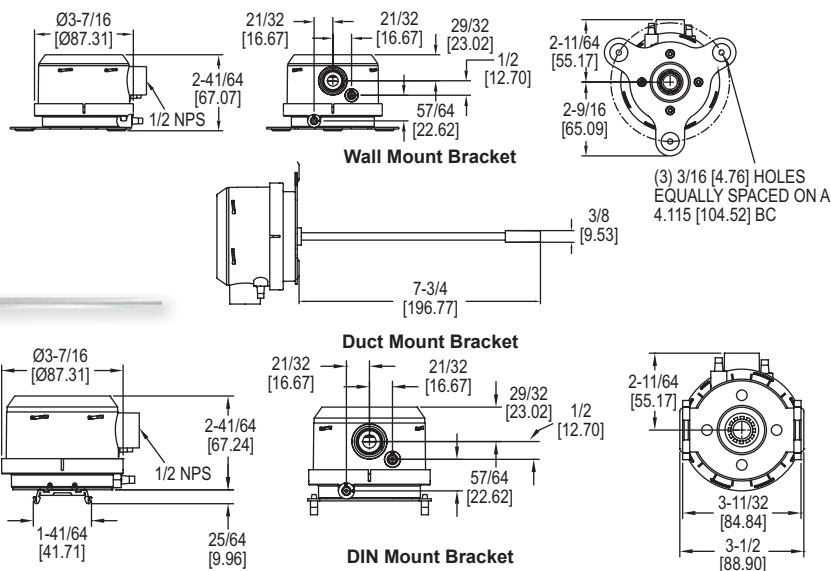
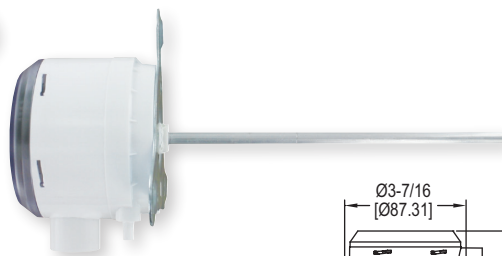


# MAGNESENSE® II DIFFERENTIAL PRESSURE TRANSMITTER

Monitors Pressure, Air Velocity and Air Flow, BACnet/Modbus® Communications



The **SERIES MS2** Magnesense® II Differential Pressure Transmitter combines the proven stable piezo technology and the versatility of our original Series MS with additional features to reduce installation time and simplify ordering. Like the original Series MS, the second generation transmitter can be used as a linear pressure output or a linear velocity output with the square root extraction done in the transmitter. Additional parameters have been included to expand the square root capability to include flow measurements.

## FEATURES/BENEFITS

- Field selectable ranges and output signal reduce inventory and the chances of ordering an incorrect part
- BACnet or Modbus serial communications reduce wiring cost by daisy-chaining the transmitters
- Our integral field-upgradeable display or plug-in remote display tool save upfront material cost and allow for local viewing of measurements

## APPLICATIONS

- Filter monitoring in air handler units
- Building pressure in pharmaceutical-semiconductor clean rooms
- Duct static pressure in commercial buildings
- Air velocity/flow in VAV systems

## SPECIFICATIONS

**Supported Baud Rates:** 9600, 19200, 38400, 57600, 76800, 115200.

**Data Size:** 8.

**Parity:** None.

**Stop Bits:** 1.

**Service:** Air and non-combustible, compatible gases.

**Wetted Materials:** Consult factory.

**Typical Accuracy:**  $\pm 1\%$  FS for 0.15 in w.c. (40 Pa), 0.25 in w.c. (50 Pa), 0.5 in w.c. (125 Pa), 2 in w.c. (500 Pa), 3 in w.c. (750 Pa), 5 in w.c. (1250 Pa), 10 in w.c. (2 kPa), 15 in w.c. (3 kPa), 25 in w.c. (5 kPa), 28 in w.c. (6.975 kPa);  $\pm 2\%$  FS for 0.1 in w.c. (25 Pa), 1 in w.c. (250 Pa), and all bi-directional ranges.

