

# 68848 - SERIES PRESSURE TRANSDUCER INSTRUCTION SHEET



## Mounting

The transducer requires no special mounting hardware, and can be mounted in any plane with negligible position error. 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. For units with NPT type pressure fittings apply Teflon® tape or an equivalent sealant to the threads before installing. When tightening, apply a wrench to the hex wrench flats located just above the pressure fitting. DO NOT tighten by using a pipe wrench on the housing.

## 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. The TDV pressure transducer is RFI/EMI protected but good wiring practices should always be maintained.

## Service

Although the V-Series Transducer utilizes a very robust stainless steel sensor, fluid hammer and extreme 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:

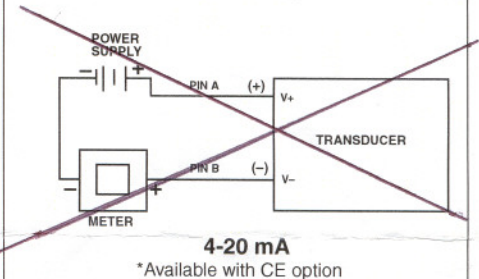
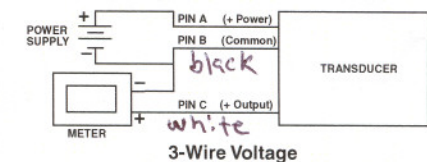
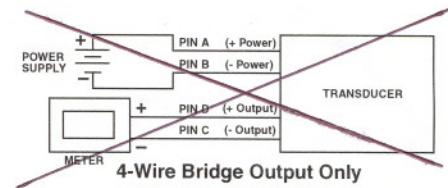
- Pressure transducer exhibits an output at zero pressure (large zero offset).
- Pressure transducer output remains constant regardless of pressure.
- In severe cases, there will be no output.

## Life Support Policy

This product is not authorized for use as critical components in life support devices or systems As used herein:

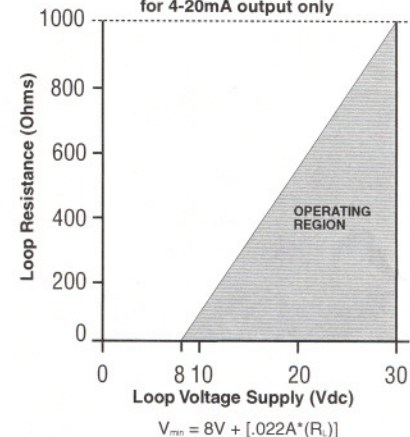
- Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and whose failure to perform, when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury to the user.
- A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

## Wiring Diagrams for TDV



\*Available with CE option

Loop Supply Voltage vs. Loop Resistance for 4-20mA output only

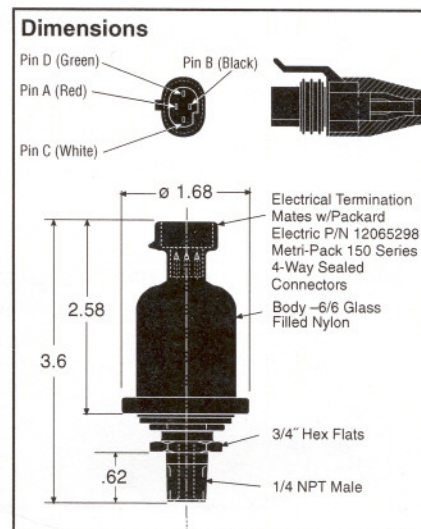


## WARNING!

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

- Ground 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.



OUTPUT TYPE	EXCITATION	SUPPLY CURRENT	ZERO BALANCE	SPAN
10MV/V	5V typ (10V max)	2.5mA typ (@ 5V)	±0.5mV (@ 5V)	50mV ±0.5mV (@ 5V)
0.5/4.5V Ratiometric	5V typ	5mA typ	0.5V ±0.04V (@ 5V)	4.0V ±0.04V (@ 5V)
1/5V	8-30 Vdc	10mA typ	1.0V ±0.04V	4.0V ±0.04V (@ 5V)
4-20mA	8-30 Vdc	N/A	4mA ±0.16mA	16mA ±0.16mA

\*Available with CE option

## Cole-Parmer Instrument Company

625 East Bunker Court  
 Vernon Hills, Illinois 60061  
 1-847-549-7600 or  
 toll-free 1-800-323-4340  
 Fax: 1-847-549-7676  
 Telex: 28-94053C