



INSTALLATION DATA MANUAL

Model 780 Pressure Transducer

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COMPANY BACKGROUND

Viatran is an ISO 9001:2008 company certified company committed to providing high quality pressure transducers and transmitters. Established more than 40 years ago, Viatran has built its reputation on providing durable and accurate pressure sensing devices. Our products are often specifically specified by integrators and engineering firms for applications ranging from the offshore oil rigs to pump control to tank and well level measurement. Viatran is often called for custom modifications for applications where standard products are not available.

TECHNICAL SUPPORT

Technical assistance is available Monday-Friday 8:00 AM to 5:00 PM (Eastern) from our knowledgeable factory personnel to answer any of your application or installation questions. Our toll free number is 800-688-0030. Questions or additional documentation can also be requested via e-mail at solutions@viatran.com.

CUSTOMER SERVICE

Orders for additional units or accessories can be placed by calling customer service at 800-688-0030 or by fax at 716-693-9162. Orders can also be placed by contacting a local representative in your area. To find the nearest representative visit our web site at www.viatran.com.

PRODUCT OVERVIEW

All information contained in this document is representative of a standard Model 780. If the product you ordered has special requirements or modifications, refer to the permanently marked information on the product and your purchase order for possible alteration to the product's configuration. Failure to verify product configuration before installation may cause permanent product damage and in most cases, void the manufacturer's product warranty. If you are unsure or have questions about your product, please contact our Application Engineers for assistance.

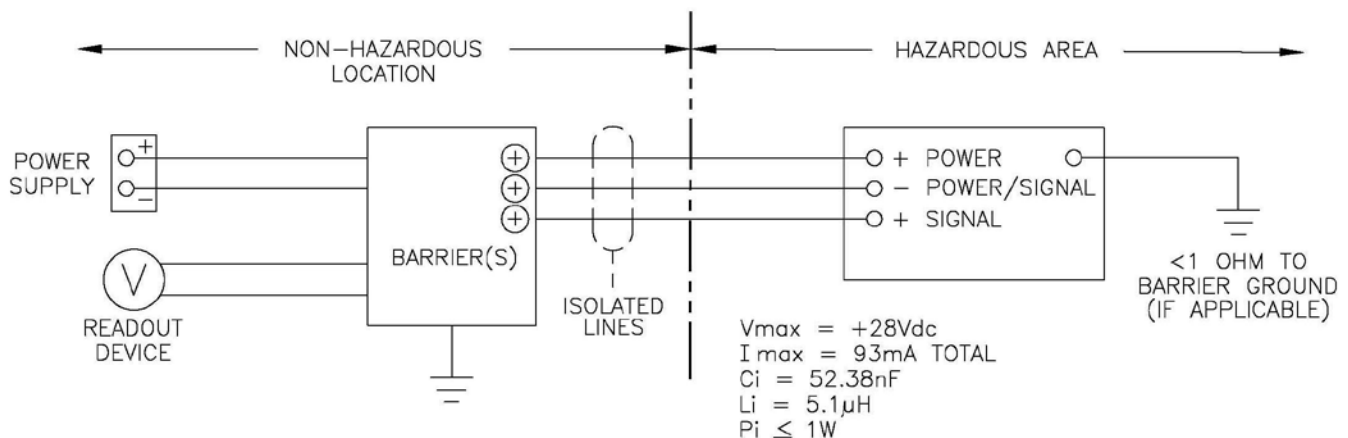
Remove and retain all instruction manuals and performance certificates that are shipped with the product. These documents provide important information on the product's calibration, operation, safety precautions, recommended maintenance, re-calibration requirements, repair service instructions and warranty information. These documents are updated from time to time as changes to the product occur and should be reviewed at receipt so that proper and safe installation can occur.

