**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
- ± 0.8% F.S. accuracy
- ± 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 ± 0.03% F.S. per °F
- Span shift of only ± 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

<table>
<thead>
<tr>
<th>No.</th>
<th>Inches W.C.</th>
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<tbody>
<tr>
<td>1</td>
<td>0.10</td>
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<tr>
<td>2</td>
<td>0.25</td>
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<tr>
<td>3</td>
<td>0.50</td>
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<tr>
<td>4</td>
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<td>5</td>
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<tr>
<td>6</td>
<td>2.00</td>
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<tr>
<td>7</td>
<td>3.00</td>
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<td>8</td>
<td>5.00</td>
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<tr>
<td>9</td>
<td>10.0</td>
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<tr>
<td>10</td>
<td>15.0</td>
</tr>
<tr>
<td>11</td>
<td>25.0</td>
</tr>
</tbody>
</table>

2. PROCESS INPUT CONNECTION
   Pneumatic ¼” barb

3. ENCLOURESE
   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
   Combined accuracy includes:
   - 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/°C
   Span shift ±0.030%FS/°F ±0.030%FS/°C

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

11. APPROXIMATE WEIGHT
    2.5 OZ

DPT-4001 Ordering Information

DPT-4  Accuracy:
   1 = 0.80% (STD)
   2 = 0.40% (OPT)

   Full Scale Range:
   1 = 0.10” wc
   2 = 0.25” wc
   3 = 0.50” wc
   4 = 0.75” wc
   5 = 1.0” wc
   6 = 2.0” wc
   7 = 3.0” wc
   8 = 5.0” wc
   9 = 10.0” wc
  10 = 15.0” w.c.
  11 = 25.0” w.c.
  0 = Other (Specify)
DPT-4001 Dimensions & Field Connection

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

POWER

ZERO ADJ.

SPAN ADJ.

RECEIVER +

(4-20mA) -

POWER SUPPLY

LOAD SUPPLY VOLTAGE (VDC)

\[
V_{\text{MIN}} = 12 + (0.022 \times R_{\text{LOAD}})
\]

LOAD RESISTANCE (OHMS)

MODE: DPT-4001
TAG NO.: W.O. #: 1300 / 1234
RANGE: 0-0.25" W.C.
POWER: 12-36VDC
OUTPUT: 4-20mA

PCI INCORPORATED

CONTROLS PARAGON

TAG NO.: W.O. #: 1300 / 1234
POWER: 12-36VDC
OUTPUT: 4-20mA
RANGE: 0-0.25" W.C.
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.