

## DPT53-5003

### 3- WIRE DIFFERENTIAL PRESSURE TRANSMITTER WITH 4-20MA CURRENT OUTPUT

#### SPECIFICATION DATA & MOUNTING INSTRUCTIONS



DPT53...5003

#### GENERAL

The 3-wire differential pressure transmitters of the DPT...3 series are used for measuring differential pressure, positive pressure, and vacuum. The transmitters are suitable for:

- Air-conditioning
- Building automation
- Environmental protection
- Fan and blower control
- Valve and flap control
- Filter and blower monitoring
- Fluid and level monitoring
- Control of air flows

#### MODELS

Order Number	Linearity Range	Overload Capacity	Bursting Pressure
DPT53	-50Pa/+50 Pa	25 kPa	50 kPa
DPT103	0...100 Pa	25 kPa	50 kPa
DPT253	0...250 Pa	25 kPa	50 kPa
DPT503	0...500 Pa	25 kPa	50 kPa
DPT1003	0...1 kPa	25 kPa	50 kPa
DPT2503	0...2.5 kPa	30 kPa	75 kPa
DPT5003	0...5 kPa	50 kPa	100 kPa

#### FEATURES

- Monitoring gaseous, non-aggressive media
- Piezo-resistive pressure transducer
- Up to 50 kPa overload capacity
- Robust design; protection standard IP54
- Easy installation and wiring connection
- Customizations and calibration on special request

#### SPECIFICATION

Pressure medium	Air and non-aggressive gases
Temperature environment	0...50 °C
Humidity	0...95% r.h., non-condensing
Supply voltage	18...30 Vac/dc
Output signal	4...20 mA, (≤ 30mA) short circuit protected
Load	≤ ±1% FS
Linearity and hysteresis	≤ 470 Ohm
Response time	10 ms
Temperature drift 0...50°C	DPT2503/5003 ± 1 % FS DPT1003, ± 2.5 % FS DPT53...503, ± 5 % FS
Long-term stability	Typ. ±0.5% FS per year
Storage temperature	-10...+70 °C
Process connection	6 mm hose pipe
Electrical connection	Cable Ø 6.5...13 mm, up to 1.5 mm <sup>2</sup>
Housing material	ABS and POM
Protection class	IP54
EMC Standards	EN50081/82 for home and industrial
Weight	approx. 130 g

#### ACCESSORIES

- DPSK\* Duct Kit, including 2m of silicone-hose and 2 joining pipes DPSJ with screws.\*
- DPSL Mounting brackets L-shaped

\* Included in delivery of single package

## FUNCTION

The DPT +/-53 ...5003 3-wire transmitter type range are used for measuring differential pressure. The piezo-resistive pressure transducer integrated in the differential pressure transmitter is designed so that the pressure to be measured is applied to a thin membrane made of mono-crystalline silicon. The membrane is deflected by this.

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 output signal by high-gain operation amplifiers.

The electrical output signal changes within the specified error limits proportionally to the applied pressure.

## DIMENSIONS

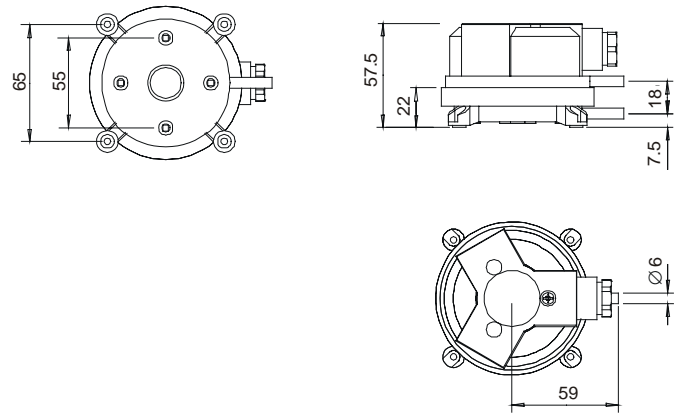
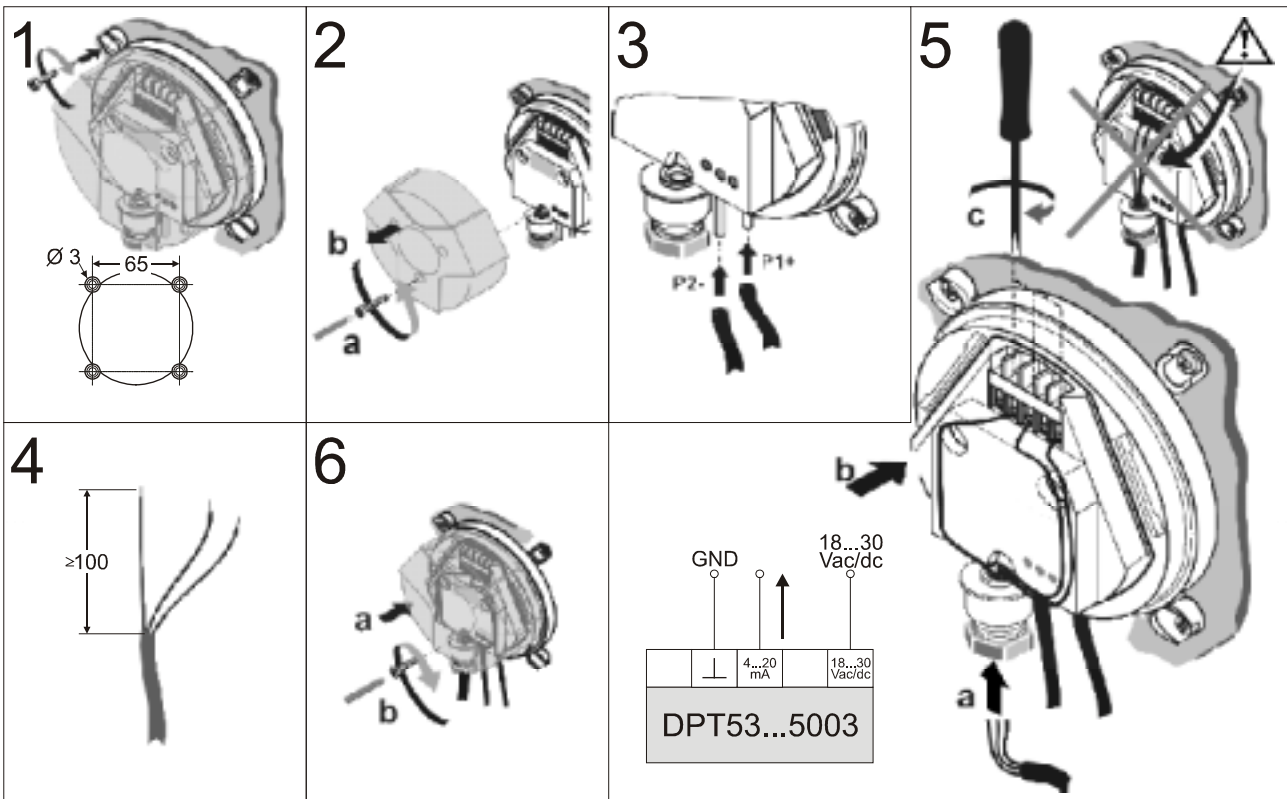


Fig. 1. Dimensions in mm

## MOUNTING AND WIRING



**Honeywell**



Fema Controls  
**Honeywell AG**  
 P.O. Box 1254  
 D-71099 Schönaich  
 Phone: (49) 7031-637-02  
 Fax: (49) 7031-637-850  
<http://honeywell.de/fema>

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