Automation Components, Inc.

MLP2
Miniature Low Pressure Transmitter

The MLP2 Series Low Differential Pressure transmitters are designed for use in OEM or high density panel mounting applications. Key installation features include an integral 35 mm DIN rail mounting foot, vertically orientated wiring and pressure connections, and a pushbutton zero function conveniently located on the front cover. 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 adapter is included with the package, and can easily be attached. The side mount offers a much thinner profile for higher density panels. The MLP2 incorporates a high accuracy, piezoresistive, silicon sensing element which senses differential pressure and provides a linear 4 to 20 mA or DC voltage output equal to the specified pressure range. This technology reduces warmup shift while also reducing the effect of package stress for increased long term stability. In addition, the unit contains a de-pluggable terminal block that can be removed for ease of installation. This unit must be ordered with a single uni or bi-directional pressure range and output signal from +/- 0.1" of water column to a maximum pressure of +/- 40" of water column depending on your application. All MLP2 Series pressure transmitters are calibrated using NIST Certified equipment. Optional 3 or 5 point NIST Certificates are available and must be specified when placing your order.

Applications: Building and Duct Static Pressure, Filter Monitoring, Air Flow Measurement, Process Control, Roof Top Units, Air Handlers, Clean Rooms, Isolation Rooms, Data Centers

The MLP2 Series Low Differential Pressure Transmitters are covered by ACI's Five (5) Year Limited Warranty. The warranty can be found in the front of ACI's Sensors & Transmitters catalog, as well as on ACI's web site, workaci.com**.**
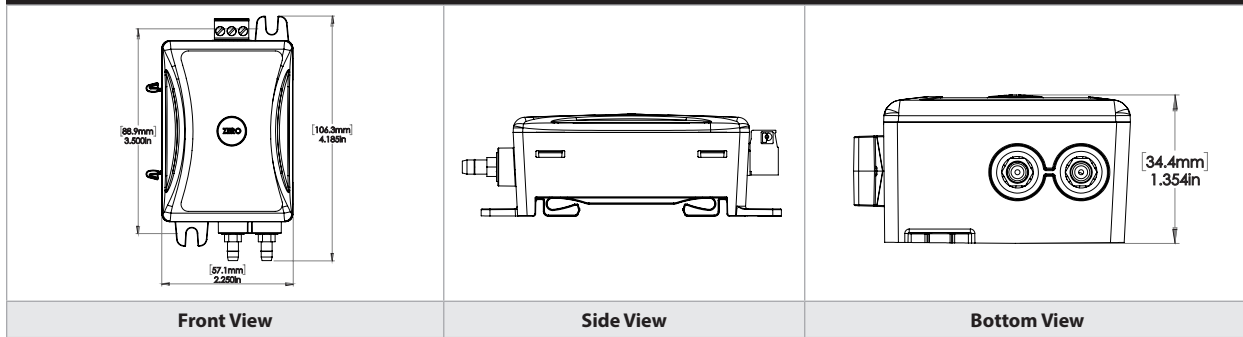
PRODUCT SPECIFICATIONS

Supply Voltage:	**4-20 mA Output:** 16-36 VDC (250 Ohm Load max.) / 21-36 VDC (500 Ohm Load max) / 24VAC(+/-10%) 50/60 Hz **0-5 VDC Output:** 12-36 VDC / 24 VAC (+/- 10%) 50/60 Hz **0-10 VDC Output:** 16-36 VDC / 24 VAC (+/- 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 maximum) **4-20 mA:** 3-Wire, VAC Powered (output limited to 20.5 mA maximum) **0-5 VDC or 0-10 VDC:** 3-Wire, VAC or VDC Powered (output limited to 5.25 & 10.25 VDC)
Pressure Ranges:	See Ordering Information on back of Product Data Sheet (Must Specify when ordering)
Accuracy[1]:	+/- 0.5% FSO **(Default)** | +/- 0.25% (Optional) for all ranges except 0.1" and +/- 0.1" wc
Sensor Compensated Temperature Range:	32 to 122ºF (0 to 50ºC)
Thermal Effects[2]:	+/- 0.056% FSO/ºF (+/- 0.10% FSO/ºC)
Warm Up Time:	15 Minutes
Response Time (T95):	4 seconds
Output Update Rate:	500 ms
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 (103.3 kPa) **Ranges > 1" wc (0.2488 kPa) to < 10" wc (2.488 kPa): Proof:** 350" wc (87.12 kPa) | **Burst:** 550" wc (136.9 kPa) **Ranges > 10" wc (2.488 kPa) to < 40" wc (9953.6 kPa): Proof:** 562" wc (140 kPa) | **Burst:** 1004.7" wc (250 kPa)
Operating Temperature | Humidity:	32 to 185ºF (0 to 85ºC) | 10 to 95% RH, non-condensing
Storage Temperature | Humidity:	-40 to 176ºF (-40 to 80ºC) | 10 to 95% RH, non-condensing
Media Types:	Intended for use with non-corrosive, non-ionic gases, such as air and other dry gases
Enclosure Material | Flammability Rating:	Polycarbonate | UL 94 V-0
Enclosure Temperature Rating:	-40 to 248ºF (-40 to 120ºC)
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 mm2) to 24 AWG (0.5105 mm2)
Terminal Block Torque Rating:	4.43 to 5.31 in-lbs. (0.5 to 0.6 Nm)
Pressure Fitting Material:	Brass
Tubing Size Accepted:	0.250" (6.35 mm) O.D. x 0.170" (4.318 mm) I.D. Push-On Flexible Poly Tubing
NIST Certification:	**3 Point NIST Test Points:** 10%, 50%, & 90% of FSO **5 Point NIST Test Points:** 10%, 30%, 50%, 70%, and 90% of FSO
Product Dimensions (L x W x D):	4.210" (106.94 mm) x 2.085" (52.96 mm) x 1.340" (34.04 mm)
Product Weight:	0.17 lbs. (0.078 kg)
Approvals:	CE, RoHS2, WEEE, Reach, UKCA

