



SERIES 100

HIGH PERFORMANCE CURRENT OUTPUT PRESSURE TRANSMITTERS

NOSHOK 100 Series Current Output Pressure Transmitters are designed to provide a previously unequalled level of performance, utilizing diffused semiconductor and sputtered thin film strain gage technology. 100 Series transmitters 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 protection combined with reverse polarity and over-voltage protection insure they perform 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.

FEATURES

- Accuracy up to ± 0.25 % Full Scale (BFSL)
- Welded stainless steel pressure chamber
- Advanced diffused semiconductor 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

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

SPECIFICATIONS

Output signal	4 mA to 20 mA, 2-wire
Pressure ranges	Standard gauge ranges from vacuum to 15000 psi; Standard Absolute 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 psi 1.5 times Full Scale for 0 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 to 15000 psi range
Accuracy	± 0.5 % Full Scale (BFSL); Optional ± 0.25 % Full Scale (BFSL); (Includes the effects of non-linearity, hysteresis, non-repeatability, zero point and full scale errors)
Repeatability	$\leq \pm 0.05$ % Full Scale
Hysteresis	$\leq \pm 0.1$ % Full Scale
Stability	$\leq \pm 0.2$ % Full Scale for 1 year, non-accumulating
Response time	≤ 1 ms (between 10 % and 90 % Full Scale)
Power supply	10 Vdc to 30 Vdc, unregulated
Load limitations	$\leq$ (Vpower supply - 10)/.020 Amp
Wetted materials	316 stainless steel for vacuum through 300 psi; 17-4PH stainless steel sensing diaphragm and 316 stainless steel process 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 EN 61326:1997/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.

ORDERING INFORMATION												
SERIES 100												
PRESSURE RANGES	-30 inHg to 0 psig	30V	0 psig to 5 psig	5	0 psig to 200 psig	200	0 psig to 3000 psig	3000	0 psia to 15 psia	15A		
	-30 inHg to 15 psig	30/15	0 psig to 10 psig	10	0 psig to 300 psig	300	0 psig to 4000 psig	4000	0 psia to 30 psia	30A		
	-30 inHg to 30 psig	30/30	0 psig to 15 psig	15	0 psig to 500 psig	500	0 psig to 5000 psig	5000	0 psia to 60 psia	60A		
	-30 inHg to 45 psig	30/45	0 psig to 25 psig	25	0 psig to 600 psig	600	0 psig to 6000 psig	6000	0 psia to 100 psia	100A		
	-30 inHg to 60 psig	30/60	0 psig to 30 psig	30	0 psig to 750 psig	750	0 psig to 7500 psig	7500	0 psia to 150 psia	150A		
	-30 inHg to 100 psig	30/100	0 psig to 60 psig	60	0 psig to 1000 psig	1000	0 psig to 10000 psig	10000	0 psia to 200 psia	200A		
	-30 inHg to 150 psig	30/150	0 psig to 100 psig	100	0 psig to 1500 psig	1500	0 psig to 15000 psig	15000	0 psia to 300 psia	300A		
	-30 inHg to 200 psig	30/200	0 psig to 150 psig	150	0 psig to 2000 psig	2000						
	-30 inHg to 300 psig	30/300										
			psig = gauge pressure			psia = absolute pressure		Other ranges available on special request ranges				
ACCURACY	1	±0.5 % Full Scale (BFSL)			2	±0.25 % Full Scale (BFSL)						
OUTPUT SIGNAL	1	4 mA to 20 mA, 2-wire										
PROCESS CONNECTIONS	1	1/8 " NPT Male		2	1/4 " NPT Male		3	7/16 " -20 UNF #4 SAE J-514 Male		4	1/8 " NPT Female	
	9	7/16 " -20 UNF #4 SAE J-514 Female			10	1/4 " BSP Male						
ELECTRICAL CONNECTION	1	36 " cable (connected to option 7)			2	4-pin bendix		3	6-pin bendix		6	1/2 " NPT conduit (with 36" cable)
	7	Mini-Hirschmann (DIN EN 175301-803 Form C)			25	M12 x 1 4-pin		36	Integral cable 36"			
OPTIONS	ORF	Threaded orifice										

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

EXAMPLE

Series 100
Pressure Range 0 psig to 500 psig
Accuracy ±0.50 % Full Scale
Output Signal 4 mA to 20 mA
Process Connection 1/4 " NPT Male
Electrical Connection ... Mini-Hirschmann
Option Orifice

100 - 500 - 1 - 1 - 2 - 7 - ORF

Load Limitations 4mA to 20mA output

$$V_{min} = 10V + (.020 \times R_L)$$

$$R_L = \text{Loop resistance } (\Omega)$$

$$R_L = R_S + R_W$$

$$R_S = \text{Sensor resistance } (\Omega)$$

$$R_W = \text{Wire Resistance } (\Omega)$$

Outline Dimensions



WIRING

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

*Note: mate supplied separately or customer supplied

