

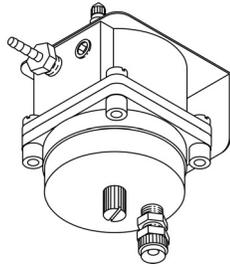
## Pressure Transducers

System Studies' High Resolution Pressure Transducers™ use solid-state, integrated circuit technology to provide greater accuracy and dependability for remote air pressure measurement. The transducers produce readings in the range of 0-30 Pounds per Square Inch (0-207 kPa) with resolution down to 0.1 PSI (0.7 kPa). Because their output is linear (from 4 to 20 milliamperes), as opposed to the 0.5 PSI (3.45 kPa) stepped readings of resistive transducers, they are capable of detecting very subtle changes in pressure. And unlike resistive transducers that have an internal resistor scale and wiper arm that can malfunction and cause inaccurate readings, our pressure transducers provide extremely dependable performance.

The High Resolution Pressure Transducers are available in a variety of configurations to suit your specific application. Variations pertain to the type of fittings supplied for both the pneumatic and conductor tubing (if applicable), and the transducer's intended application/installation. The configurations shown in this catalog section are the most commonly ordered ones.

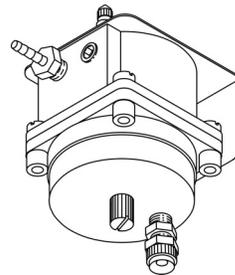
### SPECIFICATIONS

- Calibration** Provides readings from 0-30 PSI (0-207 kPa) in 0.1 PSI (0.7 kPa) increments
- Performance** Utilizes strain gauge design to detect subtle pressure differences. Calibrated to read zero absolute pressure; any reading variations caused by changes in atmospheric and barometric pressure are corrected by the PressureMAP™ software in conjunction with a System Studies Barometric Transducer™. Margin of error for repeatability is less than 1%.
- Electrical** High Resolution Pressure Transducers are powered by voltage (in the range of 12 to 48 VDC) supplied over dedicated conductor pairs by the 289H LSS Monitor™.
- Pair Access** Via internal splicing cavity. Most models supplied with primary and secondary conductor pairs.
- Mechanical** Transducer housing is constructed of nickel-plated brass. Barrier plate is ABS plastic. Stand-alone models supplied with stainless steel mounting bracket.



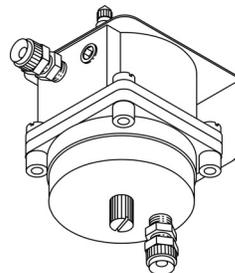
- Dimensions** Stand-alone and panel mount models measure 2.25 inches (5.7 cm) high by 2.5 inches (6.4 cm) wide.
- Weight** 2 lbs. (0.91 kg)
- Measurement** Equipped with single tank valve for manual pressure reading with C pressure gauge.

#### 9800-4000-BB Sensor, Pressure Transducer, Stand-alone, Barbed Fitting



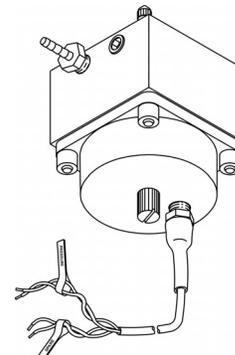
Stand-alone pressure transducer with barbed, nickel-plated brass pneumatic fitting (side location). Wire cover assembly supplied with nickel-plated brass fitting (bottom location) for 3/8" conductor tubing. Transducer includes 15 feet of plastic tubing and 18 feet of 2-pair conductor wire (not shown).

#### 9800-4000-BS Sensor, Pressure Transducer, Stand-alone, 3/8" Tubing Fitting



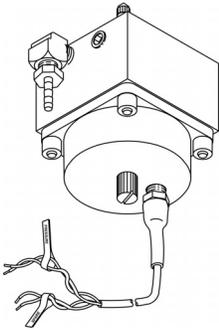
Stand-alone pressure transducer with nickel-plated brass, 3/8" tubing connector fittings for both the pneumatic connection (side location) and the conductor wire tubing (bottom location). Transducer includes 15 feet of plastic tubing and 18 feet of 2-pair conductor wire (not shown).

#### 9800-4001-BB Sensor, Pressure Transducer, Panel Mount, Barbed Fitting



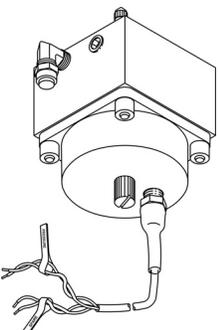
Panel mount pressure transducer with barbed nickel-plated brass fitting (side location) to accommodate pneumatic tubing. Wire cover assembly supplied with 18 feet of 2-pair conductor wire in a protective sheath.

