

# Model 267/267MR

## Pressure Transducer



### Applications

- Heating, Ventilating and Air-Conditioning (HVAC)
- Energy Management Systems
- Static Duct Pressure
- Clean Room Pressure
- Oven Pressurization and Furnace Draft Controls

### Features

- Model 267MR Offers Multi-Range Capability, 6 Field Selectable Ranges via Dip Switches, and Field Selectable 0-5 or 0-10 VDC Output
- Model 267 Offers an Optional 3 1/2 Digit LCD Display with a 0.5% FS Standard Accuracy
- NEMA 4/IP65 Rated Housing
- Optional Accuracies as High as 0.25% FS
- 24 VAC or 24 VDC Excitation
- PG-9, PG13.5 or Conduit Electrical Termination
- Integral Static Pressure Probe
- Ranges as low as 0.1 in. W.C. (25 Pa)
- Meets CE Conformance Standards



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The micro-tig welded tension sensor allows up to 10 psi overpressure (in either direction), with no damage to the unit. The improved sensor design also allows the Model 267MR version to have 6 field selectable pressure ranges (bi-directional and unidirectional) in one unit. With minimal effort, the user can field calibrate the unit with a flip of a switch and be assured of optimum performance.

### Static Duct Probe

## Model 267 and 267MR Specifications



Model 267MR Multi-Range

Model 267w/LCD Display

Model 267w/Static Probe

### Performance Data

|                                      | Standard  | Optional  |           |
|--------------------------------------|-----------|-----------|-----------|
| Accuracy RSS*<br>(at constant temp.) | ±1.0% FS  | ±0.4% FS  | ±0.25% FS |
| Non-Linearity (BFSL)                 | ±0.98% FS | ±0.38% FS | ±0.22% FS |
| Hysteresis                           | 0.10% FS  | 0.10% FS  | 0.10% FS  |
| Non-Repeatability                    | 0.05% FS  | 0.05% FS  | 0.05% FS  |

#### Thermal Effects\*\*

|                            |  |
|----------------------------|--|
| Compensated Range °F(°C)   | +40 to +150 (+5 to +65)                  |
| Zero/Span Shift %FS/°F(°C) | ±0.033 (±0.06)                           |
| Maximum Line Pressure      | 10 PSI                                   |
| Overpressure               | 10 PSI in Positive or Negative Direction |
| Warm-up Shift              | ±0.1% FS Total                           |

#### Position Effect\*\*\*

| Range         | Zero Offset (%FS/G) |
|---------------|---------------------|
| To 0.5 in. WC | 0.60                |
| To 1.0 in. WC | 0.50                |
| To 2.5 in. WC | 0.22                |
| To 5.0 in. WC | 0.14                |

\*RSS of Non-Linearity, Non-Repeatability and Hysteresis.

\*\*Units calibrated at nominal 70°F. Maximum thermal error computed from this datum.

\*\*\*Unit is factory calibrated at 0g effect in the vertical position.

### Physical Description

|                                |   |
|--------------------------------|---|
| Case                           | IP65/NEMA 4 Plastic Glass-Filled Polycarbonate UL94V-0 Case   |
| Electrical Connection          | Screw Terminal Strip Inside of Case   |
| Electrical Termination         | PG-9/PG13.5 Strain Relief, 1/2" Conduit Opening, or 9 Pin D-Sub Connector*  |
| Zero and Span Adjustment       | Accessible Inside of Case   |
| Display (Optional on 267 only) | 3 1/2 Digit LCD Integral Display (1.74"W x 0.78"H)  |
| Pressure Fittings              | 3/16" O.D. Barbed Brass for 1/4" Push-On Tubing (Standard)<br>Static Pressure Probe (Optional)<br>1/4" NPTF Brass (Optional)                        |
| Mounting                       | 2 Mounting Tabs with 0.18" Holes<br>Pressure Probe Assembly is Supplied with a 7.8" 6061 Aluminum Alloy Probe and a Gasket to Seal Against the Duct |
| Weight (approx.)               | 9.0 ounces (255 grams)<br>9.5 ounces (Duct Probe Assembly)  |

\*9 pin D-sub Connector is not suitable for NEMA4/IP-65 environments.

### Electrical Data (Voltage)

|                                  |  |
|----------------------------------|--|
| Circuit                          | 3-Wire (Exc, Gnd, Sig)<br>Protected from Miswiring |
| Excitation (for 0-5 VDC Output)  | 9 to 30 VAC/12 to 40 VDC                           |
| Excitation (for 0-10 VDC Output) | 11 to 30 VAC/13 to 40 VDC                          |

#### Model 267

|         |                               |
|---------|-------------------------------|
| Output* | 0 to 5 VDC**<br>0 to 10 VDC** |
|---------|-------------------------------|

#### Model 267MR

|                              |   |
|------------------------------|---|
| Output* (Field Selectable)   | 0 to 5 VDC**<br>0 to 10 VDC**                 |
| Bidirectional Output at Zero | Mid-Range of Specified Output                 |
| Output Impedance             | 100 Ohms                                      |
| Re-Ranging (267MR only)      | 5 Position Dip Switches (Located Inside Case) |

\*Calibrated into a 50K ohm load, operable into a 5000 ohm load or greater.

