

Transducer Test Meter

Solid-state technology designed to read System Studies' High Resolution Transducers

The System Studies solid-state Transducer Test Meter™ (Part No. 9800-3600) has been designed to test 4 to 20 milliamper (mA) devices, such as the High Resolution Transducer™—including transducers connected to a Selector Pair Saver™. (Please note that the Transducer Test Meter cannot be used to test High Resolution Addressable Transducers™.)

While High Resolution Transducers can be read remotely using PressureMAP™ and the 289H LSS™ monitor, the Transducer Test Meter provides the ability to manually confirm the accuracy of the transducer readings. With this meter, diagnostic field evaluation of System Studies' transducers can be made quickly, with an accuracy of 0.2 percent of full scale.

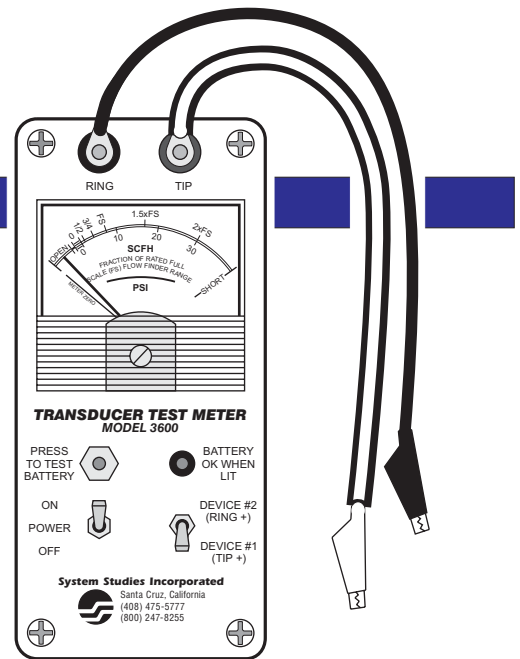
Measurement Procedures

To take a flow or pressure measurement (which are made separately), connect the meter's red and black leads to the monitoring pair of the device being measured. It is not important which leads are connected to which conductor pair—unless you are testing devices on a Selector Pair Saver device circuit (see the section which follows).

For pressure transducer readings, the values listed below the curved scale on the gauge face are used (see figure on the following page). Reading increments are 0, 10, 20, and 30 PSI. Any transducer reading that falls between two indicated PSI values is estimated.

The flow scale is read as a fraction of the flow range listed on the Flow Finder to which the transducer is connected. Flow Finder ranges are 0–950 SCFH, 0–475 SCFH (used in Power Pipe™ applications), 0–95 SCFH, 0–47.5 SCFH, 0–19 SCFH, and 0–9.5 SCFH.

A reading of "FS" (Full Scale) when testing a flow transducer connected across a 47.5 SCFH Flow Finder indicates a measured flow of 47.5 SCFH; a scale reading of "1/2" indicates a flow of 23.75 SCFH (0.5 x 47.5). Because System Studies' monitoring devices are capable of reading up to twice the rated Flow Finder range, the meter will indicate the extended ranges as either "1.5xFS" or "2xFS."



Testing Transducers on a Selector Pair Saver

System Studies' Selector Pair Saver device makes it possible to read and monitor two 4 to 20mA transducers using only one device pair. A typical application is a High Resolution Dual (pressure/flow) Transducer in a Manifold Monitoring Assembly™ equipped with an internal Selector Pair Saver.

When conducting a manual test of the transducers connected to the Selector Pair Saver, the meter's red (positive) lead is connected to the predominantly white (tip) conductor of the Selector Pair Saver's outgoing color/white pair. The black (negative) lead is connected to the colored (ring) conductor.

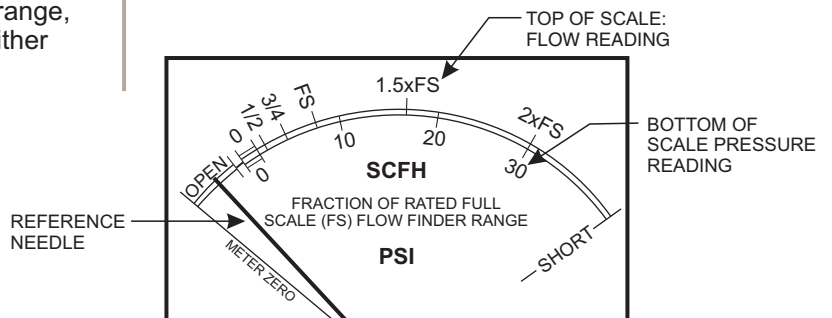
When testing the first transducer, the polarity switch on the test meter (bottom-right switch) is moved to the "Device #1" (DOWN) position. To test the second transducer, the switch is moved to the "Device #2" (UP) position.

Meter Specifications

Electrical Operates with two standard 9V Alkaline batteries: approximate battery life is 320 mA-hours.

Physical Size The meter housing measures 6.55 inches long and 3 inches wide. The housing is 3.35 inches thick. The two 20 gauge test leads are 3 feet in length.

Operating Temperature Range 0 to +150 degrees Fahrenheit.



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