

• **INLINE FLOW METER** •
MODEL F-1310 TURBINE
ANALOG OUTPUT



Made in the USA

DESCRIPTION

ONICON inline turbine flow meters are suitable for measuring electrically conductive water-based liquids. The F-1310 model provides non-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
- Domestic water

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 50 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 (non-isolated)

Voltage output: 0-10 V (0-5 V available)

Current output: 4-20 mA

Frequency Output

0 – 15 V peak pulse, typically less than 300 Hz

MATERIAL

Brass housing and stem

Sapphire bearings and tungsten carbide shaft

ELECTRONICS ENCLOSURE

Weathertight aluminum enclosure

ELECTRICAL CONNECTIONS

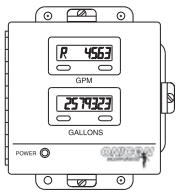
3-wire minimum for 4-20 mA or 0-10 V output

Standard: 10' of cable with ½” NPT
conduit connection

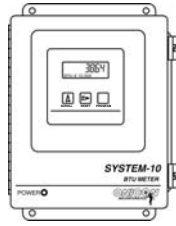
Optional: Indoor DIN connector with 10'
of plenum rated cable



ALSO AVAILABLE



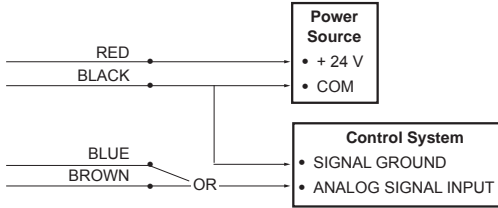
Display Modules



Btu Measurement Systems

F-1310 Wiring Diagram

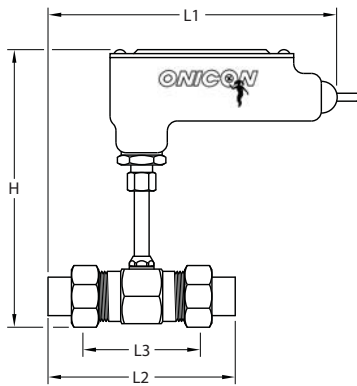
Flow meter into control system (no display or Btu meter)



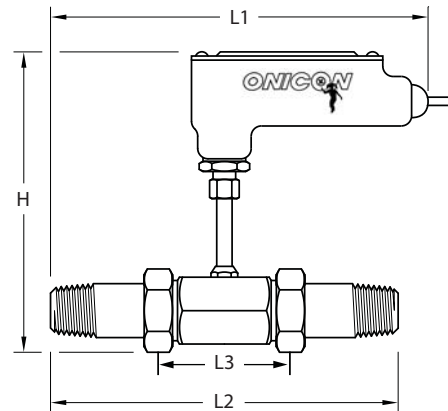
F-1310 Wiring Information

WIRE COLOR	DESCRIPTION	NOTES
RED	(+) 24 V AC/DC supply voltage, 50 mA	Connect to power supply positive
BLACK	(-) Common ground (Common with pipe ground)	Connect to power supply negative & analog input ground
GREEN	(+) Frequency output signal: 0-15 V peak pulse	Required when meter is connected to local display or Btu meter
BLUE	(+) Analog signal: 4-20 mA (non-isolated)	Both signals may be used independently.
BROWN	(+) Analog signal: 0-10 V (non-isolated)	

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)

