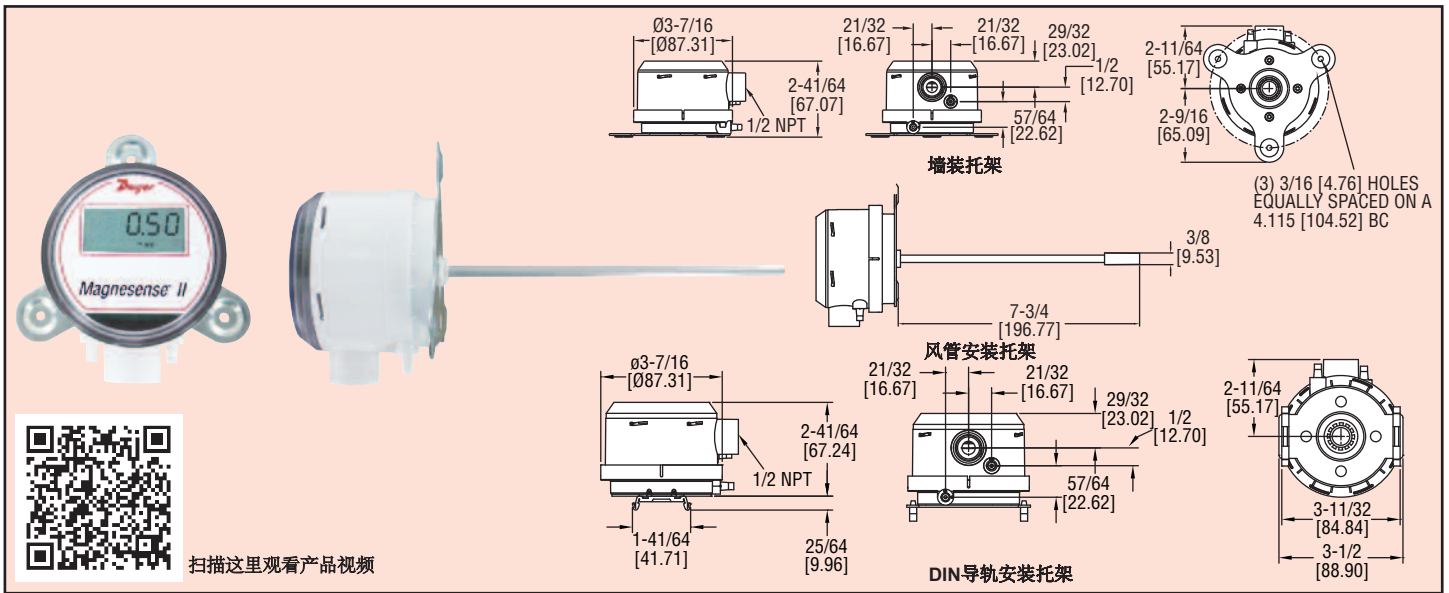




MS2  
系列

# Magnesense® II 微差压变送器

监测微差压，风速，风量，带BACnet/Modbus® 通讯方式



MS2系列Magnesense® II微差压变送器和我们已经有的MS系列一样采用霍尔效应测量原理，并增加了多种功能，不仅节省安装时间和费用，而且订购方便简单。我们在这个第二代的微差压变送器上增设了现场选择四种量程范围，包括四种正负组合量程。当配有自带数显或使用便携式数显配件时，可以通过跳线开关选择英制或公制的工程单位。输出信号可以为电流或电压输出，这样用户可以在现场很方便连接控制装置或进行现场测试。电压输出可选择0-5VDC或0-10VDC，电流输出为4-20mA。电流输出和电压输出都可以反相输出。MS2系列可选择带有BACnet®或MODBUS®通讯协议输出方式，这样，多个传感器可以采用链式拓扑结构连接在一起。

和我们已有的MS系列一样，这个第二代变送器不仅能线性输出差压信号，还可通过自带的开方的功能得到风速的线性输出。并可设置参数用于风量的线性输出。

BACnet®和Modbus®通讯协议建议每段不超过32个节点。因此，收发器能接受全位负载。也可以接受分负载。MS2在多数数据传输平台MSTP中作为第八位负载。

## 技术指标

兼容波特率：9600, 19200, 38400, 57600, 76800, 115200.

数据位：8.

奇偶校验：None.

停止位：1.

