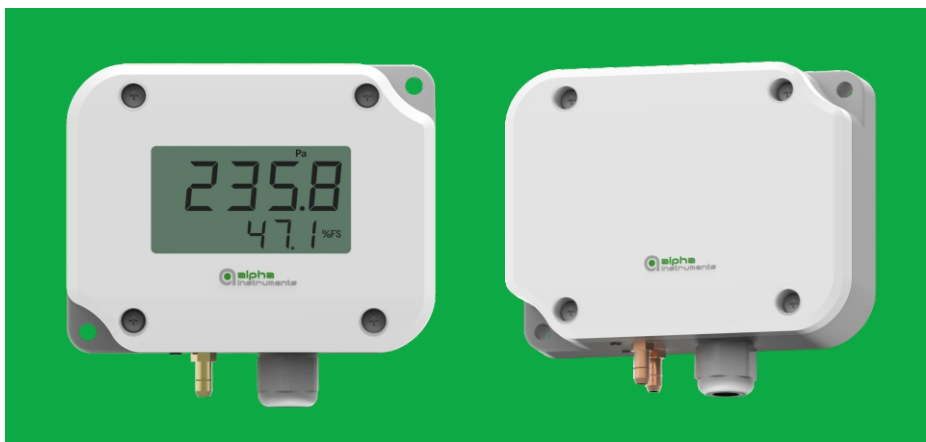


172 Model Low Differential Pressure Transmitter

alpha 阿尔法
微差压传感器 · From USA



The Model 172 series are low-range differential pressure transmitters with capacitive sensors. The patented stainless steel diaphragm sensor provides excellent corrosion resistance, repeatability, and long-term stability.

The series can sense differential or gauge pressure. Multiple output modes are offered for both unidirectional and bidirectional pressure ranges. All the units are temperature compensated from -20°C to 60°C. The thermal effect is less than $\pm 0.05\text{Pa}/^\circ\text{C}$. The highest accuracy is $\pm 0.25\%\text{FS}$ at room temperature.

Each unit features an adjustment button, making zero calibration easy. To check immediate data, an LCD display is optional. The series have IP65/NEMA 4 rated enclosures and can be applied in various fields. The powerful enclosure protects the units from damage and contamination on the construction site. It significantly reduces installation costs for users.

Performance Specifications

Parameters	Standard	Optional	Optional
Accuracy*(at room temp)	$\pm 1.0\%\text{FS}$	$\pm 0.40\%\text{FS}$	$\pm 0.25\%\text{FS}$
Non-Linearity(BFSL)	$\pm 0.97\%\text{FS}$	$\pm 0.37\%\text{FS}$	$\pm 0.20\%\text{FS}$
Hysteresis	$\pm 0.20\%\text{FS}$	$\pm 0.10\%\text{FS}$	$\pm 0.10\%\text{FS}$
Non-Repeatability	$\pm 0.10\%\text{FS}$	$\pm 0.10\%\text{FS}$	$\pm 0.10\%\text{FS}$
Compensated Range	-20°C to 60°C		
Overpressure	$\pm 15\text{PSI}$ (100kPa)		
Long Term Stability	<0.5% FS/YR		
Filter Coefficient	50ms, 500ms, 2s or 4s (Consult factory for other possible coefficients)		
Position Effect	Each unit is calibrated in the vertical position. For best accuracy, press the zero button to tare the unit if it is mounted in other positions. It is not necessary to adjust the sensitivity.		

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

Environmental and Physical Specifications

Operating Temperature	-20°C to 70°C
Storage Temperature	-40°C to 85°C
Pressure Fittings	3/16", 6.5mm or 8.0mm O.D. Barbed Brass
Electrical Connections	Terminal Block and PG-9 Cable Gland
Service	Typically Air or Similar Non-conducting Gases
Enclosure	PC+ABS, 94V-0 Rated
Weight	255g
Installation	See Diagram 1 for Outline and Dimensions

Applications:

- HVAC and VAV Control
- Medical Instruments and Equipments
- Environmental Pollution Control
- Clean and Isolation Rooms
- Power Plant Air Flow Monitor and Control
- Textile Machinery
- Gas Pipe Air Flow Monitor and Control
- Furnace Air Flow Control

Features:

- NEMA4/IP65 Rated Housing
- LCD Display Optional
- Push Button Zero Calibration
- Incorrect Wiring Protection
- RoHS Compliant
- Back Connection Available

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Electrical Specifications

Voltage Version

Circuit	3-Wire (+EXC, -EXC, OUTPUT), Incorrect Wiring Protection
Excitation	13-30VDC (Other power supplies are optional)
Output signals	0-5VDC, 0-10VDC/RS485
Output Impedance	≤5.0 OHM

* Zero Output: Factory setting is ±25mV (0-5VDC), ±50mV (0-10VDC)

Span Output: Factory setting is ±25mV (0-5VDC), ±50mV (0-10VDC)

