



## SEN-300 Series Pressure Transducers



Our State-of-the-art Silicon-on-Sapphire pressure transducers have a proven track record in the aerospace, flight test, plastics and down-hole markets. Piezoresistive strain gages are epitaxially grown onto a single-crystal radiation-hardened structure with virtually undetectable hysteresis and non-repeatability. Sapphire is a perfect electrical insulator that does not require diode isolation junctions found on diffused semiconductor pressure transducers. Sapphire is chemically inert allowing compatibility with virtually all media.

Sensonetix' Series 300 pressure sensors offer an improvement in performance over bonded foil strain gage and diffused semiconductor technologies at competitive prices. These transducers are perfect for high volume OEM applications on hydraulic test stands, injection molding machines, paper machines, sterilizers, liquid level, gas pipelines and other applications where high accuracy measurements are required.

Available with a variety of pressure ports and electrical connectors, the 300 series transducers have custom packaging for high volume OEM applications. Fully compensated temperature ranges, above those available from foil strain gage technologies, up to 500°F can be ordered today.

If accuracy, stability and price are important to you, consider Sensonetix 300 Series Silicon-on-Sapphire Pressure Transducers for your pressure measurement needs.

# **SENSONETICS**

## **300 SERIES SPECIFICATIONS**

**PRESSURE RANGES (PSI)** 15, 25, 30, 50, 1C, 2C, 5C, 1M, 2M, 3M, 5M, 10M

**PROOF PRESSURE** 150% FSO

**BURST PRESSURE** 300% FSO

### ***ERROR BAND (See below)***

**LINEARITY** 0.25% FSO

**REPEATABILITY** 0.1% FSO

### ***TEMPERATURE RANGE/EFFECTS (See below)***

**COMPENSATED RANGE** 80 to 500°F (higher ranges available)

**OPERATING RANGE** 80 to 500°F (for amplified version remote electronics required)

**STORAGE RANGE** 80 to 500°F (for amplified version remote electronics required)

**THERMAL ZERO SHIFT** +/- 0.0175%FS/°F

**THERMAL SPAN SHIFT** +/- 0.0175%FS/°F

### ***ELECTRICAL PARAMETERS (See Below)***

**FULL SCALE OUTPUT** 3-5 mV, 0-5 VDC, 0-10 VDC, 4-20 mA

**EXCITATION/POWER** 6-12 VDC for mV output units

12-36 VDC for amplified units

**ZERO BALANCE** 5.0% FSO (factory set)

**INSULATION RESISTANCE** 100 Meg Ohms @ 50 VDC

### ***MECHANICAL PARAMETERS (See Below)***

**CASE MATERIAL** 300 series welded SS, hermetically sealed

**WETTED MATERIAL** 300 series SS and sapphire

**CONNECTOR** 6 or 8 pin Bendix, CD Fitting, others available

**CASE SIZE** 1.30" diameter (maximum)

4.0" length (maximum)

**PRESSURE FITTINGS** NPTM, NPTF, MS33656-E4, 9/16" Snotrik



# SENSONETIX

## ORDERING INFORMATION

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**MODEL:** \_\_\_\_\_

- 301 = mV Output (Pressure Only)
- 302 = mV Output (Pressure & Temperature)
- 311 = 0-5 VDC Output (Pressure Only)
- 312 = 0-5 VDC Output (Pressure & Temperature)
- 321 = 4-20 mA Output (Pressure Only)
- 322 = 4-20 mA Output (Pressure & Temperature)
- 331 = 0-10 VDC Output (Pressure Only)
- 332 = 0-10 VDC Output (Pressure & Temperature)

**PRESSURE RANGE:** \_\_\_\_\_

See Pressure Ranges Codes above and use type code below  
 For example 10000 psi Absolute is 10MA

**PRESSURE TYPES**

- A ABSOLUTE REFERENCED TO 0 PSI
- G PREFERENCED TO ATMOSPHERIC PRESSURE
- V VACUUM REFERENCED TO ATMOSPHERIC PRESSURE
- W WET GAGE REFERENCE (CONDENSING ATMOSPHERES)
- S SEALED GAGE (REFERENCED TO 14.69 PSIA)

**CONFIGURATIONS:** \_\_\_\_\_

- 1 1" DIAMETER CASE WITH MALE FITTING
- 2 1" DIAMETER CASE WITH FEMALE FITTING
- 5 7/8" DIAMETER CASE WITH MALE FITTING
- 8 1.25" DIAMETER CASE WITH MALE FITTING
- 15 1.3" THICK-WALL WITHOUT ZERO AND SPAN POTS, ANY FITTING
- 16 1.3" THICK-WALL WITH ZERO AND SPAN POTS, ANY FITTING

**FITTINGS** \_\_\_\_\_

- F1 MS33656-E4 FITTING
- F2 1/4"NPTM
- F3 1/4"NPTF
- F4 1/8"NPTF
- F5 3/8"NPTF
- F6 1/4"-TUBE SWAGE-LOK (7/16"-20UNF)
- F7 9/16" SNOTRIK HIGH PRESSURE FITTING
- F8 1/8"NPTM
- F11 1/2"NPTM

**COMPENSATED TEMPERATURE RANGES** \_\_\_\_\_

- A 80 TO 500°F
- B -55 TO 300°F
- C -25 TO 250°F
- D -65 TO 250°F
- E ZERO TCR TEMP COMP COMPONENTS ONLY
- F 0 TO 180°F
- G 80 TO 180°F
- S SPECIAL CONFIGURATION

**ELECTRICAL CONNECTIONS** \_\_\_\_\_

- CD 1/2"NPTM CONDUIT FITTING
- C1 6-PIN (PTIH-10-6P) CONNECTOR
- C2 8-PIN (PCIH-12-8P) CONNECTOR
- C6 6-PIN (4-20mA)
- C8 8-PIN (4-20mA)