



The model 178A Series are low-range differential pressure transmitters. Each unit features a 3-1/2 digit LCD to show the pressure, also a push button switch (inside) for zero pressure calibration.

The 178A series has a SS304 front panel and an IP65/NEMA 4 rated aluminum die casting enclosure, good for many indoor and outdoor applications. The pressure ranges from 0.1"WC to 100"WC, unidirectional or bidirectional. The output is 2-wire 4 to 20mA, fully protected against short circuiting and incorrect wiring.

All units are temperature compensated. 0.8%, 0.4% and 0.25% accuracies are available. The patented stainless steel diaphragm sensor provides good corrosion resistance, excellent repeatability and long term stability.

Model 178A Specifications

Performance Data	Standard	Optional	Optional
Accuracy* (at room temp)	± 0.8%FS	± 0.4%FS	± 0.25%FS
Non-Linearity (BFSL)	± 0.77%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 (Per °F)	± 0.025%FS	± 0.020%FS	± 0.015%FS
Compensated Range	35 to 140°F (2 to 60°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, push the zero of the unit if it is mounted in other position. It is not necessary to adjust the span.		

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

Environmental Data and Physical Description

Operating Temperature	32 to 140°F (0 to 60°C)
Storage Temperature	-40 to 185°F (-40 to 85°C)
Electrical Termination	Pluggable Terminal Block with PG-9 Strain Relief
Pressure Fittings	3/16", 6.5mm or 8.0mm O.D. Barbed Brass for Push-on Tubing
Output Adjustment	Push button for Zero, Potentiometer for span
Pressure Media	Typically Air or similar non-conducting Gases
Enclosure	Die-cast aluminum, SS304 front panel, rated NEMA 4/IP65.
Weight	18OZ/508g
Installation	Front Panel Mounting

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

- 3-1/2 Digit LCD Display
- Incorrect Wiring Protection
- 15 PSI Over Pressure
- SS304 Front Panel Mounting
- Rugged Aluminum Housing Rated NEMA 4/IP65
- RoHS Compliant
- Pressure Ranges as Low as 10Pa Only!

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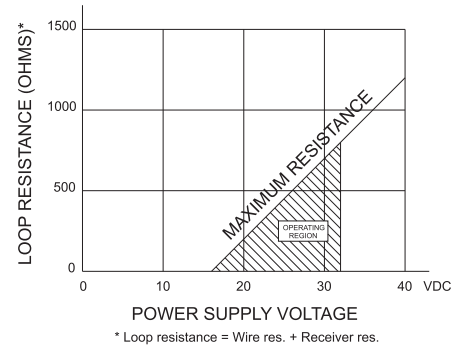
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Model 178A Specifications

Electrical Data (Current)

Circuit	2-Wire (+EXC, -EXC) , Protected from Miswiring
Excitation	16-32VDC (see diagram 2 for maximum loop resistance)
Output*	4-20mA**
Bidirectional Output at Zero	12mA as standard
External Load	0-800 OHM

* Calibrated with a 250 OHM load and a 24VDC supply voltage
 ** Span Factory Setting: $\pm 0.5\%FS$



* Loop resistance = Wire res. + Receiver res.

Diagram 2

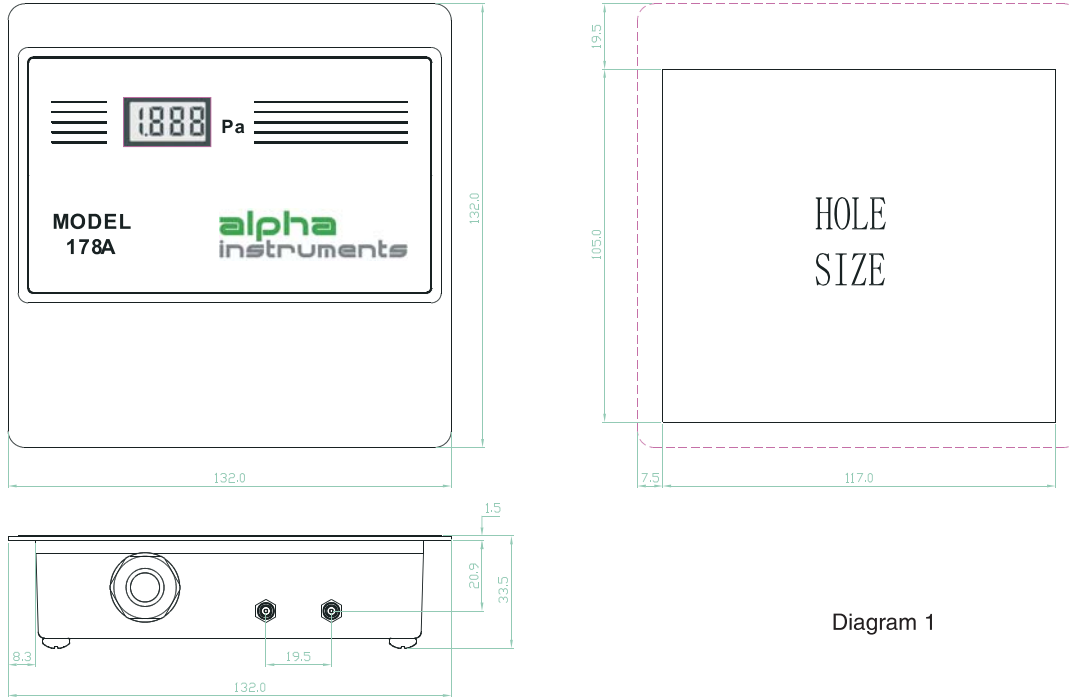


Diagram 1

Ordering Information

Code all blocks in table.

Example: 178AP0100DA8NA for 178A Transmitter, 0~100Pa Range, Unidirectional, 4~20mA Output, 0.8% Accuracy, No Calibration Certificate, 3/16" Barbed Brass Pressure Fittings, Panel Mount.

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Model	Unit	Range	Pressure Type	Output	Accuracy	Certificate	Pressure Fitting	
178A	P: Pascal	NNNN	Differential D: Unidirectional B: Bidirectional	A: 4-20mA	8: 0.8%FS 4: 0.4%FS 2: 0.25%FS	Y (with) N (without)	A: 3/16" B: 8mm E: 6.5mm (Barbed Brass)	
Pressure Unit/Range/Type								
Pascal (Unidirectional)			Pascal (Bidirectional)					
P0025D=0~25 Pa			P0010B=0~ ± 10 Pa					
P0050D=0~50 Pa			P0025B=0~ ± 25 Pa					
P0100D=0~100 Pa			P0050B=0~ ± 50 Pa					
P0250D=0~250 Pa			P0100B=0~ ± 100 Pa					
P0500D=0~500 Pa			P0250B=0~ ± 250 Pa					
P1000D=0~1000 Pa			P0500B=0~ ± 500 Pa					
P2500D=0~2500 Pa			P1000B=0~ ± 1000 Pa					
P5000D=0~5000 Pa			P2500B=0~ ± 2500 Pa					
P100CD=0~10000 Pa			P5000B=0~ ± 5000 Pa					
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.