The OleumTech® HLT High Level Switch Transmitter provides two actuation points for detecting high and high-high liquid level conditions. The Transmitter can also report transition counts. This top tank mounting Transmitter is designed for use with an OleumTech high level switch. The level switch is sold separately so that users can select the desired length and choose single or dual actuation option. The HLT utilizes on-delay exception reporting method and users can set the debounce filter ranging from 20 ms to 2000 ms to control just when the high level detection occurs. As a safety measure, regardless of state change, this device reports to the wireless gateway every five minutes. This ultra-low-power transmitter is powered by a replaceable battery pack that provides up to a 10-year life.

Dual-Level Detection Capabilities

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.

Reliable, Scalable, and Safe
HARDWARE FEATURES

Device Functionality - High Level Sensing Wireless Transmitter (Top / Vertical Mount)
Embedded Controller - Ultra-Low Power RISC Microcontroller with Internal FLASH (Field Upgradeable)
Configuration - Standard RS232 Serial / BreeZ® Software for PC
Inputs - 2x Actuation Points (1 or 2 Float Option)
Power Source - Self-Contained, Internal 3.6 Vdc Lithium Battery
Internal Battery Life - Up to 10 Years, Based on User Defined Reporting Intervals
Device Diagnostics - Health Tags: Battery Voltage, Received Signal Strength Indication (RSSI), RF Refresh, RF Timeout

WIRELESS COMMUNICATIONS

Type: 900 MHz / 915 MHz
- 900 MHz: FHSS (Frequency Hopping), FSK, AES Encryption 256-bit (900 MHz), 128-bit (915 MHz)
- 2.4 GHz / 868 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: 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 IECES-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
- ATEX: Sira 13ATEX2142X; Ex ia IIC T3 Ga; II 1 G
- IECEx: SIR 13.0054X; Ex ia IIC T3 Ga

MECHANICAL SPECIFICATIONS

Dimensions - 5" (W) x 12.6" (H) x 4.4" (D) / 127 mm (W) x 320 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 - 2" NPT Male (Pipe Plug)
Enclosure Casing Material - Type 4X Aluminum; IP66
Switch Materials - 316 Stainless Steel
Switch Length - 1 to 6 Feet in 1" Increments / Custom Lengths Also Available
Specific Gravity - 0.60

GENERAL SPECIFICATIONS

Operating Conditions - Ambient Temperature (Class I, Division 1 / Zone 0): -40 °F to 158 °F (-40 °C to 70 °C)
- Ambient Temperature (Non-Hazardous Applications): -40 °F to 176 °F (-40 °C to 80 °C)
- Humidity: 0 to 99 %, Non-Condensing
Switch Temperature Range - -40 °F to 248 °F (-40 °C to 120 °C)
Switch Pressure Rating - 497.8 PSI
Warranty - 2-Year Parts and Labor
Country of Origin - USA

ORDERING INFORMATION

Model Numbers - SMS000-HLT (900), SMS010-HLT (915), SMS400-HLT (2.4), SMS5020-HLT (868)
Wirelessly Connects To - OTC Wireless Gateway
Configuration Cable - SX1000-CC2, 20-ft All-in-One Configuration Cable
Replacement Battery - Use OleumTech SX1000-BP3 Only

Networking Diagram

Graphical representation of network connections showing OTC Transmitters, OTC Gateway, Modbus (RTU/TCP IP), SCADA/Cloud, PLC/RTU/EFM/IP Radio, and LevelMaster ASCII. DH3 shown with optional omni-directional antenna.

HLT - Indicates Top/Vertical Mount Type
IL - Length in inches from Top of Tank to Bottom of Probe
L1 - Length in inches from Top of Tank to Middle of Probe

1Ambient 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.

2The 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.