



1200 Series Differential Pressure Gauge Operating and Installation Instructions

Gauge Inspection:

Please read the product specification label attached to the gauge body to insure that this gauge is the same gauge specified for the particular application as it applies to dial size, materials of construction, working pressure, differential pressure, etc. Inspect for any shipping damage and, if discovered, report it immediately.

Product Design Features:

The NOSHOK 1200 Series is designed for working pressures to 3,000 psig, with an over-range pressure and differential pressures to 600 psid. This series is supplied, standard, with a 4.5" dial or, optionally, with a 6" dial. The gauge has a 316L sensor cell, encapsulating opposed, high (+) and low (-) side Monel membranes in a Halocarbon fill. The high (+) side pressure works against the membranes and the fill, causing them to move. This movement is transferred to a torque-tube assembly, linked to a horizontally moving, bidirectional over-pressure valve (This valve protects the sensor membranes against damage from high (+) and low (-) side overpressure of the membranes in the sensor cell.) A torsion rod, located within the torque-tube assembly, passes through a sealed compression fitting (which isolates the sensor cell from the dial case assembly) into the dial case and is connected to a pinion/sector gear and pointer assembly. The twisting motion of the torsion rod, driven by the membrane movement, is magnified to a 270 Degree, linear arc and pointer travel.

Gauge Mounting:

Design and Operating Principle

- Process pressures p_1 and p_2 are applied to the chambers - (2) and + (3).
- Gauge head (4) is filled with liquid.
- Differential pressure across + and - pressure sides deflects the diaphragm (1) and displaces the liquid.
- The displacement of the connection rod (5) is converted through the use of a transmitting lever (6) into rotation, which is transferred over an axial shaft (7) to the movement (9).
- The torque pipe (8) seals, assuring a frictionless path.
- Overpressure protection in both directions up to the max. static pressure rating is provided by contoured metal bolsters.

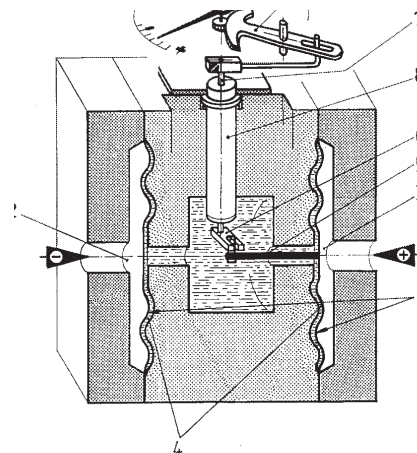
The gauge is supplied, standard, for panel mounting. The mounting method is from front to back in the panel and the gauge is secured in the panel with four (4) threaded studs, supplied with the gauge. Optional pipe or wall mount kits are available.

Gauge Connections:

Standard (2) x 1/4" FNPT back connections with high (+) and low (-) connections clearly indicated. Optional connection sizes and/or dual top/bottom connections are available.

Troubleshooting:

If the gauge is not indicating differential pressure, check to insure both the high (+) and low (-) side connections have been properly installed. Check to insure that there is pressure to the high (+) side of the gauge and that there is differential pressure across the device being monitored by the 1200 Series. If the gauge is being used together with a three-valve manifold (recommended), check to insure that the high (+) and low (-) valves are in the open position and the equalizer valve is in the closed position. If, after following these steps with no positive result, please contact the NOSHOK Customer Service Department or your nearest NOSHOK Distributor.



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