

## Voltage Output Pressure Transducers



### FEATURES

- Accuracy up to  $\pm 0.25$  % Full Scale (Best Fit Straight Line)
- Welded stainless steel pressure chamber
- Advanced diffused semi-conductor and sputtered thin film sensor for maximum stability
- Compact size
- High alternating load resistance
- High overpressure protection
- CE compliant to suppress RFI, EMI and ESD noise interference
- Compatible with NOSHOK Smart System Indicators

### APPLICATIONS

- Hydraulic and pneumatic systems
- Injection molding machines
- Railroad engine controls
- HVAC systems
- Stamping and forming presses
- Refrigeration controls
- Industrial machinery and machine tools
- Pumps and compressors

## SERIES 200

### HIGH PERFORMANCE VOLTAGE OUTPUT PRESSURE TRANSDUCERS

NOSHOK 200 Series Voltage Output Pressure Transducers are designed to provide a previously unequalled level of performance, utilizing diffused semiconductor and sputtered thin film strain gage technology. 200 Series transducers are highly repeatable, shock resistant and are extremely stable over long periods of time. CE compliance which includes substantial levels of RFI, EMI and ESD noise protection combined with reverse polarity and over-voltage protection hardens the product so it performs well in the most demanding applications.

Advanced manufacturing techniques combined with technologically advanced standard features allow NOSHOK to offer a level of performance previously found only on transducers costing hundreds of dollars more. Final calibration tests performed on all NOSHOK transmitters prior to shipment ensures 100% "out of the box" reliability

### SPECIFICATIONS

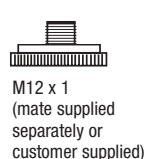
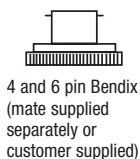
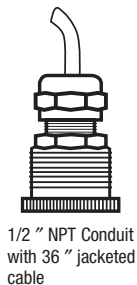
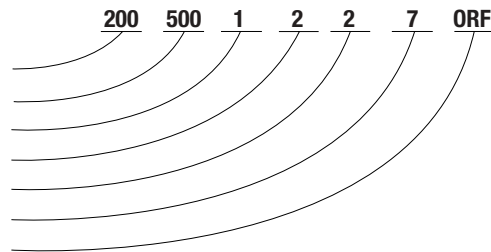
<b>Output signals</b>	0 Vdc to 5 Vdc, 3-wire; 0 Vdc to 10 Vdc, 3-wire; 1 Vdc to 5 Vdc, 3-wire; 1 Vdc to 6 Vdc, 3-wire; 1 Vdc to 11 Vdc, 3-wire;
<b>Pressure ranges</b>	Standard gauge ranges from vacuum to 15000 psi; Standard absolute ranges from 15 psia to 300 psia
<b>Proof Pressure</b>	3 times Full Scale for ranges 0 psi to 5 psi through 0 psi to 200 psi 1.75 times Full Scale for ranges 0 psi to 300 psi through 0 psi to 10000 psi 1.5 times Full Scale for 0 psi to 15000 psi range
<b>Burst Pressure</b>	3.8 times Full Scale for ranges 0 psi to 5 psi through 0 psi to 200 psi 4 times Full Scale for ranges 0 psi to 300 psi through 0 psi to 10000 psi 3 times Full Scale for 0 psi to 15000 psi range
<b>Accuracy</b>	$\pm 0.5$ % Full Scale (Best Fit Straight Line); $\pm 0.25$ % optional (Includes the combined effects of linearity, hysteresis and repeatability)
<b>Repeatability</b>	$\leq \pm 0.05$ % Full Scale
<b>Hysteresis</b>	$\leq \pm 0.1$ % Full Scale
<b>Stability</b>	$\leq \pm 0.2$ % Full Scale per year, non-accumulating
<b>Response time</b>	$\leq 1$ ms (between 10 % and 90 % Full Scale)
<b>Power supply</b>	10 Vdc to 30 Vdc, 14 Vdc to 30 Vdc for 1 Vdc to 11 Vdc and 0 Vdc to 10 Vdc unregulated
<b>Load limitations</b>	Load in resistance must be $\geq 5000 \Omega$ for 0 Vdc to 5 Vdc, 1 Vdc to 5 Vdc, and 1 Vdc to 6 Vdc outputs; load in resistance must be $\geq 10000 \Omega$ for 0 Vdc to 10 Vdc and 1 Vdc to 11 Vdc outputs. Current consumption 8 mA
<b>Wetted materials</b>	316 stainless steel for vacuum through 300 psi; 17-4PH stainless steel sensing diaphragm and 316 stainless steel pressure connection for higher ranges
<b>Housing material</b>	316 stainless steel
<b>Adjustment</b>	$\pm 10$ % Full Scale for zero and span
<b>Pressure cycle limit</b>	150 Hz
<b>Durability</b>	$> 100,000,000$ Full Scale cycles
<b>Temperature ranges</b>	Compensated 32 °F to 176 °F (0 °C to 80 °C) Effect $\pm 0.017$ % Full Scale/°F for zero and span Ambient -40 °F to 185 °F (-40 °C to 85 °C) Media -22 °F to 212 °F (-30 °C to 100 °C)
<b>Environmental rating</b>	IP65, NEMA 4X according to EN 60529/IEC 529
<b>Electromagnetic rating</b>	CE compliant to EMC norm EN61326: 1997/A1: 1998 RFI, EMI and ESD protection
<b>Electrical protection</b>	Reverse polarity, over-voltage and short circuit protection
<b>Shock</b>	1000 g's per IEC 770
<b>Vibration</b>	30 g's per IEC 770
<b>Weight</b>	Approximately 3.5 oz.

