

# DPTExxxxSD / DPTExxxxD

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

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 20 kPa (60 kPa) overload capacity
- Easy installation and wiring connection
- Measurement range adjustable by jumper
- Response time adjustable by jumper
- Output signal adjustable by jumper
- Red digital display
- Display of values > +1000 Pa in kPa
- Re-zeroing possible by pushbutton

### Technical Specification

Supply voltage	18...30 Vac/dc, 50/60 Hz
Output signal	0...10 Vdc (default) / 4...20 mA
Response time	1 s (default) / 100 ms
Working temperature	0...50 °C
Storage temperature	-10... 70°C
Humidity	0...95% rh, non-condensing
Max. current consumption	< 110 mA
Linearity + hysteresis error	$\pm \leq 1.0\%$ of FS
Long-term stability, typical	$\pm \leq 0.5\%$ to $2.5\%$ of FS p.a., depending upon meas. range
Repetition accuracy	$\pm \leq 0.2\%$ of FS
Orientation dependence	$\pm \leq 0.02\%$ of FS
Pressure medium	Air + non-aggressive gases
Process connection	6 mm hose pipe
Electrical connection	Screw terminal block for wire up to 1.5 mm <sup>2</sup>
Fixation of device	With serrated screws
Housing material	ABS and PO
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 (with hood), IP00 (without hood) as per EN60529
EMV	EN60770, EN61326
Weight	130 g



### 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.

#### NOTE:

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

**Honeywell**

## Models

Order no.	Measuring Range		Overload Capacity	Burst Pressure
	1 (default)	2		
DPTE50SD	-50...0...+50 Pa <sup>1)</sup>	NA	20 kPa	40 kPa
DPTE100SD	-100...0...+100 Pa <sup>1)</sup>	NA	20 kPa	40 kPa
DPTE500SD	-500...0...+500 Pa <sup>1)</sup>	NA	20 kPa	40 kPa
DPTE1000SD	-1 kPa...0...+1 kPa <sup>2)</sup>	NA	40 kPa	70 kPa
DPTE100D	0...100 Pa <sup>1)</sup>	0...250 Pa <sup>1)</sup>	20 kPa	40 kPa
DPTE250D	0...250 Pa <sup>1)</sup>	0...500 Pa <sup>1)</sup>	20 kPa	40 kPa
DPTE500D	0...500 Pa <sup>1)</sup>	0...1 kPa <sup>1)</sup>	40 kPa	70 kPa
DPTE1000D	0...1 kPa <sup>2)</sup>	0...2.5 kPa <sup>2)</sup>	40 kPa	70 kPa
DPTE5000D	0...5 kPa <sup>3)</sup>	0...10 kPa <sup>3)</sup>	60 kPa	120 kPa

1) Temperature error at 0...50 °C  $\pm \leq 5\%$  of FS

2) Temperature error at 0...50 °C  $\pm \leq 2.5\%$  of FS

3) Temperature error at 0...50 °C  $\pm \leq 1\%$  of FS

## FUNCTION

DPTExxxxSD / DPTExxxxD 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, while the corresponding pressure value is then displayed (in Pa/kPa) in the LED.

**NOTE:** The devices are factory pre-set to an output signal of 0...10 V. This can be changed to 4...20 mA by removing the corresponding jumper (see Fig. 3).

**NOTE:** The devices are factory pre-set to measuring range 1. This can be changed (except for +/- models) to measuring 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).

## Wiring

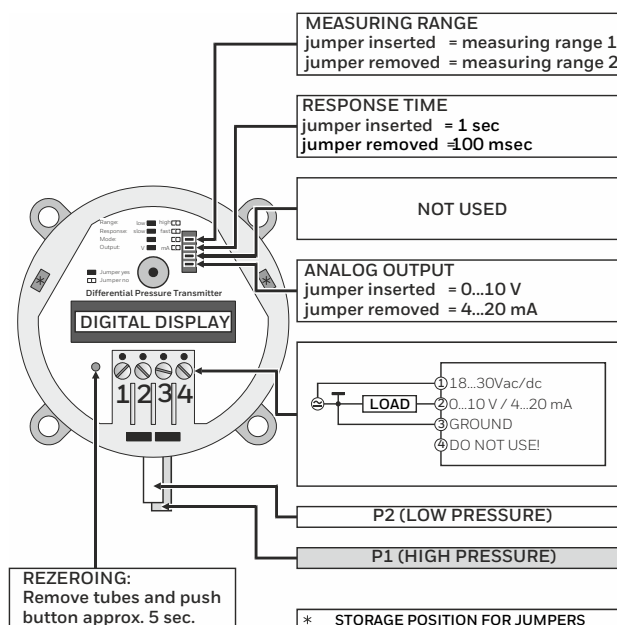


Fig. 3. Wiring details

## ACCESSORIES

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

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

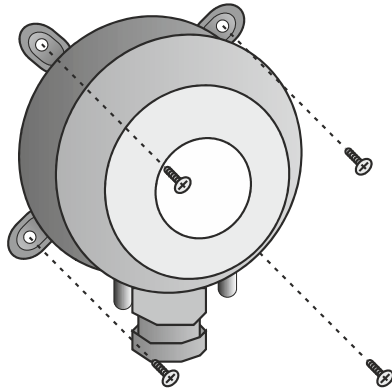


Fig. 2. Mounting

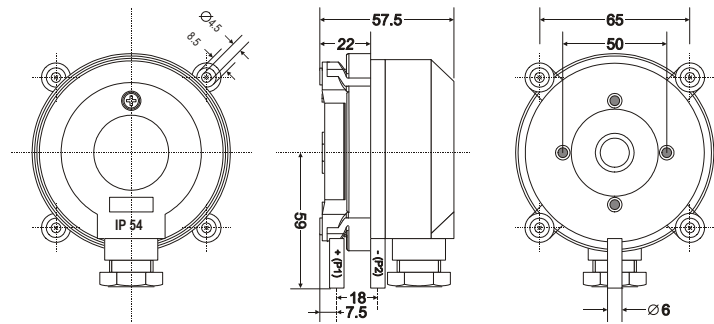



Fig. 1. Dimensions (in mm)

## APPROVALS

- CE according to 2004/108/EC
-  (Eurasian Conformity)

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