

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 DPTE 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 ¹⁾	n.a.	20 kPa	40 kPa
DPTE100S	-100...0...+100 Pa ¹⁾	n.a.	20 kPa	40 kPa
DPTE500S	-500...0...+500 Pa ¹⁾	n.a.	20 kPa	40 kPa
DPTE1000S	-1 kPa...0...+1 kPa ²⁾	n.a.	40 kPa	70 kPa
DPTE100	0...100 Pa ¹⁾	0...250 Pa ¹⁾	20 kPa	40 kPa
DPTE250	0...250 Pa ¹⁾	0...500 Pa ¹⁾	20 kPa	40 kPa
DPTE500	0...500 Pa ¹⁾	0...1 kPa ¹⁾	20 kPa	40 kPa
DPTE1000	0...1 kPa ²⁾	0...2.5 kPa ²⁾	40 kPa	70 kPa
DPTE5000	0...5 kPa ³⁾	0...10 kPa ³⁾	60 kPa	120 kPa

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

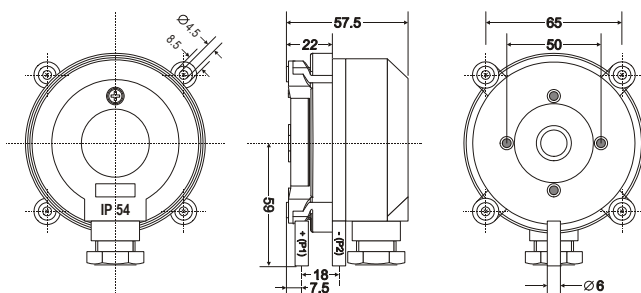


Fig. 1. Dimensions (in mm)

MOUNTING

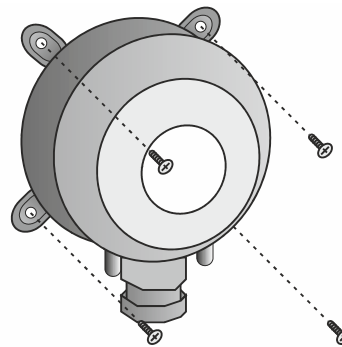


Fig. 2. Mounting

WIRING

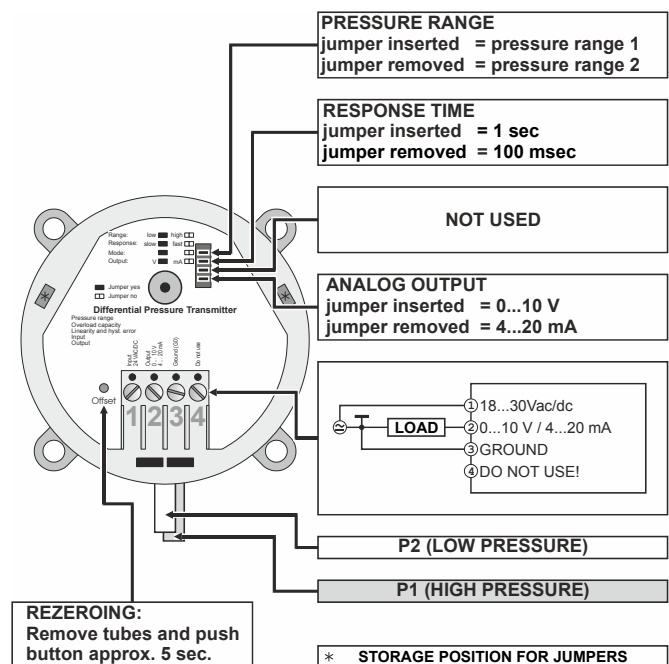


Fig. 3. Wiring details

Honeywell



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