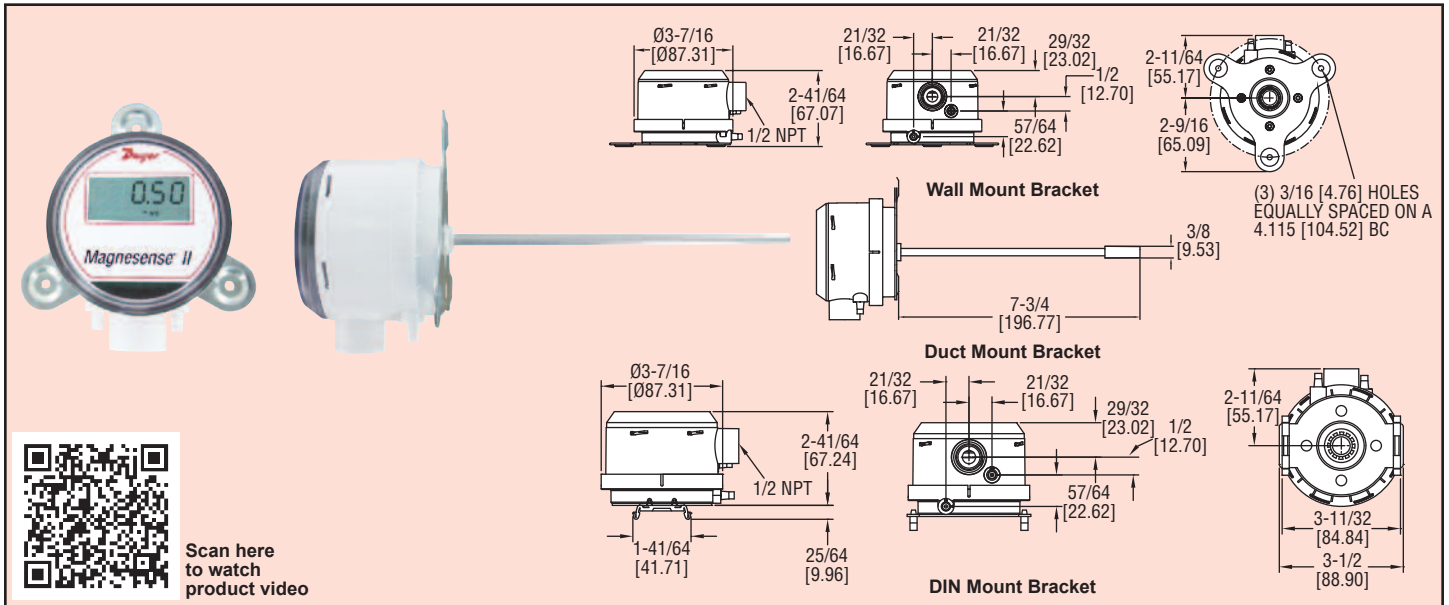


Series
MS2

Magnesense® II Differential Pressure Transmitter

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



The Series MS2 Magnesense® II Differential Pressure Transmitter combines the proven stable Hall Effect sensing technology of our original Series MS with additional features to reduce installation time and simplify ordering. In this second generation transmitter, we have added additional field selectable pressure ranges so that each model can have four selectable ranges along with four additional bidirectional ranges. When using the pluggable integral display or the portable remote display tool, both Metric and English engineering units can be selected via on board dip switches. Dual current and voltage outputs allow users to simultaneously take either a current or voltage output to their building controller and have a local test circuit for verification of the output reading. The voltage output can be selected to be either 0 to 5 VDC or 0 to 10 VDC, while the current is always 4 to 20 mA. Both the current and voltage output can also be inverted. The MS2 can also be ordered with either a BACnet® or MODBUS® Communications protocol output that will allow the transmitters to be daisy-chained together.

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.

BACnet® and Modbus® Communications protocol recommend limiting the number of nodes in any segment to 32. Therefore, the transceiver may be rated at one unit load. Fractional loads are also acceptable. The MS2 accounts as an eighth of a load on the MSTP network.

Model	in w.c.	Pa	mm w.c.	kPa
MS2-W101	0.10, 0.15,	25, 40 50,	2.5, 4, 6,	0.025, 0.04,
	0.25, 0.50	125	10	0.05, 0.125
MS2-W111	±0.10, ±0.15,	±25, ±40, ±50,	±2.5, ±4,	±0.025, ±0.04,
	±0.25, ±0.5	±125	±6, ±10	±0.05, ±0.125
MS2-W102	1, 2, 3, 5	250, 500, 750,	25, 50, 75,	0.25, 0.5, 0.75,
		1250	125	1.25
MS2-W112	±1, ±2, ±3,	±250, ±500,	±25, ±50,	±0.25, ±0.50,
	±5	±750, ±1250	±75, ±125	±0.75, ±0.125
MS2-W103	10, 15, 25,	2500, 3500,	250, 350,	2.5, 3.5, 5.0,
	28	5000, 6975	500, 697.5	6.975

OPTIONS

Add -LCD to end of model numbers for units with display

Example: MS2-W101-LCD

Add -BC to end of model numbers for BACnet Communications

Example: MS2-W101-BC

Add -MC to end of model numbers for Modbus® Communications

Example: MS2-W101-MC

Add -NIST to end of model numbers for NIST Traceable Certificate

Example: MS2-W101-NIST

Add -FC to end of model numbers for Factory Calibration Certificate

Example: MS2-W101-FC

Change W to D for Duct Mount Static Probe

Example: MS2-D101

Change W to N for DIN Rail Mounting

Example: MS2-N101

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" (40 Pa), 0.25" (50 Pa), 0.5" (100 Pa), 2" (500 Pa), 3" (750 Pa), 5" (1250 Pa), 10" (2 kPa), 15" (3 kPa), 25" (5 kPa), 28" (6.975 kPa); ±2% FS for 0.1" (25 Pa), 1" (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 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 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.

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.

ACCESSORIES

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 to 240 VAC/VDC to 24 VDC Power Supply

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Process Tubing Options: See page 547 (Gage Tubing Accessories)