Differential Pressure Transmitters
Unidirectional and Bidirectional Ranges, Removable Terminal Block

The Series 648B and 648C Differential Pressure Transmitters are designed to be used with clean, dry air and other non-corrosive gases. Each unit features a push-activated zero function and an associated LED light indicator. With the convenient push-button, zero calibration can be performed without any additional equipment, which significantly reduces time and cost for users. The dual color LED indicates if the transmitter is at zero calibration can be performed without any additional equipment, which significantly reduces time and cost for users. The dual color LED indicates if the transmitter is at

<table>
<thead>
<tr>
<th>Model</th>
<th>Range in w.c.</th>
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<tbody>
<tr>
<td>648B-01</td>
<td>0 to 0.1</td>
<td>648B-08</td>
<td>0 to 25</td>
</tr>
<tr>
<td>648B-02</td>
<td>0 to 0.25</td>
<td>648B-13</td>
<td>0 to ±0.25</td>
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<tr>
<td>648B-03</td>
<td>0 to 0.5</td>
<td>648B-14</td>
<td>0 to ±0.5</td>
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<tr>
<td>648B-04</td>
<td>0 to 1</td>
<td>648B-15</td>
<td>0 to ±1</td>
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<tr>
<td>648B-05</td>
<td>0 to 2.5</td>
<td>648B-16</td>
<td>0 to ±2.5</td>
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<tr>
<td>648B-06</td>
<td>0 to 5</td>
<td>648B-17</td>
<td>0 to ±5</td>
</tr>
<tr>
<td>648B-07</td>
<td>0 to 10</td>
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</tbody>
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Note: To order unit with ±0.4% FS* accuracy, change B to C in model number. Ex. 648C-01

For NIST traceable calibration certificate, use order code NISTCAL-PT1.

See page 567 for process tubing options.

The Series 646B Differential Pressure Transmitter is designed to be used with clean, dry air and other non-corrosive gases. Each unit features a flame retardant enclosure and a unique design which is suitable for circuit board mounting. Series 646B measures differential pressure at an accuracy of ±2.0% down to 0.5 in w.c. The transmitter contains a stainless steel sensor that provides resistance against corrosion combined with excellent performance and long term stability. The Series 646B transmitter features excellent stability, low hysteresis, accurate operation over a broad temperature range, and exceptional insensitivity to vibration. These features make the transmitters perfect for VAV systems, filter monitoring, HVAC fan control, building temperature range, and exceptional insensitivity to vibration. These features make the

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OPTION
For NIST traceable calibration certificate, use order code NISTCAL-PT1.

See page 567 for process tubing options.

### SPECIFICATIONS

- **Service**: Air and non-combustible, compatible gases.
- **Wetted Materials**: 302 SS, glass, nickel, silicon rubber, polyethylene, acrylic, ABS and brass.
- **Accuracy**: ±0.8% FS* at room temperature; 648B: ±0.4% FS* at room temperature. "RSS (Root Sum Square) includes non-linearity, hysteresis and non-repeatability.
- **Stability**: ±1% FS/yr.
- **Temperature Limits**: Operating: 0 to 120°F (-18 to 49°C); Storage: -5 to 120°F (-21 to 49°C).
- **Pressure Limits**: 25 psi (172 kPa) proof pressure; 30 psi (200 kPa) burst pressure.
- **Response Time**: Approximately 10 ms.
- **Max. Loop Resistance**: DC: 0 to 950 Ω.
- **Electrical Connection**: Detachable euro-style terminal block.
- **Process Connections**: 3/16” OD barbed fitting for 1/8” ID push-on tubing.
- **Housing**: SS and PC+ABS alloy.
- **Weight**: 3.8 oz (108 g).

### Power Requirements:
- **Output Signal**: 4 to 20 mA.
- **Zero and Span Adjustments**: Push-button for zero, potentiometer for span.
- **Response Time**: Approximately 10 ms.

### Thermal Effects:
- **648B**: ±0.025% FS/F (0.045%/°C)
- **648C**: ±0.020% FS/F (0.036%/°C)

### Warm-Up Shift:
- ±0.1% FS

### Output Impedance:
- < 5.0 ±0.25 VDC.

### Ratiometric Signal Output:
- 0 to ±2.5 VDC

### Electrical Connection:
- Three stripped, color-coded lead wires. 26 AWG, approximately 3.5” length.

### Process Connections:
- 3/16” OD barbed fitting for 1/8” ID push-on tubing.
- Housing: PBT+ABS alloy.
- Weight: 3.1 oz (90 g).

### Output Signal:
- 0.5 to 4.5 VDC ratiometric.

### Supply Voltage:
- 5.0 ±0.25 VDC.

### Response Time:
- Approximately 10 ms.