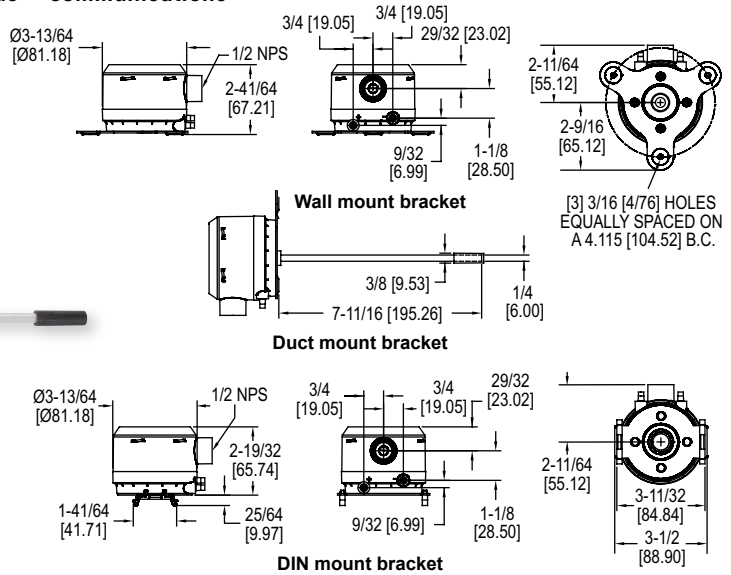


# MAGNESENSE® II DIFFERENTIAL PRESSURE TRANSMITTER

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



The **Series MS2 Magnesense® II Differential Pressure Transmitter** combines stable piezo sensing technology 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 on the MS2 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:** ±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); ±2% FS for 0.1 in w.c. (25 Pa), 1 in w.c. (250 Pa), and all bi-directional ranges.  
**Stability:** ±1% / year FSO.  
**Temperature Limits:** 0 to 150°F (-18 to 66°C).  
**Pressure Limits:** 1 psi max., operation; 10 psi burst.  
**Power Requirements:** 10-35 VDC (2-wire), 17-36 VDC or isolated 21.6-33 VAC (3-wire).  
**Output Signals:** 4-20 mA (2-wire), 0-5 VDC, 0-10 VDC (3-wire).  
**Response Time:** Averaging 0 to 240 s, 2.5 Hz sample rate, 1.5 to 228 s for 95% step change.  
**Zero & Span Adjustments:** Digital push-buttons.  
**Loop Resistance:** Current output: 0 to 1250 Ω max; Voltage output: Min. load resistance 1 kΩ.  
**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; Accessory (A-151): Cable gland for 5 to 10 mm diameter cable.  
**Process Connection:** 3/16" ID tubing (5 mm ID); Max. OD 9 mm.  
**Enclosure Rating:** NEMA 4X (IP66).  
**Mounting Orientation:** Any orientation.  
**Weight:** 8.0 oz (230 g).  
**Agency Approvals:** BTL, CE.

MODEL CHART				
Model	in w.c.	Pa	mm w.c.	kPa
MS2-W101	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
MS2-W111	±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
MS2-W102	1, 2, 3, 5	250, 500, 750, 1250	25, 50, 75, 125	0.25, 0.5, 0.75, 1.25
MS2-W112	±1, ±2, ±3, ±5	±250, ±500, ±750, ±1250	25, 50, 75, 125	0.25, 0.5, 0.75, 1.25
MS2-W103	10, 15, 25, 28	2500, 3500, 5000, 6975	250, 350, 500, 697.5	2.5, 3.5, 5.0, 6.975
	±10, ±15, ±25, ±28	±2500, ±3500, ±5000, ±6975	±250, ±350, ±500, ±697.5	±2.5, ±3.5, ±5.0, ±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
-LCD	Units with display
<b>Example:</b> MS2-W101-LCD	
-BC	BACnet Communications
<b>Example:</b> MS2-W101-BC	
-MC	Modbus® Communications
<b>Example:</b> MS2-W101-MC	
-NIST	NIST traceable calibration certificate
<b>Example:</b> MS2-W101-NIST	
-FC	Factory calibration certificate
<b>Example:</b> MS2-W101-FC	

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

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 Process Tubing Options: See page 455 (Gage Tubing Accessories)