

**RHEOTHERM®**

FLOW INSTRUMENTS

# Model 210 Flow Meter

**Trusted Rheotherm precision with added versatility, functionality and safety**

- Precision low flow meters with signal processing electronics integrally mounted to the sensor, installable at the process site
- Capable of measuring liquid as well as gas flows
- Measures liquid flows as low as one gallon per year and gases as low as 30 sccm
- Chemically compatible with most process liquids and gases
- Little or no maintenance, no moving parts, high reliability
- Extended temperature compensation for reliable flow measurement under a wide range of process conditions
- Self diagnostics
- Available with inline sensors and insertion probe sensors
- Optional remote electronics configuration
- CE marked (24 Vdc models only)
- FM and cFM approved options for hazardous locations (see reverse)



# INTEK

## Your Process Flow Partner

For over 40 years, Intek's Rheotherm flow meters have proven to be a robust and accurate solution for industrial and aerospace flow measurement applications. A low maintenance design with no moving parts and excellent chemical compatibility leads to a long equipment life—up to 20 years is common. The unobstructed flow path of the in-line TU and TUL style sensors minimizes pressure drop across the meter and is suitable for high pressure applications. Quality is assured with Intek's ISO-9001:2015 certified quality assurance program.

### Model 210 Features

- Advanced temperature compensation
- Multiple calibration data storage: 4 liquid or gas calibrations at 4 temperatures each
- Wide turndown capability: 10:1 standard, 200:1 extended, up to 2000:1 with multiple ranges
- Enhanced self diagnostics
- Field adjustable calibration

### Applications

- Low flow: liquids as low as 10 cc/day, and gases as low as 30 sccm
- Gas mass, volume, or velocity flow rates in ducts: 50 sfpm and higher
- Homogeneous slurries
- Hazardous environment options:
  - FM approved intrinsically safe sensors with remote electronics\*
  - FM and cFM approved explosion-proof integral design\*\*
- Choice of fittings and cleaning options for use in sanitary or high purity applications
- Choice of wetted material for chemical compatibility includes stainless steel, Hastelloy C®, Monel®, Super Duplex and other alloys

\*Class I, Division 1, Groups A, B, C, and D

Class I, Zone 1, IIB+H2 (US Only)

Class II, Division 1, Groups E, F, and G

Class III, Division 1

ATEX & IECEx options available with ISB

\*\* Same as above, except Group A is not included



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## Model 210 Specifications

### Line Size

- 1/16 OD or larger

### Response Time

- 1 second

### Time Constant (63% of flow change)

- 3 to 5 seconds (typical)

### Repeatability

- ± 0.5% of reading (typical)

### Accuracy

- ± 1% of reading (typical)

### Enclosure

- Standard: NEMA 4X/NEMA 7
- Optional: NEMA 4/NEMA 7/Panel Mount/Lab (remote electronics)

### Display

- "Blind" (no display)
- 2 x 16 backlit LCD displays all of the following:
  - Mass/volume flow rate
  - Temperature in °C or °F
  - Total accumulated flow

### Output

- Standard: 4/20 mA (flow rate only)
- Optional:
  - 0-10 Vdc or 0-5 Vdc (flow rate, temperature)
  - Pulse (open collector, 5 Vdc, remote electronics only)
  - SPDT switch (remote electronics only)
  - 4/20mA (temperature, remote electronics only)

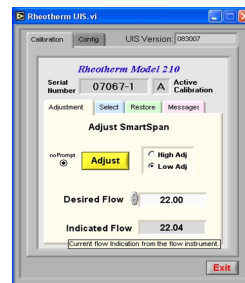
### Input Power

- Standard: 24 Vdc
- Optional: 85-250 Vac (remote electronics only)

## Multiple Calibrations

Up to four independent calibrations can be stored. These can be selected for changes of fluid or to cover additional flow ranges, while maintaining high accuracy. Channel A is the primary factory calibration, with additional factory or user calibrations stored in channels B, C and D.

## Field Adjustment



Calibration performed on the actual fluid typically does not require adjustment. The Model 210's display interface or a Windows based PC connected to the meter via an adapter cable allow for field adjustments if required. A two-point Hi/Lo adjustment automatically adjusts the entire calibration. Factory calibration is easily recoverable.

## Self Diagnostics

Fault detection is per NAMUR NE 43 using 4/20 mA output.

## Configurations

The Model 210 is available as an integrated one-piece design or with the electronics mounted remotely (Model 210R) from the sensor up to 200 feet away.