7.0 WARRANTY AND LIMITATION OF LIABILITY

DWYER warrants its products to be free from defects in materials and workmanship, subject to the following terms and conditions: Without charge, DWYER 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 DWYER;
b) the product has not been repaired or altered by anyone except DWYER or its authorized service agencies;
c) the serial number or product code has not been removed, defaced, or otherwise changed; and
d) examination discloses, in the judgement of DWYER, the defect in materials or workmanship developed under normal installation, use and service;
e) DWYER is notified in advance of and the product is returned to DWYER transportation prepaid.

Unless otherwise specified in a manual or warranty card, or agreed to in a writing signed by a DWYER officer, DWYER 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.

DWYER'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. DWYER's liability for all other breaches is limited to a refund of the purchase price. In no instance shall DWYER 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 DWYER any other liability in connection with the sale of its products.

Dwyer Instruments, Inc.
P.O. Box 373
Michigan City, Indiana 46360, U.S.A.
Phone: 219/879-8000
Fax: 219/872-9057
Lit-By Fax: 888/891-4963
www.dwyer-inst.com
e-mail: info@dwyer-inst.com

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Installation Guide

Dwyer Series 682

Pressure Transducers

1.0 GENERAL INFORMATION

Every Series 682 pressure transducer has been tested and calibrated before shipment. Specific performance specifications are shown on page 3 of this Guide.

Dwyer Series 682 pressure transducers sense gauge pressure and convert this pressure difference to a proportional high level analog output. This pressure transducer has the following excitation and output.

Excitation	Output
9 to 30 VDC	4 to 20 mA - (Must Observe Polarity)

2.0 MECHANICAL INSTALLATION

2.1 Media Compatibility

Series 682 transducers are designed to be used with any gases or liquids compatible with 17-4 PH Stainless Steel.

2.2 Environment

The operating temperature limits of the 682 are -40° to +260°F (-40 to +127°C). The compensated temperature range is -4 to +176°F (-20 to +80°C).

2.3 Pressure Fittings

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

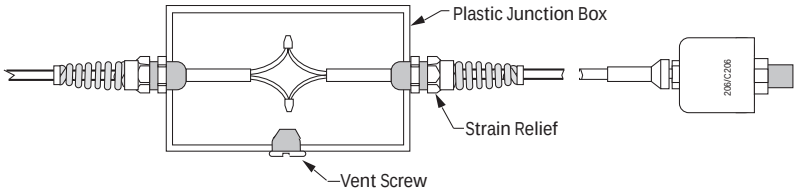
2.4 Venting

Series 682 Venting Method

Because the reference pressure in a sealed gauge 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 Series 682 are vented to atmosphere.

The 682 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 682 signal cable in order to achieve a moisture resistant and vented connection.



Termination:	Junction Box	Cable Strain Relief
Part No.	Q1388PCE	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.

3.0 ELECTRICAL INSTALLATION

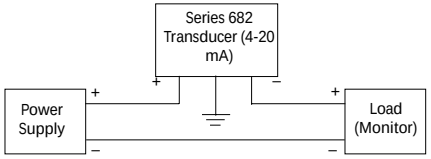
The Series 682 is available with the following electrical termination:

2 foot Cable

3.1 Series 682

Series 682 Current Unit

The Series 682 (current output) transducers are true 2-wire, 4-20 mA current output devices and deliver rated current into any external load of 0-800 ohms. The 682 has a 2-wire cable where red is positive and black is negative. On the Hirschmann Connector, Pin 1 is positive; Pin 2 is negative and Pin 4 is Ground/Shield.



The 4-20 mA current output unit is designed to have current flow in one direction only - PLEASE OBSERVE POLARITY. We suggest that the electrical cable shield be connected to the system's loop circuit ground to improve electrical noise rejection.

4.0 CALIBRATION

Every Series 682 is factory calibrated and should require no field adjustment Whenever possible, any zero and/or span offsets should be corrected by software adjustments in the user's control system. However, both zero and span adjustments are accessible by removing the pan head screws and turning the zero and span potentiometer screw inside. Use zero and span adjustments on the 682 only if absolutely necessary. Pan head screws should be replaced after adjustment to maintain enclosure rating.

Current output units (4-20 mA) are factory calibrated with a 24 VDC loop supply voltage and a 250 ohm load. The zero factory setting is ±0.08 mA. The span (full scale) factory setting is ±0.16 mA. Zero and span adjustments are approximately ±1.0 mA.

5.0 MAINTENANCE/REPAIR

After final installation of the Series 682 pressure transducer no routine maintenance is required. A periodic check of system calibration is recommended. These devices are not field repairable and should be returned to the factory if recalibration or other service is required. After first obtaining a Return Goods Authorization (RGA) number, send the material, freight prepaid, to the following address. Please include a clear description of the problem plus any application information available.

Dwyer Instruments
Attn: Repair Department
102 Indiana Highway 212
Michigan City, IN 46360

6.0 SERIES 682 PERFORMANCE SPECIFICATIONS

Accuracy RSS*	±0.13% FS
(at constant temperature)	
Non-Linearity, BFSL	±0.1% FS
Hysteresis	0.08% FS
Non-Repeatability	0.02% FS

*RSS of Non-Linearity, Non-Repeatability and Hysteresis.

Thermal Effects

Compensated Range °F(°C)	-4 to +176 (-20 to +80)
Zero Shift %FS/°F(°C)	±1.0 (±0.9)
Span Shift %FS/°F(°C)	±1.5 (±1.4)
Stability	0.5% FS/YR