



Made in the USA

• **INLINE FLOW METER** •
MODEL F-1311 TURBINE
ISOLATED ANALOG OUTPUT



GENERAL SPECIFICATIONS

ACCURACY

- ± 0.5% of reading at calibrated velocity
- ± 2% of reading from 0.8 to 38 GPM (50:1 range)

SENSING METHOD

- Electronic impedance sensing
(non-magnetic and non-photoelectric)

PROCESS CONNECTIONS

- Threaded or sweat union fittings ¾" or 1"

SUPPLY VOLTAGE

- 24 ± 4 V AC/DC at 80 mA

LIQUID TEMPERATURE RANGE

- Standard: 180° F continuous, 200° F peak
- High Temp: 280° F continuous, 300° F peak

AMBIENT TEMPERATURE RANGE

- 5° to 160° F (-20° to 70° C)

OPERATING PRESSURE

- 400 PSI maximum

PRESSURE DROP

- 3 PSI at maximum flow rate

OUTPUT SIGNALS PROVIDED

- Analog Outputs (Isolated)
Jumper selectable: 4-20 mA / 0-10V / 0-5V
- Frequency Output
0 – 15 V peak pulse

MATERIAL

- Brass housing and stem
- Sapphire bearings and tungsten carbide shaft

ELECTRONICS ENCLOSURE

- Weathertight aluminum enclosure

ELECTRICAL CONNECTIONS

- 4-wire minimum for 4-20 mA, 0-10V, or 0-5V output
- Standard: 10' of cable with ½" NPT
conduit connection
- Optional: Indoor DIN connector with 10'
of plenum rated cable

DESCRIPTION

ONICON inline turbine flow meters are suitable for measuring electrically conductive water-based liquids. The F-1311 model provides isolated 4-20 mA and 0-10 V analog output signals that are linear with the flow rate.

CALIBRATION

Every ONICON flow meter is wet calibrated in our flow laboratory against primary volumetric standards that are directly traceable to N.I.S.T. A certificate of calibration accompanies every meter.

FEATURES

Unmatched Price vs. Performance - Custom calibrated, highly accurate instrumentation at very competitive prices.

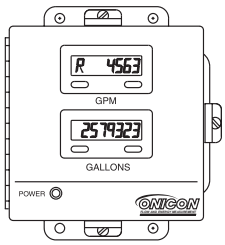
Excellent Long-term Reliability - Patented electronic sensing is resistant to scale and particulate matter. Low mass turbines with engineered jewel bearing systems provide a mechanical system that virtually does not wear.

Industry Leading Two-year "No-fault" Warranty - Reduces start-up costs with extended coverage to include accidental installation damage (miswiring, etc.) Certain exclusions apply. See our complete warranty statement for details.

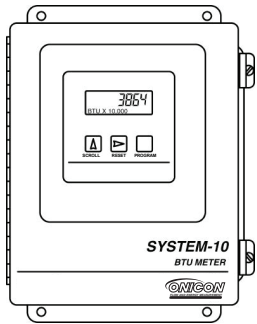
APPLICATIONS

- Closed loop chilled water, hot water, condenser water & water/glycol/brine solutions for HVAC
- Process water & water mixtures

ALSO AVAILABLE



Display Modules



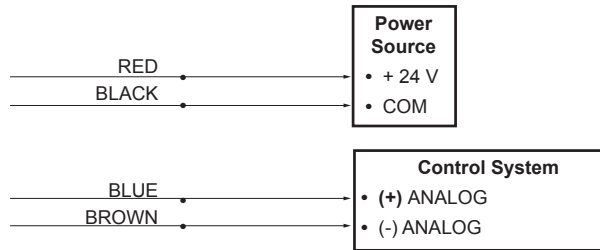
Btu Measurement Systems

F-1311 WIRING INFORMATION

WIRE COLOR	DESCRIPTION	NOTES
RED	(+) 24 V AC/DC supply voltage, 100 mA	Connect to power supply positive.
BLACK	(-) Common ground (Common with pipe ground)	Connect to power supply negative.
GREEN	(+) Frequency output signal: 0-15 V peak pulse	Required when meter is connected to local display or Btu meter.
BLUE	(+) Analog signal	Jumper selectable: 4-20 mA / 0-10V / 0-5V
BROWN	(-) Analog signal	

F-1311 WIRING DIAGRAM

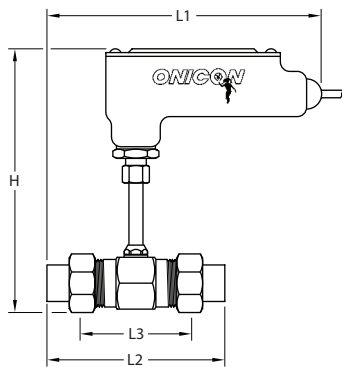
Flow meter into control system (no display or Btu meter)



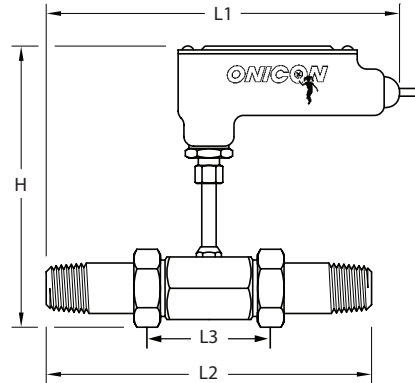
NOTE:

1. Black wire is common with the pipe ground (typically earth ground).
2. Frequency output required for ONICON display module or Btu meter, refer to wiring diagram for peripheral device.

INLINE FLOW METER DIMENSIONS



Sweat		Threaded
9"	L1	10 1/4"
5 3/8"	L2	8 5/8"
3 1/4"	L3	3 1/4"
8"	H	8"
2"	MAX WIDTH	2"



TYPICAL METER INSTALLATION

(New construction or scheduled shutdown)

