of 0...10 V. This can be changed to 0...20 mA by removing the corresponding jumper (see Fig. 3).

## 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.

## DIMENSIONS

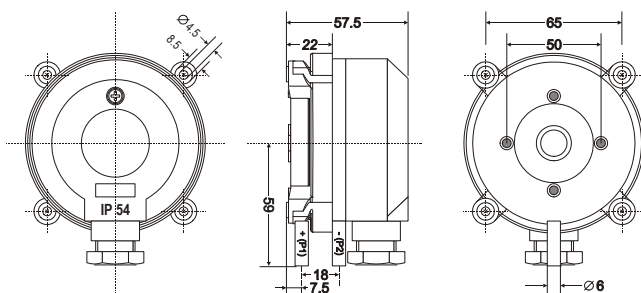


Fig. 1. Dimensions (in mm)

## MOUNTING

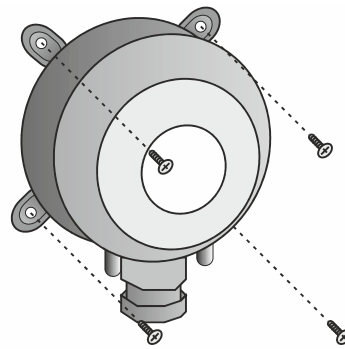


Fig. 2. Mounting

## WIRING

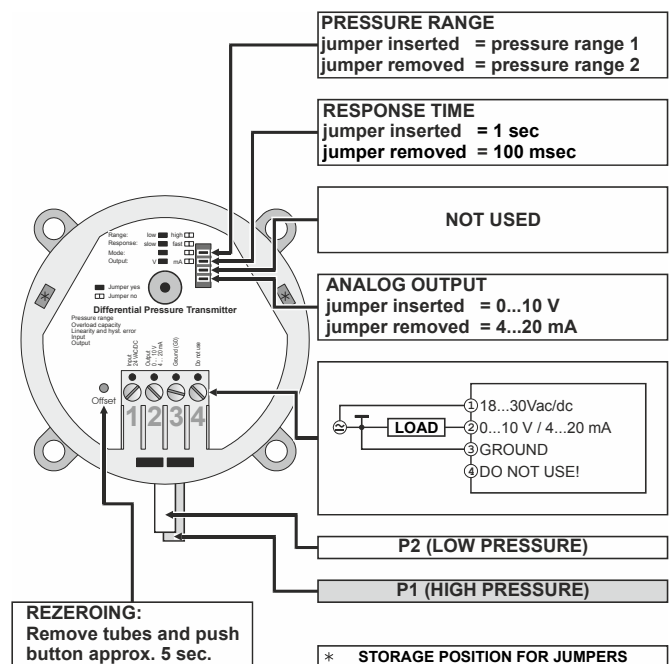


Fig. 3. Wiring details

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