

Made in the USA

• **F-1100 SINGLE TURBINE •**
INSERTION FLOW METER
FREQUENCY OUTPUT

DESCRIPTION

ONICON insertion turbine flow meters are suitable for measuring electrically conductive water-based liquids. The F-1100 model provides a high-resolution frequency output for connection to an ONICON display or Btu meter.

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
- ± 1% of reading from 3 to 30 ft/s (10:1 range)
- ± 2% of reading from 0.4 to 20 ft/s (50:1 range)

SENSING METHOD

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

PIPE SIZE RANGE

1¼" through 72" nominal diameter

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
 Meters operating above 250° F require 316 SS construction option

AMBIENT TEMPERATURE RANGE

-5° to 160° F (-20° to 70° C)

OPERATING PRESSURE

400 PSI maximum

PRESSURE DROP

Less than 1 PSI at 20 ft/s in 1½" pipe, decreasing in larger pipes and lower velocities

OUTPUT SIGNALS PROVIDED

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

(continued on back)

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.

Simplified Hot Tap Insertion Design - Standard on every insertion flow meter. Allows for insertion and removal by hand without system shutdown.

| OPERATING RANGE FOR COMMON PIPE SIZES | |
|---------------------------------------|-----------------|
| 0.17 TO 20 ft/s | |
| ±2% accuracy begins at 0.4 ft/s | |
| Pipe Size (Inches) | Flow Rate (GPM) |
| 1 ¼ | 0.8 - 95 |
| 1 ½ | 1 - 130 |
| 2 | 2 - 210 |
| 2 ½ | 2.5 - 230 |
| 3 | 4 - 460 |
| 4 | 8 - 800 |
| 6 | 15 - 1,800 |
| 8 | 26 - 3,100 |
| 10 | 42 - 4,900 |
| 12 | 60 - 7,050 |
| 14 | 72 - 8,600 |
| 16 | 98 - 11,400 |
| 18 | 120 - 14,600 |
| 20 | 150 - 18,100 |
| 24 | 230 - 26,500 |
| 30 | 360 - 41,900 |
| 36 | 510 - 60,900 |

F-1100 SPECIFICATIONS cont.

MATERIAL

Wetted metal components:

Standard: Electroless nickel plated brass

Optional: 316 stainless steel

ELECTRONICS ENCLOSURE

Standard: Weathertight aluminum enclosure

Optional: Submersible enclosure

ELECTRICAL CONNECTIONS

3-wire for frequency output

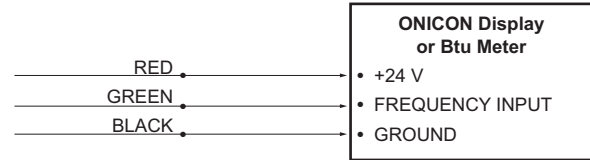
Standard: 10' of cable with 1/2" NPT conduit connection

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

F-1100 Wiring Information

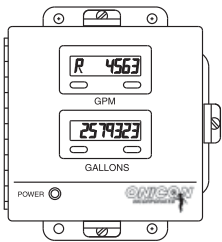
| WIRE COLOR | DESCRIPTION | NOTES |
|------------|--|--|
| RED | (+) 24 V AC/DC supply voltage, 30 mA | Connect to power supply positive |
| BLACK | (-) Common ground (Common with pipe ground) | Connect to power supply negative |
| GREEN | (+) Frequency output signal: 0-15 V peak pulse | Signal for ONICON display or Btu meter |

F-1100 Wiring Diagram

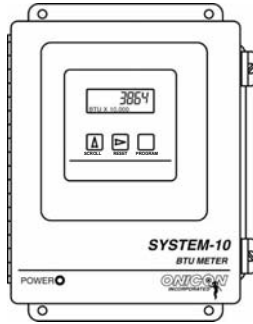


NOTE: Black wire is common with the pipe ground (typically earth ground).

ALSO AVAILABLE



Display Modules



Btu Measurement Systems

Typical Meter Installation

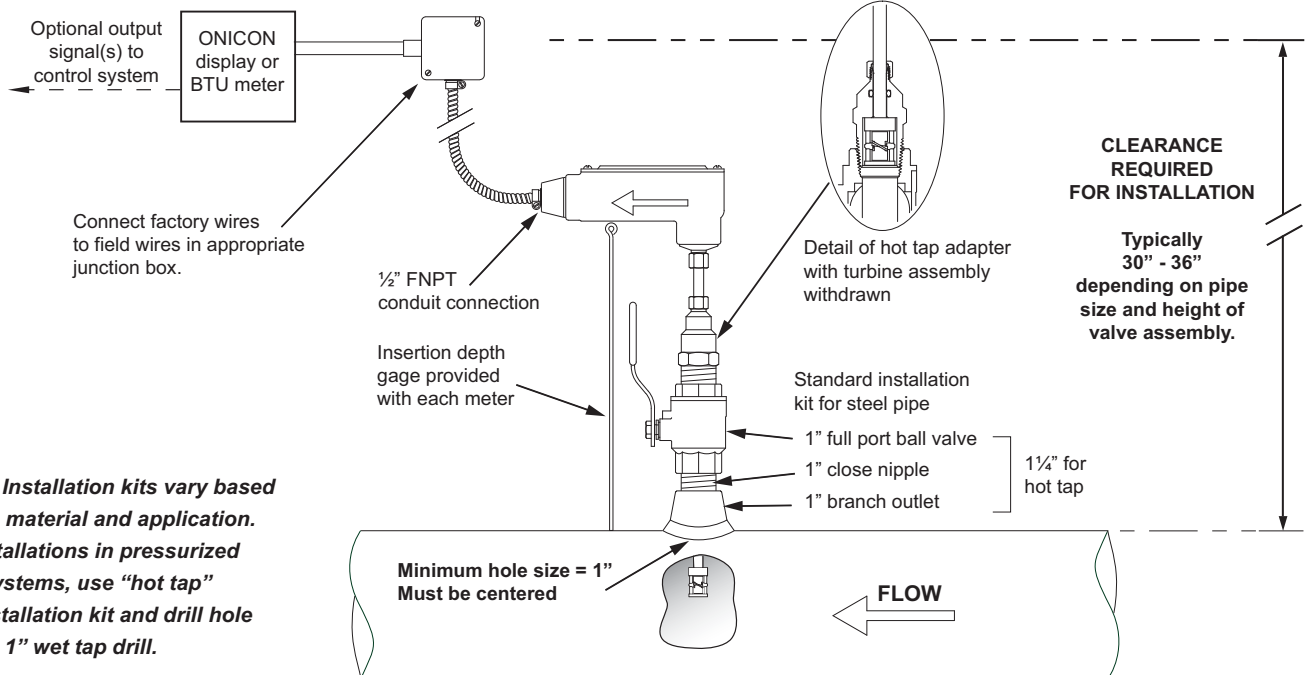
(New construction or scheduled shutdown)

- Acceptable to install in vertical pipe

- Position meter anywhere in upper 240° for horizontal pipe

THIS AREA ACCEPTABLE

Horizontal Run Pipe



NOTE: Installation kits vary based on pipe material and application. For installations in pressurized (live) systems, use "hot tap" 1 1/4" installation kit and drill hole using a 1" wet tap drill.

주|태흥엠엔시

대리점 :

경기도 성남시 중원구 상대원동 5442-1 크란츠테크노 B/D 1408호
Tel) 031-777-8400 Fax) 031-777-8404
e-mail : info@thmc.co.kr website : www.thmc.co.kr