\*\*Zero output factory set to within ±50mV (±25 mV for optional accuracies).  
Span (Full Scale) output factory set to within ±50mV. (±25 mV for optional accuracies).

### Electrical Data (Current)

|  |   |
|--|---|
| Circuit  | 2-Wire<br>Protected from Miswiring            |
| Output*  | 4 to 20 mA**                                  |
| Bidirectional Output at Zero   | 12 mA   |
| External Load  | 0 to 800 Ohms                                 |
| Minimum loop supply voltage (VDC) = 9 + 0.02 x (Resistance of receiver plus line).   |   |
| Maximum loop supply voltage (VDC) = 30 + 0.004 x (Resistance of receiver plus line). |   |
| Re-Ranging (267MR only)  | 4 Position Dip Switches (located inside case) |

\*Calibrated with a 24 VDC loop supply voltage and a 250 ohm load.

\*\*Zero output factory set to within ±0.16mA (±0.08 mA for optional accuracies).  
Span (Full Scale) output factory set to within ±0.16mA (±0.08 mA for optional accuracies).

### Pressure Media

Typically Air or Similar Non-Conducting Gases.

### Environmental Data

|                    |                          |
|--------------------|--------------------------|
| Temperature        |                          |
| Operating* °F (°C) | 0 to +150 (-18 to +65)   |
| Storage °F (°C)    | -65 to +180 (-54 to +82) |

\*Operating temperature limits of the electronics only.

Pressure media temperature may be considerably higher or lower.

Application of some available options may impact standard specifications.  
Specifications are subject to change without notice.

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# ORDERING INFORMATION

## Model 267 Pressure Transducer

Code all blocks in table.

Example: Part No. 2671R25WD11G2CD for a 0 to .25 in. WC Unidirectional  
Range, 4-20 mA Output, 3/16" Barbed Brass Fitting, PG-9 Electrical Termination, 1% Accuracy with LCD Display

|                            |   |   |   |   |   |   |  |   |   |  |  |  |  |
|----------------------------|---|---|---|---|---|---|--|---|---|--|--|--|--|
| 2                          | 6   | 7 | 1 |   |   |   |  |   |   |  |  |  |  |
| <b>Model</b><br>2671 = 267 | <b>Pressure Ranges</b><br><b>in. W.C.</b>   |   |   | <b>Units</b><br>W = in.WC<br>L = Pascal | <b>Type</b><br><u>Differential</u><br>D = Unidirectional<br>B = Bidirectional | <b>Output</b><br>11 = 4-20 mA<br>2D = 0-5 VDC<br>2E = 0-10 VDC  | <b>Pressure Fitting/<br/>Elec. Termination</b><br>(Choose the proper electrical termination code under the pressure fitting ordered.)                              | <b>Accuracy</b><br>C = $\pm 1.0\%$ FS<br><br><u>Optional (w/Cal.Cert.)</u><br>E = $\pm 0.4\%$ FS<br>F = $\pm 0.25\%$ FS<br>G = $\pm 1\%$ FS<br>H = $\pm 0.5\%$ FS | <b>Display</b><br>D = LCD Display <sup>1</sup><br>N = No Display  |  |  |  |  |
|                            | <b>OR1</b> = 0 to 0.1 $\pm 0.1$<br><b>R25</b> = 0 to 0.25 $\pm 0.25$<br><b>OR5</b> = 0 to 0.5 $\pm 0.5$<br><b>001</b> = 0 to 1 $\pm 1$<br><b>1R5</b> = 0 to 1.5 $\pm 1.5$<br><b>2R5</b> = 0 to 2.5 $\pm 2.5$<br><b>005</b> = 0 to 5 $\pm 5$<br><b>010</b> = 0 to 10 $\pm 10$<br><b>025</b> = 0 to 25 $\pm 25$<br><b>050</b> = 0 to 50 $\pm 50$<br><b>100</b> = 0 to 100 $\pm 100$ |   |   |   |   |   |  |   |   |  |  |  |  |
|                            | <b>Pascals</b><br><b>025</b> = 0 to 25 $\pm 25$<br><b>050</b> = 0 to 50 $\pm 50$<br><b>100</b> = 0 to 100 $\pm 100$<br><b>250</b> = 0 to 250 $\pm 250$<br><b>500</b> = 0 to 500 $\pm 500$<br><b>10C</b> = 0 to 1000 $\pm 1000$<br><b>25C</b> = 0 to 2500 $\pm 2500$<br><b>40C</b> = 0 to 4000 $\pm 4000$<br><b>70C</b> = 0 to 7000 $\pm 7000$                                     |   |   |   |   |   |  |   |   |  |  |  |  |
|                            |   |   |   |   |   |   | <b>3/16" Barbed Brass<br/>Standard Fitting</b><br>G1 = PG-9 Strain Relief<br>G2 = PG 13.5 Strain Relief<br>D9 = 9 pin D-sub Connector<br>A1 = 1/2" Conduit Opening |   | <b>Static Duct Probe<br/>Optional Fitting</b><br>1P = PG-9 Strain Relief<br>2P = PG 13.5 Strain Relief<br>9P = 9 pin D-sub Connector<br>AP = 1/2" Conduit Opening |  |  |  |  |
|                            |   |   |   |   |   | <b>1/4" NPT F, Brass<br/>Optional Fitting</b><br>1K = PG-9 Strain Relief<br>2K = PG 13.5 Strain Relief<br>9K = 9 pin D-sub Connector<br>AK = 1/2" Conduit Opening |  |   |   |  |  |  |  |