Note[1]: Accuracy includes Hysteresis, Linearity, and Repeatability at 71ºF (21.5ºC) Typical **| Note[2]:** Shift is relative to 77ºF (25ºC)

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DIMENSIONAL DRAWING

Front View	Side View	Bottom View

CUSTOM ORDERING

Model # Example:

A/	MLP2	D25	W	B	B	A	5P		MODEL #
A.	B.	C.	D.	E.	F.	G.	H.		

			MODEL #
A. Sensor Series *No Selection Required*	**A/** ⟶		**A/**
B. Pressure Series *No Selection Required*	**MLP2** = Miniature Low Pressure Transmitter ⟶		**MLP2**
C. Pressure Ranges *Select One (1)* **Note*:** Shaded Pressure Ranges are for Pascal Units Only)	**D10**** = 0.10 **2D5** = 2.50 **015** = 15.00 **050** = 50* **1K6** = 1,600* **D25** = 0.25 **003** = 3.00 **020** = 20.00 **100** = 100* **2K5** = 2,500* **D50** = 0.50 **004** = 4.00 **025** = 25.00[1] **300** = 300* **3K2** = 3,200* **001** = 1.00 **005** = 5.00 **030** = 30.00 **500** = 500* **5K0** = 5,000* **002** = 2.00 **010** = 10.00 **040** = 40.00 **1K0** = 1,000* **10K** = 10,000*		
D. Units of Pressure *Select One (1)*	**W** = Inches of Water Column │ **P** = Pascals		
E. Bi/Uni Directional Range *Select One (1)*	**U** = Uni-Directional (ie. 0 to 1" wc) │ **B** = Bi-Directional (ie. -1 to +1" wc)		
F. Accuracy *Select One (1)*	**A** = +/- 0.5% FSO │ **B** = +/- 0.25%		
G. Output Signal *Select One (1)*	**A** = 4 to 20 mA │ **B** = 0 to 5 VDC │ **C** = 0 to 10 VDC		
H. NIST Certification *Select One (1)*	**0P** = No NIST Certificate │ **3P** = 3 Point NIST Certificate │ **5P** = 5 Point NIST Certificate		

Note*: Pascal Ranges Only │ **Note[1]:** The "025" Range can be ordered in either Inches of Water Column (W) or Pascal (P) │ **Note**:** 0.10" WC and 025 Pa accuracy is +/- 0.50% only (Use "A" for Accuracy Selection)

ACCESSORIES ORDERING | PITOT TUBES

Model # Example: **A/PT 5.2** -OR- **130141**

Model #	Item #	Description	Insertion Length	Number of Sensing Points
PT 3"	130140	3.0" Pitot Tube with Foam Gasket	3.0" (7.6 cm)	1 Set
PT 5.2"	130141	5.2" Pitot Tube with Foam Gasket	5.2" (13.2 cm)	2 Sets
PT 7.5"	130142	7.5" Pitot Tube with Foam Gasket	7.5" (19.1 cm)	3 Sets
PT 9.7"	130143	9.7" Pitot Tube with Foam Gasket	9.7" (24.6 cm)	4 Sets
SPT - 3.5"	102957	3.5" Aluminum Duct Static (Flat Tip) Pitot Tube	3.5" (88.9 mm)	1 Point
SPT - 8.0"	108976	8.0" Aluminum Duct Static (Flat Tip) Pitot Tube	8.0" (203.2 mm)	1 Point
VPT	103010	4.0" Aluminum Velocity (Pointed Tip) Pitot Tube	4" (101.6 mm)	1 Point
VPT - 8"	125008	8.0" Aluminum Velocity (Pointed Tip) Pitot Tube	8" (203.2 mm)	1 Point

ACCESSORIES ORDERING | PICK UP PORTS

Model # Example: A/SP-PUP -OR- 125585

Model #	Item #	Description	Color
A/SP-PUP	125585	Pickup Port, Wall Mounted Stainless Plate	Brushed Stainless Steel
A/R-PUP	125584	Pickup Port, Wall Mounted Plastic Enclosure	Beige
A/R2-PUP	132711	Pickup Port, Wall Mounted Plastic Enclosure	White
A/O-PUP-H	132892	Pickup Port, Horizontal Mount, Outdoor Weatherproof Euro Enclosure	Light Gray
A/O-PUP-V	132891	Pickup Port, Vertical Mount, Outdoor Weatherproof Euro Enclosure	Light Gray

ACCESSORIES ORDERING | TUBING KIT

Model # Example: A/10' TUBE -OR- 126606

Model #	Item #	Description	Color
A/10' TUBE	126606	10' Medical Tubing Kit, 1/8" ID x 1/4" OD	Clear
A/20' TUBE	132226	20' Medical Tubing Kit, 1/8" ID x 1/4" OD	Clear
A/100' TUBE	136018	100' Medical Tubing Kit, 1/8" ID x 1/4" OD	Clear