**Stability:**  $\pm 1\%$  / year FSO.

**Temperature Limits:** 0 to 150°F (-18 to 66°C).

**Pressure Limits:** 1 psi max., operation; 10 psi burst.

**Power Requirements:** 10 to 35 VDC (2-wire), 17 to 36 VDC or isolated 21.6 to 33 VAC (3-wire).

**Output Signals:** 4 to 20 mA (2-wire), 0 to 5 VDC, 0 to 10 VDC (3-wire).

**Response Time:** Adjustable: 0.5 to 15 sec. time constant. Provides a 95% response time of 1.5 to 45 seconds.

**Zero & Span Adjustments:** Digital push buttons.

**Loop Resistance:** Current output: 0 to 1250  $\Omega$  max; Voltage output: Min. load resistance 1 k $\Omega$ .

**Current Consumption:** 40 mA max.

**Display (Optional):** 5 digit LCD.

**Electrical Connections:** 3-wire removable European style terminal block for 16 to 22 AWG.

**Electrical Entry:** 1/2" NPS thread.

**Process Connection:** 3/16" ID tubing (5 mm ID); Max. OD 9 mm.

**Enclosure Rating:** IP66.

**Mounting Orientation:** Diaphragm in vertical position.

**Weight:** 8.0 oz (230 g).

**Agency Approvals:** BTL, CE.

## MODEL CHART

Model	in w.c.	Pa	mm w.c.	kPa
<b>MS2-W101</b>	0.10, 0.15, 0.25, 0.50	25, 40, 50, 125	2.5, 4, 6, 10	0.025, 0.04, 0.05, 0.125
<b>MS2-W111</b>	$\pm 0.10$ , $\pm 0.15$ , $\pm 0.25$ , $\pm 0.50$	$\pm 25$ , $\pm 40$ , $\pm 50$ , $\pm 125$	$\pm 2.5$ , $\pm 4$ , $\pm 6$ , $\pm 10$	$\pm 0.025$ , $\pm 0.04$ , $\pm 0.05$ , $\pm 0.125$
<b>MS2-W102</b>	1, 2, 3, 5	250, 500, 750, 1250	25, 50, 75, 125	0.25, 0.5, 0.75, 1.25
	$\pm 1$ , $\pm 2$ , $\pm 3$ , $\pm 5$	$\pm 250$ , $\pm 500$ , $\pm 750$ , $\pm 1250$	25, 50, 75, 125	0.25, 0.5, 0.75, 1.25
<b>MS2-W103</b>	10, 15, 25, 28	2500, 3500, 5000, 6975	250, 350, 500, 697.5	2.5, 3.5, 5.0, 6.975
	$\pm 10$ , $\pm 15$ , $\pm 25$ , $\pm 28$	$\pm 2500$ , $\pm 3500$ , $\pm 5000$ , $\pm 6975$	$\pm 250$ , $\pm 350$ , $\pm 500$ , $\pm 697.5$	$\pm 2.5$ , $\pm 3.5$ , $\pm 5.0$ , $\pm 6.975$

**Note:** For duct mount static probe change W to D. **Example:** MS2-D101

For DIN rail mounting change W to N. **Example:** MS2-N101

## OPTIONS

To order add suffix:	Description
<b>-LCD</b>	Units with display
<b>Example:</b> MS2-W101-LCD	
<b>-BC</b>	BACnet Communications
<b>Example:</b> MS2-W101-BC	
<b>-MC</b>	Modbus® Communications
<b>Example:</b> MS2-W101-MC	
<b>-NIST</b>	NIST traceable calibration certificate
<b>Example:</b> MS2-W101-NIST	
<b>-FC</b>	Factory calibration certificate
<b>Example:</b> MS2-W101-FC	

## ACCESSORIES

Model	Description
<b>A-151</b>	Cable gland for 5 to 10 mm diameter cable
<b>A-MS2-LCD</b>	Field upgradeable display
<b>A-435-A</b>	Remote display tool
<b>A-480</b>	Plastic static pressure tip
<b>A-481</b>	Installer kit; includes 2 plastic static pressure tips and 7 ft (2.1 m) of PVC tubing
<b>A-489</b>	4" 303 SS straight static pressure tip with flange
<b>A-302F-A</b>	4" 303 SS static pressure tip with mounting flange; for 3/16" ID rubber or plastic tubing
<b>SCD-PS</b>	100 to 240 VAC/VDC to 24 VDC power supply