



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

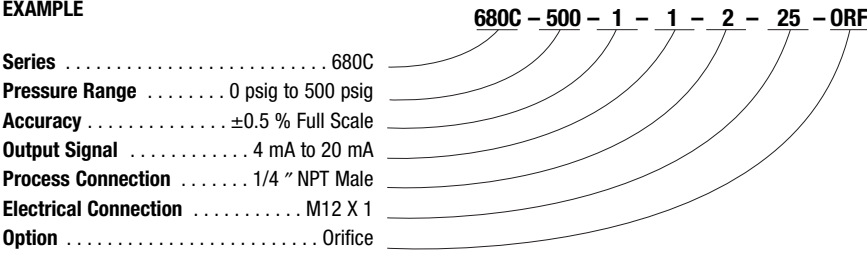
SPECIFICATIONS

| | |
|-------------------------------|--|
| 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. |

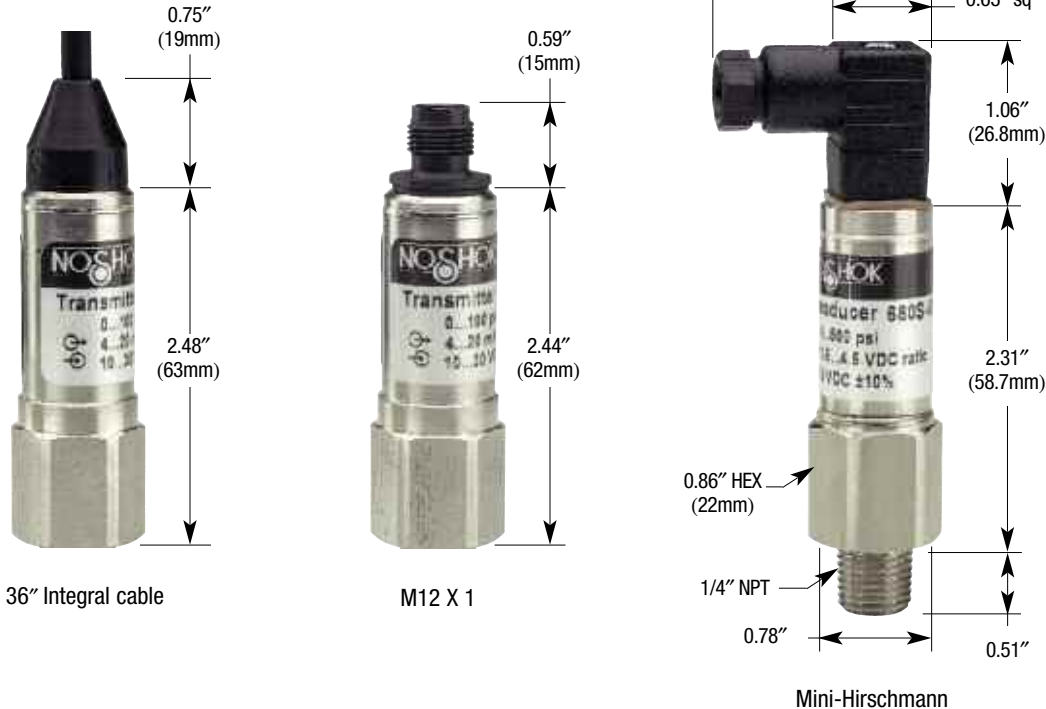
| ORDERING INFORMATION | | | | | | |
|---|---|---|------------------------------------|-----------------------------------|------------------------------|-------------|
| SERIES 680C Copper alloy | SERIES 680S Stainless steel | | | | | |
| PRESSURE RANGES | 0 psig to 30 psig | 30 | 0 psig to 150 psig | 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



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 |