162 Model
Low Differential Pressure Transducer

alpha instruments

The Model 162 Series are low range differential pressure transducers and transmitters. Each unit features a stainless steel pressure sensor, a stainless steel back cover and a plastic enclosure, which meets the NEMA 1 requirement. The electrical terminal screws and adjustment holes are concealed beneath a detachable plastic cap. All units are fully protected against short circuiting and incorrect wiring.

The Model 162 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 162 Pressure Transducer is available in two versions: 0 to 5VDC and 0 to 10VDC, where 0VDC is true zero without offset. The output of Model162 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.

Additionally, our unique production setup allows us to accommodate special orders for nonstandard pressure ranges (e.g. -0.5"WC to +3.5"WC).

Model 162 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	±0.24%FS
Hysteresis	±0.20%FS	±0.10%FS	±0.05%FS
Non-Repeatability	±0.10%FS	±0.10%FS	±0.05%FS
Thermal Effects: Zero/Span Shift (/°F)	±0.03%FS	±0.02%FS	±0.015%FS
Compensated Range	40 to 170°F (4 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 Time	5 seconds to meet specifications		
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	-40 to 185°F (-40 to 85°C)
Electrical Termination	Terminal Strip
Pressure Fittings	3/16" O.D. barbed brass for 1/8" I.D. push-on tubing(standard). 6.5mm and 8mm O.D. barbed brass(optional)
Zero & Span Adjustment	Accessible under the small cap
Pressure Media	Typically air or similar non-conducting gases
Enclosure	Stainless Steel and PC+ABS Alloy, 94V-0 Rated
Weight	4.0OZ/113g
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

- 15 PSI Over Pressure
- Incorrect Wiring Protection
- Nonstandard Pressure Ranges
- True Zero Output for Voltage Unit
- RoHS Compliant

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www.alphainstruments.com
E-mail: sales@alphainstruments.com

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Model 162 Specifications

Electrical Data (Voltage)

Circuit	3-Wire (+EXC, -EXC, OUTPUT)，Protected against incorrect wiring
Excitation	12-32VDC/12-30VAC
Output*	0-5VDC，0-10VDC
Output Impedance	⩽5.0 OHMS

* Zero output：factory set at ±35mV(0-5VDC), ±70mV(0-10VDC)
Span output：factory set at ±35mV(0-5VDC), ±70mV(0-10VDC)
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	12-32VDC（see diagram 2 for maximum loop resistance）
Output**	4-20mA
Bidirectional Output at Zero	12mA as standard
External Load	0-1000 OHM

* Zero output: factory set at ±0.11mA
Span output: factory set at ±0.11mA
Calibrated with a 250 OHM load and a 24VDC supply voltage.

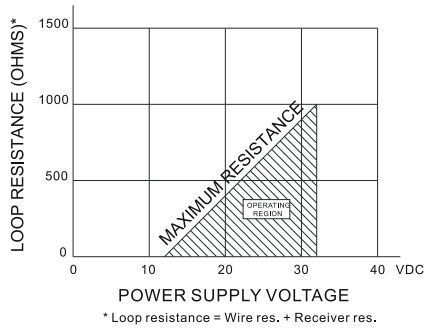

Diagram 2

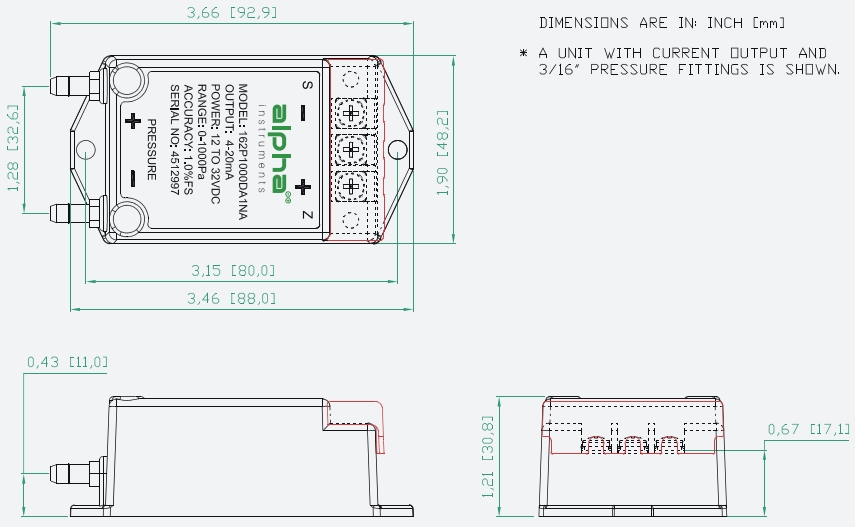

Diagram 1

Ordering Information

Code all blocks in table.

Example: 162W00R1DA6NA for 162 Transmitter, 0~0.1 in. WC Range, Unidirectional, 4-20mA Output, 0.6% Accuracy, No Calibration Certificate, 3/16" Barbed Brass Pressure Fittings.

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Model 162	**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 Fitting** **A:** 3/16" **B:** 8mm **E:** 6.5mm (Barbed Brass)

Pressure Unit/Range/Type

in. W.C. (Unidirectional)	in. W.C. (Bidirectional)	Pascal (Unidirectional)	Pascal (Bidirectional)
W00R1D=0 to 0.1 in. W.C.	W0R05B=-0.05 to 0.05 in. W.C.	P0025D=0 to 25 Pa	P0010B=-10 to 10 Pa
W0R25D=0 to 0.25 in. W.C.	W00R1B=-0.1 to 0.1 in. W.C.	P0050D=0 to 50 Pa	P0025B=-25 to 25 Pa
W00R5D=0 to 0.5 in. W.C.	W0R25B=-0.25 to 0.25 in. W.C.	P0100D=0 to 100 Pa	P0050B=-50 to 50 Pa
W0001D=0 to 1 in. W.C.	W00R5B=-0.5 to 0.5 in. W.C.	P0250D=0 to 250 Pa	P0100B=-100 to 100 Pa
W02R5D=0 to 2.5 in. W.C.	W0001B=-1.0 to 1.0 in. W.C.	P0500D=0 to 500 Pa	P0250B=-250 to 250 Pa
W0005D=0 to 5 in. W.C.	W02R5B=-2.5 to 2.5 in. W.C.	P1000D=0 to 1000 Pa	P0500B=-500 to 500 Pa
W0010D=0 to 10 in. W.C.	W0005B=-5.0 to 5.0 in. W.C.	P2500D=0 to 2500 Pa	P1000B=-1000 to 1000 Pa
W0025D=0 to 25 in. W.C.	W0010B=-10 to 10 in. W.C.	P5000D=0 to 5000 Pa	P2500B=-2500 to 2500 Pa
W0050D=0 to 50 in. W.C.	W0025B=-25 to 25 in. W.C.	P100CD=0 to 10000 Pa	P5000B=-5000 to 5000 Pa
W0100D=0 to 100 in. W.C.	W0050B=-50 to 50 in. W.C.	P250CD=0 to 25000 Pa	P100CB=-10000 to 10000 Pa

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

Tel: 978-264-2966 · E-mail: sales@alphainstruments.com · Web: alphainstruments.com