

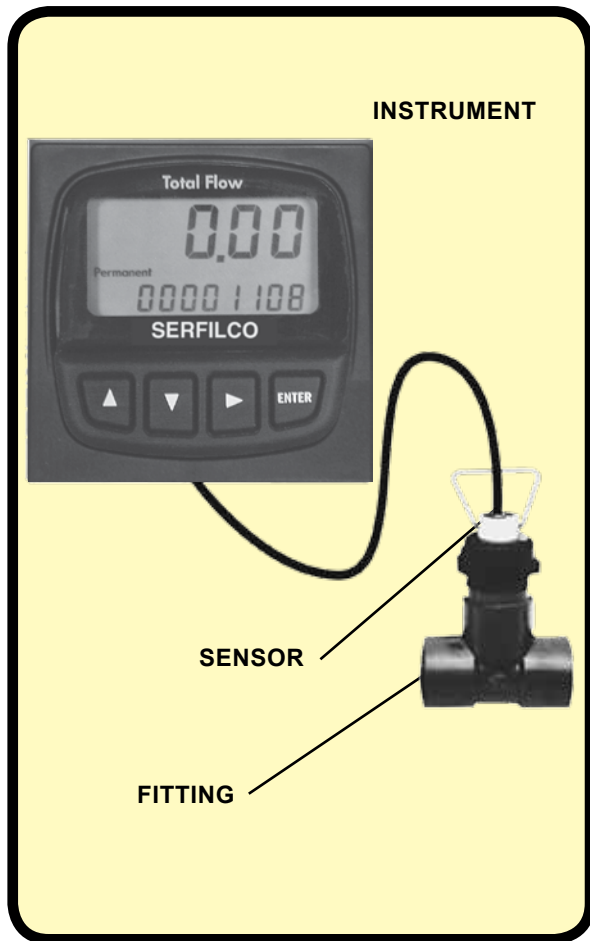


INDICATORS, CONTROLLERS AND SENSORS USED FOR:

FILTRATION SYSTEMS
WASTE WATER MONITORING
PROCESS FLOW CONTROL AND MONITORING
WATER TREATMENT SYSTEMS
BATCH PROCESSING AND BOTTLING
FEED PUMP PULSING AND CHEMICAL ADDITIONS

FEATURES and BENEFITS

- **1/2" to 4" pipe size, 0 - 800 GPM**
- **Highly accurate**
± 1% full scale, ± 0.5% repeatability
- **Local or remote readout and control**
- **Easy to install and use**
- **Convenient field calibration**
- **Highly flexible**
Interface with metering pumps, chart recorders, alarms or programmable logic controllers.
- **Intrinsically safe model available**
- **Quality standards:**
UL, CSA, CE
Manufactured to ISO 9001



These high performance electronic flow monitoring/control systems consist of three components:

1. Flow Meter
2. In-line/Insertion Flow Sensor
3. Installation Fitting

A variety of different configurations is available to provide a system that will monitor or control the movement of fluids and is compatible with corrosive chemicals. The instruments are waterproof for long life in shop environments.

A system may be assembled to monitor a process flow rate (GPM, LPM or any other units) or keep track of accumulated flow for a period of time (totalize gallons or liters). Instruments can be selected that provide a pre-set electrical output signal for batch-

mixing applications or triggering acid and caustic feed pumps. They can also be interfaced with other instruments in your plant, including a computer.

The accuracy and reliability come from patented Flow Sensor designs that convert fluid velocity in a pipe into an electronic signal. The signal is measured and channeled through microprocessor based solid state circuitry to the appropriate meter: flow rate, totalizer or controller.

Cost effectiveness of this equipment makes plant applications feasible. The initial investment pays for itself quickly by providing cost savings from improved process efficiency. These systems are an excellent choice for the simple to the complex industrial application.



MODEL 509 - ANALOG FLOW RATE INDICATOR



An economical feature packed flow monitor, the Model 509 is designed exclusively for use with the Model 515 Flow Sensor to provide a completely independent flow monitoring system.

MODEL	PRICE CODE NO.
509	56-0576

- **Sensor powered**
- **Front panel calibration**
- **Economical flow monitoring**
- **Splash-proof, shatter-resistant acrylic front panel**
- **Factory Mutual (FM) approved for intrinsic safety in Classes I, II and III, Division I**

SPECIFICATIONS:

Compatible sensor: Model 515
 Minimum full scale range: 7 fps
 Accuracy: ± 2% of full scale
 Repeatability: ± 1% of full scale

Environmental:

Operating temperature: 14°F - 149°F

Display:

Type: Taut-band suspension meter movement, 250° deflection - not suitable for prolonged exposure to vibration.

Dials:

Reversible dial kit included (0-2, 4, 6, 8, 10, 100)
 Electrical power: none required

MODEL 815 BATTERY POWERED DIGITAL FLOW METER/TOTALIZER

INTEGRAL MOUNT



Integral field mount comes complete with sensor.

See page 4 to select required fitting

PANEL MOUNT



- **Three totalizers - 2 resettable**
- **Displays flow rate and totalized flow volume simultaneously**
- **Accuracy ± 0.5% of reading**
- **"No-flow" indicator**
- **Simple push - button operation**
- **Users selectable access code**

MOUNTING VERSION	DESCRIPTION	MODEL	PRICE CODE NO.
Integral Mount	PP sensor for 1/2"-4" pipe*	815-PO	56-0759
Panel Mount	used with 515PO sensor	815-1P	56-0760
--	Replacement battery - 3.6V (2 required)		56-0761

* For PVDF sensor change **P** to **N** in model and add **-N** to price code No.

