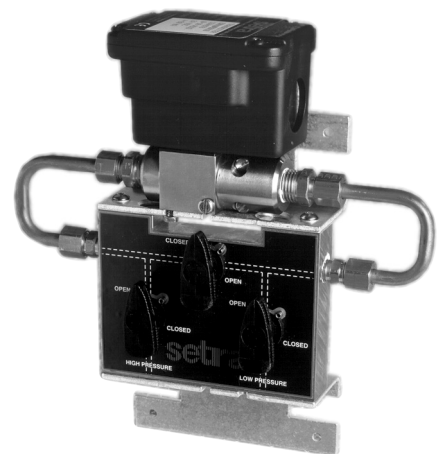


# 230 Series - Wet/Wet Differential Pressure Transducer

- ▶ Liquid media on both ports
- ▶ Bleed screws for accurate results
- ▶ Optional manifold for easy installation

The 230 Series is designed for wet-to-wet differential pressure measurements of liquids or gases. They feature fast-response capacitance sensors that respond approximately 20x faster than conventional fluid-filled transducers! Sensors are coupled to signal conditioned electronic circuitry for highly accurate, linear analogue output proportional to pressure. Both unidirectional and bidirectional models are available for line pressures up to 250psi. These units feature bleed ports that allow for total elimination of air in the line and pressure cavities.



Gems optional 3-valve manifold assembly eases installation and maintenance

## Common Specifications

Input	
Pressure Range	1 to 100psid
Proof Pressure	see ordering chart
Burst Pressure	see ordering chart
Common Line Pressure	<250psia
Fatigue Life	>1 Million Cycles
Performance	
Supply Voltage (Vs)	9-30Vdc (13-30Vdc for 10Vdc output)
Long Term Drift	0.5% FS/year
Accuracy	0.25% FS
Thermal Error Zero	.02% FS/°F (.036% FS/°C)
Thermal Error Span	.02% FS/°F (.036% FS/°C)
Compensated Temperatures	-1°C to +65°C (30° to 150°F)
Operating Temperatures	-18°C to +80°C (0° to 175°F)
Storage Temperatures	-54°C to +121°C (-65° to +250°F)
Zero Tolerance	.5% FS
Span Tolerance	.5% FS
Mechanical Configuration	
Pressure Port	see ordering chart
Wetted Parts	17-4 PH Stainless Steel, 300 Series SS, Viton and Silicone
Electrical Connection	7/8" Knock Out for 1/2" Conduit, Screw Terminal Strip
Enclosure	Stainless Steel, Aluminum
Vibration	5g Peak Sinusoidal, 5 to 500 Hz
Acceleration	10g
Shock	50g
Approvals	CE
Weight	450gms

## Individual Specifications

Voltage Output Units	
Output	0-5Vdc or 0-10Vdc (3 wire)
Min. Load Resistance	5000K ohms
Current Output Units	
Output	4-20mA (2 wire)
Max. Loop Resistance	(Vs-9) x 50 ohms

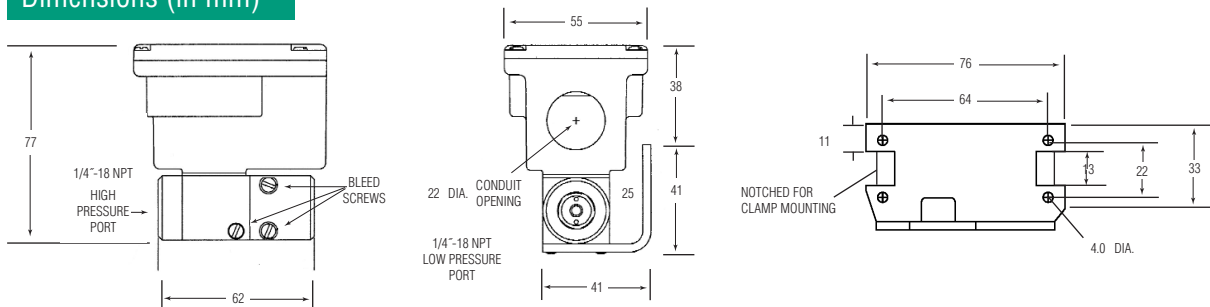
## Applications

- ▶ Energy Management Systems
- ▶ Process Control Systems
- ▶ Liquid & Gas Flow Measurement
- ▶ Filter Monitoring
- ▶ Liquid Level Measurement

## How They Operate

A unique isolation system transmits the motion of the differential pressure sensing diaphragm from the high line pressure environment to the dry enclosure where it moves one of a pair of capacitance plates proportionally to the diaphragm movement. Electronic circuitry linearises output vs. pressure and compensates for thermal effects of the sensor.

