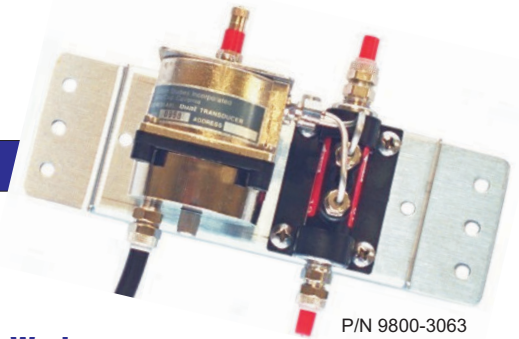


# Flow Measurement Assembly



P/N 9800-3063

## For Multiple Field Applications

As far as measuring air flow, nothing beats the accuracy and reliability of Flow Finders™. And nothing performs this function as well remotely as the High Resolution Transducers™. To offer you the best in air flow measurement and monitoring, System Studies has put these two products together in an easy to install package.

The Flow Measurement Assembly™ (Part Nos. 9800-3063 and 9800-3066) is the ideal component for all air pipe manifold locations where Flow Finders have not been previously installed. It is the offspring of System Studies' Manifold Monitoring Assembly, which includes one or two Flow Finder Manifolds™ and a High Resolution Transducer. When you want to use your existing air pipe manifolds in order to save on costs and time, the Flow Measurement Assembly is the device for you.

The Flow Measurement Assembly comes preassembled on a stainless steel mounting bracket. You have a choice between a High Resolution Dual (pressure and flow) Transducer or a High Resolution Flow Transducer. You can also select one of four Flow Finder ranges, either 0-9.5, 0-19, 0-47.5 or 0-95 Standard Cubic Feet per Hour (SCFH) to suit your specific needs. The transducer is equipped with an internal splice case for quick access to device pairs. To make the electrical connection, the transducer is available in two configurations: one with connectors for use with 3/8" tubing, one with 37° flange stainless steel tubing. The Flow Finder to air pipe pneumatic connections can be made with 1/4" female to air pipe fittings.

### Easy Installation

Designed for quick installation, the mounting bracket of the Flow Measurement Assembly is easily secured to the access hole wall with the bolts supplied. A stainless steel cover is available with the assembly as an accessory to protect it in busy access hole locations. Because the pneumatic connections between the Flow Finder and the transducer are already completed, only two simple connections need to be made: installing the Flow Measurement Assembly in the air pipe and splicing the transducer to the designated monitoring pairs.

### Here's How it Works

The Flow Finder installed on the Flow Measurement Assembly creates a pressure differential across an internal calibrated orifice. This differential is converted to a meaningful flow measurement by the High Resolution Transducer. This unique transducer, which uses state-of-the-art "chip" technology outputs in loop current rather than electrical resistance. Because of its solid-state design, and the fact that it has no mechanical parts, the High Resolution Transducer does not experience the problems associated with resistive, mechanical transducers. It provides accurate readings with much greater resolution than previous devices.

Remote readings are taken via the 289H or 289H-M Loop Surveillance System (LSS)™ monitors, which are directed by PressureMAP™ software. Using this integrated software and hardware monitoring system, you can obtain all the information you need about manifold flow (and pressure measurement if you are using a dual transducer) at this location, quickly and easily.

Because of the Flow Measurement Assembly design, manual flow (and pressure) readings are totally accessible. Simply connect a Flow Gauge™ sampler (or C pressure gauge) to the sampler valves on top of the transducer to obtain a reading. It's as easy as that. There's no air to re-route, no manifold to shut off.

And high flow and pressure readings aren't a problem with the Flow Measurement Assembly. The High Resolution Transducer can read up to twice the reading range of the Flow Finder, in 1 SCFH increments. This means that flows as high as 190 SCFH (using a 0-95 SCFH Flow Finder) can be monitored with the accuracy one would expect from a 0-9.5 SCFH device.

Assemblies equipped with a High Resolution Dual Transducer will give you pressure readings up to 30 Pounds per Square Inch (PSI)—over twice the range of other transducers. They also reduce the 0.5 PSI stepped readings provided by mechanical, resistive pressure transducers down to 0.1 PSI. The result: greater precision and versatility in every system monitoring application.

The Flow Measurement Assembly gives you the monitoring benefits you've been waiting for in a durable, easy to install package. For ordering information, contact your product standardization department or call System Studies Incorporated.



## Model Specifications

The Flow Measurement Assembly can be ordered in a variety of configurations to meet your specific needs. There are four flow measurement ranges available in Standard Cubic Feet per Hour (depending upon the range of Flow Finder ordered); two types of High Resolution Transducers (Flow or Dual); and two types of conductor hose fittings (for 3/8" plastic tubing and for 1/4" braided stainless steel tubing). Part No. 9800-3063 specifies the brass nickel-plated conductor fitting; Part No. 9800-3066 is supplied with a 37° stainless steel conductor tube fitting.

