



Model: WLV7389-24-SB

# Non-contact Wireless Ultrasonic Level Sensor Transmitter and Analog Output Wireless Receiver



## FEATURES & BENEFITS

- Wireless Bridge Between Level Sensor & Instrument
- Non-contact Ultrasonic Sensor with Narrow Beam Pattern
- Up To 1 Mile Line-of-site Transmit/Receive Distance
- 500cm (16') Measurement Range
- Can Be 12-24V DC, Hardwired, Battery or Solar Powered
- Receiver Provides 4-20mA or 1-5V DC Analog Output
- License Free Point-to-point Radio Operation

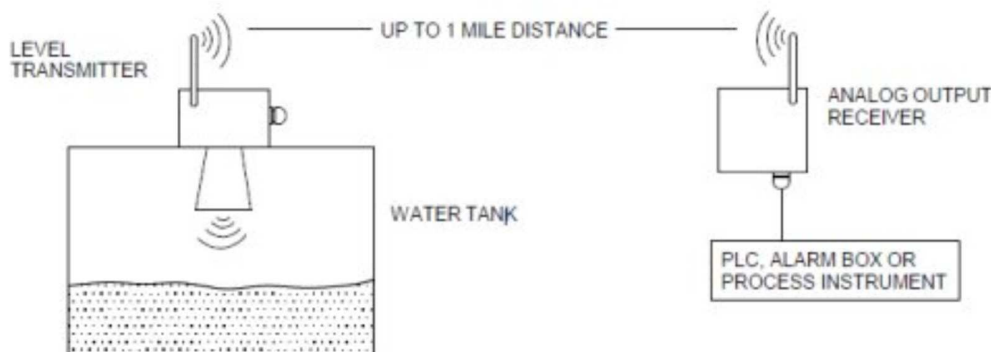
## APPLACATIONS

- Bin, Tank or Pool Level Monitoring, Irrigation Systems
- Process Control & Instrumentation
- Snow Level Measurement

## DESCRIPTION

Model WLV7389-24-SB Wireless Ultrasonic Tank Level Transmitter provides a license free 2.4GHz wireless bridge between level sensor and process instrument at a distance up to 1-mile line-of-site (LOS). The sensor/wireless transmitter combination accomplishes tank level measurement by providing a 4-20mA current or 1-5V DC voltage output on the wireless receiver side that corresponds to distance measured by the sensor. Connect the receiver output to a process instrument or PLC to control a pump, valve or alarm unit.

SAMPLE APPLICATION: ULTRASONIC LEVEL SENSOR SENDING WIRELESS MEASUREMENTS TO REMOTE PLC, ALARM BOX OR PROCESS INSTRUMENT



## General Specifications

**Radio Frequency:** 2.4Ghz  
**Wireless Analog Signal Transmission Resolution:** 10-bit  
**RF Output Impedance:** 50 Ohm nominal  
**Transmitter/Receiver Code Matching:** Factory set  
**Wire Connections:** Terminal Blocks (14 – 24 AWG)  
**Transmitter/Receiver Enclosure:** Din-rail Plastic or NEMA 4X  
**Antennas:** 7dBi Antenna (Included with system)  
**Transmit/Receive RF Distance:**  
Up to 600' Line-of-sight (With Included 5dbi Antennas)  
Up to 1 Mile Line-of-sight (With Optional 12dbi Antennas)

## Level Sensor Specifications

**Sensor Frequency:** 42kHz  
**Sensor Read Rate:** 6.66Hz  
**Measurement Distance/Beam Pattern:** 500cn (16') Narrow  
**Mounting:** 3/4"-14 NPT Thread

## Wireless Transmitter Specifications

**Input Signal:** ULSXL Ultrasonic Level Sensor  
**Operating Power:** Can be Hardwired, Battery or Solar  
**Operating Temperature:** -10 to 130 °F (-23 to 54 °C)  
**Hardwired -** 12 to 24V DC @ 250mA  
**Battery –** 12V Battery (See Manual for Battery Life Estimates)  
**Optional Solar –** Includes Panel, Battery, Charge Controller  
**RF Power Output:** 63mW  
**RF Data Rate:** 250 Kbps

## Wireless Receiver Specifications

**Operating Power:** 12-24V DC @ 350mA  
**Operating Temperature:** -10 to 130 °F (-23 to 54 °C)  
**Receive Sensitivity:** -100 dBm  
**RF Input Impedance:** 50 Ohm nominal  
**Analog Output:** 4-20mA, 1-5VDC (Field Selectable)  
**Enclosure:** NEMA 4X PCT Plastic, Din-rail or Painted Aluminum  
(See model numbers)

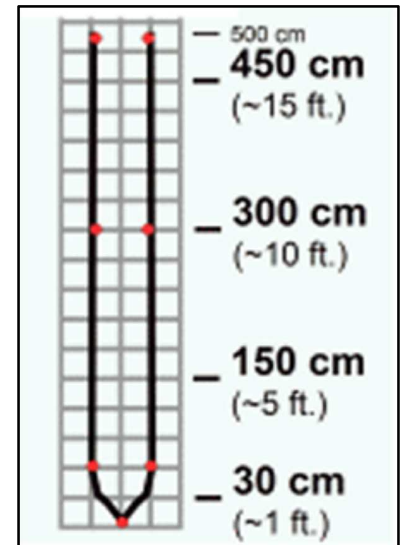
## Wireless Regulatory Approvals

**Regulatory:** FCC Part 95 (No license required)  
**FCC(USA):** OUR-XBEEPRO, **IC (Canada):** 4214A-XBEEPRO



Optional Antenna Model: AT24-12DBI-YD-RP-SMA

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16' (500cm) Beam Pattern



Solar Kit Includes Panel, Battery, Charger, Enclosure



Includes 9' Antenna Remote Mount Kit

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### Wireless Receiver Versions



NEMA 4X Receiver



Din-rail Receiver



Painted Aluminum Receiver

### Available Models

Model Number	Description/Measurement Distance
WLV7389-24-SB-NB	16' (500cm) Distance Wireless Level Transmitter with Analog Output Receiver in NEMA Enclosure.
WLV7389-24-SB-DR	16' (500cm) Distance Wireless Level Transmitter with Analog Output Receiver in Din-rail Enclosure.
WLV7389-24-SB-ID	16' (500cm) Distance Wireless Level Transmitter with Analog Output Receiver in Industrial Enclosure.

### Available Options

Model Number	Description
AT24-12DBI-YD-RP-SMA	12dBi Yagi Antenna
WLTX-24-SPK	Solar Power Kit for Level Transmitter

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Note: Continued product improvements make specifications subject to change without notice.  
Check [www.imagineinstruments.com](http://www.imagineinstruments.com) for the latest product information and updates

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