

**• F-1200 DUAL TURBINE •
INSERTION FLOW METER
FREQUENCY OUTPUT**



Made in the USA

DESCRIPTION

ONICON insertion turbine flow meters are suitable for measuring conductive water-based liquids. The F-1200 model provides a high-resolution frequency output for connection to an ONICON Display or BTU Meter.

APPLICATIONS

- Chilled water, hot water, condenser water, and water/glycol/brine for HVAC
- Process water and 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

2½" through 72" nominal

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 stainless steel construction

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 2½" pipe,
decreasing in larger pipes and lower velocities

OUTPUT SIGNAL 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 directly traceable to NIST. Certification of calibration is included with every meter.

FEATURES

Unmatched Price vs. Performance - individually calibrated, "Percentage of Reading" 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 2-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.

Installation Flexibility - Patented dual turbine models deliver outstanding accuracy in short pipe runs.

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

JCI ITEM #	DESCRIPTION
F-1200	Flow Meter, dual turbine, frequency out
F-1299-STANLS	1200 Option, stainless wetted metal
F-STD-INSTL1	Install kit, standard, welded steel pipe
F-HTAP-INSTL2	Install kit, hot tap, welded steel pipe
F-STD-INSTL4	Install kit, standard, 2.5-3" copper tube
F-STD-INSTL9	Install kit, standard, 4" copper tube
F-STD-INSTL5	Install kit, std SS, welded steel pipe
F-HTAP-INSTL6	Install kit, hot tap, SS, welded steel pipe
F-OPT1-CONDUIT	10 ft. sealtight conduit w/ fittings
F-OPT5-PLENUM	10' plenum cable w/inline DIN connector

NOTE: Purchase of installation kit with the flow meter is **STRONGLY RECOMMENDED** to prevent installation difficulties and insure accurate, trouble-free operation. Contact factory for pipe materials not listed.

F-1200 SPECIFICATIONS cont.

MATERIAL

- Wetted metal components
 - Standard: Electroless nickel plated brass
 - Optional: 316 stainless steel

ELECTRONICS ENCLOSURE

- Standard: Weathertight aluminum enclosure
- Optional: Submersible enclosure

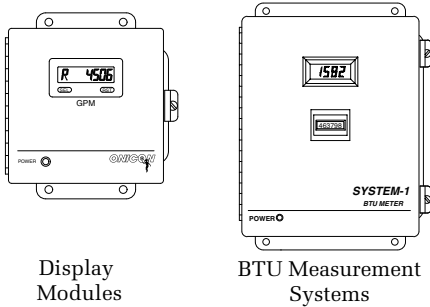
ELECTRICAL CONNECTIONS

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

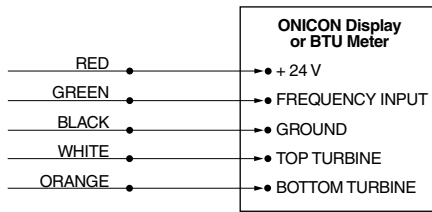
F-1200 Wiring Information

WIRE COLOR CODE		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
DIAGNOSTIC SIGNALS		
ORANGE	Bottom turbine frequency	These signals are for diagnostic purposes - connect to local display or BTU Meter
WHITE	Top turbine frequency	

ALSO AVAILABLE



F-1200 Wiring Diagram

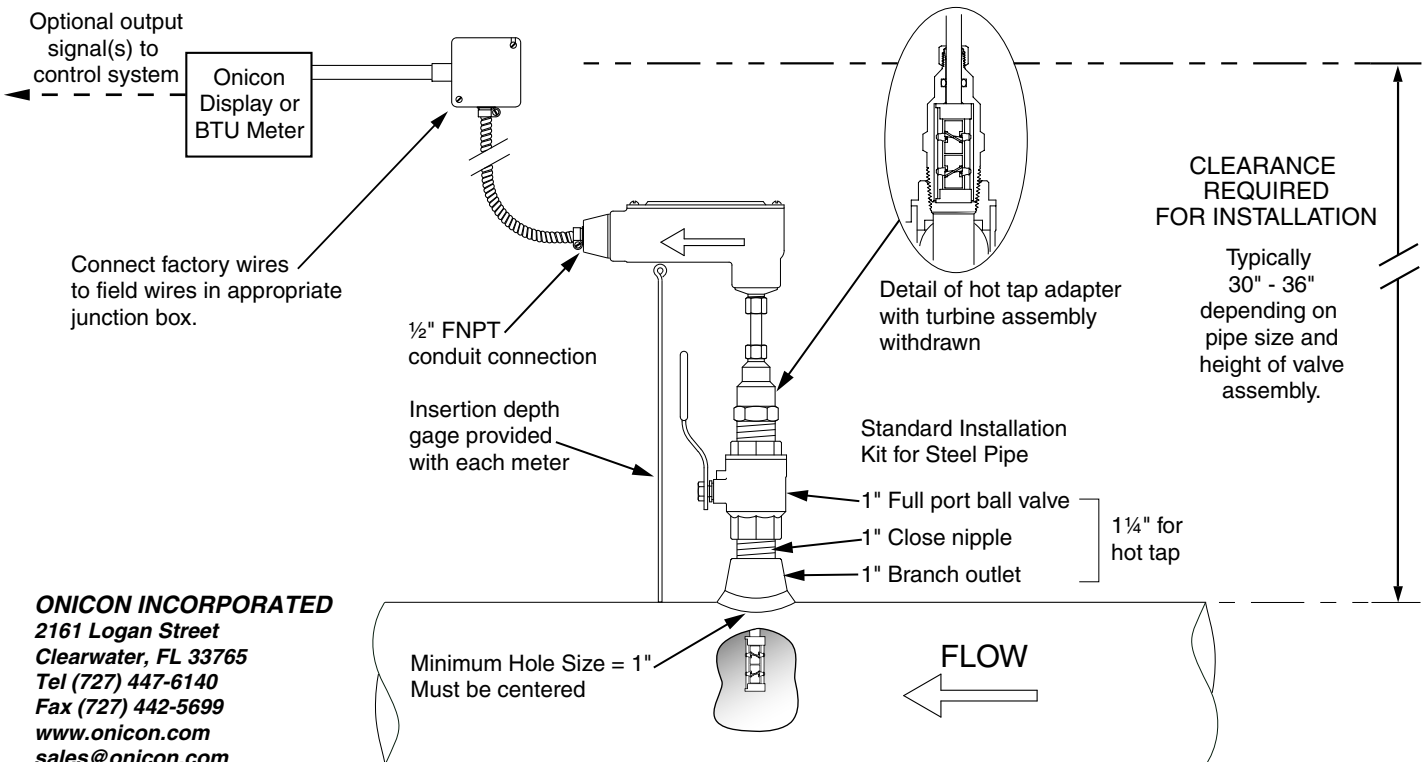


NOTE: Black wire is common with the pipe ground (typically earth ground).

Typical Meter Installation

(New construction or scheduled shutdown)

- Acceptable to install in vertical pipe
- Position meter anywhere in upper 180° for horizontal pipe



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