

# DPTExx2S / DPTExxx2

## 2-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS, CURRENT OUTPUT

### PRODUCT DATA & MOUNTING INSTRUCTIONS



### 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.	measuring range		overload capacity	burst pressure
	1 (default)	2		
DPTE52S	-50...0...+50 Pa <sup>1)</sup>	n.a.	20 kPa	40 kPa
DPTE102S	-100...0...+100 Pa <sup>1)</sup>	n.a.	20 kPa	40 kPa
DPTE102	0...100 Pa <sup>1)</sup>	0...250 Pa <sup>1)</sup>	20 kPa	40 kPa
DPTE252	0...250 Pa <sup>1)</sup>	0...500 Pa <sup>1)</sup>	20 kPa	40 kPa
DPTE502	0...500 Pa <sup>1)</sup>	0...1 kPa <sup>1)</sup>	40 kPa	70 kPa
DPTE1002	0...1 kPa <sup>2)</sup>	0...2.5 kPa <sup>2)</sup>	40 kPa	70 kPa
DPTE5002	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

### FEATURES

- 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
- 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.

### SPECIFICATION

Supply voltage	18...30 Vdc
Output signal	4...20 mA, two-wire
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	< 21 mA
Linearity + hysteresis error	≤ ± 1.0% of FS
Long-term stability, typical	≤ ± 0.5% to ± 2.5% of FS p.a., depending upon meas. range
Repetition accuracy	≤ ± 0.2% of FS
Orientation dependence	≤ ± 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 POM
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 (with hood), IP00 (without hood) as per EN60529
EMV	EN60770, EN61326
Weight	120 g

### FUNCTION

DPTExx2S / DPTExxx2 Two-Wire Differential Pressure Transmitters are equipped with an integrated piezo-resistive pressure transducer. The pressure to be measured 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 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 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 sec. This can be changed to 100 ms by removing the corresponding jumper (see Fig. 3).

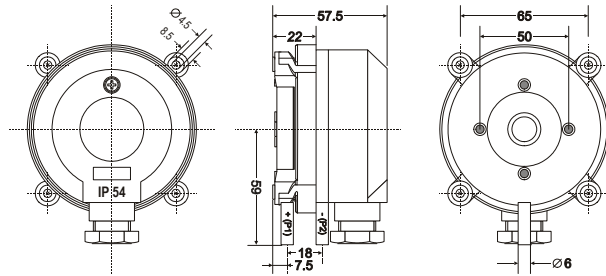
**NOTE:** During the first two years of operation, the sensor may display slight drift. To nevertheless maintain nominal accuracy during this period, we therefore recommend occasional rezeroing (see Fig. 3).

## ACCESSORIES

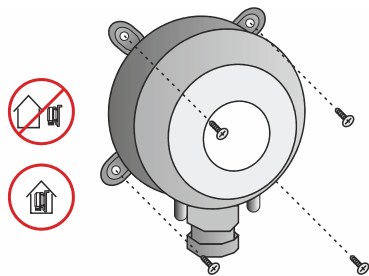
DPSK: Included in delivery. Duct Kit, incl. 2 m of silicone hose and two joining pipes

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

## DIMENSIONS



## MOUNTING



## WIRING

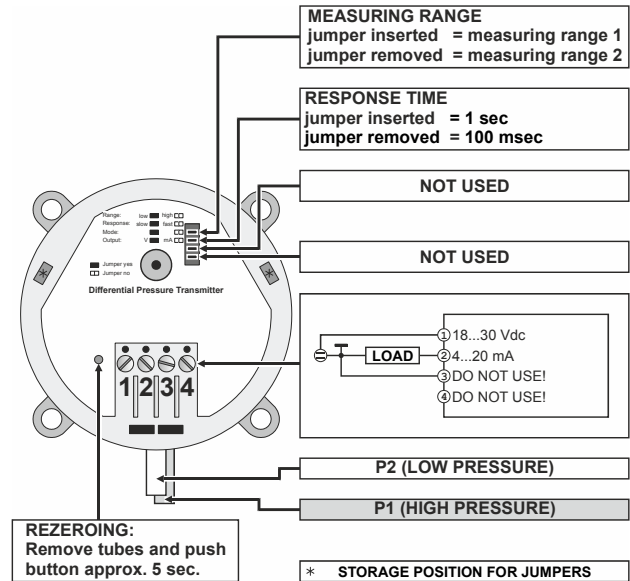


Fig. 3. Wiring details

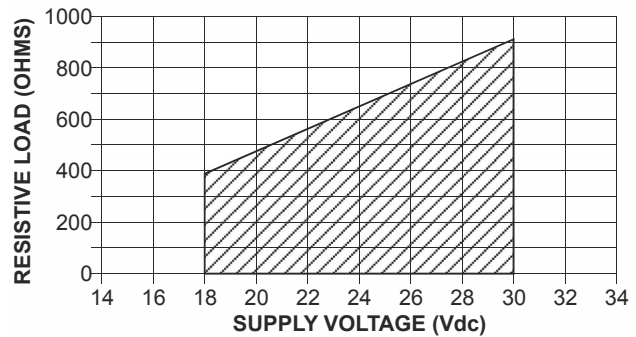


Fig. 4. Permissible load vs. supply voltage

## APPROVALS

- CE according to 2014/30/EU
- (Eurasian Conformity)
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### Home and Building Technologies

Honeywell GmbH  
P.O. Box 1254  
71099 Schönaich, Germany  
phone: (49) 7031-637-02  
fax: (49) 7031-637-850  
<http://www.honeywell.de/fema>