

175 Model Low Differential Pressure Transducer

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instruments



The Model 175 Series are low range differential pressure transducers and transmitters. Each unit features a push-activated ZERO function and an associated LED lamp indicator. With a convenient push button, the zero calibration can be performed without any additional equipment. It significantly reduces time and cost for users. The unique bi-color LED indicates if the transducer is at normal operation, over pressure, or in the process of zero calibration. It also reports if the unit is badly damaged.

The Model 175 Series are available for full scale pressure range from 0 to 0.1"WC till 0 to 100"WC. Both unidirectional and bidirectional pressure ranges are offered. The output of the Model 175 Pressure Transducer is available in two versions: 0 to 5VDC and 0 to 10VDC, where 0VDC is true zero without offset. The output of Model 175 Pressure Transmitter is 4 to 20 mA. All units are temperature compensated. The accuracy can be 0.6%, 0.4% or 0.25% at room temperature.

The patented variable capacitance pressure sensor is constructed by stainless steel and glass, no glue or other organics. That provides excellent performance, corrosion resistance and long-term stability.

Model 175 Specifications

Performance Data	Standard	Optional	Optional
Accuracy* (at room temp)	±0.60%FS	±0.40%FS	±0.25%FS
Non-Linearity (BFSL)	±0.55%FS	±0.37%FS	±0.20%FS
Hysteresis	±0.20%FS	±0.10%FS	±0.10%FS
Non-Repeatability	±0.10%FS	±0.10%FS	±0.10%FS
Thermal Effects: Zero/Span Shift (°F)	±0.025%FS	±0.02%FS	±0.015%FS
Compensated Range	35 to 170° F (2 to 77°C)		
Maximum Line Pressure	15PSI(100kPa)		
Overpressure	15PSI(100kPa) in Positive or Negative Direction for all Ranges		
Stability	±0.5% FS/YR		
Warm-up shift	±0.1%FS		
Position Effect	Each unit is calibrated in the vertical position. For best accuracy, adjust zero of the unit if it is mounted in other position. It is not necessary to adjust the sensitivity.		

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

Environmental Data and Physical Description

Operating Temperature	0 to 170° F (-18 to 77°C)
Storage Temperature	-65 to 185° F (-54 to 85°C)
LED Indication	Off No Power. Green Normal Working Red Over Pressure, or during Zero Calibration process Green/Red Flashing... Damaged, Zero Calibration can not be completed
Electrical Termination	Detachable Euro Style Terminal Block, 14-26 AWG
Pressure Fittings	3/16" O.D. Barbed Brass for 1/8" I.D. Push-on Tubing
Zero & Span Adjustment	Push button for Zero, Potentiometer for span
Pressure Media	Typically Air or similar non-conducting Gases
Enclosure	Stainless Steel and PC+ABS Alloy, 94V-0 Rated
Weight	Approx. 3.8OZ/108g
Installation	See Diagram 1 for outline and dimensions.

Applications:

- HVAC and VAV Control
- Clean Rooms and Isolation Rooms
- Duct Static Pressure Measurement
- Draft Control and Fume Hood Control
- Furnace Air Flow Control
- Power Plant Air Flow Monitor and Control

Features

- Green/Red Bi-Color LED to Indicate The Working Status
- Push Button Zero Calibration
- 15 PSI Over Pressure
- Detachable Euro Style Terminal Block
- True Zero Output for Voltage Unit
- Incorrect Wiring Protection
- RoHS Compliant

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Model 175 Specifications

Electrical Data (Voltage)

Circuit	3-Wire (+EXC, -EXC, OUTPUT), Protected against incorrect wiring
Excitation	13-32VDC
Output*	0-5VDC, 0-10VDC
Output Impedance	≤5.0 OHMS

* Span Factory Setting: $\pm 0.5\%FS$
Calibrate with a 50K OHM load. Operable with a load greater than 5K OHM for 0-5VDC output, greater than 10K OHM for 0-10VDC output.

