

Model 267/267MR

Pressure Transducer



Applications

- Heating, Ventilating and Air-Conditioning (HVAC)
- Energy Management Systems
- Static Duct Pressure
- Clean Room Pressure
- Environmental Pollution Control
- 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
- Reliable Capacitance Technology
- Micro-tig Welded Stainless Steel Tension Sensor
- NEMA 4/IP65 Rated Housing
- UL94V-0 Flammability Rating
- 1% Standard Accuracy
- Optional Accuracies as High as 0.25% FS
- 24 VAC or 24 VDC Excitation
- PG-9, PG13.5 or Conduit Electrical Termination
- Integral Mounting Tabs
- Ranges as low as 0.1 in. W.C. (25 Pa)
- Meets CE Conformance Standards

ISO
9001



Certified

Model 267 and 267MR Specifications

Performance Data

Accuracy RSS* (at constant temp.)	±1% FS
Non-Linearity (BFSL)	±0.98% FS
Hysteresis	0.20% FS
Non-Repeatability	0.10% 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 Effects

(Unit is factory calibrated at 0g effect in the vertical position)

Range	Zero Offset (%FS/G)
0 to 0.1" WC	2.1
0 to 1" WC	.22
0 to 5" WC	.14
0 to 30" WC	.06

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

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

Physical Description

Case	IP65/NEMA 4 Plastic Glass-Filled Polycarbonate UL94V-0 Case
Mounting	2 mounting tabs with 0.18" holes
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
Pressure Fittings	3/16" O.D. barbed brass pressure fitting for 1/4" push-on tubing

Weight (approx.) 9.0 ounces (255 grams)

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

Specifications are subject to change without notice.

Application of some available options may impact standard specifications.

Electrical Data (Voltage)

Circuit	3-Wire (Exc, Gnd, Sig) Protected from miswiring
Excitation (for 0-5 VDC Output)	9 to 30 VAC/9 to 42 VDC
Excitation (for 0-10 VDC Output)	11 to 30 VAC/13 to 42 VDC
Output* (Field Selectable)	0 to 5 VDC** 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 at 50 mV (±25 mV).

**Span (Full Scale) output factory set at 5.0 VDC (±25 mV) or 10.0 VDC (±50 mV).

Electrical Data (Current)

Circuit	2-Wire 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 at 4 mA (±0.08 mA).

**Span output factory set at 20 mA (±0.08 mA).

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.

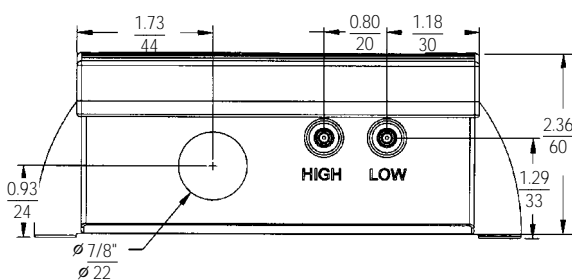
Systems Model 267 and 267MR pressure transducers sense gauge (static) or differential pressures and convert this pressure difference to a proportional electrical output. The 267 series is offered with a high level DC output or 4-20 mA output. The 267MR offers multi-range capability and field configurable 0-5 VDC or 0-10 VDC output, as well as a 4-20 mA output. The 267 is a single range unit and offers an optional LCD display.

Used in Building Energy Management Systems, the 267 and 267MR pressure transducers are available for air pressure ranges as low as 0.1 in. W.C. (25 Pa) full scale to 30 in. W.C. (7500 Pa) full scale. Static accuracy is ±1% full scale in normal ambient temperature environments. The units are temperature compensated to less than ±0.06% FS/°C of thermal error over the temperature range of +5°C to +65°C. The 267 series has an IP65/NEMA 4 rated package to withstand environmental effects.

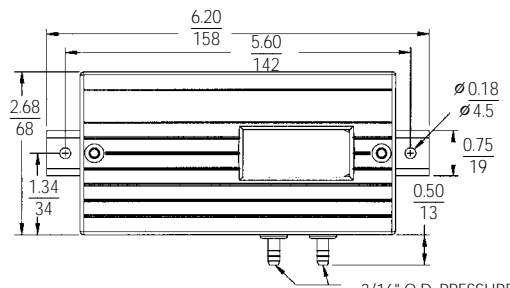
The 267 series utilizes an improved all stainless steel micro-tig welded sensor. The tensioned stainless steel diaphragm and insulated stainless steel electrode, positioned close to the diaphragm, form a variable capacitor. Positive pressure moves the diaphragm toward the electrode, increasing the capacitance. A decrease in pressure moves the diaphragm away from the electrode, decreasing the capacitance. The change in capacitance is detected and converted to a linear DC electrical signal by a unique electronic circuit. The sensor is enclosed in a welded stainless steel body.

The micro-tig welded tension sensor allows up to 10 psi overpressure (in either direction), with no damage to the unit. In addition, sensor parts have thermally matched coefficients, which promote improved temperature performance and excellent long-term stability.