OPTIONAL for all models

DESCRIPTION	PRICE CODE NO.
Surface mounting bracket	56-0571
Splashproof rear cover kit	56-0573

DESCRIPTION	PRICE CODE NO.
Power supply 120 / 220 VAC-24 VDC	56-0758



MODEL 9900 BATCH CONTROLLER



The Model 9900 Batch Controller provides control capability and process fine tuning. The programming interface uses a four button key pad and an intuitive menu for adjusting a batching system to the best performance possible. Choose between simple or advanced modes for a multitude of functions including end of batch pulse, two stage shutdown, overrun alarm, highflow detection, total volume or source volume alarm.

Designed for a variety of batch applications, the 9900 allows storing 10 batch sizes with customized names and 10 different K-factors,

- **Two-stage control**
- **3 Programmable relays**
- **4 - 20 mA non-isolated output**
- **Power: 24 VDC nominal**
- **Modular Design**

MODEL	PRICE CODE NO.
9900-BC	56-0767

MODEL 9900 TRANSMITTER



PANEL MOUNT

The Model 9900 Transmitter is a versatile single channel instrument that can be used to monitor many different parameters. As offered here when used with the Model 515 Flow Sensor, the 9900 provides a cost effective flow instrument. The 9900 is offered in both panel or field mount versions. The optional plug-in Relay Module provides two SPDT relays which can be used for process control.

(Available with panel mount only).

- **Flow rate and totalizer**
- **Large auto-sensing backlit display**
- **Dial type digital bar graph**
- **Intuitive and user friendly interface**
- **Power: 24 VDC nominal**
- **Optional field upgradeable relays (panel mount only)**
- **Field mount includes universal mounting kit**



FIELD MOUNT

DESCRIPTION	MODEL	PRICE CODE NO.
Panel Mount Transmitter	9900-P	56-0764
Field Mount Transmitter	9900-F	56-0765
Optional Relay Module <i>(Panel Mount Only)</i>	9900-R	56-0766

NOTE:

Instrument bodies for models 509 and 815 Panel Mount measure 3.8" x 3.8" x 3.5" and include panel mounting hardware. The 9900 Panel Mount enclosure is 1/4 DIN, 3.9" x 3.9"



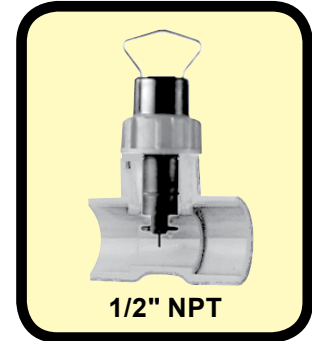
MODEL 515 ROTOR-X™ FLOW SENSOR

Polypropylene or optional pure PVDF

Optional local or remote capability lets you place your meter up to 200 ft. away without signal amplification. The Model 515 can be installed in pipes ranging in size from 1/2" to 4". Patented rotor design ensures a linear output with minimal head loss and no cavitation. The Model 515 can be used with any of the flow meters shown on the preceding pages.

SPECIFICATIONS:

- Output signal: 1 volt peak to peak
- Flow rate range: 1-30 FPS
- Output accuracy: ±1% of full range
- Maximum % of solids: 1% of fluid volume
- Linearity: ± 1% of full range
- Repeatability: ± 0.5% of full range
- Standard cable length: 25 feet
- Pressure rating: 200 PSI @ 80°F



*For PVDF body and Hastelloy® C shaft, change **P** to **N** in Model Number and add **N** to Price Code Number.

PIPE SIZE	MATERIAL*	MODEL	PRICE CODE NO.
1/2" - 4"	Polypropylene body and titanium shaft	515-PO	56-0428

SENSOR INSTALLATION FITTINGS

for Model 515 flow sensors



PIPE SIZE	RECOMMENDED SCALE RANGES GPM	MINIMUM FLOW GPM	PVC 80		CPVC 80	
			MODEL NUMBER	PRICE CODE NO.	MODEL NUMBER	PRICE CODE NO.
1/2"	0-18	1	PV8T005F	56-0440	CP8T005F	56-0454
3/4"	0-30	1.5	PV8T007F	56-0441	CP8T007F	56-0455
1"	0-50	2.7	PV8T010F	56-0442	CP8T010F	56-0456
1 - 1/4"	0-80	4.5	PV8T012F	56-0443	CP8T012F	56-0457
1 - 1/2"	0-120	6.2	PV8T015F	56-0444	CP8T015F	56-0458
2"	0-180	10.5	PV8T020F PV8S020	56-0445 56-0446	CP8T020F --	56-0459 --
2 - 1/2"	0-300	15	PV8T025 PV8S025	56-0447 56-0448	-- --	-- --
3"	0-500	23	PV8T030 PV8S030	56-0449 56-0450	-- --	-- --
4"	0-800	39	PV8T040	56-0451	--	--

NOTE: OTHER PIPING MATERIALS AVAILABLE SUCH AS STEEL, COPPER, PVDF, ETC. FITTINGS ARE SOCKET-TYPE