



PRECAUTIONS

- Remove power before wiring. Never connect or disconnect wiring with the power applied. Do not allow live wires to touch the circuit board.
- An isolation transformer is recommended when powering the device with 24 VAC.
- Do not run the wiring in any conduit with line voltage.
- Failure to wire devices with the correct polarity when using a shared transformer may result in damage to any device powered by the shared transformer.
- Do not remove the cover. All user features are accessible from the outside of the unit.

MEDIA

The MLP2 can be used to monitor the differential pressure in any application that uses dry air or inert gas.

MOUNTING INSTRUCTIONS

Using the two #8 x 3/4" self drilling mounting screws supplied by ACI, mount the unit vertically with the brass fittings pointing towards the ground. Attach the unit to the mounting surface using the two mounting openings located on the top and bottom flanges. This ensures that any condensation that may form in the tubing does not have an effect on the pressure sensor. If mounting the unit horizontally, a slight zero shift may occur and care must be taken to prevent moisture from building up in the sensor. For best results, all tubing lengths should be limited to a maximum length of 75 feet (23 meters).

DIN RAIL MOUNTING

The MLP2 offers two options for DIN Rail mounting: rear and side mount. The rear DIN rail mount is integrated into the enclosure. The side mount DIN adapter is included with the package. The side mount offers a much thinner profile for higher density panels. - See **Figure 2** or **Figure 3** (pg. 2)

To install the side mount DIN adapter, the front cover must be removed first. The cover can be pried out with a flat blade screw driver on the upper edge, or on the two side slots. The clip can then be slid into position. Once the clip is inserted, snap the front cover into place.

FIGURE 1: MLP2 DIMENSIONS

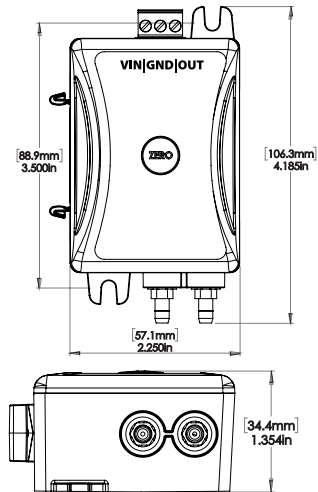


FIGURE 2: DIN RAIL MOUNTING

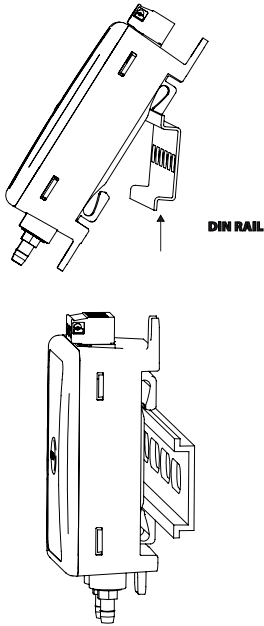
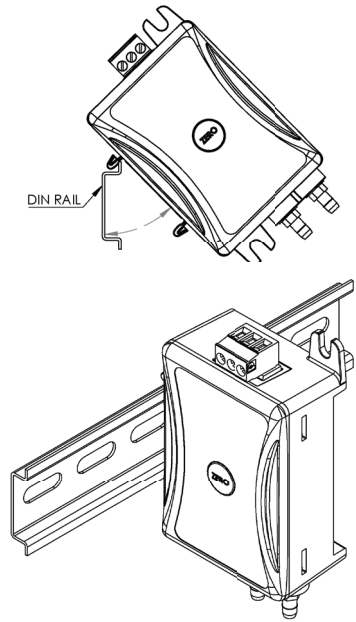


FIGURE 3: SIDE DIN RAIL MOUNTING



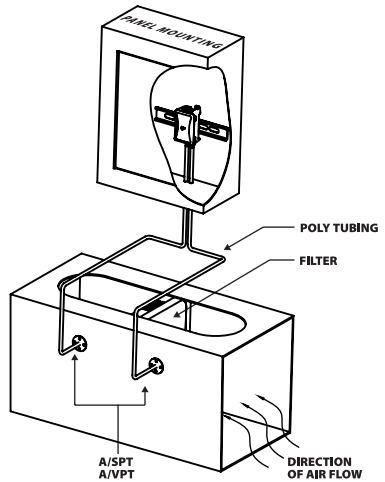
WIRING INSTRUCTIONS

Shielded cable with 14 to 24AWG conductors is recommended. Use the Wiring Connections table below to determine the proper wiring for your application. Insert the wire into the depluggable terminal block sockets and tighten the screws. In some circumstances, it may be easier to remove the terminal blocks while connecting the wires. Refer to **TABLE 1** (below).

All wiring must comply with local and National Electric Codes.