The improved sensor design also allows the Model 267MR version to have up to 6 field selectable pressure ranges (bi-directional and unidirectional) in one unit. The simple flip of a dipswitch enables the user to easily field calibrate the unit with minimal effort.

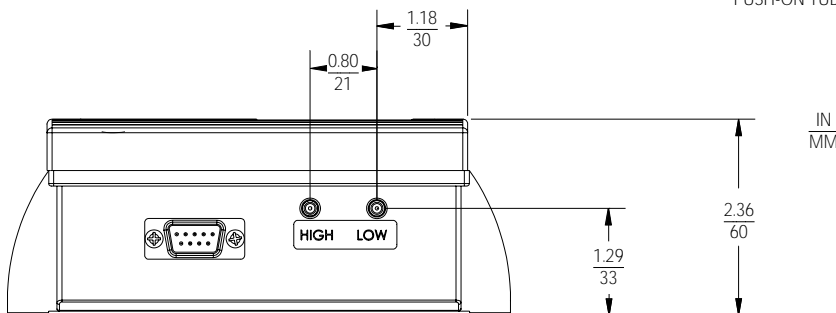


PG and Conduit Opening
Electrical Termination



LCD available as an Option
on Model 267 only.

3/16" O.D. PRESSURE
FITTING FOR 1/4"
PUSH-ON TUBING



9 pin D-sub Connector
Electrical Termination

NOTE: The quality standards including ISO 9001 are based on ANSI Z540-1. The calibration of this product is NIST traceable. U.S. Patent Nos. 4358814, 4434203, 4054833, 6019002, 6014800 and other patents pending.

ORDERING INFORMATION

Model 267 Pressure Transducer

Code all blocks in table.

Example: Part No. 2671R25WD11G2CD for a 0 to .25 in. WC Unidirectional Output, 4-20 mA Output, PG-9 Electrical Termination, 1% Accuracy with LCD Display

2 6 7 1	□ □ □	□	□	□ □	□ □	□	□
Model 2671 = 267	Pressure Ranges <u>in. W.C.</u>	Units W = in.WC L = Pascal	Type <u>Differential</u> D = Unidirectional B = Bidirectional	Output 11 = 4-20 mA 2D = 0-5 VDC 2E = 0-10 VDC	Elec. Termination G1 = PG-13.5 Strain Relief G2 = PG-9 Strain Relief A1 = 1/2" Conduit Opening D9 = 9 pin D-sub Connector	Accuracy C = ±1.0%FS <u>Optional (w/Cal.Cert.)</u> E = ±0.4% FS F = ±0.25% FS G = ±1% FS H = ±0.5% FS	Display D = LCD Display N = No Display
	OR1 = 0 to 0.1 ±0.1 R25 = 0 to 0.25 ±0.25 OR5 = 0 to 0.5 ±0.5 001 = 0 to 1 ±1 2R5 = 0 to 2.5 ±2.5 005 = 0 to 5 ±5 010 = 0 to 10 ±10 025 = 0 to 25 ±25 050 = 0 to 50 ±50 100 = 0 to 100 <hr/> Pascals 025 = 0 to 25 ±25 050 = 0 to 50 ±50 100 = 0 to 100 ±100 250 = 0 to 250 ±250 500 = 0 to 500 ±500 10C = 0 to 1000 ±1000 25C = 0 to 2500 ±2500 40C = 0 to 4000 70C = 0 to 7000						

Model 267MR Pressure Transducer

2 6 7 1	□ □ □	□	D	□ □	□ □	□	N
Model 2671 = 267	Pressure Ranges <u>in. W.C.</u>	Units W = in.WC L = Pascal	Type D = Differential	Output 11 = 4-20 mA 2D = 0-5 VDC 2E = 0-10 VDC	Elec. Termination G1 = PG-13.5 Strain Relief G2 = PG-9 Strain Relief A1 = 1/2" Conduit Opening D9 = 9 pin D-sub Connector	Accuracy C = ±1.0%FS <u>Optional (w/Cal.Cert.)</u> G = ±1.0% FS	Display N=No Display
	MR1 = 0 to 0.1 ±0.05 MR2 = 0 to 0.25 ±0.125 0 to 0.5 ±0.25 0 to 1 ±0.5 MR3 = 0 to 1.25 ±0.625 0 to 2.5 ±1.25 0 to 5.0 ±2.5 MR4 = 0 to 7.5 ±3.75 0 to 15 ±7.5 0 to 30 ±15 <hr/> Pascals MR5 = 0 to 25 ±12.5 MR6 = 0 to 50 ±25 0 to 100 ±50 0 to 200 ±100 MR7 = 0 to 250 ±125 0 to 500 ±250 0 to 1000 ±500 MR8 = 0 to 625 ±312 0 to 1250 ±625 0 to 2500 ±1250 MR9 = 0 to 1875 ±937 0 to 3750 ±1875 0 to 7500 ±3750						

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