SumoFlo CPFM-8103-Series

SINGLE-USE CORIOLIS FLOW METER

PSG BIOTECH

Precision is achievable with the SumoFlo CPFM-8103 Series Single-Use Coriolis Flow Meter from PSG Biotech.

The SumoFlo accuracy is within ±1% of reading, no matter the changes in viscosity or temperature with flow range from 0.02 kg/min to 100 kg/min. The SumoFlo Single-Use Coriolis Flow Meter comes in eight models and is specially designed for measuring liquids in high-purity bio-pharmaceutical and other applications that require all gamma-sterilizable wetted surfaces. Due to patented Coriolis technology, SumoFlo Flow Meters offer ±1% accuracy of mass flow rate readings that is unaffected by flow regime or variations to the velocity profile, allowing for accurate measurements of bubbly or frothy fluids.

The SumoFlo Single-Use Coriolis Flow Meter is the world's only PEEK (Polyether ether ketone) gamma-sterilizable Coriolis mass flow meter, and is available in a disposable, drop-in form factor for Single-Use applications.

The fluid contacting surfaces are made of unreinforced PEEK that meet USP Class VI, USP 661, and USP 788 standards.

FEATURES

- Accuracy: ±1% of mass flow rate reading; unaffected by flow regime or variations to the velocity profile
- Multiple size sensors from 1/8" to 1" for flow ranges from 0.02 kg/min to 100 kg/min
- Fluid measurement performance is independent of fluid properties; eliminating the need to calibrate on different fluids
- USP Class VI wetted materials
- PEEK sensor is compatible with gamma irradiation to 40 kGy
- CE marketing certified
- Custom sensor mounting cradle available
- Transmitter with integral display options available

Designed and Assembled in California, USA, from American and imported materials. This product is protected by U.S. and International patents.

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Where Innovation Flows

The SumoFlo CPFM-8103-Series Coriolis Flow Meter consists of the Single-Use sensor assembly, supporting electronics, sensor mounting enclosure and a graphical user interface (GUI). Optional temperature sensors provide feedback to the electronics that allow temperature compensation to ensure measurement accuracy regardless of temperature changes to the application fluid. When properly installed in the mounting cradle, the SumoFlo CPFM-8103-series meets CE specifications.

MEASUREMENT SPECIFICATIONS

Model CSEN-8103-**	031	032	062	063	082	151	152	153
Mass Flow Accuracy	±1% of rate for 10% to 100% of full scale rated flow rate ±(1% of rate + Z.O.S) for < 10% of full scale rated flow rate							
Density Accuracy	Density Accuracy ±1%							
Temperature	Ambient: 0°– 50°C, Fluid: 4°– 40°C For applications involving temperatures below 10°C, consult factory for special calibration.							
Operating Pressure	45 psig (3.10 Bar G) max	60 psig (4.14 Bar G) max	80 psig (5.51 Bar G) max					
Flow Range*	0.05 – 1.5 kg/min	0.02 – 3 kg/min	0.5 – 5 kg/min	0.9 – 9 kg/min	2 – 20 kg/min	4 - 40 kg/min	6 - 60 kg/min	10 – 100 kg/min
Zero Offset Stability (Z.O.S.)	0.0023 kg/min	0.0023 kg/min	0.00375 kg/min	0.007 kg/min	0.015 kg/min	0.03 kg/min	0.045 kg/min	0.045 kg/min

* Lower minimum flow rates available with special calibration fee.
Note: The stated accuracy is based on the reference condition of water at 68°F (20°C)1to 77°F (22°C).

MATERIAL SPECIFICATIONS

Model CSEN-8103-***	031	032	062	063	082	151	152	153
Process Connections[2]	1/8″ barb	1/8″ barb 1/4″ barb	1/4″ barb	3/8″ barb 3/8″ Mini TC	1/2″ barb 1/2″ Mini TC	3/4″ barb 3/4″ Mini TC	3/4″ barb 3/4″ Mini TC	1″ barb 1″-1.5″ TC
Wetted Materials)	Unreinforced PEEK (Polyether ether ketone), 316L Stainless Steel (for temperature sensor only), Silicone. All polymeric wetted materials are USP Class VI compliant.							
Interconnecting Cable Length	All polymeric wetted materials are USP Class VI compliant							
Ingress Rating For Connectors	IP65							

* Please consult the factory for other types of process connection options.
[2] Consult the factory for other types of process connection options.

ELECTRICAL SPECIFICATIONS

Supply Voltage	24 V DC ±10%
Power Consumption	CELE-8103-C: Max 6W. CELE-8103-D: Max 7.5W
Programming	Operator parameter configuration through configuration port with a PC
Analog Output Module	1x4-20mA, 2x 4-20mA, 3x 4-20 mA, or 4x 4-20mA; configurable as Mass Flow Rate, Temperature
Digital Input/Output Module	0x D/O, 1x D/O, or 2x D/O; Configurable as frequency or digital I/O
Frequency Output	0 to 10 kHz proportional to flow rate
Digital Output over MODBUS[2]	Mass Flow Rate, Volumetric Flow Rate[3], Density[3], Temperature[4], Rezeroing, Totalizer Reset; via MODBUS RTU over RS485

[1] Lower minimum flow rates are available with an additional calibration fee.
[2] Requires CELE-8103 model configured for MODBUS communications.
[3] Requires CELE-8103 and CSEN-8103 models configured for density measurement.
[4] Requires CELE-8103 and CSEN-8103 models configured for temperature compensation.

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