**9800-4001-BR** Sensor, Pressure Transducer, Panel Mount, 90° Barbed Fitting



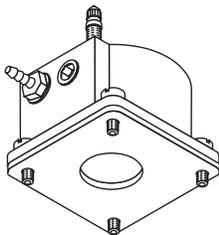
Panel mount pressure transducer with 90°, barbed nickel-plated brass fitting (side location) to accommodate pneumatic tubing. Wire cover assembly supplied with 18 feet of 2-pair conductor wire in a protective sheath.

**9800-4001-BS** Sensor, Pressure Transducer, Panel Mount, 3/8" Tubing Fitting



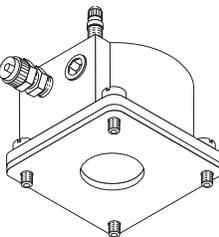
Panel mount pressure transducer with nickel-plated brass fitting (side location) to accommodate 3/8" pneumatic tubing. Wire cover assembly supplied with 18 feet of 2-pair conductor wire in a protective sheath.

**9800-4002-BB** Sensor, Pressure TD, Housing Mount, Barbed Fitting



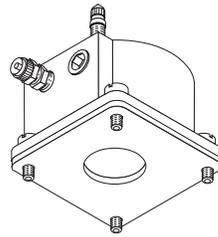
This housing mount pressure transducer is equipped with a single barbed fitting to accommodate smaller diameter pneumatic tubing.

**9800-4002-BS** Sensor, Pressure Transducer, Housing Mount, 3/8" Tubing Fitting



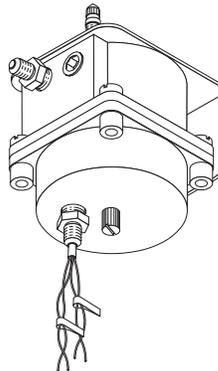
Housing mount pressure transducer with nickel-plated brass fitting (side location) to accommodate 3/8" pneumatic tubing. No wire cover assembly or barrier plate supplied with this configuration. Intended for installation in five or ten bank, pressurized transducer housing. This model equipped with one pair of 26 gauge, stranded wire (not shown).

**9800-4002-BT** Sensor, Pressure Transducer, Housing Mount, 1/4" Tubing Fitting



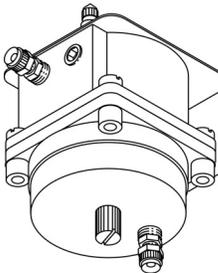
Housing mount pressure transducer with nickel-plated brass fitting (side location) to accommodate 1/4" pneumatic tubing. No wire cover assembly or barrier plate supplied with this configuration. Intended for installation in five or ten bank, pressurized transducer housing. This model equipped with one pair of 26 gauge, stranded wire (not shown).

**9800-4003-SS** Sensor, Pressure Transducer, Stand-alone, 37° Flared Tubing Fitting



Stand-alone pressure transducer equipped with 37° degree, flared connector fittings for both the pneumatic tubing connection (side location) and the conductor wire tubing (bottom location). Fittings are to be used with braided stainless steel tubing (not supplied). Transducer is equipped with 18 feet of 2-pair conductor wire.

**9800-4004-BT** Sensor, Pressure Transducer, Stand-alone, 1/4" Tubing Fitting

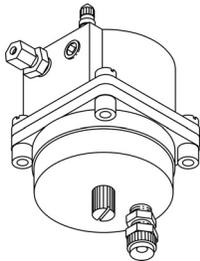


Stand-alone pressure transducer with nickel-plated brass connector fittings to accommodate 1/4" pneumatic tubing (side location) and conductor wire tubing (bottom location). This model is not supplied with tubing or conductor wire.

**FLOW BANK ASSEMBLY REPLACEMENT TRANSDUCERS**

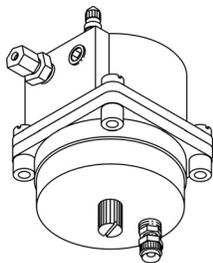
Please note that there are several variations of the High Resolution Pressure Transducer that can be ordered as a replacement for the one used on a Flow Bank Assembly™. These models are listed below.

**9800-4000-SC Sensor, Pressure Transducer, Assembly Replacement, 3/8" Wire Cover Tubing Fitting**



Replacement pressure transducer for use on Flow Bank Assemblies. Equipped with nickel-plated brass connector (side location) for 1/8" pre-formed stainless steel pneumatic tubing. Wire cover assembly includes a nickel-plated brass fitting (bottom location) to accommodate 3/8" conductor tubing. Transducer includes 15 feet of plastic tubing and 18 feet of 2-pair conductor wire (not shown).

**9800-4004-SC Sensor, Pressure Transducer, Assembly Replacement, 1/4" Wire Cover Tubing Fitting**

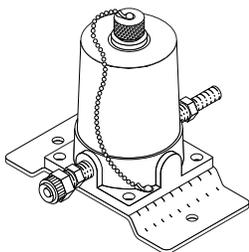


Replacement pressure transducer for use on Flow Bank Assemblies. Equipped with nickel-plated brass connector (side location) for 1/8" pre-formed stainless steel pneumatic tubing. Wire cover assembly equipped with nickel-plated brass fitting (bottom location) for 1/4" conductor wire tubing. This model is not supplied with tubing or conductor wire.