Note: When using a shielded cable, be sure to connect only (1) end of the shield to ground at the controller. Connecting both ends of the shield to ground may cause a ground loop. When removing the shield from the sensor end, make sure to properly trim the shield to prevent any chance of shorting.

FIGURE 4: DUCT ASSEMBLY



OUTPUT SIGNAL	SUPPLY VOLTAGE	WIRE CONNECTIONS		
0-5/10VDC	AC/DC	VIN	GND	OUT
4-20mA	AC	VIN	GND	OUT
4-20mA	DC	VIN	----	OUT



PRESSURE CONNECTIONS

The recommended connection tubing is ¼" O.D. push-on tubing (1/8" – 3/16" I.D.). ACI recommends to keep the tubing runs as short as possible so as to not affect the response time.

ZERO ADJUSTMENT

Small positive or negative pressure offsets can be removed using the Zero push button. Make sure that there is no pressure at the HI and LO pressure fittings. Additionally, a small piece of tubing can be connected between the HI and LO brass fittings to neutralize any external pressure effects. Press and hold the Zero button for 5 seconds. MLP2 will enter zero mode AFTER push button is released. **The Zero adjustment should only be performed with no pressure applied.**

CALIBRATION

MLP2 utilizes a digital pot for Span calibration and is factory set. There is no Span potentiometer for adjustment. In the event you require Span calibration, the unit must be sent back to ACI.

The Offset can be adjusted using the Auto Zero function. Drift is a function of stress relaxation over time and this results in the offset shifting, and not the span. Periodically re-zeroing the device will eliminate the effect of drift.

PRODUCT SPECIFICATIONS

Supply Voltage:	4-20mA (250 Ω Load): 16-36 VDC / 24VAC ± 10 %, 50/60 Hz 4-20mA (500 Ω Load): 21-36 VDC / 24VAC ± 10 %, 50/60 Hz 0-5 VDC: 12-36 VDC / 24VAC ± 10 %, 50/60 Hz 0-10 VDC: 16-36 VDC / 24VAC ± 10 %, 50/60 Hz
Supply Current mA: [Power Consumption]	4-20 mA Output: 23 mA minimum [0.83 VA] VDC Output Signals: 5 mA maximum [0.18 VA]
Output Signals:	4-20 mA: 2-Wire Loop Powered (Output limited to 20.5 mA Max.) 4-20 mA: 3-Wire, VAC Powered (Output limited to 20.5 mA Max.) 0-5 VDC, 1-6 VDC, or 0-10 VDC: 3-Wire, VAC or VDC Powered (Output limited to 5.25, 6.25, & 10.25 VDC)
Sensor Accuracy¹:	± 0.5 % FSO (Standard); ± 0.25 % FSO (Optional)
Operating Temperature Range:	32 to 185 °F (0 to 85 °C)
Compensated Temperature Range:	32 to 122 °F (0 to 50 °C)
Humidity:	10 to 95 % RH, non-condensing
Thermal Effects²:	± 0.056 % FSO/°F (± 0.10 % FSO/°C)
Warm Up Time:	15 Minutes
Response Time (T95):	4 Seconds
Output Update Rate:	0.5 Second intervals
Zero Function:	Pushbutton Zero Function (Recommended after 15 minutes warm up)
Proof Pressure [Burst Pressure]:	Ranges < 1" wc (248.84 Pa): Proof: 270" wc (67.2 kPa) [Burst: 415" wc (103.3kPa)] Ranges > 1" wc (0.2488 kPa) to < 10" wc (2.488 kPa): Proof: 350" wc (87.12 kPa) [Burst: 550" wc (136.9kPa)] Ranges > 10" wc (2.488 kPa) to < 40" wc (9953.6 kPa): Proof: 562" wc (140 kPa) [Burst: 1004.7" wc (250 kPa)]
Media Types:	Dry air or inert non-conductive gases
Din Rail Mounting:	35 mm (U.S. Patent No. 7,416,421)
Wiring Connections [Wire Size]:	3 Position de-pluggable screw terminal block [14 AWG (1.628 mm ²) to 24 AWG (0.5105 mm ²)]
Terminal Block Torque Rating:	4.43 to 5.31 in.-lbs. (0.5 to 0.6 Nm)
Tubing Size Accepted:	0.250"(6.35mm) O.D. x 0.170"(4.318mm) I.D. Push-On Flexible Poly Tubing
Enclosure Material [Flame Rating]:	Polycarbonate [UL 94 V-0]

WARRANTY

The ACI MLP2 sensors are covered by ACI's Five (5) Year Limited Warranty, which is located in the front of ACI'S SENSORS & TRANSMITTERS CATALOG or can be found on ACI's website: www.workaci.com.

W.E.E.E. DIRECTIVE

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre. Do not dispose of with household waste. Do not burn.