BASIC OPERATION

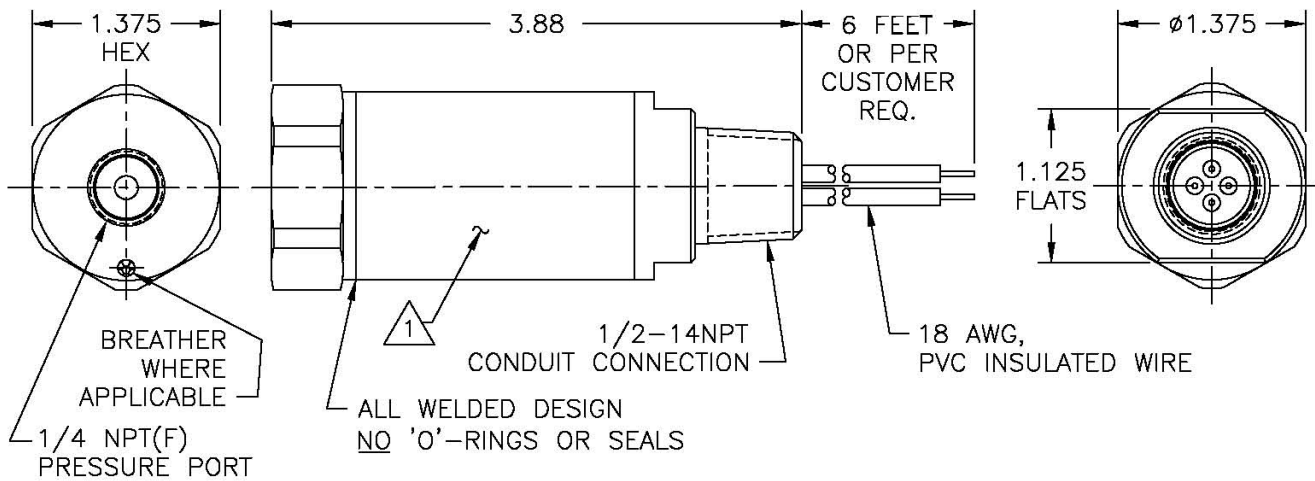
Model 780 has been pre-set at the factory for the required output. Standard output is 1-5 VDC (0.5-4.5 VDC optional), referenced to atmospheric pressure (zero PSIG). Once factory set, the product should perform as indicated by the performance certificate and product labeling. In all cases the zero and span cannot be externally adjusted, hence any deviation from the factory settings may indicate damage to the sensor, electronics, or both.

- A. For all ranges, the zero balance will be set for zero PSIG.
- B. Pressure ranges ≤ 1500 Psi are breathing units, while ranges ≥ 2000 Psi are sealed and referenced to zero PSIG.
- C. Output for all units will go positive with positive pressure applied to the pressure port.

For Intrinsically Safe Hazardous Area Installations: A < 1 Ohm connection to barrier ground is required, if the barrier manufacturer's instructions require the transducer to be connected to barrier ground. It is not a requirement of Viatran to connect the ground to barrier; it is the requirement of the barrier whether the ground needs to be connected.



INSTALLATION DATA – VIATRAN MODEL 780

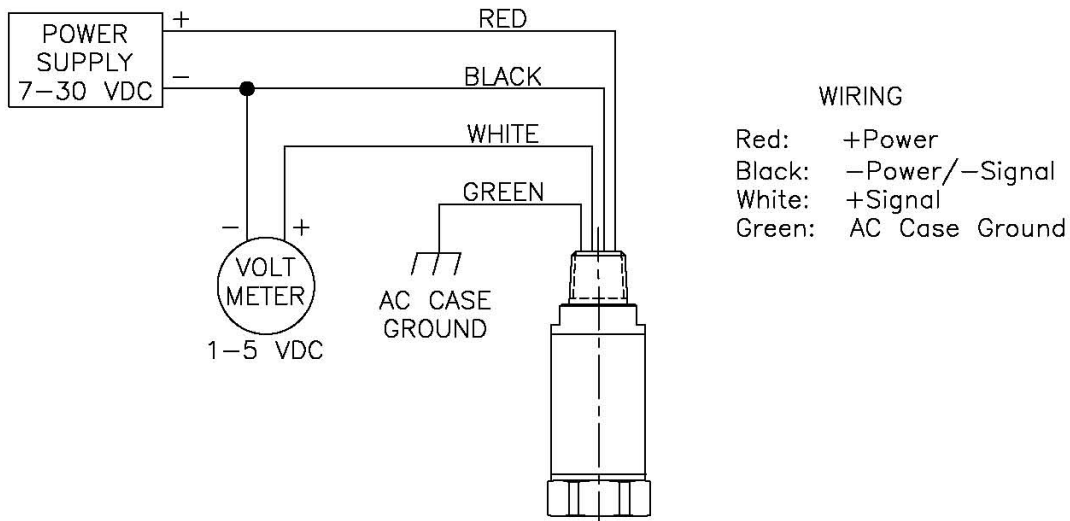


NOTE:

1. UNIT INFORMATION PERMANENTLY MARKED ON EXTERNAL HOUSING.
2. ALL DIMENSIONS ARE NOMINAL, IN INCHES AND FOR REFERENCE PURPOSES ONLY.
3. WETTED MATERIALS: RANGE 0-300 TO < 7500 PSI = 316L SST AND INCONEL 718
RANGE 0-7500 TO 15,000 PSI = INCONEL 718
4. SENSOR CONSTRUCTION: BONDED FOIL STRAIN GAGE

CONNECTION DIAGRAM & WIRING

Electrical Mating Connection:
Acceptable 18AWG wire termination connection – 1/2" NPT (M)



Note: If the product is approved for use in a hazardous location the product will be marked with the appropriate approvals. If the unit is certified as Intrinsically Safe for use in hazardous locations, use the connection diagram CD0670, enclosed with the unit. Only the pressure transmitter is considered to have the FM, ETL, CSA or ATEX safety ratings. If you have purchased a transmitter and isolator/remote seal, they have not been tested as a system for safety certification. The end-user shall be responsible for verifying the system is safe and installed accordingly.

