



AMS Series Transducers (AMS8100, AMS8100LR) DELUXE PRESSURE TRANSDUCER WITH LCD DISPLAY

Ruskin AMS Series Transducers are extremely accurate and economical low-pressure transducers. It is the number one choice for air measurement applications using velocity pressure air measurement technology. The AMS Series Transducers feature a large four-digit LCD display with three status LEDs, and includes short circuit protected out-puts, and is tolerant of reverse polarity. With selectable field select-table range transducers when air measurement range is unknown. Microprocessor-controlled Auto-Zeroing feature provides absolute accuracy at zero differential. Recommended for use with the Ruskin AMS series, AMP series and AML series air measurement stations. The unit installs quickly by connecting standard 1/8" I.D. tubing to



STANDARD CONSTRUCTION

HOUSING

Hinged, 3.63" x 4.51" x 2.22" (92.1 x 114.7 x 56.5), UV-resistant Polycarbonate, UL94, V-0; IP-44, NEMA2 rated

PRESSURE PORT FITTINGS:

Barbed Brass accepts 1/8" or 3/16" I.D. Tubing

SENSOR

Piezoresistive silicon pressure sensor

FIELD SELECTABLE OUTPUT RANGES

0 to 10 V, 2 to 10 V; 0 to 5 V; 4 to 20 mA

POWER REQUIREMENTS

13 - 40 VDC or 18 - 32 VAC (0 - 10 or 2 - 10 V Output, 3 wires)
7 - 40 VDC or 18 - 32 VAC (0 - 5 or 1 - 5 V Output, 3 wires)
7 - 40 VDC (4 to 20 mA Output, 2 wires)

POWER CONSUMPTION

4.9 mA max DC at 0 to 5 VDC or 0 to 10 VDC Output
0.12VA max AC at 0 to 5 VDC or 0 to 10 VDC Output
20 mA max. DC only at 4 to 20 mA Output

LOAD RESISTANCE:

0 to 5 V or 0 to 10 V output 6K to 10K Ω minimum
4 to 20 mA Output 850 Ω Maximum @ 24 VCD

FIELD SELECTABLE RANGES (INCHES WATER COLUMN)

AMS8100LR: 0-0.1", 0-0.25", 0-0.50", 0-0.75", 0-1.0"

AMS8100: 0-0.1", 0-0.25", 0-0.50", 0-1.0", 0-2.5"

OVERPRESSURE

Proof: 300 WC (10.83 PSI)

ACCURACY at 72°F: $\pm 0.25\%$ of range, $\pm 0.5\%$ of range for the three lowest ranges

AUTO-ZERO FUNCTION

Microprocessor Controlled

TEMPERATURE LIMITS

Environmental Operation Range:

-4°F to 140°F (-20°C to 60°C)

Storage Temperature: -40°F to 203°F (-40°C to 95°C)

Temperature Error Low Range:

0.04% FS/°F (0.07% FS/°C), (± 0.1 " W.C. @ -4 to 140°F (-20 to 60°C)

OPERATING RH RANGE

0 to 95% non-condensing

STABILITY:

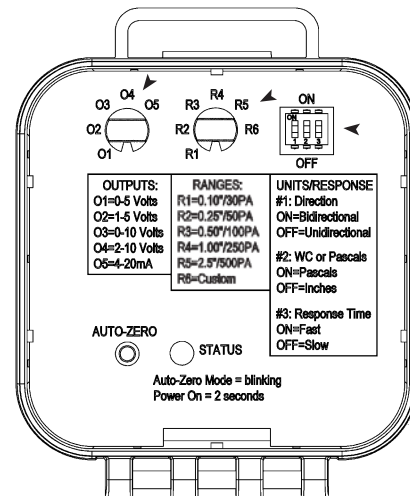
$\pm 0.25\%$ Full Scale (FS) per year

Notes:

- Dimensions in inches, parenthesis () indicate millimeters.
- Refer to installation manual for additional details



