

RHEOTHERM® FLOW INSTRUMENTS

Liquid and Gas Flow Switches / Monitors

- No moving parts
- Field adjustable
- Maintenance-free
- Easy installation
- Choice of wetted materials
- Long-term reliability

Rheotherm flow switches feature advanced thermal flow sensing technology for highly reliable flow switch protection in liquid or gas service.

With no moving parts, Rheotherm's simplified design is an excellent, maintenance-free alternative to mechanical switches.

- Used with liquids, gases or slurries
- Insertion probes or non-intrusive sensors accommodate virtually all flow rate ranges.
- No mechanical parts to stick, wear or break
- Factory-set switch point is readily adjustable in the field as application requirements change.
- Rugged all-metal wetted surface
- Various process connection options make sensor integration simple.
- Proprietary design uses unstressed components, providing years of reliable operation. The sensor is not harmed when process flow stops or the line empties.

Basic Models

The model descriptions define the electronics to be used with either a TU sensor or insertion probe and your choice of process connections.

Model 100CS



With Insertion probe and sanitary fitting

With flanged TU sensor

Flow switch (or level sensor) with integral electronics and one SPDT relay, rated 10 A at 120 Vac or 5 A at 24 Vdc. CE mark available.

Model 400



Insertion probe with MNPT Fitting

Flow switch with integral electronics, providing two SPDT relays or one relay and a non-linear, uncalibrated 4-20 mA analog flow output signal (calibrated signal optional).

Model 100FS



TU sensor with bare tube stubs

Flow switch with separate electronics and one relay, or optional dual switch relays for low and high set points.

Model 500



In-line design with choice of 1/16" O.D. or 1/8" O.D. flow tube connections. Integral electronics with one SPST-N.O. relay rated 0.5 A at 200 Vdc max. Designed and configured for OEM flow switch applications.

Rheotherm Flow Switches/Monitors

General Specifications	
Applications:	Liquid, gas and slurries
Process Connection	
TU Sensor:	Standard: Tube stubs Optional: Flange, NPT, VCR, Sanitary
Probe Sensor:	Standard: 1" MNPT Optional: 1" flange, sanitary, hot tap
Model 500:	1/16" or 1/8" compression fittings
Set Point Ranges*	
TU Sensor:	
Liquids:	0.007 cc/min to 20 GPM
Gases:	0.0009 to 320 SCFM
Probe Sensor:	
Liquids:	0.5 to 600 FPM
Gases:	5 to 60,000 SCFM
Model 500:	
Liquid (water):	1/16": 0.1 to 100 cc/min 1/8": 2 to 1000 cc/min
Gas (air):	100 to 5000 SCFM 600 to 50,000 SCFM
Repeatability	±0.5% of reading
Temperature Limits*	
Process:	Standard: 0 - 140°F (-18 - 60°C) Optional: -20 - 500°F (-29 - 260°C)
Environment:	0-120°F (-18 - 50°C)
Wetted Material	316 SS standard. Other materials and quartz optional.
Pressure Limits	Per fitting working pressure limits
Trip Response Time	Typical range: 2-25 seconds, depending on set point and direction/magnitude of flow change. Model 100CS: optional 6-360 second time delay.
Input Power	Standard: 115 Vac, 60 Hz Options: 230 Vac, 50/60 Hz 24-28 Vac, 60 Hz 24 Vdc
Output	Standard: single SPDT relay Options: 2 SPDT relays, or 1 relay with non-linear 4-20 mA
Enclosure	Standard: NEMA 7, NEMA 4 (100FS) Option: NEMA 4, NEMA 7 (100FS)
Flow Signal (Model 400)	Non-linear 4-20 mA over 10:1 range

* Specify requirement

Low Flow Meters



Accurate, repeatable measurement of liquid flows as low as one gallon per year (10cc per day), and gas flows down to 20 sccm.

Gas Mass Flow Sensors



One piece insertion probe installs easily into 1" and larger pipes and ducts for reliable measurement of mass or standard volumetric gas flow rates.

For assistance with any flow application, contact an application engineer at Bionetics, *the leader in precision thermal flow metering.* Call **888-LOW FLOW (569-3569).**

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