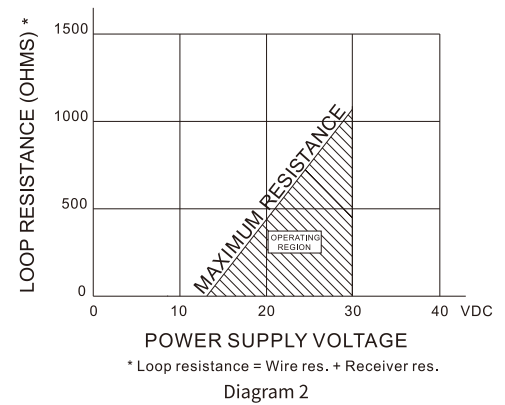
Calibrated with a 50K OHM load. Operable with a load greater than 5K OHM (0-5VDC) or 10K OHM (0-10VDC)

Current Version

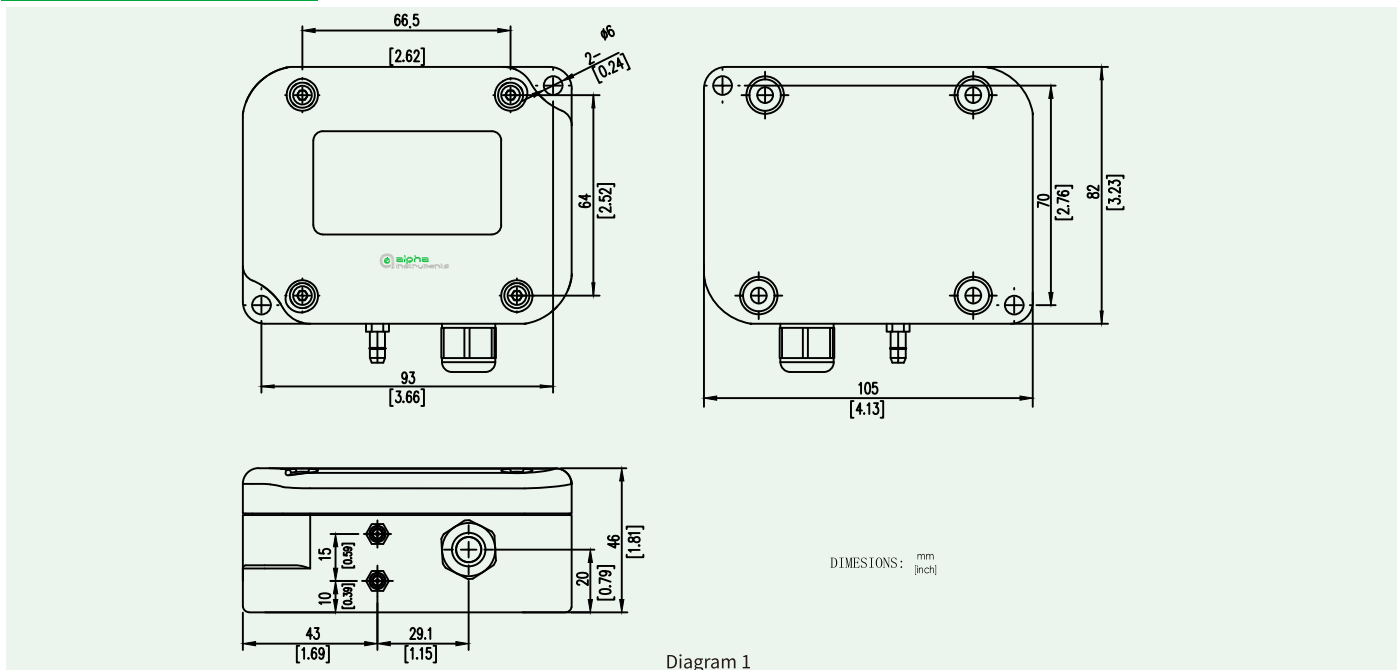
Circuit	2-Wire (+EXC, -EXC), Incorrect Wiring Protection
Output signal	4-20mA/RS485
Bidirectional Output at Zero	12mA as Standard
Excitation	13-30VDC (See diagram 2 for maximum loop resistance)
External Load	≤1050 OHM

* Zero Output: Factory setting is ±0.08mA

* Calibrated with a 24 VDC power supply and a 250 Ω load



Outline and Dimensions



Ordering Information

Example: 172W00R4DA1NYA for 172 Transmitter, 0 to 0.4 in. WC Range, Unidirectional, 4-20mA Output, 1.0%FS Accuracy, Without Calibration Certificate, With LCD Display, 3/16" Barbed Brass Pressure Fittings

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Model	Unit	Range	Pressure Type	Output	Accuracy	Certificate	LCD Display	Pressure Fitting
	P: Pascal W: in. W.C.	NNNN	D: Unidirectional B: Bidirectional	A: 4-20mA B: 0-5V C: 0-10V D: RS485 I: I ² C N: None S: Special	1: 1.0%FS 4: 0.4%FS 2: 0.25%FS	Y: With N: Without	Y: With N: Without	A: 3/16" B: ϕ8 C: ϕ6.5 (Barbed Brass)
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		P0010B=-10 to 10 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=-1.0 to 1.0 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		P2000B=-2000 to 2000 Pa
W0100D=0 to 100 in. WC			W0050B=-50 to 50 in. WC			P250CD=0 to 25000 Pa		P5000B=-5000 to 5000 Pa
								P100CB=-10000 to 10000 Pa