介质：空气或其它不可燃气体。

材质：咨询工厂。

精度：当量程为0.25" (50 Pa), 0.5" (100 Pa), 2" (500 Pa), 5" (1250 Pa), 10" (2 kPa), 15" (3 kPa), 25" (5 kPa)时，精度为± 1%；当量程为0.1" (25 Pa)以及所有正负组合量程，精度为± 2% FS。

稳定性：± 1% / 年 FSO。

温度限制：0 到 150°F (-18to 66°C)。

耐压：最大1 psi。

泄放压力：10psi。

电源：10 - 35VDC (两线)，17 - 36VDC或隔离21.6 - 33 VAC (三线)。

输出信号：4 - 20mA (两线)；0 - 5VDC, 0-10VDC (三线)。

响应时间：0.5到15秒时间常数可调。1.5到45秒达到9 5%的响应。

零点和量程调整：数字按键。

回路电阻：电流输出：最大0 - 1250 Ω；电压输出：最小1 kΩ。

电流消耗：最大40mA。

显示方式 (可选)：5位LCD数显。

电气连接：三线连接的 (16 - 26AWG) 可移除接线端排。

电线穿管：1/2"NPS螺纹。

过程连接：3/16"内径管 (5mm内径)；最大外径9 mm。

外壳防护等级：IP65。

安装方位：隔膜垂直于地面的方向。

重量：8.0 oz (230 g)。

机构认证：BTL, CE。

型号	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, ±0.5	±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, ±0.50, ±0.75, ±0.125
MS2-W103	10, 15, 25, 28	2500, 3500, 5000, 6975	250, 350, 500, 697.5	2.5, 3.5, 5.0, 6.975

## 选项：

在型号后面添加后缀-LCD：自带数显。

(例：MS2-W101-LCD)

在型号后面添加后缀-BC：带BACnet通讯协议

(例：MS2-W101-BC)

在型号后面添加后缀-MC：带Modbus通讯协议

(例：MS2-W101-MC)

在型号后面添加后缀-NIST：带NIST溯源证书

(例：MS2-W101-NIST)

在型号后面添加后缀-FC：带工厂校准证书

(例：MS2-W101-FC)

将型号中的W改为D：管道安装方式的静压探头

(例：MS2-D101)

将型号中的W改为N：导轨DIN安装方式

(例：MS2-N101)

## 附件及配件：

A-151, 用于5-10mm直径电缆的填料函

A-MS2-LCD, 可现场替换的LCD显示表

A-435-A, 分体式LCD显示表

A-480, 塑料静压取压头

A-481, 安装套件，包括2个塑料静压取压头和7 ft (2.1 m)长的 PVC管

A-489, 4"带法兰的303不锈钢直式静压取压头

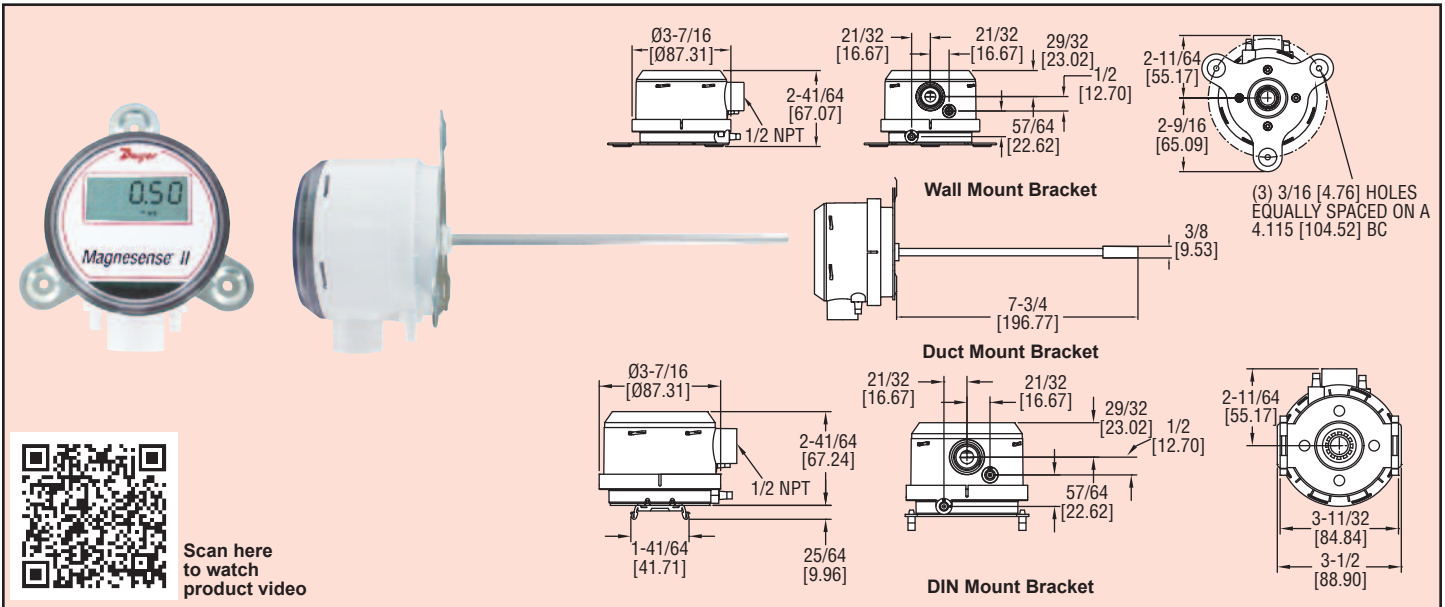
A-302F-A, 4"带法兰的303不锈钢静压取压头。用于 3/16"内径的橡胶管或塑料管

SCD-PS, 从 100 - 240 VAC/VDC转换到 24 VDC 的电源转换器



# 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