

Wet/Wet Differential Pressure

For high line pressure, high differential pressure applications

The pressure difference across an orifice plate, filter, pump, valve, etc. can be sensed with two Model 206 or 207 pressure transducers. One transducer measures the high side pressure (P_1) while the other measure the low side pressure (P_2). Pressure media can be any liquid or gas compatible with 17-4 pH stainless steel.

- Advantages:** Can readout P_1 , P_2 , and ΔP ($P_1 - P_2$)
Can take full line pressure either side (for ΔP)
No organic seals or gaskets, etc.
Can reduce pressure piping by placing each transducer near its pressure source.

Option A:

Provides a two wire differential analog output proportional to differential pressure. Applicable ratios of line pressure to differential pressure, analog output and accuracy are:

Pressure Ratio	Analog Output	Accuracy
1:1	0 - 5.00 VDC	$\pm .16\%$ Full Scale
2:1	0 - 2.50 VDC	$\pm .32\%$ Full Scale
3:1	0 - 1.67 VDC	$\pm .48\%$ Full Scale
4:1	0 - 1.25 VDC	$\pm .64\%$ Full Scale
5:1	0 - 1.00 VDC	$\pm .80\%$ Full Scale

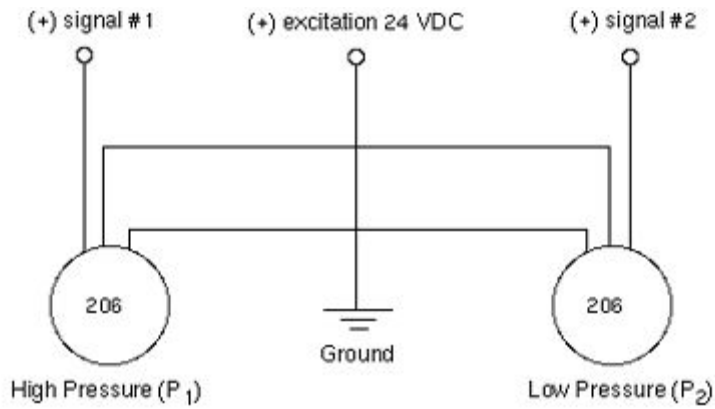
Pressure Ratio = Line Pressure/Differential Pressure

Both Model 206 or 207 transducers must have identical full scale pressure ranges equal to or greater than the maximum line pressure.

Example: Line pressure = 100 psig
Differential pressure = 50 psid
Pressure ratio = $100/50 = 2:1$

Specify two Model 206 or 207, 0-100 psig transducers.

The signal proportional to differential pressure is read between (+) signal #1 and (+) signal #2.



Option B:

Provides a two wire ground referenced 0 to 5 VDC analog output for both the high side pressure (P_1) and the low side pressure (P_2). It is possible to monitor P_1 , P_2 , and ΔP ($P_1 - P_2$) on a readout such as a digital panel meter, datalogger, scanner or recorder. The ΔP ($P_1 - P_2$) subtraction can be performed in systems software or by using an external subtraction circuit.

