

# Low Flow Switch Model 500

- **Liquid flows from 0-1,000 CC/MIN**
- **Gas flows from 0-50,000 SCCM**
- **Field adjustable set point**
- **Low cost**
- **Maintenance-free**
- **No moving parts**
- **Non-intrusive, in-line design**
- **UL listed**



The Model 500 Rheotherm flow switch offers a unique opportunity to monitor low liquid, gas or slurry flow rates in a small, economical package.



**RHEOTHERM<sup>®</sup>**  
**FLOW INSTRUMENTS**

## Theory of Operation

The Model 500 flow switch uses INTEK's patented flow measurement technology, where the temperature differential between a reference temperature sensor and a heated temperature sensor is monitored. Two (2) Resistance Temperature Detectors (RTDs) are utilized for the differential measurement. One RTD provides the fluid temperature reference. The other RTD measures the temperature of an adjacent heater.

The flow trip point is set to a temperature differential signal that represents a given flow rate. This flow trip point is easily adjusted in the field, using an external adjustment potentiometer.

## Applications

The Model 500 is used when reliable low flow detection is needed. It can be configured for liquid, gas or slurry applications. It is the preferred instrument for reliable, low cost flow switching. With no mechanical parts, it will not stick, wear or sustain damage from overranging. It works with various liquid viscosities. For viscous liquids, pressure drop requires consideration.

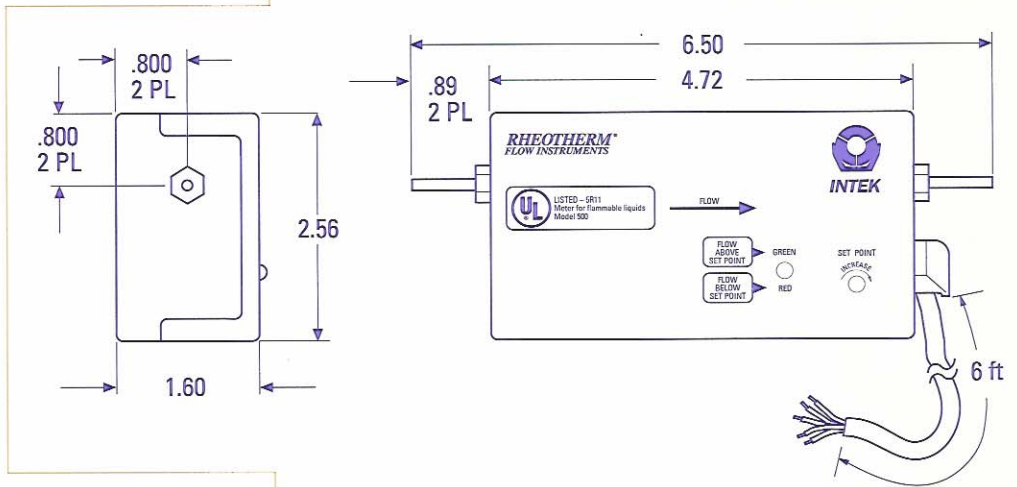
It is intended for general purpose areas and designed in compliance with NEMA 4 requirements. For hazardous areas or severe operating conditions, other models are available.

## How to Install

Use compression-type tube fittings (supplied on UL listed units) to connect the flow tube's inlet and outlet. The Model 500 is virtually orientation insensitive. If installed vertically, however, flow direction should be upward. Electrical connections are easily made via the supplied multiconductor pigtail.

## How to Order

Selection is made from two flow tube sizes, 1/16" O.D. or 1/8" O.D., based on the service (liquid or gas), and the desired trip point range. To ensure proper selection, provide INTEK with a fluid description (including viscosity of liquids) and the maximum flow rate. In most cases, these units can be shipped from stock.



## Specifications

- Flow tube sizes: 1/16" or 1/8" O.D.
- Service: Liquid, gas or slurry
- Wetted material: 316 SS  
(Consult INTEK for other available materials)
- Input power: 24 Vdc; 2 watts max.
- Relay: SPST - N.O.;  
0.5 amp. max. switch current;  
200 Vdc max. switch voltage
- Flow signal: Ranged within 5-10 Vdc;  
output is non-linear and uncalibrated
- Temperature range: 0 to 140°F (-18 to 60°C)
- Pressure rating: 1000 PSI standard  
(Consult INTEK for higher pressure rating)
- Set point range: Liquid (water)      Gas (air)  
1/16" → 0.1-100 CC/MIN      100-5,000 SCCM  
1/8" → 2-1,000 CC/MIN      600-50,000 SCCM
- Process connection: 1/16" or 1/8" compression fittings
- Electrical connections: 6 ft. multiconductor pigtail



## Technology Leader

In addition to flow switches, INTEK offers Rheotherm® precision flow meters for liquid and gas measurements, including extremely low liquid flows of 1 gallon/year. For assistance with any flow application, contact your local representative or an INTEK application engineer.



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