# **Voltage Output Pressure Transducers**

**APPLICATIONS** 

systems

HVAC systems

presses

Hydraulic and pneumatic

Injection molding machines

Railroad engine controls

Stamping and forming

Refrigeration controls

machine tools

Industrial machinery and

Pumps and compressors



#### **FEATURES**

- Accuracy up to ±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
- Compatible with NOSHOK Smart System Indicators



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



## WIRING DIAGRAMS ELECTRICAL CONNECTIONS

			C	RDERI	NG INFORMAT	ION				
SERIES 200										
PRESSURE Ranges	-30 inHg to 0 psig -30 inHg to 15 psi -30 inHg to 30 psi -30 inHg to 30 psi -30 inHg to 60 psi -30 inHg to 100 ps -30 inHg to 150 ps -30 inHg to 200 ps psig = Gauge Pressure	g 30/15 g 30/30 g 30/60 ig 30/100 ig 30/150 ig 30/200	-30 inHg to 300 psig 0 psig to 5 psig 0 psig to 10 psig 0 psig to 10 psig 0 psig to 15 psig 0 psig to 30 psig 0 psig to 60 psig 0 psig to 100 psig lute Pressure 0ther rang	30/300 5 10 15 30 60 100 ges available o	0 psig to 150 psig 0 psig to 200 psig 0 psig to 300 psig 0 psig to 500 psig 0 psig to 600 psig 0 psig to 750 psig 0 psig to 1000 psig n special request	150 200 300 500 600 750 1000	0 psig to 1500 psig 0 psig to 2000 psig 0 psig to 3000 psig 0 psig to 5000 psig 0 psig to 6000 psig 0 psig to 7500 psig 0 psig to 10000 psig 0 psig to 15000 psig	1500 2000 3000 5000 6000 7500 10000 15000	0 psia to 15 psia 0 psia to 30 psia 0 psia to 60 psia 0 psia to 100 psia 0 psia to 150 psia 0 psia to 200 psia 0 psia to 300 psia	15A 30A 60A 100A 150A 200A 300A
ACCURACY	1 ±	0.5 % Full Scale	e (Best Fit Straight Line)		2 ±0.25 % Full Scale	(Best Fit S	Straight Line)			
OUTPUT SIGNALS 2 0 Vdc to 5 Vdc, 3-wire 3 1 Vdc to 5 Vdc, 3-w		dc, 3-wire	<b>4</b> 1 Vdc to 6 Vdc, 3-wire <b>5</b> 0 Vdc to 10 Vdc, 3-wire			6 1 Vdc to 11 Vdc, 3-wire				
PROCESS CONNECTIONS     1     1/8 " NPT male     2     1/4 " NPT male       9     7/16 " -20 UNF #4 SAE J-514 female			3 7/16 " -20 UNF #4 SAE J-514 male 10 1/4 " BSP male			<b>4</b> 1/8 " NPT female				
6 1/2 " NPT con		'2 ″ NPT condui	ected to option 7) t ( with 36 ″ cable) Vdc and 0 Vdc to 10 Vdc outputs are		2 4-pin bendix 3 6-pin bendix   7 Mini-Hirschmann (DIN EN 175301-803 Form C)   e also available in 4-wire configurations for use with other elevent		<b>36</b> Integral cable 36" <b>25</b> M12 x 1 4-pin ctrical systems.			
OPTIONS		ORF Threaded	l Orifice							

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

200 - 500 - 1 -

2 –

2 –

7 – ORF

#### EXAMPLE

Series	
Pressure Range0 psig to 500 psig	
Accuracy±0.50 % Full Scale	
Output Signal 0 Vdc to 5 Vdc	
Process Connection1/4 " NPT Male	
Electrical ConnectionMini-Hirschmann	
OptionOrifice	

