Self-Contained Wireless Liquid Flow Monitoring Solution

**Highlights**

- Works with a 3rd-party turbine flow meter
- Captures today’s & yesterday’s totals, raw totals, and instantaneous rate
- High accuracy of ± 0.01 % / 1 Hz - 10 KHz
- Up to a 10-year battery life
- Advanced local LCD display interface
- Self-contained, rugged design
- Installs in minutes
- IP66, -40 ºC to 70 ºC
- 900 MHz / 2.4 GHz / 868 MHz
- Secure AES encryption
- Class I, Division 1 (Zone 0), Intrinsically Safe

The OleumTech® FT1 Flow Totalizer Transmitter is designed to work with virtually any third-party flow turbine meters for accumulating volume of liquid with high accuracy of ±0.01 %. Users have the ability to set the contract hour and set the flow rate to per second, minute, hour, or day. Users can also match the k factor and k factor units and display the volume output in barrels, liters, gallons, or cubic meters. The FT1 provides a 2-pin pickup coil connector and a 1-inch mating union for connecting to a turbine meter. This ultra low-power transmitter is powered by a replaceable battery pack that provides up to a 10-year life. The push button LCD interface allows for device configuration and instant access to process data.

Works with a Third-Party Flow Turbine

The OleumTech® FT1 Flow Totalizer Transmitter is designed to work with virtually any third-party flow turbine meters for accumulating volume of liquid with high accuracy of ±0.01 %. Users have the ability to set the contract hour and set the flow rate to per second, minute, hour, or day. Users can also match the k factor and k factor units and display the volume output in barrels, liters, gallons, or cubic meters. The FT1 provides a 2-pin pickup coil connector and a 1-inch mating union for connecting to a turbine meter. This ultra low-power transmitter is powered by a replaceable battery pack that provides up to a 10-year life. The push button LCD interface allows for device configuration and instant access to process data.

Reliable, Scalable, and Safe

The field-proven wireless transmitter communicates with an assigned wireless gateway within the OTC Wireless Sensor and I/O Network creating a highly scalable network, accommodating virtually any I/O requirement.

The OleumTech Wireless Transmitter is certified for use in Class I, Division 1 (Zone 0) hazardous locations. It is intrinsically safe, designed not to cause a spark, and can be serviced without being removed from a process.
### Technical Specifications

**HARDWARE FEATURES**
- Device Functionality: Flow Totalizer Wireless Transmitter
- Embedded Controller: Ultra-Low Power RISC Microcontroller with Internal FLASH (Field Upgradeable)
- Configuration: Standard RS232 Serial / BreeZ® Software for PC
- Inputs:
  - 1x High-Speed Pulse Counter Input: 1 Hz to 10 KHz
  - Up to 10 K Cycles per Second
- Input Voltage Range:
  - 15 mV to 3300 mV
- Accuracy and Stability:
  - Flow Rate Accuracy to ±0.01 % of Reading
  - Excluding Turbine Meter and Magnetic Pickup
- Power Source:
  - Self-Contained, Internal 3.6 Vdc Lithium Battery
- Internal Battery Life:
  - Up to 10 Years, Based on User Defined Reporting Intervals
- Local LCD Display:
  - 32-Character Display (16x2 Lines) with 4 Function Keys + Read Button
- Instant Displayable Read:
  - Current Flow Rate / Today’s Totals / Yesterday’s Totals / Battery Voltage / RF Status
- Local Configuration:
  - Integral LCD with Push Button Interface
- Device Diagnostics:
  - Health Tags: Battery Voltage, Received Signal Strength Indication (RSSI), RF Refresh, RF Timeout

**WIRELESS COMMUNICATIONS**
- Type: 900 MHz / 915 MHz / 2.4 GHz / 868 MHz
- 900 MHz: FHSS (Frequency Hopping), FSK, AES Encryption 256-bit (900 MHz), 128-bit (915 MHz)
- 2.4 GHz: DSSS (Direct-Sequence), AES Encryption 128-bit
- 868 MHz: LBT (Listen Before Talk), AFA (Adaptive Frequency Agility), AES Encryption 128-bit
- Bit Rate:
  - 900 MHz: 9600 bps / 115.2 kbps
  - 2.4 GHz: 250 kbps
  - 868 MHz: 80 kbps
- Output Power (Max):
  - 900 MHz: 10 mW
  - 2.4 GHz: 63 mW
  - 868 MHz: 25mW
- Receiving Sensitivity:
  - 900 MHz: -110 dBm @ 9600 bps, -100 dBm @ 115.2 kbps
  - 2.4 GHz: -100 dBm @ 250 kbps
  - 868 MHz: -101 dBm @ 80 kbps
- RF Range:
  - 900 MHz: Up to 7500 Feet / 1.4 Miles / 2.3 km with Clear Line of Sight
  - 2.4 GHz: Up to 4.3 Miles / 7 km with Clear Line of Sight
  - 868 MHz: Up to 5.2 Miles / 8.4 km with Clear Line of Sight

**CERTIFICATIONS & COMPLIANCE**
- EMC/EMI:
  - FCC Part 15 (USA), IC ICES-003 (Canada), ACMA (Australia)
  - AS/NZS CISPR 32 (Australia), EN55032 & EN55024 (EU)
- Safety:
  - Class I, Division 1, Groups A, B, C, D T3c; Ex ia IIC T3
  - Class I, Zone 0; ATEX: SIRA 13ATEX2142X; Ex ia IIC T3 Ga; II 1 G
  - IECEx: SIR 13.0054X; Ex ia IIC T3 Ga

**MECHANICAL SPECIFICATIONS**
- Dimensions: 5.5” (W) x 16” (H) x 4.4” (D) / 140 mm (W) x 406 mm (H) x 112 mm (D)
- Package Dimensions: 10.25” (W) x 14” (H) x 6.5” (D) / 260mm (W) x 356mm (H) x 165mm (D)
- Package Weight:
  - ~7 lbs / 3.2 kg
- Connection Fitting:
  - 1” NPT Female, 1” Mating Union to Flow Turbine Included
- Enclosure Casing Material:
  - Type 4X Aluminum; IP66
- Mating Assembly:
  - Stainless Steel 316
- Magnetic Pickup Coil Connection:
  - 2-Pin Circular Connector (Part # MS3106A-10SL-4S)

**GENERAL SPECIFICATIONS**
- Ambient Temperature (Class I, Division 1 / Zone 0): -40 °F to 158 °F (-40 °C to 70 °C)
- LCD Screen -4 °F to 158 °F (-20 °C to 70 °C)
- Operating Conditions:
  - Ambient Temperature (Non-Hazardous Applications): -40 °F to 176 °F (-40 °C to 80 °C)
  - LCD Screen -4 °F to 158 °F (-20 °C to 70 °C)
  - Humidity: 0 to 99 %, Non-Condensing
- Warranty:
  - 2-Year Parts and Labor
- Country of Origin:
  - USA

**ORDERING INFORMATION**
- Model Numbers: WT-0900-FT1, WT-0915-FT1, WT-2400-FT1, WT-0868-FT1
- Wirelessly Connects To:
  - OTC Wireless Gateway
- Configuration Cable:
  - SX1000-CC2, 20-ft All-in-One Configuration Cable
- Replacement Battery:
  - Use OleumTech SX1000-BP3 Only

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