



Operating Instructions 206 and 207 Series Pressure Transducers and Transmitters

General Information

Your Setra Pressure Transducer has been carefully tested and calibrated before shipment. Specific performance information is listed on the specification bulletin for the transducer.

Model 206/207 transducers are similar in design and performance with exception only to the method of electrical termination. Model 206 is provided with a two foot multi-conductor cable and Model 207 has a screw terminal block.

Installation

Environment - These transducers are designed to be used with any gas or liquid compatible with 17-4 PH stainless steel. Never totally submerge in any liquid.

The operating temperature, based on the limits of the electronics, is -40°F to 250°F.

Thermal Effects (%F.S./°F)

30°F to 150°F Range

Models

206/C206, 207/C207

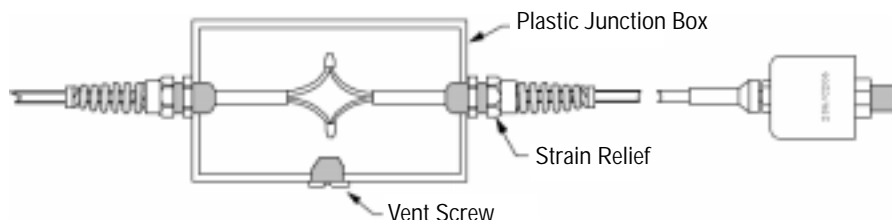
Zero shift <math><\pm 0.01</math>

Span shift <math><\pm 0.015</math>

Pressure Fitting - Typically, standard pipe fittings and procedures should be used. However, for very high pressure ranges in excess of 500 psig, we suggest the use of a sealant such as Loctite Hydraulic Sealant. Excessive high torquing of metal fittings may cause slight zero shift but can be trimmed out by the zero adjustment. The use of plastic fittings often results in no noticeable zero shift. Torquing does not appreciably affect linearity or sensitivity.

Venting - Because the reference pressure in a sealed gage transducer will vary due to changes in temperature, atmospheric pressure, etc. and will affect overall accuracy, especially in units of less than 500 psig range, all 206 and 207 Series are vented to atmosphere.

The 206/C206 is vented to atmosphere through the cable to achieve best accuracy. Connection to the cable should be made in a junction box that is vented to atmosphere, with care taken to insure that the end of the cable is not blocked or sealed.



Junction Box Suggestion - The following junction box configuration is a recommended method of terminating the 206/C206 signal cable in order to achieve a moisture resistant and vented connection.

Part No.	Junction Box A-533PC1	Cable Strain Relief 3237 Heyco Flex Fitting
Dimensions:	4.92" x 2.95" x 2.95"	2.50" Long
Manufacturer:	Hoffman Engineering Co. 900 Ehlen Drive Anoka, MN 55303 (612) 421-2240	Heyco Kenilworth, NJ 07033 (201) 245-0033 (800) 526-4182

1. Drill one 1/2" dia. hole at each end of junction box for cable strain reliefs. Note: If conduit is to be installed, omit one 1/2" hole and drill appropriate hole for conduit.
2. Drill and tap one 1/2" - 13 NC hole in bottom of junction box and install loosely one 1/2" - 13 NC plastic or stainless steel screw. The clearance between threads serves as a vent for the box.
3. Install cable strain reliefs in 1/2" dia. holes. If using conduit at one end, be sure it is sealed properly against moisture.
4. Mount junction box and install cables.
5. A desiccant pack can be placed in the junction box for additional protection.

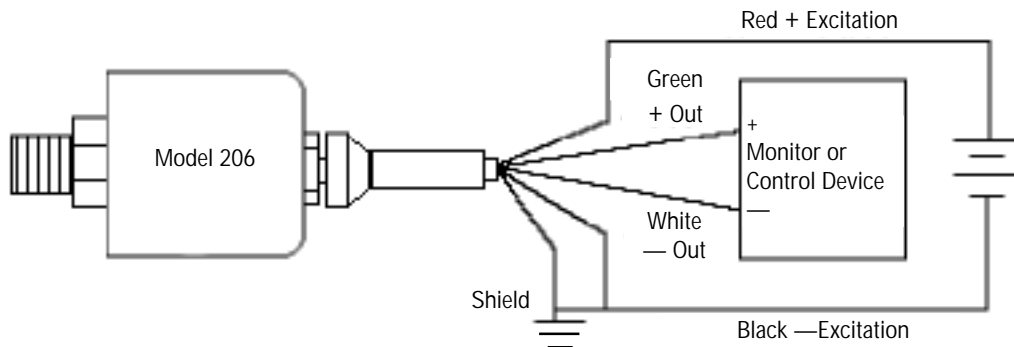
All 207/C207 models are vented by the omission of the zero screw o-ring at the factory. An additional sealing screw is provided separately for sealing the unit against water splashing etc. or, a barbed fitting in place of the zero screw along with tubing can be used for remote venting.

