

• **INLINE FLOW METER** •  
**MODEL F-1320 TURBINE**  
**DIVIDED OUTPUT**



Made in the USA

## 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 3/4" or 1"

### **SUPPLY VOLTAGE**

- 24 ± 4 V AC/DC at 30 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**

- Divided Contact Output
- Isolated solid state dry contact
- Contact rating: 100 mA, 50 V
- 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**

- Weather-tight aluminum enclosure

### **ELECTRICAL CONNECTIONS**

- 4-wire minimum for divided switch output
- Standard: 10' of cable with 1/2" NPT conduit connection
- Optional: Indoor DIN connector with 10' of plenum rated cable

## DESCRIPTION

ONICON in-line turbine flow meters are suitable for measuring electrically conductive water-based liquids. The F-1320 model provides a binary (digital) dry contact output signal corresponding to flow rate, which is divided to meet the monitoring system input frequency limitation.

## 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.

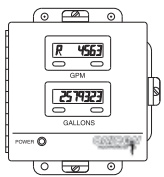
**Industry Leading Two-year "No-fault" Warranty** - Reduces start-up costs with extended coverage to include accidental installation damage (miswiring, etc.) Certain exclusions apply. See our complete warranty statement for details.

## APPLICATIONS

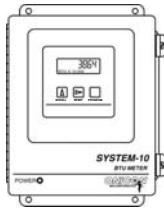
- Closed loop chilled water, hot water, condenser water & water/glycol/brine solutions for HVAC
- Process water & water mixtures
- Domestic water



**ALSO AVAILABLE**



Display Modules



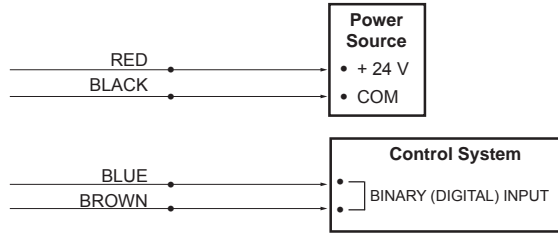
Btu Measurement Systems

**F-1320 Wiring Information**

WIRE COLOR	DESCRIPTION	NOTES
RED	(+) 24 V AC/DC supply voltage, 30 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	Dry contact switch output	Output can be divided by any binary number up to 4096 to meet frequency limitations of control system.
BROWN		

**F-1320 Wiring Diagram**

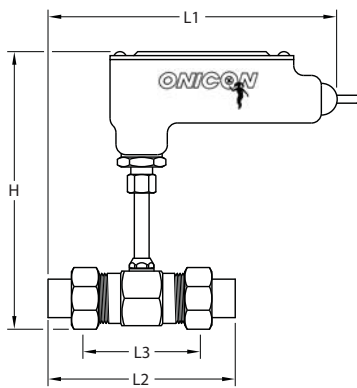
Flow meter into control system (no display or Btu meter)



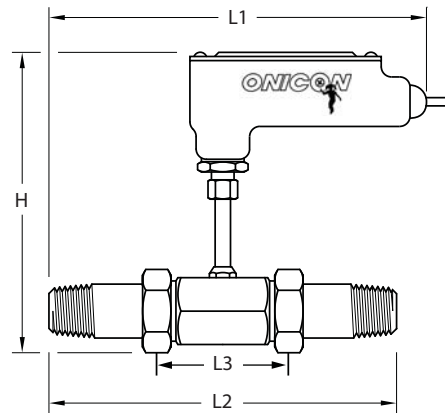
**NOTE:**

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**

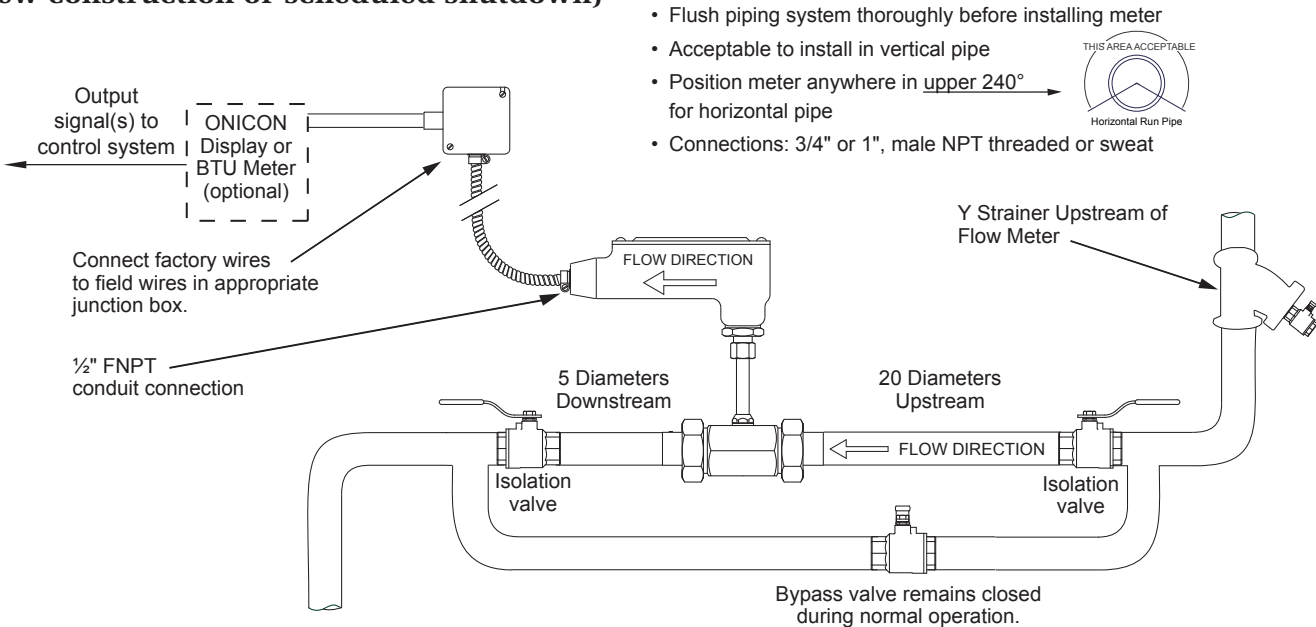


Sweat		Threaded
9"	L1	10 1/4"
5 3/8"	L2	8 5/8"
3 1/4"	L3	3 1/4"
8"	H	8"
2"	MAX WIDTH	2"



**Typical Meter Installation**

(New construction or scheduled shutdown)



- Flush piping system thoroughly before installing meter
- Acceptable to install in vertical pipe
- Position meter anywhere in upper 240° for horizontal pipe
- Connections: 3/4" or 1", male NPT threaded or sweat