Compact OEM Pressure Transducers

SERIES 300

Ruggedness and long term stability during operation were the focus in the design of this NOSHOK 300 series pressure transducer. As a result of this we were able to develop a transducer for use in general industrial applications with technical specifications exceeding those of transducers costing much more.

A wide variety of electrical and mechanical connections are available for easy installation into most applications along with most popular analog output signals. All electrical components carry a high degree of EMC protection compliant with EN 61 326 which make it ideal for areas where RFI, EMI or ESD signals are present.

The compact size makes it very attractive for applications where space is limited. Constructed of high quality stainless steel makes it compatible with chemically aggressive media. The sensor is welded directly to the process connection eliminating the need for any gaskets or seals while also increasing the resistance to mechanical stress.

FEATURES

- Ranges from 0 psig to 15 psig to 0 psig to 10,000 psig
- RoHS compliant
- Constructed of high quality stainless steel
- Excellent EMC-protection compliant with EN 61 326
- Compact size
- All welded design with no internal seals
- Highly resistant to shock and vibration
- Excellent for use in dynamic or static measurement
- Standard absolute ranges from 15 psia to 200 psia

APPLICATIONS

- Hydraulic and pneumatic systems
- Pumps and compressors
- Stamping and forming presses
- Test equipment and systems
- Industrial machinery and machine tools

SPECIFICATIONS

Output signals	4 mA to 20 mA, 2-wire; 0 Vdc to 5 Vdc, 3-wire; 1 Vdc to 5 Vdc, 3-wire; 0 Vdc to 10 Vdc, 3-wire; 0.5 Vdc to 4.5 Vdc ratiometric, 3-wire
Pressure ranges	Standard gauge ranges from 0 psig to 15 psig; through psig to 10,000 psig Standard absolute ranges 15 psig through 200 psig
Proof Pressure	2 times Full Scale
Burst Pressure	6 times Full Scale
Accuracy	±0.5 % Full Scale (Best Fit Straight Line); ±0.25 % optional (Includes the combined effects of linearity, hysteresis and repeatability)
Repeatability	≤ ±0.05 % Full Scale
Hysteresis	≤ ±0.1 % Full Scale
Stability	≤ ±0.2 % Full Scale per year, non-accumulating
Response time	≤ 4 ms (between 10 % and 90 % Full Scale)
Power supply	8 Vdc to 30 Vdc unregulated for 4 mA to 20 mA output, 0 Vdc to 5 Vdc output and 1 Vdc to 5 Vdc outputs; 5 Vdc ±0.5 Vdc for 0.5 Vdc to 4.5 Vdc output, unregulated
Load limitations	≤ (VPower -10)/0.020 Amp for 4 mA to 20 mA output ≤ 5,000 Ω for 1 Vdc to 5 Vdc output ≤ 10,000 Ω for 0 Vdc to 10 Vdc output ≤ 4,500 Ω for 0.5 Vdc to 4.5 Vdc output
Wetted materials	316 stainless steel for absolute through 150psi 13-8PH stainless steel sensing diaphragm and 316 stainless steel process connection for higher ranges
Housing material	316L stainless steel
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) Storage -4°F to 176°F (0°C to 80°C) Media 32°F to 176°F (0°C to 80°C) Ambient 32°F to 176°F (0°C to 80°C)
Environmental rating	IP65 to IP67 depending on electrical connection
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	100 g's per IEC 68-2-27
Vibration	10 g's per IEC 68-2-6
Weight	Approximately 2.8 oz.

ORDERING INFORMATION

SERIES 300

PRESSURE RANGES	0 psig to 15 psig	**15**	0 psig to 200 psig	**200**	0 psig to 2000 psig	**2000**	0 psia to 15 psia	**15A**
	0 psig to 30 psig	**30**	0 psig to 300 psig	**300**	0 psig to 3000 psig	**3000**	0 psia to 30 psia	**30A**
	0 psig to 60 psig	**60**	0 psig to 500 psig	**500**	0 psig to 5000 psig	**5000**	0 psia to 60 psia	**60A**
	0 psig to 100 psig	**100**	0 psig to 1000 psig	**1000**	0 psig to 10000 psig	**10000**	0 psia to 100 psia	**100A**
	0 psig to 150 psig	**150**	0 psig to 1500 psig	**1500**			0 psia to 150 psia	**150A**
							0 psia to 200 psia	**200A**

psig = Gauge Pressure psia = Absolute Pressure Other ranges available on special request

ACCURACY	**1** ±0.5 % Full Scale (Best Fit Straight Line)			**2** ±0.25 % Full Scale (Best Fit Straight Line)			
OUTPUT	**1** 4 mA to 20 mA, 2-wire	**2** 0 Vdc to 5 Vdc, 3-wire	**3** 1 Vdc to 5 Vdc, 3-wire	**5** 0 Vdc to 10 Vdc, 3-wire
PROCESS CONNECTIONS	**2** 1/4 ″ NPT male	**45** 7/16 ″ -20 UNF #4 SAE	**8** 1/2 ″ NPT male	
ELECTRICAL CONNECTIONS	**1** 36 ″ cable (connected to option 7)		**8** Hirschmann (DIN EN 175301-803 Form A)	**36** 6 ft Intergral Cable
	7 Mini-Hirschmann (DIN EN 175301-803 Form C)		**25** M12 x 1 4-pin	
OPTIONS	**ORF** Threaded Orifice (.3mm)			

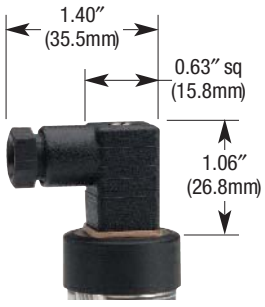
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

EXAMPLE **300 – 500 – 1 – 2 – 2 – 7 – ORF**

Series 300
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

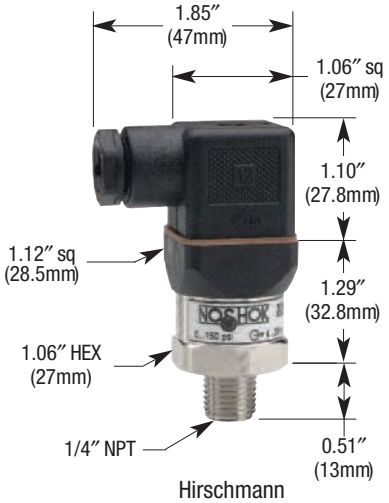
Outline Dimensions

Integral Cable



Mini-Hirschmann

*M12 x 1
*Note: (mate supplied separately or customer supplied)



Hirschmann

2-WIRE WIRING

Wiring	M12	Hirschmann	Cable
+ Supply	1	1	Brown
+ Output	3	2	Blue

3-WIRE WIRING

Wiring	M12	Hirschmann	Cable
+ Supply	1	1	Brown
Common	3	2	Blue
+ Output	4	3	White