

DATASHEET WT-LL6





# **Highlights**

- For water/wastewater applications only
- Non-contact, no moving part solution
- Level reading range: up to 12 ft / 3.4 m
- Up to a 10-year battery life<sup>1</sup>
- Advanced local LCD display interface
- Self-contained, rugged design
- Installs in minutes
- IP66, -40 °C to 70 °C (-40 °F to 158 °F)
- 900 MHz / 915 MHz / 2.4 GHz / 868 MHz
- Secure AES encryption

US Patent #6967589



**OTC Gateway** 







Network Infrastructure

Cloud (Analytics)



# Non-Contact Wireless Water Level Monitoring Solution

#### Ultrasonic Level Sensor Included

The OleumTech® OTC Wireless Ultrasonic Transmitter does not come in contact with the liquid (product) or have any moving parts that require maintenance. Specifically designed for water and wastewater applications, the WT-LL6 can measure up to 12 ft of water level with a high resolution of 0.04 inches. The WT-LL6 can be installed easily and quickly with the provided mounting hardware. Additional data such as volume and tank full percentage can be reported as well based on user preference. This ultra-low-power transmitter is powered by a replaceable battery pack that provides up to a 10-year life.¹ 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 designed for general purpose applications.



## **Technical Specifications**

#### HARDWARE FEATURES · Liquid Level Sensing Wireless Transmitter Using Ultrasonic Technology **Device Functionality** · Non-Contact Solution / No Moving Parts **Embedded Controller** · Ultra-Low Power RISC Microcontroller with Internal FLASH (Field Upgradeable) Configuration · Standard RS232 Serial / BreeZ® Software for PC Sensor Type Ultrasonic; Non-Submersible Reading Range · Up to 12 ft. / 3.6 m Dead Band Zone · 12" / 1 ft. / 0.3 m · High Resolution of 0.04" (1 mm) Resolution · Self-Contained, Internal 3.6 Vdc Lithium Battery **Power Source** Internal Battery Life · Up to 10 Years, Based on User Defined Reporting Intervals 1 Local LCD Display · 32-Character Display (16x2 Lines) with 4 Function Keys + Read Button Instant Displayable Read · Product Level / Battery Voltage / RF Status Local Configuration · Integral LCD with Push Button Interface · Health Tags: Battery Voltage, Received Signal Strength Indication (RSSI), RF Refresh, RF Timeout, Error Codes **Device Diagnostics** WIRELESS COMMUNICATIONS Radio Band · ISM Band (License-Free)

900 MHz / 915 MHz · FHSS, FSK, AES Encryption 256-bit (900 MHz), 128-bit (915 MHz)

2.4 GHz · DSSS, AES Encryption 128-bit

Bit Rate 900/915 MHz: 9600 bps / 115.2 kbps; 2.4 GHz: 250 kbps

· 900/915 MHz: 10 mW: 2.4 GHz: 63 mW Output Power (Max)

· 900/915 MHz: -110 dBm @ 9600 bps, -100 dBm @ 115.2 kbps Receiving Sensitivity · 2.4 GHz: -101 dBm @ 250 kbps; 868 MHz: -106 dBm @ 80 kbps

· 900/915 MHz: Up to 7500 Feet / 1.4 Miles (2.3 km) with Clear Line of Sight<sup>2</sup>

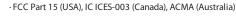
· 2.4 GHz: Up to 4.3 Miles (7 km) with Clear Line of Sight<sup>2</sup>

#### **CERTIFICATIONS & COMPLIANCE**

EMC/EMI

RF Range





· AS/NZS CISPR 32 (Australia)

· CAN/CSA-C22.2 No. 61010-1-2012

Safety



· UL Std. No. 61010-1-2012

· IEC/EN 61010-1-2010

Device is not intended for use in hazardous locations

#### MECHANICAL SPECIFICATIONS

Dimensions  $\cdot$ 5.5" (W) x 20.2" (H) x 4.4" (D) / 140 mm (W) x 513 mm (H) x 112 mm (D) · 24" (W) x 10" (H) x 7" (D) / 609mm (W) x 254mm (H) x 153mm (D) Package Dimensions

Package Weight ·~6 lbs / 2.7 kg

Connection Fitting · 1.5" NPT Male Compression Fitting

**Enclosure Casing Material** · Type 4X Aluminum: IP66

#### **GENERAL SPECIFICATIONS**

· Ambient Temperature (Non-Hazardous Applications): -40 °C to 80 °C (-40 °F to 176 °F)

**Operating Conditions**  $\cdot$  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

#### ORDERING INFORMATION

Model Numbers · WT-0900-LL6, WT-0915-LL6, WT-2400-LL6

Wirelessly Connects To · OTC Wireless Gateway

· SX1000-CC2, 20-ft All-in-One Configuration Cable Configuration Cable

· Use OleumTech SX1000-BP3 Only Replacement Battery

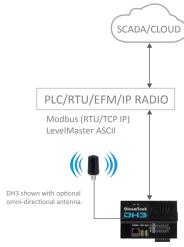
·USA

Ambient temperature and one transmission per 1 min interval without any retries were used to calculate battery life. Actual battery life may vary depending on environmental factors, application, and usage. Use data shown above only as general point of reference. See OleumTech Battery Life Expectancy Chart for predicted battery life based on reporting interval.

<sup>2</sup>The maximum RF range data was collected under optimal test conditions, including a clear line of sight between antennas. Actual wireless RF range may vary depending on location, RF interference, weather, antenna type, cable type, and line of sight.

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### **Networking Diagram**



**OTC GATEWAY** 

### **OTC TRANSMITTERS**

Point-to-Multipoint "Star Topology