1.)  $\pm 0.5\%$  FS (Code: H) accuracy is standard when ordered with the LCD display (Code: D).

## Model 267MR Pressure Transducer

|                            |   |   |   |   |                                 |   |  |   |   |  |  |  |   |
|----------------------------|---|---|---|---|---------------------------------|---|--|---|---|--|--|--|---|
| 2                          | 6   | 7 | 1 |   |                                 |   | D  |   |   |  |  |  | N |
| <b>Model</b><br>2671 = 267 | <b>Pressure Ranges</b><br><b>in. W.C.</b>   |   |   | <b>Units</b><br>W = in.WC<br>L = Pascal | <b>Type</b><br>D = Differential | <b>Output</b><br>11 = 4-20 mA<br>2D = 0-5 VDC<br>2E = 0-10 VDC  | <b>Pressure Fitting/<br/>Elec. Termination</b><br>(Choose the proper electrical termination code under the pressure fitting ordered.)                              | <b>Accuracy</b><br>C = $\pm 1.0\%$ FS<br><br><u>Optional (w/Cal. Cert.)</u><br>G = $\pm 1.0\%$ FS | <b>Display</b><br>N=No Display  |  |  |  |   |
|                            | <b>MR1</b> = 0 to 0.1 $\pm 0.05$<br><b>MR2</b> = 0 to 0.25 $\pm 0.125$<br>0 to 0.5 $\pm 0.25$<br>0 to 1 $\pm 0.5$<br><b>MR3</b> = 0 to 1.25 $\pm 0.625$<br>0 to 2.5 $\pm 1.25$<br>0 to 5.0 $\pm 2.5$<br><b>MR4</b> = 0 to 7.5 $\pm 3.75$<br>0 to 15 $\pm 7.5$<br>0 to 30 $\pm 15$   |   |   |   |                                 |   |  |   |   |  |  |  |   |
|                            | <b>Pascals</b><br><b>MR5</b> = 0 to 25 $\pm 12.5$<br><b>MR6</b> = 0 to 50 $\pm 25$<br>0 to 100 $\pm 50$<br>0 to 200 $\pm 100$<br><b>MR7</b> = 0 to 250 $\pm 125$<br>0 to 500 $\pm 250$<br>0 to 1000 $\pm 500$<br><b>MR8</b> = 0 to 625 $\pm 312$<br>0 to 1250 $\pm 625$<br>0 to 2500 $\pm 1250$<br><b>MR9</b> = 0 to 1875 $\pm 937$<br>0 to 3750 $\pm 1875$<br>0 to 7500 $\pm 3750$ |   |   |   |                                 |   |  |   |   |  |  |  |   |
|                            |   |   |   |   |                                 |   | <b>3/16" Barbed Brass<br/>Standard Fitting</b><br>G1 = PG-9 Strain Relief<br>G2 = PG 13.5 Strain Relief<br>D9 = 9 pin D-sub Connector<br>A1 = 1/2" Conduit Opening |   | <b>Static Duct Probe<br/>Optional Fitting</b><br>1P = PG-9 Strain Relief<br>2P = PG 13.5 Strain Relief<br>9P = 9 pin D-sub Connector<br>AP = 1/2" Conduit Opening |  |  |  |   |
|                            |   |   |   |   |                                 | <b>1/4" NPT F, Brass<br/>Optional Fitting</b><br>1K = PG-9 Strain Relief<br>2K = PG 13.5 Strain Relief<br>9K = 9 pin D-sub Connector<br>AK = 1/2" Conduit Opening |  |   |   |  |  |  |   |

Ranges are factory set for the highest range.  
Optional higher accuracies are not available on the 267MR.

While we provide application assistance on all Setra products both personally and through our literature, it is the customer's responsibility to determine the suitability of the product in the application.

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