Electrical Data (Current)

Circuit	2-Wire (+EXC, -EXC) , Protected against incorrect wiring
Excitation	13-32VDC (see diagram 2 for maximum loop resistance)
Output	4-20mA
Bidirectional Output at Zero	12mA as standard
External Load	0-950 OHM

* Calibrated with a 250 OHM load and a 24VDC supply voltage
Span Factory Setting: +/-0.5%FS

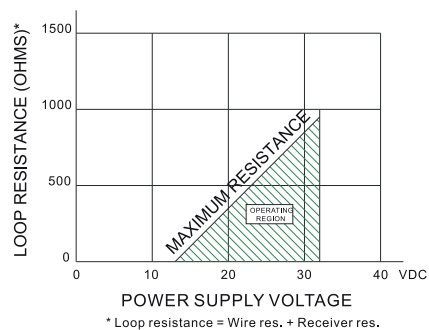
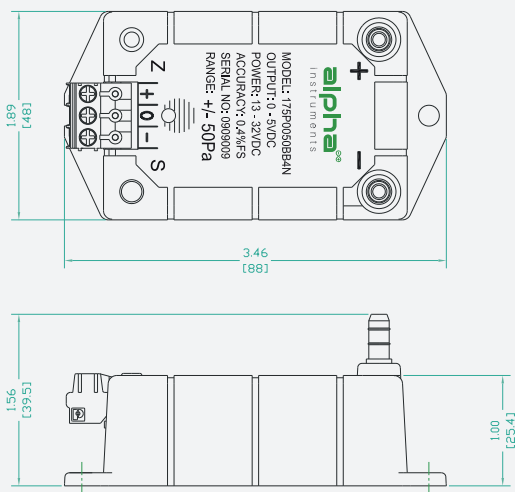


Diagram 2



DIMENSIONS ARE IN: $\frac{\text{INCH}}{[\text{mm}]}$

* A VOLTAGE OUTPUT UNIT IS SHOWN.

Diagram 1

Ordering Information

Code all blocks in table.

Example: 175W00R1DA6N for 175 Transmitter, 0~0.1 in. WC Range, Unidirectional, 4-20mA Output, 0.6% Accuracy, No Calibration Certificate.

1	7	5					
Model 175			Unit P: Pascal W: in. W.C.	Range NNNN	Pressure Type Differential D: Unidirectional B: Bidirectional	Output A: 4-20mA B: 0-5VDC C: 0-10VDC	Accuracy 6: 0.6%FS 4: 0.4%FS 2: 0.25%FS
Certificate Y: (with) N: (without)							

Pressure Unit/Range/Type

in. W.C. (Unidirectional)	in. W.C. (Bidirectional)	Pascal (Unidirectional)	Pascal (Bidirectional)
W00R1D=0 to 0.1 in. WC	W0R05B=-0.05 to 0.05 in. WC	P0025D=0 to 25 Pa	P12R5B=-12.5 to 12.5 Pa
W0R25D=0 to 0.25 in. WC	W00R1B=-0.1 to 0.1 in. WC	P0050D=0 to 50 Pa	P0025B=-25 to 25 Pa
W00R5D=0 to 0.5 in. WC	W0R25B=-0.25 to 0.25 in. WC	P0100D=0 to 100 Pa	P0050B=-50 to 50 Pa
W0001D=0 to 1 in. WC	W00R5B=-0.5 to 0.5 in. WC	P0250D=0 to 250 Pa	P0100B=-100 to 100 Pa
W02R5D=0 to 2.5 in. WC	W0001B=-0.1 to 1 in. WC	P0500D=0 to 500 Pa	P0250B=-250 to 250 Pa
W0005D=0 to 5 in. WC	W02R5B=-2.5 to 2.5 in. WC	P1000D=0 to 1000 Pa	P0500B=-500 to 500 Pa
W0010D=0 to 10 in. WC	W0005B=-5 to 5 in. WC	P2500D=0 to 2500 Pa	P1000B=-1000 to 1000 Pa
W0025D=0 to 25 in. WC	W0010B=-10 to 10 in. WC	P5000D=0 to 5000 Pa	P1250B=-1250 to 1250 Pa
W0050D=0 to 50 in. WC	W0025B=-25 to 25 in. WC	P100CD=0 to 10000 Pa	P2500B=-2500 to 2500 Pa
W0100D=0 to 100 in. WC	W0050B=-50 to 50 in. WC	P250CD=0 to 25000 Pa	P5000B=-5000 to 5000 Pa
			P125CB=-12500 to 12500 Pa

* Specifications subject to change without notice. If you don't see what you need here, please contact us.