



**SEN-610 SERIES  
WING UNION PRESSURE/TEMPERATURE TRANSMITTERS  
INSTALLATION INSTRUCTIONS**

**1.0 INTRODUCTION:**

The Series 610 Pressure and Pressure/Temperature Wing Union Transmitters use the proven Silicon-on-Sapphire Technology for direct measurement. The sapphire diaphragm is thicker and more abrasion resistant than the conventional pressure transmitters. These transmitters can give the user unprecedented life if proper care is used in installation and removal.

**2.0 CALIBRATION:**

Prior to subjecting the transducer to operating pressure and temperature, it is important to set the end points to 0 VDC at Pressure and 5 VDC at full-scale pressure. There are 2 methods that can be used to calibrate the transducer:

2.1 First method, without a pressure calibrator:

2.1.1 With temperature at room ambient (or close to 80 °F) and with zero pressure applied, adjust reading to 0 VDC by turning "PZERO" zero trim pot located under the connector on the electronic case.

2.1.2 Short RCal (Calibrating Resistor) pins together and adjust reading to 4 VDC by turning "PSPAN" span trim pot located under the cover screw next to the zero trim pot.

Repeat steps 2.1.1 to 2.1.2 as necessary to fine tune adjustment.

Second method, with a Pressure Calibrator:

2.2.1 With temperature at room ambient (or close to 80 °F) and with zero pressure applied, adjust reading to 0 VDC by turning "PZERO" zero trim pot located under the connector on the electronic case.

2.2.2 Apply full scale pressure to transmitter and adjust reading to 5 VDC by turning the "PSPAN" span trim pot located under the connector next to the zero trim pot.

2.2.3 Repeat steps 2.2.1 to 2.2.2 as necessary to fine tune adjustment.

Transducer is now ready to use. (*NOTE: DO NOT adjust span at any temperature other than 80 ± 10 °F*). Adjustment of span at any temperature will require calibration with a Pressure Calibrator (see paragraph 4.2).

2.3 Make sure to reset zero occasionally to insure more accurate measurements. Reset span only at room ambient temperature using RCal method if calibrating without a Pressure Calibrator.

2.4 On SEN-612 models, the temperature sensor of the transmitter is factory set to 0 VDC at 80 °F and

2.5 5 VDC at 180°F unless special calibration is noted on the housing. These settings can be changed if desired, but a precision temperature reference should be used.