Honeywell

FEMA

DPT50-1000 / DPT50D-1000D

3-WIRE DIFFERENTIAL PRESSURE TRANSMITTERS VOLTAGE OUTPUT

SPECIFICATION DATA & MOUNTING INSTRUCTIONS

DPT50-1000

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 U.S. Food and Drug Administration.

Models

order no.	pressure range 1 [1)]	pressure range 2	overload capacity	burst pressure
DPT50/50D	-50...0...+50 Pa [2)]	n.a.	20 kPa	40 kPa
DPT110/110D	-100...0...+100 Pa [2)]	n.a.	20 kPa	40 kPa
DPT550/550D	-500...0...+500 Pa [2)]	n.a.	20 kPa	40 kPa
DPT1100/1100D	-1 kPa...0...+1 kPa [3)]	n.a.	40 kPa	70 kPa
DPT100/100D	0...100 Pa [2)]	0...250 Pa [2)]	20 kPa	40 kPa
DPT250/250D	0...250 Pa [2)]	0...500 Pa [2)]	20 kPa	40 kPa
DPT500/500D	0...500 Pa [2)]	0...1 kPa [2)]	20 kPa	40 kPa
DPT1000/1000D	0...1 kPa [3), 4)]	0...2.5 kPa [3), 4)]	40 kPa	70 kPa

[1)] default setting
[2)] temperature error at 0…50 °C ≤ ± 5% of full scale (FS)
[3)] temperature error at 0…50 °C ≤ ± 2.5% of full scale (FS)
[4)] pressure displayed in kPa

FEATURES

- **Monitoring gaseous, non-aggressive media**
- **Piezo-resistive pressure transducer**
- **Up to 40 kPa overload capacity**
- **Models with display (DPT50D-1000D)**
- **Rugged design; protection class IP54**
- **Easy installation and wiring connection**
- **Measurement range 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	≤ ± 1.0% of FS
Temperature error at 0...50°C	See section "Models"
Storage temperature	-10...+70 °C
Humidity	0...95% rh, non-condensing
Long-term stability, typical	
DPT50...500 / 50D…500D	≤ ± 2.5% of FS per year
DPT1000 / 1000D	≤ ± 1.5% of FS per year
Repetition accuracy	≤ ± 0.2% of FS
Position dependence	≤ ± 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 up to 1.5 mm²
Housing material	ABS and POM
Cable entry	M20x1.5 (polyamide)
Protection class	IP54 as per EN60529
EMV	EN60770, EN61326
Weight	approx. 130 g

CE

EN0B-0466GE51 R0406

FUNCTION

The differential pressure transmitters of the DPT 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 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.

WIRING

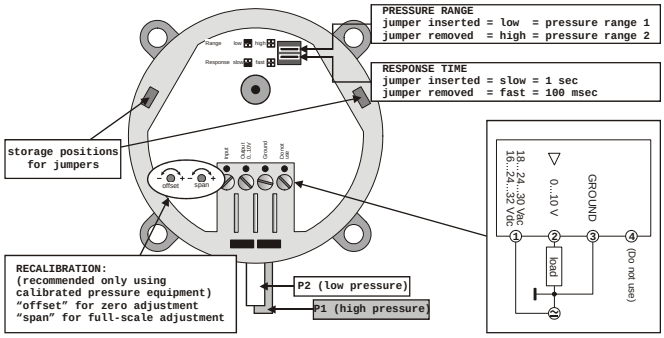

Fig. 1. Wiring details

MOUNTING

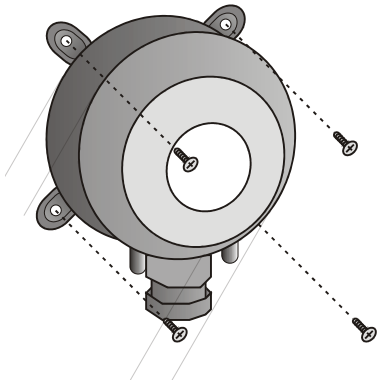

Fig. 2. Mounting

DIMENSIONS

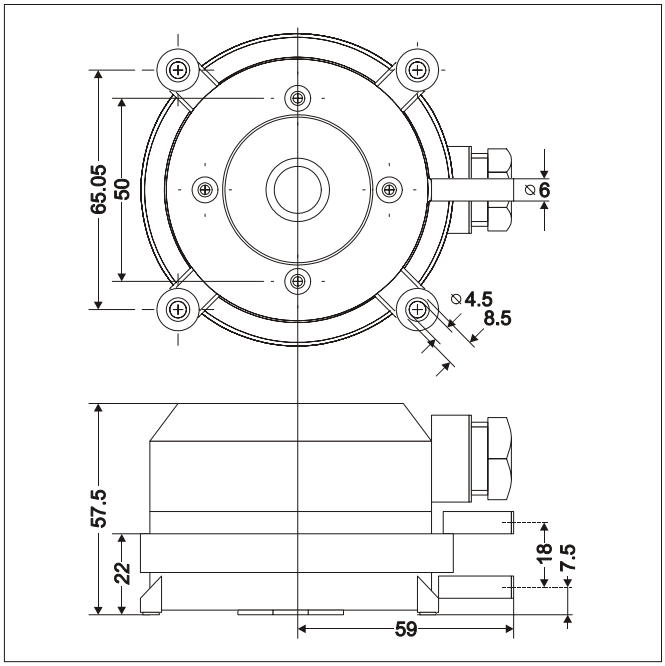

Fig. 3. Dimensions (in mm)

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DIN EN
ISO 9001

Subject to change without notice. Printed in Germany
EN0B-0466GE51 R0406