

# INSTALLATION INSTRUCTIONS

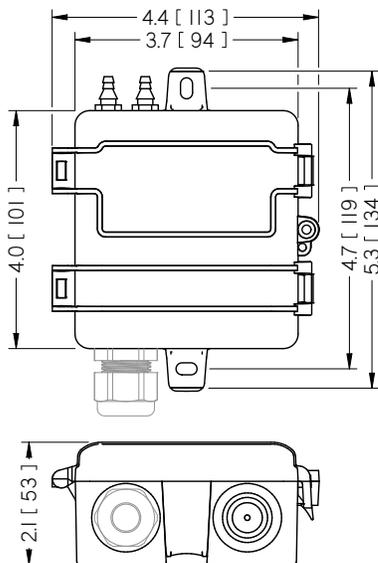
## PDP31-2500 & PDP31-7000 NEMA/IP Panel Mount High Static Pressure Transmitters 0-250/1250/2500 Pa and 0-2500/5000/7000 Pa



### IMPORTANT WARNINGS

- Only qualified trade installers should install this product
- This product is not intended for life-safety applications
- Do not install in hazardous or classified locations
- The installer is responsible for all applicable codes
- De-energize power supply prior to installation or service

### DIMENSIONS



### PRODUCT APPLICATION LIMITATION:

Senva products are not designed for life or safety applications. Senva products are not intended for use in critical applications such as nuclear facilities, human implantable device or life support. Senva is not liable, in whole or in part, for any claims or damages arising from such uses.

## INSTALLATION

1. Screw mount sensor directly to duct, or in panel using self-tapping screws provided.

NOTE: This model is position sensitive, and must be installed in the orientation shown below.

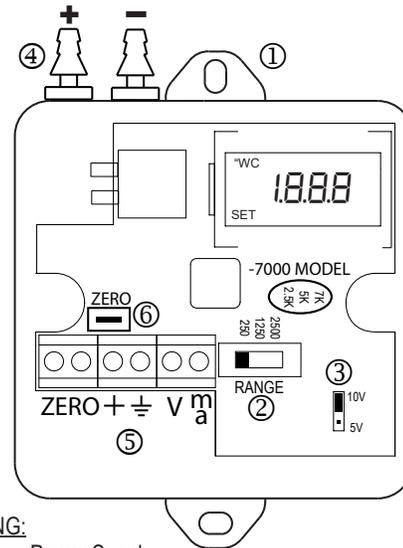
2. Move slide switch to select desired pressure range.

3. If voltage output is to be used, set jumper for 5V or 10V output operation.

NOTE: Voltage (5V/10V) and Current (4-20mA) outputs are both provided. No jumper or setting is required to select between these outputs.

4. Plumb air lines to sensor hose barbs. High (+) and low (-) ports are labeled on the sensor.

5. Wire sensor for voltage or current output as shown:



### WIRING:

- + = Power Supply
- ± = Common (power & signal)
- V = Voltage output 5V/10V
- mA = Current output 4-20mA
- ZERO = Contact closure input

(Power and Common required for both VDC and mA operation)

6. Apply power to sensor. With no pressure applied, press the ZERO button for 2-seconds. (For best results, temporarily connect high and low pressure ports together while zeroing.)

## IMPORTANT!

Forming a "drip-loop" (allowing tubing to dip below the level of the sensor hose barbs) is recommended to protect the sensor from damage caused by condensation.

Do NOT blow into the sensor to test. Condensation from breath can cause permanent damage.

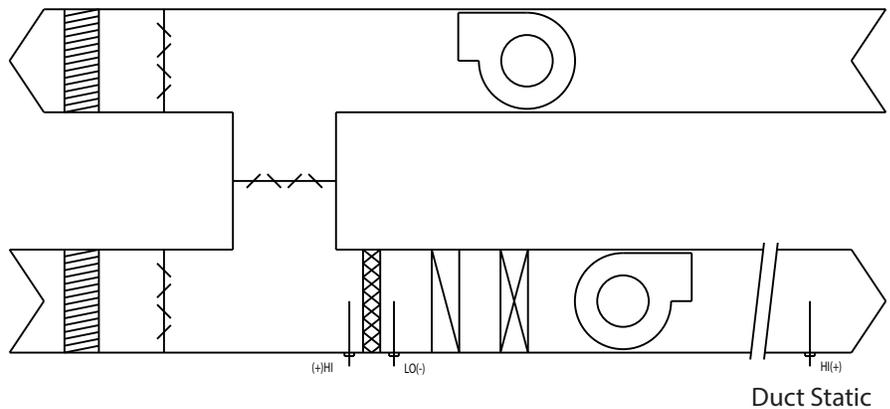
## SPECIFICATIONS

Power supply		12-30VDC/24VAC <sup>(1)</sup> , 30mA max. 15-30VDC/24VAC required for 10V f.s. output
Outputs	Dual 3-wire transmitters	3-wire 0-5V/10V and 4-20mA
Output scaling	PDP31-2500, selectable ranges	0-2500 Pa (250/1250/2500Pa) uni-directional
	PDP32-7000, selectable ranges	0-7000 Pa (2500/5000/7000 Pa) uni-directional
Operating Temperature	Calibrated range	50 to 140°F (10-60°C)
Media Compatibility		Dry, oil-free air. Nitrogen.
Sensor Type		Integrated, micromachined silicon piezo
Accuracy	Combined linearity, hysteresis, temp error	2.5% F.S.
	Auto-zero input	Pushbutton and contact closure input
Enclosure	Material	ABS/Polycarbonate, Brass hose barb fittings
	Dimensions	4.0"h x 4.4"w x 2.1"d

(1) One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.

## TYPICAL APPLICATIONS

**Duct Static:** Install a static pressure pickup tube approximately 2/3 of the way down the discharge air duct and plumb to high (+) port for positively pressurized ducts.



**Velocity:** Use a pitot tube and plumb high (+) port to total pressure (Pt) connection and low (-) port to static pressure (Ps) connection to directly read  $P_t - P_s = P_v$ . Apply correction constant provided by pitot tube manufacturer.

## CALIBRATION

Senva PDP sensors are factory calibrated. No field calibration is necessary or recommended.

## TROUBLESHOOTING

Symptom	Solution
No output	Check wiring. Ensure power supply meets requirements.
Pressure reading error	Verify control panel software is configured for correct output scaling.
	Verify switch and jumper settings.
	Verify tubing is not pinched or leaking.
	Possible contamination. Ensure sensor is used only on dry air or nitrogen.