



DPT-4005 DIFFERENTIAL PRESSURE TRANSDUCER

Description

The **DPT-4005** transducer is a combination differential pressure transmitter, scaling multiplier and output filter; complete in a single package.

The 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.

Each **DPT-4005** is selected and factory calibrated to meet the design requirements for the given application.

Features

- Field selectable 4-20 mA or 0-10 VDC output, (optional 0-5 VDC output)
- $\pm 0.5\%$ F.S. accuracy (standard)
 $\pm 0.25\%$ F.S. accuracy (optional)
- Full scale ranges as low as 0.10 inches of water differential pressure
- Signal noise cancellation (Low Pass Filter set to 3.2Hz)
- Can be operated continuously in temperature ranges of 32 to 160 °F
- Can be stored in temperature ranges of -40 to 180 °F
- Standard zero shift of only $\pm 0.025\%$ F.S./°F
Zero shift of only $\pm 0.015\%$ F.S./°F (optional)
- Standard span shift of only $\pm 0.025\%$ F.S./°F
Span shift of only $\pm 0.015\%$ F.S./°F (optional)
- 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 ¼" compression process input connection

DPT-4005 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	25.0
11	50.0

2. PROCESS INPUT CONNECTION

Pneumatic 1/4" compression, suitable for either hard or soft wall signal tubing

3. ENCLOSURE

Steel NEMA-12 continuous hinge
Optional Nema4 Steel

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:	±0.50%	±0.25%
Terminal point nonlinearity		
Hysteresis		
Non-repeatability		

9. ENVIRONMENTAL ATTRIBUTES

Storage	-40 ~ 180°F	-40 ~ 82°C
Operating	32 ~ 160°F	0 ~ 71°C
Compensation Range	40 ~ 125°F	4 ~ 52°C
Zero shift **	±0.025%FS/°F	±0.025%FS/½°C
Span shift **	±0.025%FS/°F	±0.025%FS/½°C
** Opt 0.25% Accuracy	±0.015%FS/°F	±0.015%FS/½°C

10. ELECTRICAL INFORMATION

Output	Field selectable 4 ~ 20mA or 0 ~ 10VDC, (optional 0 ~ 5VDC)
Supply Power	18 ~ 28 volts DC/AC; 50 ~ 60Hz; 150mA
Connections	Removable plug w/screw terminals
External Load	500 Ω max

11. APPROXIMATE WEIGHT

3.5 LBS

DPT-4005 Specification Guide

Electronic Transducers

- Provide individual differential pressure transducers, selected for the required spans of the application being served. The transducer shall not be ranged for more than 200% of the application requirements.
- The transducer(s) shall be solid state electronic type, with infinite output resolution, capable of performing dedicated differential pressure measurement. Microprocessor based transducers with time sharing of multiple inputs are not acceptable.
- Each transducer's output shall not be affected by direction of mounting (orientation) 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: □0.5% F.S.
Temperature Effects: <0.03% F.S./°F
Over-pressure: 15 PSID Proof / 25 PSID Burst
Noise Filtration: Low Pass Filter, factory set @ 3.2Hz

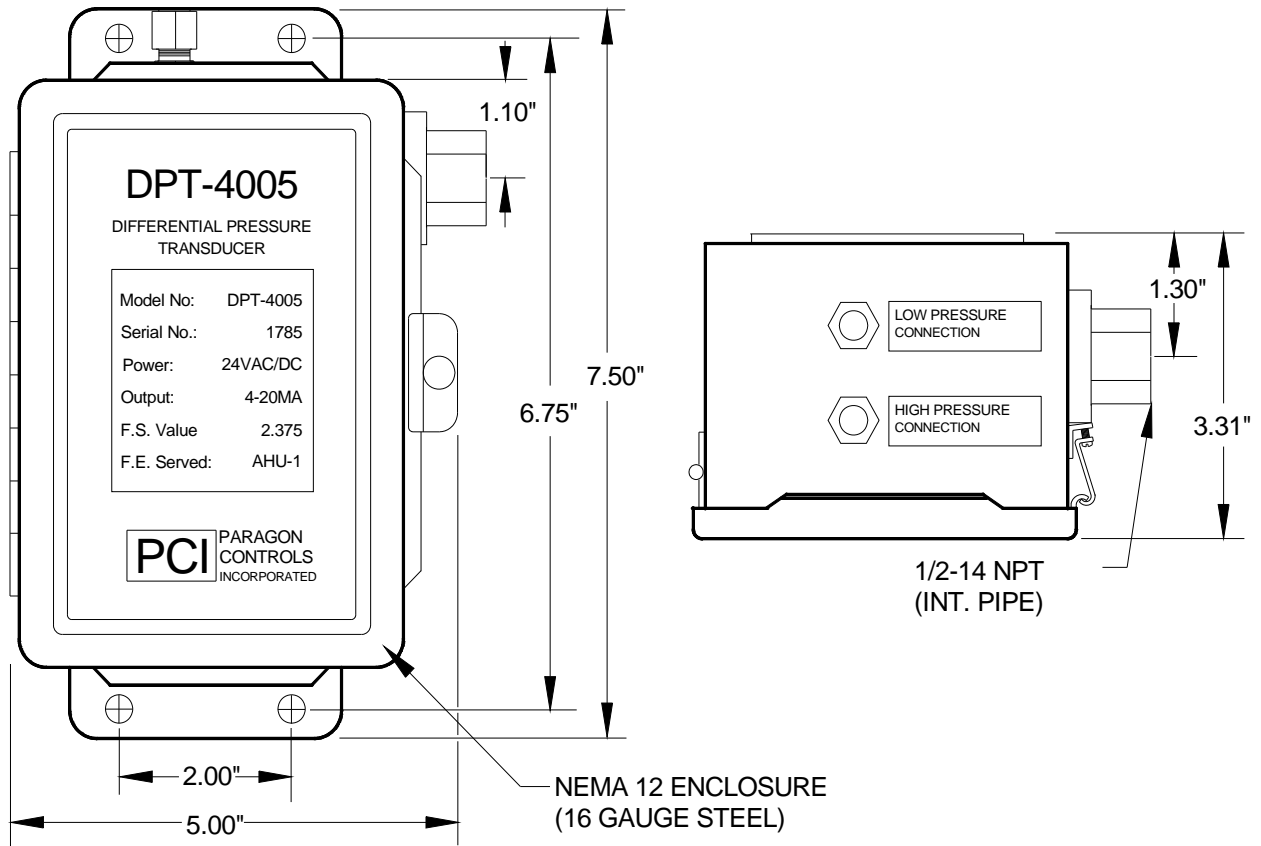
Labeling

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

Manufacturer

- Electronic transducers shall be Paragon Controls Inc. Model DPT-4005 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-4005 Dimensions



DPT-4005 Field Connections

