



DPT-4003 DIFFERENTIAL PRESSURE TRANSDUCER

Description

The **DPT-4003** differential pressure transducer sensor operates on the capacitance principal and is capable of sensing ultra low differential pressures. In the capacitance cell, a very lightweight, responsive diaphragm deflects a small amount when pressure is applied. This deflection results in a change in capacitance, which is then detected and processed electronically into an output signal linear to the differential pressure.

Features

- Three wire 0-5 VDC or 0-10 VDC jumper selectable
- $\pm 0.8\%$ F.S. accuracy
 $\pm 0.4\%$ F.S. accuracy (optional)
- Full scale ranges as low as 0.10 inches of water differential pressure
- Can be operated continuously in temperature ranges of 0 to 160 °F
- Temperature Compensated Range is 35 to 130°F
- Can be stored in temperature ranges of -40 to 180 °F
- Zero shift of only $\pm 0.03\%$ F.S. per °F
- Span shift of only $\pm 0.03\%$ F.S per °F
- 25 psi maximum static line pressure
- Differential overpressure of 15 psi proof and 25 psi burst
- Vibration less than 0.05% F.S. temporary effect with 5g's, 0-60 Hz
- Non-corrosive dry gas pressure media
- Pneumatic $\frac{1}{4}$ " barb process input connection
- Enclosure is NEMA 1 fire-retardant ABS

DPT-4003 Technical Specifications

1. AVAILABLE FULL SCALE RANGES

No.	Inches W.C.
1	0.10
2	0.25
3	0.50
4	0.75
5	1.00
6	2.00
7	3.00
8	5.00
9	10.0
10	15.0
11	25.0

2. PROCESS INPUT CONNECTION

Pneumatic 1/4" barb

3. ENCLOSURE

NEMA 1 fire-retardant ABS
Mount using mounting tabs or 35mm DIN rail

4. PRESSURE MEDIA

Non-corrosive dry gases

5. OPERABLE LINE PRESSURE

25 psi maximum static line pressure

6. DIFFERENTIAL OVERPRESSURE

15 psi proof and 25 psi burst pressure

7. VIBRATION

<0.05% F.S. temporary effect with 5g's, 0-60 Hz

8. FULL SCALE ACCURACY DATA AT 70°F

	Standard	Optional
Combined accuracy includes:	±0.80%	±0.40%
Terminal point nonlinearity		
Hysteresis		
Non-repeatability		

9. ENVIRONMENTAL ATTRIBUTES

Storage	-40 ~ 180°F	-40 ~ 82°C
Operating	0 ~ 160°F	-18 ~ 71°C
	(10-95% R.H. non-condensing)	
Compensation Range	35 ~ 130°F	1.7 ~ 54°C
Zero shift	±0.03%FS/°F	±0.03%FS/½°C
Span shift	±0.03%FS/°F	±0.03%FS/½°C

10. ELECTRICAL INFORMATION

Output	0 ~ 5 VDC / 0 ~ 10 VDC (3 Wire)
Supply Power	11.5 ~ 36 VDC (5V output) 14 ~ 36 VDC /24VAC (10V output)
Supply Current	4.5mA (5V) / 6.0mA (10V)
Connections	Pluggable terminal block, accepts 12 – 26 gauge wire

11. APPROXIMATE WEIGHT

2.5 OZ

DPT-4003 Specification Guide

Electronic Transducers

- Provide individual differential pressure transducers, selected for the required spans of each application.
- The transducer(s) shall be solid state electronic type, with infinite output resolution, capable of performing dedicated pressure control functions. Microprocessor based transducers with time sharing of multiple inputs are not acceptable.
- Each transducer's output shall not be affected by direction of mounting (attitude) or external vibrations, and shall be furnished with a factory calibrated span that matches the application.
- Transducer performance shall be equal to or better than the following:
Accuracy: □0.8% F.S.
Temperature Effects: <0.03% F.S./°F
Over-pressure: 15 PSIG Proof / 25 PSIG Burst
Response: <0.25 seconds for full span input

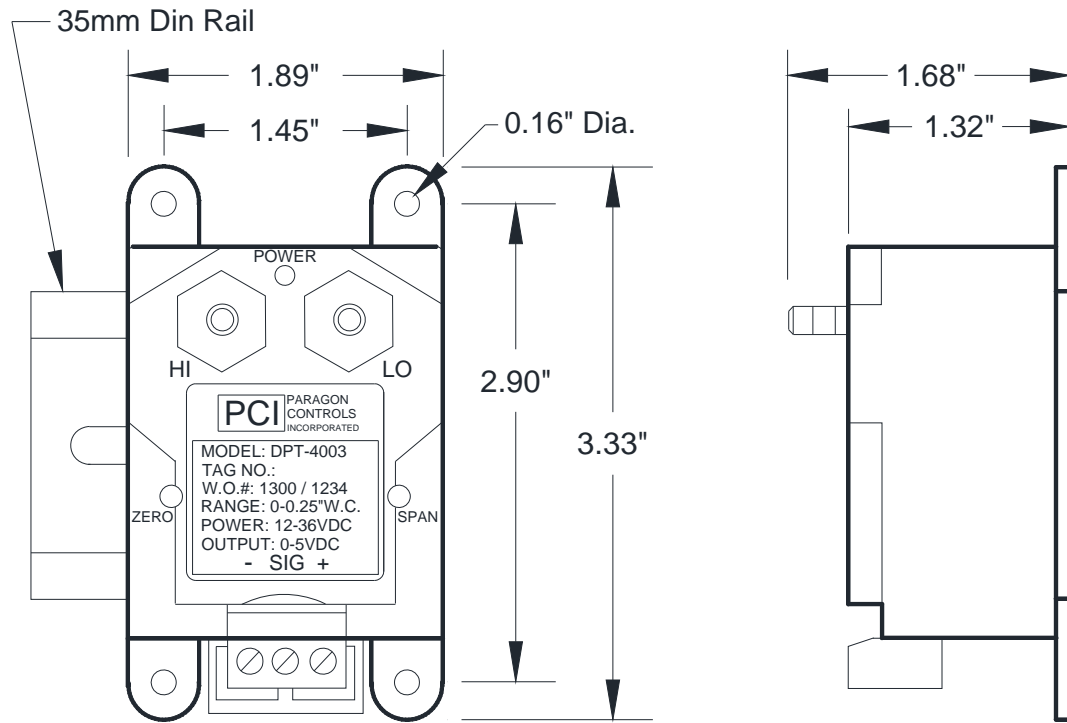
Labeling

- An identification label shall be placed on each airflow transducer listing the model number, flow elements served, full scale value, and identifying tag number.

Manufacturer

- Electronic transducers shall be Paragon Controls Inc. Model DPT-4003 or equal as approved by the Engineer.
- Naming of a manufacturer does not automatically constitute acceptance of this standard product nor waive the responsibility of the manufacturer to comply totally with all requirements of the proceeding specification.

DPT-4003 Dimensions & Field Connection



(Mount with #8 screws or 35mm Din Rail)