5 YEAR LIMITED WARRANTY



AMS8100 SHOWN

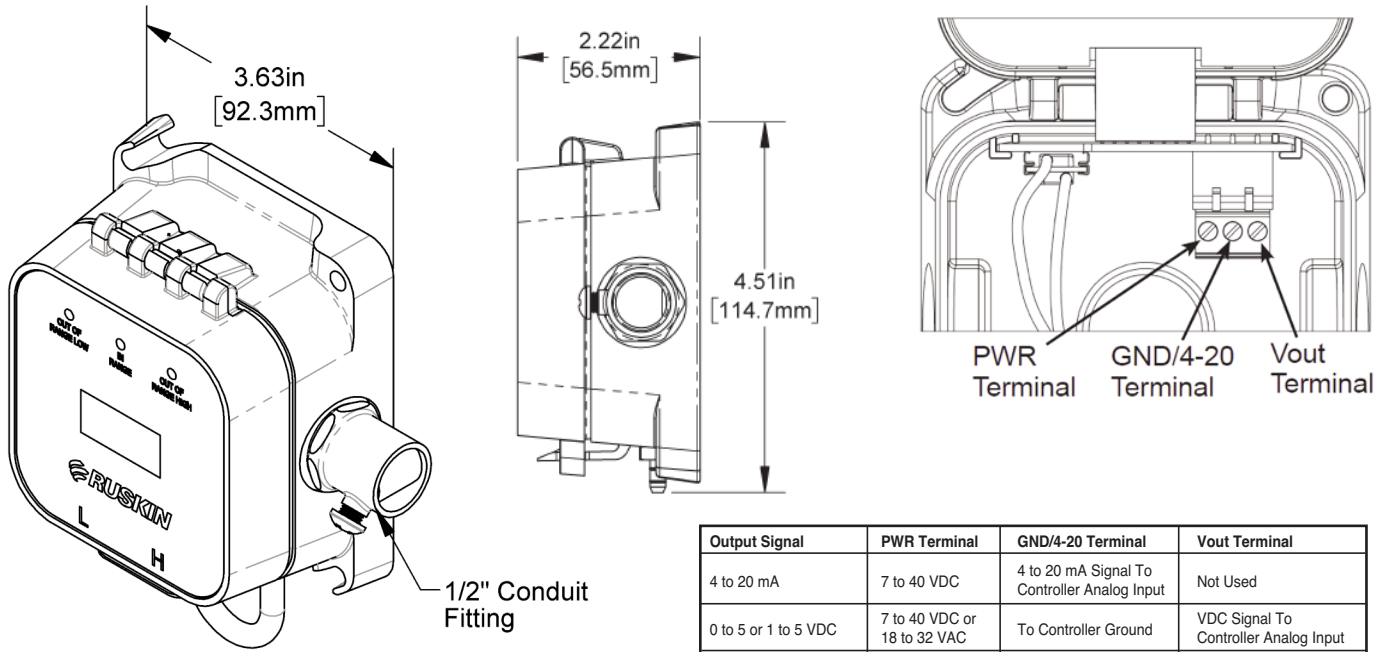
STANDARD FEATURES

- 10 Field Selectable Pressure Ranges and 5 Field Selectable Outputs
- LCD display shows pressure over the entire operational range regardless of which pressure range is selected
- Three LEDs on the face of the unit indicate when the pressure is "Out of Range Low", "In Range" or "Out of Range High".
- Output, Range, Units, Directionality, and Response Time can be set without tools or power
- Free NIST Certificate Included with each unit.

VARIATIONS

The AMS8100 is available in a 0 to 2.5 Inch Water Column range for applications where velocities are greater than 2,000 FPM.

DIMENSIONAL DATA



Output Signal	PWR Terminal	GND/4-20 Terminal	Vout Terminal
4 to 20 mA	7 to 40 VDC	4 to 20 mA Signal To Controller Analog Input	Not Used
0 to 5 or 1 to 5 VDC	7 to 40 VDC or 18 to 32 VAC	To Controller Ground	VDC Signal To Controller Analog Input
0 to 10 or 2 to 10 VDC	13 to 40 VDC or 18 to 32 VAC	To Controller Ground	VDC Signal To Controller Analog Input

FIELD SELECTABLE RANGES AND OUTPUTS

AMS8100LR (standard)	
Inches WC	Pascals
0 to 0.10	0 to 30
0 to 0.25	0 to 50
0 to 0.50	0 to 100
0 to 0.75	0 to 175
0 to 1.00	0 to 250

AMS8100 (optional)	
Inches WC	Pascals
0 to 0.10	0 to 25
0 to 0.25	0 to 65
0 to 0.50	0 to 125
0 to 0.75	0 to 175
0 to 1.00	0 to 250
0 to 2.50	0 to 625

Ruskin recommends that the pressure ports point down so that any condensation that collects in the tubing may not enter the transmitter. It is good practice to leave "drip loops" in the tubing just before the transmitter.

Certified to CE standards for electrostatic discharge, radiated susceptibility, electrical fast transient, surge, conducted immunity, voltage fluctuations, power frequency magnetic fields, and voltage dips.

*Ruskin recommends that you do not run wiring for the pressure transmitter in the same conduit as line voltage wiring or with wiring used to supply highly inductive loads such as motors, generators and coils.

PARAGRAPH SPECIFICATION

Furnish and install, at locations shown on plans or as in accordance with schedules, an air measuring station pressure transducer, with integral 4 character LCD display indicating actual differential pressure. The transducer shall be housed in a polycarbonate enclosure that bears an IP44 rating. Enclosure shall have a hinged cover for access to all switches for field adjustment. Switches shall allow for field selection of 0-5 or 1-5 VDC, 0-10 or 2-10 VDC, or 4-20 mA output signal. Additionally, settings shall accommodate field selection of a minimum

of five pressure ranges from 0" to 1.0" water column (0" to 2.5" optional). The transducer shall have an auto-zero function. The transducer assembly shall contain a piezoresistive silicon pressure sensor. Accuracy of the transducer shall be $\pm 0.5\%$ on 0 to 0.1" range and 0.25" range, $\pm 0.25\%$ on all other ranges. Stability shall be $\pm 0.25\%$ (of span selected) per year. Transducer shall be, in all respects, equivalent to Ruskin Model AMS8100 or AMS8100LR and shall be compatible with all Ruskin air measuring probes and stations.



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