OMEGA ENGINEERING, INC.

PX673/675 Series

Flush Diaphragm Pressure Transducer

INSTRUCTION SHEET

M3423/0699

INSTALLATION INSTRUCTIONS FOR OMEGA® FLUSH DIAPHRAGM PRESSURE TRANSDUCER

Mounting
Although the unit can withstand normal vibration without damage or significant output effects, it is always good practice to mount the transducer where there is minimum vibration.

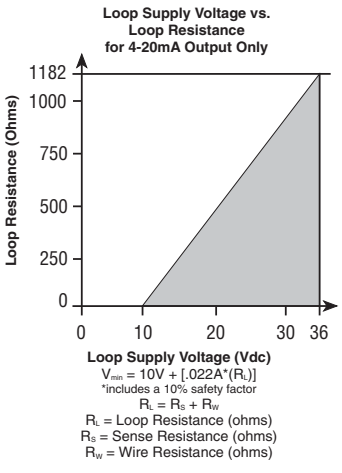
Power Supply
The supply voltage for the 1-5 and 1-6 Vdc output transducers must be within the range of 10 to 36 Vdc. The maximum supply voltage for a 4-20mA current output transducer is 36 Vdc while the minimum supply voltage is dependent upon the loop resistance of the circuit. The figure below shows the minimum supply voltage (V_{min}) required for a given loop resistance (R_{LOOP}).

Noise
For minimum noise susceptibility, avoid running the transducer's cable in a conduit that contains high current ac power cables. Where possible avoid running the cable near inductive equipment.

Shield Wiring
Connect the braided shield to the guard terminal on the reading instrument (meter, etc.) if available or to ground or to the power supply negative terminal.

Adjustment Potentiometers
The zero and span pots are accessible through the top of the case. Loosen the collar and separate the top carefully. The zero pot is marked with a white dot.

Vent Tube
The cable will have a clear Teflon vent tube that's required at pressure below 500 psi to provide atmospheric reference. The open end should be placed in a dry area.



WARNING!

This instrument is susceptible to damage when exposed to static electrical charges. To avoid damage to the transducer observe the following:

- **Ground the body of the transducer BEFORE making any electrical connections**
- **When disconnecting, remove the ground LAST.**

NOTE: The braided shield and drain wire in the cable (if supplied) is not connected to the transducer body, and is not a suitable ground.

CAUTION: Pressure spikes in excess of the rated overpressure capability of the transducer may cause irreversible electrical and/or mechanical damage to the pressure measuring and containing element(s).

WARNING: READ BEFORE INSTALLATION
The diaphragm is very sensitive and fragile! Do not let anything touch the diaphragm but the fluid to be measured. Fluid hammer and surges can destroy any pressure transducer and must always be avoided. A pressure snubber should be installed to eliminate the damaging hammer effects. Fluid hammer occurs when a liquid flow is suddenly stopped, as with quick-closing solenoid valves. Surges occur when flow is suddenly begun, as when a pump is turned on at full power or a valve is quickly opened.

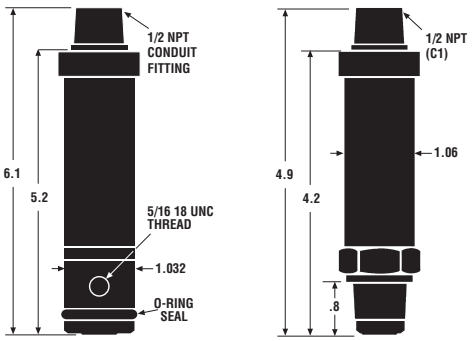
Liquid surges are particularly damaging to pressure transducers if the pipe is originally empty. To avoid damaging surges, fluid lines should remain full (if possible), pumps should be brought up to power slowly, and valves opened slowly. To avoid damage from both fluid hammer and surges, a surge chamber should be installed.

Symptoms of fluid hammer and surge's damaging effects:

a) Pressure transducer exhibits an output at zero pressure(large zero offset). If zero offset is less than 10% FS, user can usually re-zero transducer, install proper snubber and continue monitoring pressures.

b) Pressure transducer output remains constant regardless of pressure.

c) In severe cases, there will be no output.



Electrical Connections

Voltage Output Units 1-5, 1-6 Vdc

Cable Type C1
Red = + Power
Black = Common
White = Output

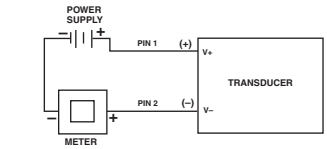
DIN Type
PIN-1 = + Power
PIN-2 = Common
PIN-3 = Output

Current Output Units 4-20mA

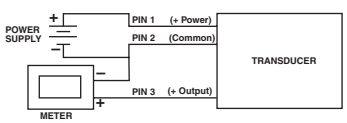
Cable Type C1
Red = +Power
Black = –Power

DIN Type
PIN-1 = + Power
PIN-2 = –Power

Wiring Diagrams for All Transducers



4-20 mA



3-Wire Voltage

Recalibration Instructions:
1. Apply 0% Full Scale Pressure.
2. Set the output using the *Zero adjustment potentiometer*.
3. Apply 100% Full Scale Pressure.
4. Set the output using the *Span adjustment potentiometer*.
5. Repeat steps 1 thru 4 as necessary.

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WARNING: These products are not designed for use in, and should not be used for, patient connected applications.

MADE IN USA

WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's Warranty adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit should malfunction, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of being damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components which wear are not warranted, including but not limited to contact points, fuses, and triacs.

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Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS). The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available BEFORE contacting OMEGA:

1. P.O. number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available BEFORE contacting OMEGA:

1. P.O. number to cover the COST of the repair,
2. Model and serial number of product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering.

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