



SERIES 680

HIGH PERFORMANCE THICK FILM PRESSURE TRANSDUCERS

The NOSHOK Series 680 pressure transducer provides an unbeatable level of performance at a competitive price. Using the proven reliability and stability of ceramic thick film strain gage technology, this transducer offers a broad array of choices for the OEM and user alike. The sensing element is a high purity ceramic diaphragm which together with either copper alloy or stainless steel pressure connection and appropriate seal form a corrosive resistant pressure chamber. Several output signal choices and either an M12x1 or Mini-Hirschmann (DIN 43650C) electrical connection complete the package.

A rigorous inspection is performed on all NOSHOK pressure transducers after final assembly and prior to shipment to ensure 100% "out of the box" reliability.

Please consult your local NOSHOK Distributor or NOSHOK for minimum quantity requirements.

FEATURES

- Proven ceramic thick film strain gage sensor
- Maximum reliability
- Wide variety of pressure ranges, connections and outputs
- Cost effective for volume applications
- CE compliant

APPLICATIONS

- OEM applications
- Pumps and compressors
- Industrial machinery and machine tools
- HVAC systems
- Medical applications
- Refrigeration systems

SPECIFICATIONS

Output signal	4 mA to 20 mA, 2 wire; .1 Vdc to 10 Vdc, 3 wire; .1 Vdc to 5 Vdc, 3 wire; .5 Vdc to 4.5 Vdc, 3 wire ratio-metric to power supply
Pressure ranges	Standard gauge ranges from vacuum through 1500 psig
Proof pressure	2 times Full Scale
Burst pressure	2.5 times Full Scale
Accuracy	±0.5 % Full Scale (Best Fit Straight Line)
Response time	< 5 ms (between 10 % and 90 % Full Scale)
Repeatability	≤ ±0.1 % Full Scale
Stability	≤ ±.3 % Full Scale for 1 year, non-accumulating
Power supply	8 Vdc to 30 Vdc for 4 mA to 20 mA, 2-wire and .1 Vdc to 5 Vdc, 3 wire output signals; 14 Vdc to 30 Vdc for .1 Vdc to 10 Vdc, 3-wire output, unregulated; 5 Vdc ±10% for .5 Vdc to 4.5 Vdc, 3-wire ratio-metric 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	Ceramic diaphragm, copper alloy or 316 stainless steel body and Buna N seal (EPDM or Viton® available)
Housing material	Copper alloy or stainless steel dependent upon wetted materials
Temperature ranges	Compensated 32 °F to 176 °F (0 °C to 80 °C) Zero effect ±0.022 % Full Scale/°F Span effect ±0.011 % Full Scale/°F Ambient -13 °F to 185 °F (-25 °C to 85 °C) Media -13 °F to 185 °F (-25 °C to 85 °C) Storage -40 °F to 212 °F (-40 °C to 100 °C)
Environmental rating	Nema 4 IP65 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
Weight	Approximately 4 oz.

ORDERING INFORMATION						
SERIES 680C Copper alloy	SERIES 680S Stainless steel					
PRESSURE RANGES	0 psig to 30 psig	30	0 psig to 150 psig	150	0 psig to 750 psig	750
	0 psig to 50 psig	50	0 psig to 250 psig	250	0 psig to 1000 psig	1000
	0 psig to 100 psig	100	0 psig to 500 psig	500	0 psig to 1500 psig	1500
psig = Gauge Pressure Other ranges available on special request						
ACCURACY	1 ±0.5 % Full Scale (Best Fit Straight Line)					
OUTPUT SIGNALS	1 4 mA to 20 mA, 2-wire	13 .5 Vdc to 4.5 Vdc ratio-metric, 3-wire	27 .1 Vdc to 10 Vdc, 3-wire	28 .1 Vdc to 5 Vdc, 3-wire		
PROCESS CONNECTIONS	1 1/8" NPT male	2 1/4" NPT male				
ELECTRICAL CONNECTIONS	1 36" cable (connected to option 7)	7 Mini-Hirschmann (DIN EN 175301-803 Form C)		25 M12 x 1 4-pin	36 36" Integral cable	
OPTIONS	ORF Threaded Orifice					

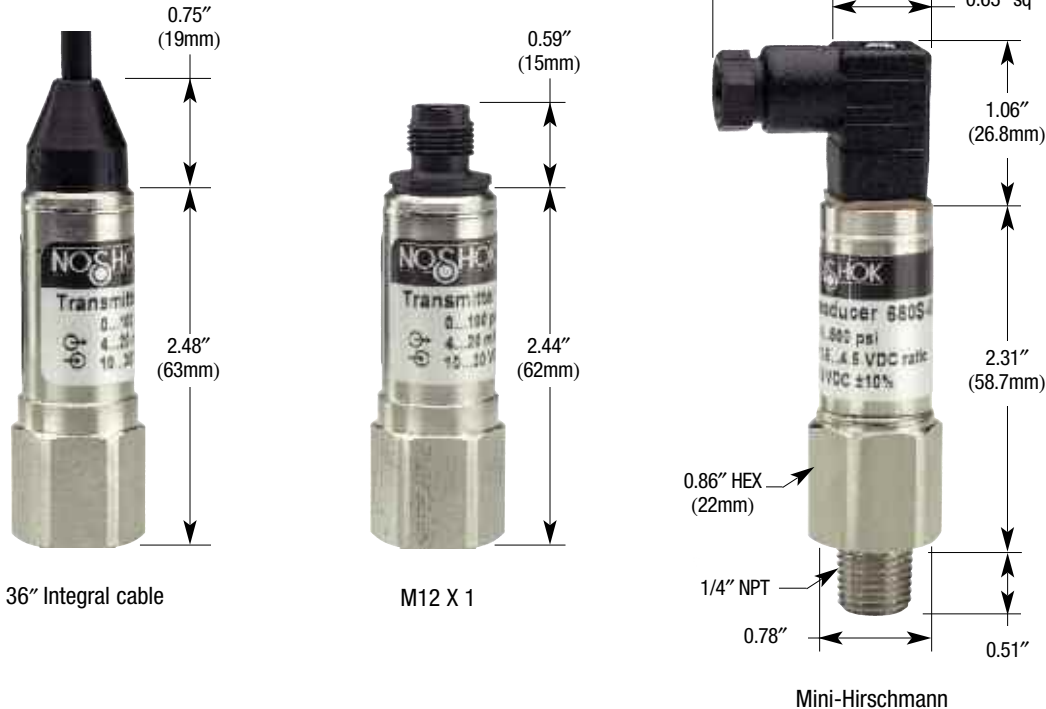
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for minimum quantity requirements and delivery information.

EXAMPLE

- Series 680C
- Pressure Range 0 psig to 500 psig
- Accuracy ±0.5 % Full Scale
- Output Signal 4 mA to 20 mA
- Process Connection 1/4" NPT Male
- Electrical Connection M12 X 1
- Option Orifice

680C - 500 - 1 - 1 - 2 - 25 - ORF

Outline Dimensions



2-WIRE WIRING

Wiring	M12	Mini-Hirschmann	Cable
+ Supply	1	1	Red
+ Output	3	2	Black

3-WIRE WIRING

Wiring	M12	Mini-Hirschmann	Cable
+ Supply	1	1	Red
Common	3	2	Black
+ Output	4	3	White