Please refer to the accompanying ordering chart for product numbering.

**Mechanical** The Flow Measurement Assembly is made of stainless steel. It measures 8-3/8" (21 cm) by 6" (15 cm) high by 6" (15 cm) deep. The assembly's Flow Finders are made of molded, thermoplastic nylon. They are equipped with 1/4" NPT female threads. Flow Finders contain a precision, stainless steel orifice which creates a small pressure drop directly related to the amount of air flow. Mechanical parts are brass, nickel plated.

The High Resolution Transducer housing is constructed of Zinc 5 metal and equipped with two 1/8-

inch, stainless steel tubes to provide the pneumatic connection to the Flow Finder. The optional stainless steel cover protects these critical components from accidental damage.

The transducer contains a removable wire cover to provide access to the device pairs. A working pair is supplied for each sensor, as well as a spare pair.

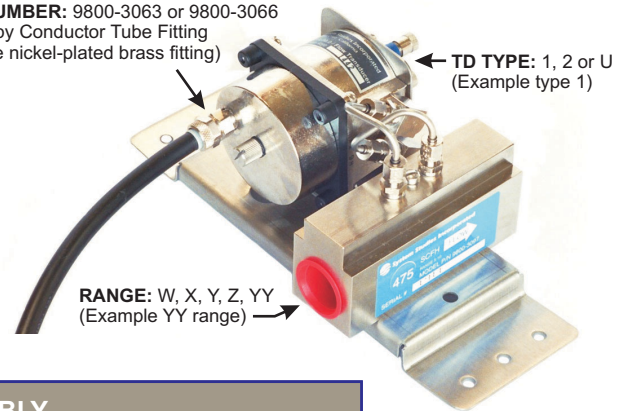
Flow Measurement Assembly, High Resolution Dual Transducer, High Resolution Flow Transducer, Flow Finder Manifold, Flow Finder, 289H Loop Surveillance System (LSS), PressureMAP and Flow Gauge are trademarks of System Studies Incorporated.

For more information regarding any of the products listed here, please refer to their respective Data Sheets.

Specifications subject to change without notification.

**PART NUMBER:** 9800-3063 or 9800-3066  
Defined by Conductor Tube Fitting  
(Example nickel-plated brass fitting)

**TD TYPE:** 1, 2 or U  
(Example type 1)



### FLOW MEASUREMENT ASSEMBLY

PART NUMBER	RANGE*	FITTING**	TD TYPE***
<b>9800-3063</b> (transducer supplied with brass, nickel-plated conductor tubing connector)	W, X, Y, Z, YY	BS, SS, NN, PP, PB	1, 2, U
<b>9800-3066</b> (transducer supplied with 37° stainless steel conductor tubing connector)	W, X, Y, Z, YY	SS, SS, NN, PP, PB	1, 2, U

Please note that a part number, range, fitting and TD type must be specified for each Flow Measurement Assembly when ordering.

#### \*Flow Finder Ranges

<b>W</b>	0-9.5 SCFH
<b>X</b>	0-19 SCFH
<b>Y</b>	0-47.5 SCFH
<b>Z</b>	0-95 SCFH
<b>YY</b>	0-475 SCFH (for Power Pipe System™)

#### \*\*Fitting

These fittings pertain to the pneumatic connections on the incoming and outgoing ports of the Flow Finder.

<b>BS</b>	Nickel-plated brass tubing connectors (not available for YY)
<b>SS</b>	Stainless steel, 37° flared tubing connectors (not available for YY)
<b>NN</b>	No pipe or tubing connectors
<b>PP</b>	Pipe fittings on both ends
<b>PB</b>	Pipe fitting on one end, tubing connector on other end (not available for YY)

#### \*\*\*TD Type

<b>1</b>	High Resolution Flow Transducer
<b>2</b>	High Resolution Dual Transducer
<b>U</b>	Resistive Flow Transducer (United Electric)

#### Ordering Examples:

If you ordered a 3063-X-NN-2 Flow Measurement Assembly, you would receive a bracket with a 0-19 SCFH Flow Finder and a High Resolution Dual Transducer with a nickel-plated brass conductor tube fitting. The Flow Finders would not be supplied with pneumatic connectors.

A 3063-YY-PP-1 (shown in example above) would include a 0-475 SCFH Flow Finder and a High Resolution Flow Transducer equipped with a nickel-plated brass conductor fitting on the transducer's wire cover assembly. The Flow Finder would include nickel plated brass Power Pipe connectors on the incoming and outgoing ports.