



High Purity Coriolis Flow Meter

CPFM 8800

All-PFA wetted Coriolis flow meter designed for measuring liquids in high-purity applications



- Fluid measurement performance is independent of fluid properties; eliminating the need to calibrate on different fluids
- Accuracy unaffected by flow regime (e.g., laminar or turbulent flow) or variations in flow velocity profile
- Sensors operate and measure in two-phase flow conditions with gas volumetric void fractions in excess of 30%

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Description

The CPFM Series 8800 is a family of advanced flow meters based on the Coriolis principle fabricated exclusively from PFA (Perfluoroalkoxy) polymeric material.

Series 8800 flow meters are comprised of two assemblies: one containing the sensor, the other containing the supporting electronics.

Series 8800 sensors are specially designed for measuring liquids in high-purity semiconductor, bio-pharmaceutical and other applications that require all PFA-wetted surfaces and provide the following measurements simultaneously:

- Mass flow rate & total mass
- Volumetric flow rate & total volume
- Density
- Solids (or slurry, solution) concentration
- Temperature

Measurement Principle

Fluid flows into the sensor consisting of two flow sensitive elements which are vibrated relative to one another - similar to the tines of a tuning fork. Fluid interacts with the sensor dynamically in such a way that the sensor's response is immune to the fluid's chemical and physical properties flow regime, or variations in flow velocity profile. Fluid mass flow rate and fluid density are independently determined by measuring the relative motion and frequency of the flow-sensitive elements.

Applications

- Highly corrosive chemicals
- CMP slurries or solutions containing solid contents and/or bubbles
- Pure water or ultra high purity chemicals
- Fluids with varying density or viscosity

Measurement Specifications

Mass Flow Ranges	Model 8801	400-6,000 g/min
	Model 8802	250-3,500 g/min
Accuracy		+/- 1% of rate +/-5 g/min
Temperature	Fluid	10 to 80 °C
	Ambient	0 to 50 °C (Electronics Housing)
Operating Pressure		80 psig (Maximum)
Density Range		0.5 to 2.0 g/cc
Density Accuracy		TBD

Electrical Specifications

Supply Voltage	24VDC ±10%
Power Consumption	Max 12W, Add 2W for each installed output module (Analog, Frequency or Digital I/O)
Programming	Operator Parameter configuration through USB interface with a PC
Output Interfaces	4-20 mA Current Loop, Digital I/O, RS485 (pending); (Up to 4 Output Modules can be selected at time of ordering)
LCD Display	2 lines; 16 characters per line
4-20mA I/O Load	4-20mA; 500 Ohms max. load
Frequency Output	Configurable as Frequency or Digital I/O
Frequency Output Range	0-10KHz proportional to flow rate

Physical Specifications

Process Connections	1/4", 1/2" Pillar Fitting® *
	3,500 g/m (3,500 ccm of water)
Wetted Material	DuPont™ Teflon® PFA 440 HP
Dimensions	L(254mm)x W(73mm)x H(115mm)
Weight	Sensor: 0.91kg; Transmitter: 1.16Kg
Cable Length	15m maximum cable length between sensor and electronics assemblies

NOTE: Specifications subject to change without notice