Electrical Connection - Voltage Output Units

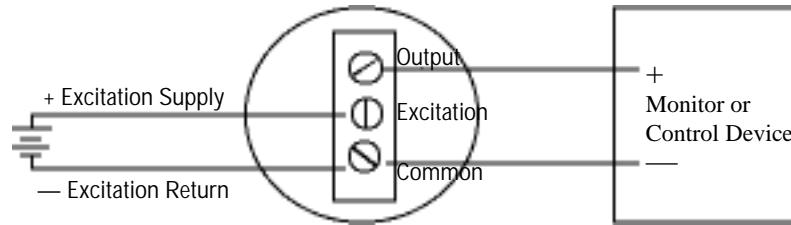
The **Model 206** (0.1 - 5.1 VDC) voltage output transducer is supplied with a 2 foot multiconductor cable, which should be connected as follows:

<u>Cable</u>		Optional Hirschmann Connector
Red	= + Excitation; connect to 12-28 VDC power supply	<u>Pin designation:</u> #1
Green	= + Output; connect to controls or monitor	#3
White	= - Output; connect to controls or monitor	#2
Black	= - Excitation; connect to return of 12-28 V power supply	#2
Shielding	= Connect to system or earth ground	#4 (Ground)

Note: Model 206 can be wired as a 3-wire device by connecting - output, - excitation and shield to a common ground. However, accuracy will be reduced with increase in lead resistance.



The **Model 207** (0.1 - 5.1 VDC) transducer is supplied with a screw terminal block where excitation, output and common termination points are clearly marked.



Electrical Connections - Current Output Units

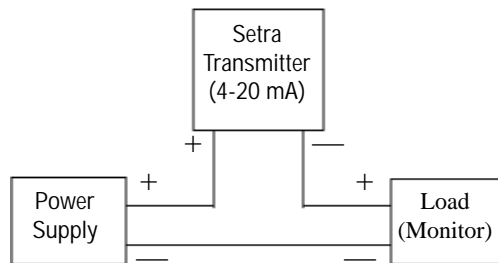
Model C206 and C207 (current output) transmitters are true 2-wire, 4-20 mA current output devices and deliver rated current into any external load of 0-800 ohms.

The **C206** has a 2-wire cable where red is positive and black is negative. For Hirschmann Connector option pin 1 is positive, pin 2 is negative and pin 4 is Ground/Shield.

Positive and negative connections are marked on the **C207** terminal block. (The center terminal may be used for shielding.)

The 4-20 mA current output units are designed to have current flow in one direction only - **please observe polarity.**

We suggest that any electrical cable shield (C206) be connected to the system's loop circuit ground to improve electrical noise rejection.



Calibration

All Setra pressure transducers and transmitters are carefully calibrated to the specific input pressure range vs. output voltage or current at the factory so little or no field calibrating is necessary.

Zero and span adjustments are made by removing the pan head screws and turning the potentiometer screw inside.

Current output transmitters (4-20 mA) are factory calibrated using a 250 ohm load at 24 VDC. Zero and span adjustments are approximately ± 1.0 mA, individually.

Voltage output transducers are factory set for an output range of 0.1 - 5.1 VDC within ± 50 mV. The zero pressure output is set to $100 \text{ mV} \pm 25 \text{ mV}$ and can be adjusted between approximately 0.1 V and 1.0 V. Span can be adjusted approximately ± 1.0 V about the nominal 5.1 V span.

RETURNING PRODUCTS FOR REPAIR

Please contact Setra (1-800-257-3872, 978-263-1400) before returning unit for repair to review information relative to your application. Many times, only minor field adjustments may be necessary. When returning a product to Setra, the material should be carefully packaged and shipped prepaid to:

Setra Systems, Inc.
159 Swanson Road
Boxborough, MA 01719-1304
Attn: Repair Department

To assure prompt handling, please supply the following information and include it inside the package of returned material:

1. Name and phone number of person to contact.
2. Shipping and billing instructions.
3. Full description of the malfunction.
4. Identify any hazardous material used with product.

Notes: Please remove any pressure fittings and plumbing that you have installed and enclose any required mating electrical connectors and wiring diagrams.

Allow approximately 3 weeks after receipt at Setra for the repair and return of the unit. Non-warranty repairs will not be made without customer approval and a purchase order to cover repair charges.

LIMITED WARRANTY AND LIMITATION OF LIABILITY

SETRA warrants its products to be free from defects in materials and workmanship, subject to the following terms and conditions: Without charge, SETRA will repair or replace products found to be defective in materials or workmanship within the warranty period; provided that:

- a) the product has not been subjected to abuse, neglect, accident, incorrect wiring not our own, improper installation or servicing, or use in violation of instructions furnished by SETRA;
- b) the product has not been repaired or altered by anyone except SETRA for its authorized service agencies;
- c) the serial number or date code has not been removed, defaced, or otherwise changed; and
- d) examination discloses, in the judgment of SETRA, the defect in materials or workmanship developed under normal installation, use and service;
- e) SETRA is notified in advance of and the product is returned to SETRA transportation prepaid.

Unless otherwise specified in a manual or warranty card, or agreed to in a writing signed by a SETRA officer, SETRA pressure and acceleration products shall be warranted for one year from date of sale.

The foregoing warranty is in lieu of all warranties, express, implied or statutory, including but not limited to, any implied warranty of merchantability for a particular purpose.

SETRA's liability for breach of warranty is limited to repair or replacement, or if the goods cannot be repaired or replaced, to a refund of the purchase price. SETRA's liability for all other breaches is limited to a refund of the purchase price. In no instance shall SETRA be liable for incidental or consequential damages arising from a breach of warranty, or from the use or installation of its products.

No representative or person is authorized to give any warranty other than as set out above or to assume for SETRA any other liability in connection with the sale of its products

159 Swanson Road, Boxborough, MA 01719-1304; 800-257-3872;
(978) 263-1400; Fax. 978-264-0292; WEB; www.setra.com;
E-mail: transducer.sales@setra.com



Rev. D 10/16/96