**RESISTIVE PRESSURE TRANSDUCERS**

System Studies offers a resistive pressure transducer for use in air pressure systems that are not monitored by a 289H LSS monitor. In contrast to our High Resolution Pressure Transducer, the resistive device reads in 0.5 PSI (3.4 kPa) steps from 0-9.5 PSI (0-65.5 kPa).

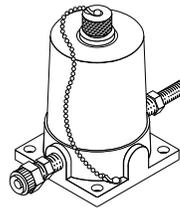
**9800-4012 Sensor, Pressure Transducer, Stand-alone, Resistive, 0-9.5 PSI**



This stand-alone resistive pressure transducer is supplied with 22 gauge conductors in 15 feet of 3/8 inch plastic tubing. It does not require a transducer housing for mounting. It can be installed in both underground and aerial locations.

**9800-4013**

**Sensor, Pressure Transducer, Housing Mount, Resistive, 0-9.5 PSI**



This 0-9.5 PSI resistive pressure transducer is designed to be installed in a transducer housing. Unlike the 9800-4012 transducer, it is not supplied with bottom cover and mounting bracket.

**POSITIVE AIR FLOW TRANSDUCER**

There are some special-application sensors that have been designed specifically for use in the Positive Air Flow (PAF) System™. The PAF System is an engineering design that has proven to be successful in helping telephone companies reduce high resistance cable trouble in underground cables.

**9800-3906-BS-0 Sensor, Assembly, Pressure Relief**



This single transducer assembly is used in a Positive Air Flow System to monitor individual cable pressure. The assembly is equipped with a stainless steel, 90-degree transducer bracket containing a 0-30 psi High Resolution Pressure Transducer. Pneumatically connected to the transducer is a branch T with a 1/4" NPT-M to 3/8" tubing connector on one end (to accept feed from the cable), and a pressure relief valve, manual shutoff valve and particulate filter on the other end. The pressure relief valve permits air to flow from the pneumatically connected cable to atmosphere. When cable pressure drops to 4.85 psi, the valve closes to maintain adequate cable pressure protection.

Refer also to Pressure Relief Manifold Assemblies in Section 4, page B-8.

The words High Resolution Dual Transducer™, Flow Finder™, Flow Finder System of Measurement™, 289H LSS™, PressureMAP™ and the Positive Air Flow System™ are trademarks of System Studies Incorporated.

**HIGH RESOLUTION PRESSURE TRANSDUCERS**

PART NUMBER	PNEUMATIC FITTING*
4000 STAND-ALONE (this model includes a nickel-plated brass conductor tubing connector, 15 feet of plastic tubing, and 18 feet of 2-pair conductor wire)	BB, BR, BS, SC
4001 CENTRAL OFFICE PANEL MOUNT (this model includes a wire cover assembly with 2 pairs of conductors in a protective sheath).	BB, BR, BS, BT
4002 TRANSDUCER HOUSING MOUNT (this model does not include a wire cover assembly, center barrier plate, or tubing and conductors)	BB, BS, BT, SS
4003 STAND-ALONE (this model is supplied with a 37° flared stainless steel conductor tubing connector; it does not include tubing or conductors)	SC, SS
4004 STAND-ALONE (this model is supplied with 1/4" nickel-plated brass conductor tubing connector; it does not include tubing or conductors)	BT, SC

Please note that a four digit part number and a two digit pneumatic fitting designation must be specified for each transducer when ordering.

**\*Pneumatic Fitting:**

- BB** Transducer supplied with nickel-plated brass, barbed pneumatic connector
- BR** Transducer supplied with nickel-plated brass, barbed pneumatic connector on a 90° elbow.
- BS** Transducer supplied with nickel-plated brass, standard tubing connector. For use with 3/8" plastic tubing.
- BT** Transducer supplied with nickel-plated brass, 1/4 inch tubing connector.
- SC** Transducer supplied with nickel-plated brass connector. For use with 1/8" pre-formed stainless steel tubing.
- SS** Transducer supplied with stainless steel, 37° flared tubing connector. For use with 1/4" stainless steel braided tubing.
- NN** No pneumatic tubing connector supplied.

**Ordering Examples:**

If you ordered part number 4002-BS, for example, you would receive a High Resolution Pressure Transducer designed for a conventional five or ten bank transducer housing. The transducer would be supplied with a nickel-plated brass 1/4" male NPT fitting for standard 3/8" plastic tubing.

Pressure transducer model 4003-SS consists of a stand-alone model with a 37° flared stainless steel conductor tubing connector and a 37° flared pneumatic tubing connector (for use with 1/4" stainless steel braided tubing). This model is not supplied with conductor wires.

