Miscellaneous Sensors

System Studies not only manufactures High Resolution Pressure, Flow, and Dual Transducers, we also offer a variety of special application sensors. These sensors, described briefly below, either enhance the performance of the pressure and flow devices, or they perform distinct, independent monitoring functions.

Additional information regarding these sensors, including detailed operating specifications, are included on the data sheets for each product. Ordering information and/or data pertaining to field applications of these transducers is available by contacting System Studies directly or the System Studies Field Engineer in your area.

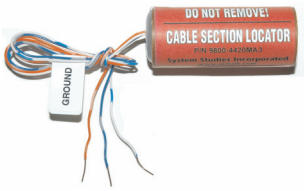
9800-4050 Sensor, Barometric Transducer, Stand-alone

Our Barometric Transducer is designed to be used with High Resolution Transducers in pressure systems that are affected by extreme barometric fluctuations or are located at relatively high altitudes. With one barometric pressure transducer per office, PressureMAP™ will be able to compensate the High Resolution Pressure Transducer™ readings that are affected by barometric changes and altitude.

9800-4450 Sensor, Contact Alarm Expander

The Contact Alarm Expander™ is a small, DC powered block of solid-state relays that makes it possible to convert a standard "open/closed" contact indicator into several isolated and varying contact configurations. Each of these outputs can be read simultaneously by different monitors. The Contact Alarm Expander takes a normally dry contact as input and relays the state of this contact to two normally open contacts, one normally closed contact, and one 540/270 ohm contactor. In application, this device makes it possible to monitor air dryer equipment remotely without interfering with existing, on-premises contactor alarming.

9800-4420MA3 Sensor, Cable Section Locator



A Cable Section Locator (CSL) is a small electrical device that is installed in parallel on dedicated conductor monitoring pairs to provide information for copper cable theft detection. The CSL provides a fixed 3.0 mA output. For the CopperWATCH™ monitoring application, two conductor pairs are required for each monitored cable: a Detection Pair and a Verification Pair. The Detection Pair can have as many as seven (7) CSL devices installed at evenly spaced intervals; the Verification Pair is equipped with one (1) CSL at or near the end of the monitored section. The measured loop value of these pairs is used to determine if a cable cut has occurred and approximately where the cut has taken place.

Each CSL device is equipped with three conductors: blue (wired to monitoring pair's Tip side conductor), white/blue (wired to the Ring side) and orange (wired to ground).

9800-4430 Sensor, Nitrogen Tank

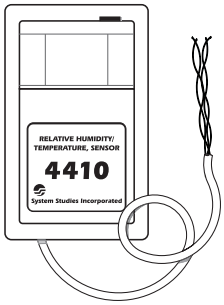
This item is a stainless steel, cylindrical device that threads into the high pressure side of a nitrogen tank's pressure regulator. It measures tank pressure from 0 to 3,000 Pounds per Square Inch (PSI) and outputs the information as a loop current value in the range of 4 to 20 milliamperes.

The device is powered by voltage—in the range of 10 to 48 volts DC—supplied over a pair of dedicated conductors by the 289H LSS monitor. PressureMAP calls the 289H monitor, scans the device reading, and converts the PSI value to a volume reading between 0 and 220 cubic feet.

9800-4505 Sensor, AC Voltage Sensor

This device is ideal for monitoring incoming line voltage to key AC-powered equipment, such as central office air dryers. Designed for 220V AC three-phase applications, this sensor provides accurate and reliable voltage measurement on three individual 4–20 mA output pairs. System Studies recommends one device for each 220V AC three-phase branch in a wire center to monitor air dryer AC power. ***Note:*** *This sensor should be installed ONLY by a qualified electrician following the manufacturer's instruction supplied with the product.*

9800-4410 Sensor, Relative Humidity/Temperature



Designed primarily for central office dryer room monitoring, this dual sensing device provides remote monitoring and alarming of high humidity conditions and ambient room temperature. The humidity sensor detects changes in relative humidity between 20 and 95% and responds with a current loop value between 4 and 20 milliamperes. The temperature sensor provides an electrical resistance output in the range of 2069 ohms to 885K ohms that is converted by PressureMAP to a temperature reading between 32° F and 150° F.

9800-4400-T Sensor, Water Level / Moisture Sensor

The System Studies Water Level / Moisture Sensor™ is an electronic contactor device that is housed in a 3/4-inch by 4-inch protective nickel-plated copper cylinder. Designed for installation in a central office sump or along the base of a central office wall, the water level sensor provides an early indication of the presence of water.

Miscellaneous Sensors Specifications

Model#	Name	Output Characteristics	Dimensions	Material	Ship Weight
9800-4050	Barometric Transducer	Zero calibrated to fixed reference at sea level–vented to atmosphere. Outputs 4 to 20 mA, 20.6 to 35.0 inches of Hg.	2.5 in/6.4 cm x 2.6 in/6.6 cm	Nickel-plated brass, mineral filled nylon center barrier plate	2 lbs (1.8 kg)
9800-4450	Contact Alarm Expander	Function: Relays a contact alarm input to four contact alarm outputs: 2 normally open, 1 normally closed, and 1 540/270K ohm output.	2 in/5.1 cm (wide) x 1 in/2.5 cm (high) x .69 in/1.8 cm (thick)	Solid-state relays housed in phenolic resin material. Sealed with DO-270 epoxy.	1 lb (.45 kg)
9800-4420MA3	Cable Section Locator	Outputs a loop current value of 3.0MA. One or more sensors operate on a single dedicated conductor pair.	2.0 in/5.08cm x 7/8 in/2.22cm	Garolite Tube, Epoxy-filled	1 lb (.45 kg)
9800-4430	Nitrogen Tank Sensor	Output: Loop current (4 to 20 mA) Converted by PressureMAP to a reading between 0-3,000 PSI.	3.780 in/9.6 cm (length) x 1.058 in/2.69 cm Cylindrical O.D. 0.875 in/2.22 cm	Stainless Steel	1 lb (.45 kg)
9800-4505	AC Voltage Sensor	Output: 4 to 20 mA loop-powered unit (15-40 Vdc). Three separate inputs; three separate outputs.	Case: 5.5 in/ 13.9 cm x 3.625 in/9.2 cm x 4.75 in/12.1 cm	Metal Casing	2.3 lbs./ 1.04 kg
9800-4410	Relative Humidity/ Temperature Sensor	Outputs a loop current value between 4 and 20 mA. Sensor operates on a single dedicated conductor pair.	4.5 in/11.4 cm x 2.75 in/6.9 cm x 1.14 in/2.9 cm	Plastic	1.2 lb (.54 kg)
9800-4400-T	Water Level/ Moisture Sensor	Provides electrical resistance output on pair. OPEN (non alarm) condition is approx. 540k ohms; shorts when moisture detected and produces 270k ohm alarm reading.	4.0 in/10.16 cm x 0.875 in/2.2 cm	Nickel-plated copper, includes plastic mounting bracket	1.1 lb (.032 kg)

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