



## **DPT-4001 LOOP POWERED DIFFERENTIAL PRESSURE TRANSDUCER**

### **Description**

The **DPT-4001** 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**

- Two wire 4-20 mA output
- $\pm 0.8\%$  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 ¼" barb process input connection
- Enclosure is NEMA 1 fire-retardant ABS

## DPT-4001 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 transmitter 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	±0.030%FS/°F	±0.030%FS/½°C
Span shift	±0.030%FS/°F	±0.030%FS/½°C

### 10. ELECTRICAL INFORMATION

Output	4 ~ 20mA (2 Wire)
Supply Power	12 ~ 36 volts DC
	$V_{min} = 12 + (0.022 \times R_{LOAD})$
Connections	Plugable Terminal Block
	Accepts 12-26 gauge wire
External Load	1090 Ω max. @ 36 VDC

### 11. APPROXIMATE WEIGHT

2.5 OZ

## DPT-4001 Specification Guide

### Electronic Transducers

1. Provide individual differential pressure transducers, selected for the required spans of each application.
2. 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.
3. Each transducer's output shall not be adversely affected by direction of mounting (orientation) or external vibrations, and shall be furnished with a factory-calibrated span that matches the application.
4. Transducer performance shall be equal to or better than the following:  
 Accuracy: 0.80% F.S.  
 Temperature Effects: <0.03% F.S./°F  
 Over-pressure: 15 PSID Proof / 25 PSID Burst  
 Response: <0.25 seconds for full span input

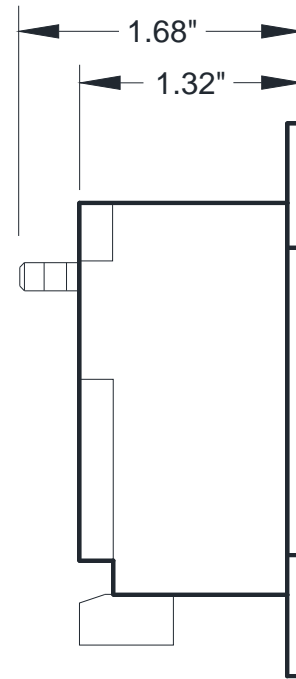
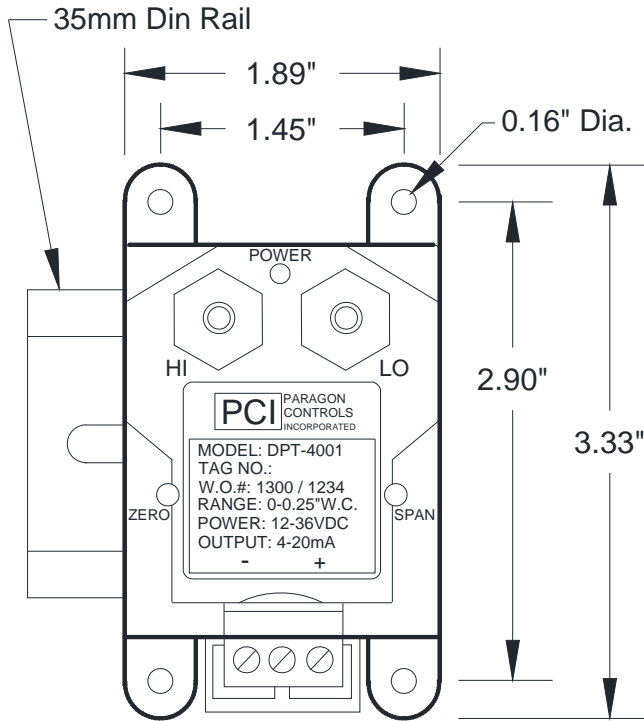
### Labeling

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

### Manufacturer

1. Electronic transducers shall be Paragon Controls Inc. Model DPT-4001 or equal as approved by the Engineer.
2. 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-4001 Dimensions & Field Connection**



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

