



The Model 165 Series are low-range differential pressure transducers and transmitters. Each unit features a stainless steel pressure sensor, a stainless steel enclosure and a plastic cover, 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 165 Series are available for pressure range from 0.1"WC full scale to 100"WC full scale, Both unidirectional and bidirectional pressure ranges are offered.

The output of the Model 165 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 165 Pressure Transmitters is 4 to 20 mA. All units are temperature compensated.

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 165 Specifications

Performance Data	Standard	Optional	Optional
Accuracy* (at room temp)	± 1.0%FS	± 0.4%FS	± 0.25%FS
Non-Linearity (BFSL)	± 0.90%FS	± 0.33%FS	± 0.20%FS
Hysteresis	± 0.10%FS	± 0.10%FS	± 0.10%FS
Non-Repeatability	± 0.10%FS	± 0.10%FS	± 0.10%FS
Thermal Effects (Per °F)	± 0.025%FS	± 0.020%FS	± 0.015%FS
Compensated Range	40 to 170°F (4 to 77°C)		
Maximum Line Pressure	15PSI(100kPa)		
Overpressure	15PSI(100kPa) Proof Pressure. 30PSI(200kPa) Burst Pressure		
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
Output 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	5.8OZ/165g
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
- Meets CE Conformance Standards
- RoHS Compliant

Visit us Online:

www.alphainstruments.com

E-mail: sales@alphainstruments.com

978-264-2966

Model 165 Specifications

Electrical Data (Voltage)

Circuit 3-Wire (+EXC, -EXC, OUTPUT), Protected from Miswiring
 Excitation 12-32VDC/12-30VAC
 Output* 0-5VDC, 0-10VDC
 Output Impedance ≤ 5.0 OHMS

* Zero output: factory set at ± 25 mV(0-5VDC), ± 50 mV(0-10VDC)
 Span output: factory set at ± 25 mV(0-5VDC), ± 50 mV(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 from Miswiring
 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 ± 0.08 mA
 Span output: factory set at ± 0.08 mA
 Calibrated with a 250 OHM load and a 24VDC supply voltage.

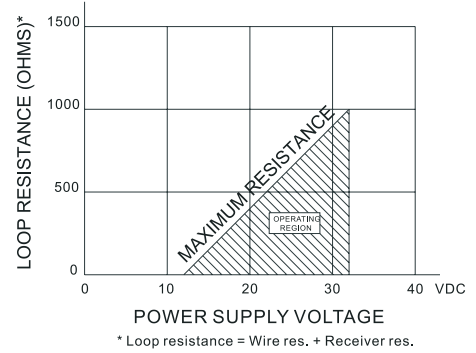
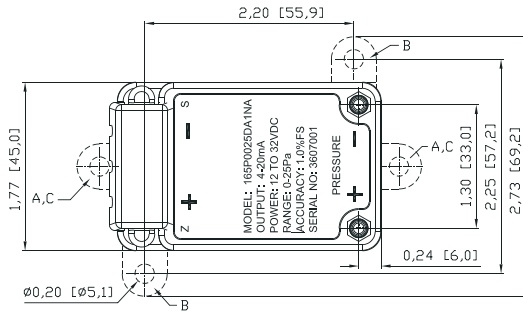


Diagram 2



DIMENSIONS ARE IN: INCH [mm]
 * A CURRENT OUTPUT UNIT IS SHOWN.

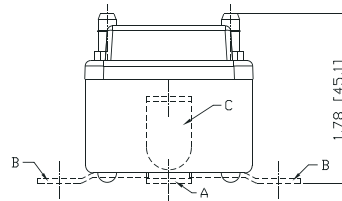
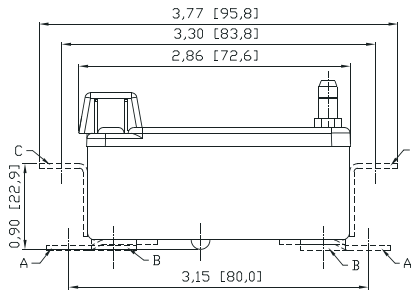


Diagram 1

Ordering Information

Code all blocks in table.

Example: 165W00R1DA1NA for 165 Transmitter, 0~0.1 in. WC Range, Unidirectional, 4-20mA Output, 1.0% Accuracy, No Calibration Certificate, Mounting Flanges "A".

Model	Unit	Range	Pressure Type	Output	Accuracy	Certificate	Mounting Flanges
165	P: Pascal W: in. W.C.	NNNN	Differential D: Unidirectional B: Bidirectional	A: 4-20mA B: 0-5VDC C: 0-10VDC	1: 1.0%FS 4: 0.4%FS 2: 0.25%FS	Y (with) N (without)	See Diagram 1
Pressure Unit/Range/Type							
in. W.C. (Unidirectional)		in. W.C. (Bidirectional)		Pascal (Unidirectional)	Pascal (Bidirectional)		
W00R1D=0~0.1 in. W.C.		W0R05B=0~ ± 0.05 in. W.C.		P0025D=0~25 Pa	P0010B=0~ ± 10 Pa		
W0R25D=0~0.25 in. W.C.		W00R1B=0~ ± 0.1 in. W.C.		P0050D=0~50 Pa	P0025B=0~ ± 25 Pa		
W00R5D=0~0.5 in. W.C.		W0R25B=0~ ± 0.25 in. W.C.		P0100D=0~100 Pa	P0050B=0~ ± 50 Pa		
W0001D=0~1 in. W.C.		W00R5B=0~ ± 0.5 in. W.C.		P0250D=0~250 Pa	P0100B=0~ ± 100 Pa		
W02R5D=0~2.5 in. W.C.		W0001B=0~ ± 1 in. W.C.		P0500D=0~500 Pa	P0250B=0~ ± 250 Pa		
W0005D=0~5 in. W.C.		W02R5B=0~ ± 2.5 in. W.C.		P1000D=0~1000 Pa	P0500B=0~ ± 500 Pa		
W0010D=0~10 in. W.C.		W0005B=0~ ± 5 in. W.C.		P2500D=0~2500 Pa	P1000B=0~ ± 1000 Pa		
W0025D=0~25 in. W.C.		W0010B=0~ ± 10 in. W.C.		P5000D=0~5000 Pa	P2500B=0~ ± 2500 Pa		
W0050D=0~50 in. W.C.		W0025B=0~ ± 25 in. W.C.		P100CD=0~10000 Pa	P5000B=0~ ± 5000 Pa		
W0100D=0~100 in. W.C.		W0050B=0~ ± 50 in. W.C.		P250CD=0~25000 Pa	P100CB=0~ ± 10000 Pa		

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