INSTALLATION REQUIREMENTS AND CAUTIONS

1. All electrical & pressure connections should be compatible with specifications outlined above.
2. Installation should occur only after electrical (input power) and line pressure is off and at zero.
3. The product's internal electrical circuitry is isolated from case ground. It is not recommended that the case or ground of the unit be connected to the input, output or calibrate pins of the product or wiring system. Ground loops and line noise will affect the product's performance and may cause internal electrical failure.
4. All products should be protected from direct or continued exposure to fluids at the electrical connection. The electrical connections on the Model 780 have been designed to be terminated in a junction box or encased in conduit. In applications where moisture or fluid contamination is possible, the use of an application approved connection box is recommended for connection termination.
5. Use care when handling the unit by the connection wires. Continued or constant movement of the connection wires at the area of sealant might cause the wire(s) or seal to break. If the seal fails, internal contamination and product failure will occur.
6. When installing the unit to a pressure or electrical connection, only use the wrench flats closest to the end being installed. If the unit is being installed on a pressure pipe, only use the 1-3/8" wrench flats at the end where the pressure port is located, not the 1-1/8" flats at the electrical end.
7. At no time should an object be inserted into the pressure port or pressed against the sensing area to deflect the sensor (to test or simulate pressure), as permanent damage to the sensing diaphragm may occur.
8. To preserve the integrity of the hermetic design, the units have no field replaceable or repairable parts.
9. When shipped in quantities, units should be packaged individually to eliminate possible damage.
10. Model 780 is available with a variety of pressure fittings. The units should be mounted using an anti-galling product on the threads that is compatible with the media being measured. If your unit is equipped with a NPT female pressure port, it should be mounted to 20 ft-lbs. of torque to ensure proper trim. Always check for process leaks after installation.

MAINTENANCE AND REPAIR

Viatran transmitters are designed to function free from routine or scheduled maintenance. Simple cleaning of the electrical connector, pressure port threads and pressure cavity on an as needed basis will provide years of satisfactory performance. Protecting the product from continued exposure to moisture or fluids at the electrical connection, breather area (model dependent) will eliminate premature internal failure of the product. Whenever the product is removed from service the connector and pressure port threads should be cleaned and the pressure cavity flushed with a stainless steel compatible cleaner to prevent media buildup. A lint-free cloth is recommended for cleaning. Cleaning with a coarse or stiff bristle can damage the diaphragm surface.

It is suggested that the calibration be verified on a usage dependent schedule. If the product is in continuous service 7 days a week, then calibration verification may be necessary every 6 to 8 months. If the product is in a lab test environment a more lenient verification schedule would be appropriate. In all instances the performance of the product will depend on the individual application or process in which it is installed. More continued usage would require a shorter period between calibration verification and product maintenance.

If a product is perceived to be exhibiting problems, it can be returned to Viatran for analysis and/or repair. It is suggested that only Viatran personnel attempt repair of the product. Any damage resulting from customer disassembly would result in a loss of coverage under the warranty policy. All Viatran products are able to be repaired at minimal cost if simple cleaning and precautions are taken in the handling and application of the product. Older products returned for repair are updated to current specifications unless the repair cost would outweigh the cost of a new replacement model. Products returned for repair should include information on the person to contact for repair quote approval, the individual to contact if Viatran's technical staff requires additional information during analysis, and a brief description of the problem associated with the product's failure.

WARRANTY

Viatran Corporation warrants that its products shall be free from defective workmanship and/or material for a period of twelve (12) months from the date of shipment, provided that Viatran's obligation hereunder shall be limited to correcting any defective workmanship and/or replacing any defective material f.o.b. factory. No allowance will be made for any expense incurred for correcting any defective workmanship and/or material without written consent by Viatran. This warranty is in lieu of all other warranties expressed or implied.

REPAIR INSTRUCTIONS

Viatran's Transmitters are designed to be easily repaired and recalibrated if necessary. If a failure occurs, the transmitter should be returned to the factory for inspection and testing. Please contact the Customer Support Department at 1-800-688-0030, for a return tracking number and/or a repair cost estimate. A nominal inspection fee is charged on all units returned to the factory which are not subsequently repaired.