ORDERING INFORMATION											
<b>SERIES 200</b>											
<b>PRESSURE RANGES</b>	-30 inHg to 0 psig	<b>30V</b>	-30 inHg to 300 psig	<b>30/300</b>	0 psig to 150 psig	<b>150</b>	0 psig to 1500 psig	<b>1500</b>	0 psig to 15000 psig	<b>15000</b>	
	-30 inHg to 15 psig	<b>30/15</b>	0 psig to 5 psig	<b>5</b>	0 psig to 200 psig	<b>200</b>	0 psig to 2000 psig	<b>2000</b>	0 psia to 15 psia	<b>15A</b>	
	-30 inHg to 30 psig	<b>30/30</b>	0 psig to 10 psig	<b>10</b>	0 psig to 300 psig	<b>300</b>	0 psig to 3000 psig	<b>3000</b>	0 psia to 30 psia	<b>30A</b>	
	-30 inHg to 60 psig	<b>30/60</b>	0 psig to 15 psig	<b>15</b>	0 psig to 500 psig	<b>500</b>	0 psig to 5000 psig	<b>5000</b>	0 psia to 60 psia	<b>60A</b>	
	-30 inHg to 100 psig	<b>30/100</b>	0 psig to 30 psig	<b>30</b>	0 psig to 600 psig	<b>600</b>	0 psig to 6000 psig	<b>6000</b>	0 psia to 100 psia	<b>100A</b>	
	-30 inHg to 150 psig	<b>30/150</b>	0 psig to 60 psig	<b>60</b>	0 psig to 750 psig	<b>750</b>	0 psig to 7500 psig	<b>7500</b>	0 psia to 150 psia	<b>150A</b>	
	-30 inHg to 200 psig	<b>30/200</b>	0 psig to 100 psig	<b>100</b>	0 psig to 1000 psig	<b>1000</b>	0 psig to 10000 psig	<b>10000</b>	0 psia to 200 psia	<b>200A</b>	
		psig = Gauge Pressure		psia = Absolute Pressure	Other ranges available on special request					0 psia to 300 psia	<b>300A</b>
	<b>ACCURACY</b>	<b>1</b> ±0.5 % Full Scale (Best Fit Straight Line)				<b>2</b> ±0.25 % Full Scale (Best Fit Straight Line)					
<b>OUTPUT SIGNALS</b>	<b>2</b> 0 Vdc to 5 Vdc		<b>3</b> 1 Vdc to 5 Vdc		<b>4</b> 1 Vdc to 6 Vdc		<b>5</b> 0 Vdc to 10 Vdc		<b>6</b> 1 Vdc to 11 Vdc		
<b>PROCESS CONNECTIONS</b>	<b>1</b> 1/8 " NPT male		<b>2</b> 1/4 " NPT male		<b>3</b> 7/16 " -20 UNF #4 SAE J-514 male			<b>4</b> 1/8 " NPT female			
	<b>9</b> 7/16 " -20 UNF #4 SAE J-514 female				<b>10</b> 1/4 " BSP male						
<b>ELECTRICAL CONNECTIONS</b>	<b>1</b> 36 " cable (connected to option 7)		<b>2</b> 4-pin bendix		<b>3</b> 6-pin bendix						
	<b>6</b> 1/2 " NPT conduit ( with 36 " cable)		<b>7</b> Mini-Hirschmann (DIN 43650C with mate)		<b>25</b> M12 x 1 4-pin						
	<b>NOTE:</b> 0 Vdc to 5 Vdc and 0 Vdc to 10 Vdc outputs are also available in 4-wire configurations for use with other electrical systems.										
<b>OPTIONS</b>	<b>ORF</b> Threaded Orifice (.3 mm)										

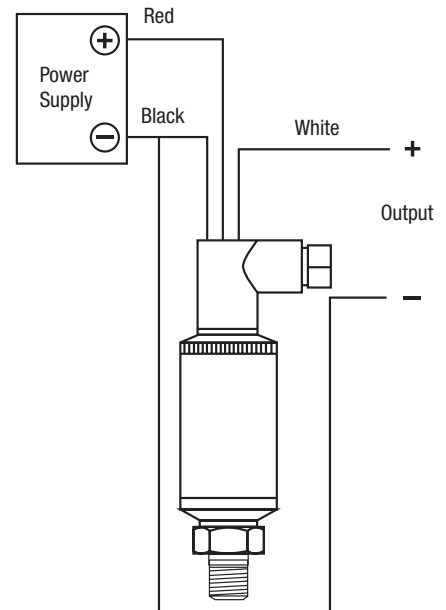
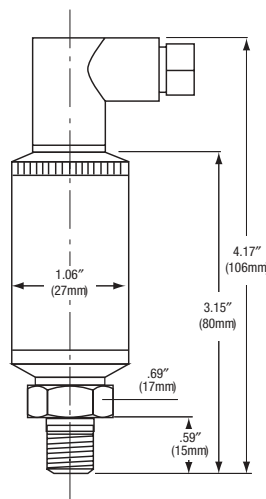
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

**EXAMPLE**

**Series** 200  
**Pressure Range** 0 psig to 500 psig  
**Accuracy** ±0.50 % Full Scale  
**Output Signal** 0 Vdc to 5 Vdc  
**Process Connection** 1/4 " NPT Male  
**Electrical Connection** Mini-Hirschmann  
**Option** Orifice



**Outline Dimensions**



Wire	Bendix 4-pin or 6-pin	Mini-Hirschmann	Cable	M12 x 1
+ Supply	pin A	pin 1	Red	pin 1
Common	pin B	pin 2	Black	pin 3
+ Output	pin C	pin 3	White	pin 4