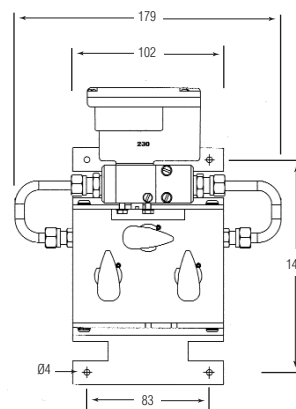
Dimensions (in mm)



3-Valve Manifold

Gems optional 3-valve manifold assembly eases installation and maintenance. Machined of Brass, it eliminates internal pipe connections and the associated chance of internal leaks. When manifold and 230 Series transducer are ordered together, they are assembled at the factory and shipped ready for mounting. Specify the **3V** Pressure Port code when ordering.

<b>Wetted Parts</b>	360 Brass, Copper 122, Acetal plug valves, and Nitrile O-rings
<b>Valve Type</b>	90-degree on/off
<b>Process Connections</b>	1/4" NPTF
<b>Dimensions</b>	7.05" x 6.25" x 2.16" D
<b>Weight</b>	2.5 lbs



How to Order

Use the **bold** characters from the chart below to construct a product code

**SELECT** **2301** **025PD** **2F** **11** **B** **X**

**Series** \_\_\_\_\_  
**2301** - 230 Series

**Pressure Range Code** \_\_\_\_\_

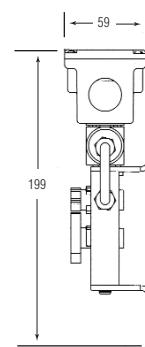
	Proof Pressure - psi			Proof Pressure - psi		
	High Side	Low Side	Burst	High Side	Low Side	Burst
<b>Unidirectional</b>				<b>Bidirectional</b>		
psid Ranges				psid Ranges		
<b>001PD</b> -0-1	20	2.5	200	<b>0R5PB</b> -±0.5	20	1.25 200
<b>002PD</b> -0-2	40	5.0	200	<b>001PB</b> -±1	40	2.50 200
<b>005PD</b> -0-5	100	12.5	600	<b>2R5PB</b> -±2.5	100	6.25 600
<b>010PD</b> -0-10	100	52.5	1000	<b>005PB</b> -±5	100	12.50 1000
<b>025PD</b> -0-25	250	62.5	1000	<b>010PB</b> -±10	200	25.00 1000
<b>030PD</b> -0-30	250	62.5	1000	<b>025PB</b> -±25	250	62.50 1000
<b>050PD</b> -0-50	250	125.0	1000	<b>050PB</b> -±50	250	125.00 1000
<b>100PD</b> -0-100	250	250.0	1000			

**Pressure Port** \_\_\_\_\_  
**2F** - 1/4" NPTF  
**3V** - 3-Valve Manifold Assembly Installed

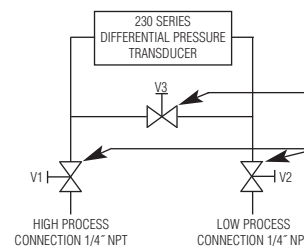
**Output** \_\_\_\_\_  
**11** - 4-20mA  
**2D** - 0-5Vdc  
**2E** - 0-10Vdc

**Bleed Screw Seals** \_\_\_\_\_  
**B** - Viton/Silicon Standard  
**A** - Buna-N Optional

**Optional** \_\_\_\_\_  
**C** - Calibration Certificate



Valve Schematic



Indicators and Accessories  
Pages 64-69