LoRaWAN Ultrasonic Level Sensor with Remote Cable

Smart Agriculture, Smart Building, Smart City, Smart Facility, Smart Farm, Smart Factory, Smart Transportation

SKU: WSLRW-RULA

Safe Zone

Hazardous Zones

WSLRW-RULA is a LoRaWAN ultrasonic level sensor to measure the water surface level in the small tanks. This level sensor uses ultrasonic technology to measure the solid surface of waste, the principle is to measure the time of flight of the ultrasound pulse in the air environment. The ultrasound pulse will be ejected from the ultrasonic transducer, go thru the air and reach the solid surface of the waste, then be reflected on the ultrasonic transducer, the measuring circuit will measure the flight time of the pulse and then calculate the distance from the transducer to the surface. The ultra-low power design and smart firmware allow the sensor to last up to 5 years with just 2 x AA batteries (depending on configuration). The sensor will transmit data over kilo-meters to the LoRaWAN gateway, any brand on the market. The level sensors are most widely applied in Water & Wastewater Management, Industrial Manufacturing, Agriculture & Irrigation, Food & Beverage and Residential & Smart Homes.

Applications

Water & Wastewater Management, Industrial Manufacturing, Agriculture & Irrigation, Food & Beverage and Residential & Smart Homes.

Notes For Applications

Non-Contact Measurement: Reduce wear and maintenance. Wide Range of Applications: Suitable for fluids, pastes, sludge, and bulk materials in harsh environment. Density and Humidity Insensitivity: Don't affect by humidity and density. Versatility: Used in oil and gas, chemical processing, water treatment, and food industries. Height Limitations: Best for small and medium liquid tanks. Medium conditions: Consider foaming liquids, turbulence, and viscosity.

LoRaWAN communication

LoRaWAN Class A 1.0.3 communication standard to allow sensor connect to any LoRaWAN Gateway on the market

5-10 years battery

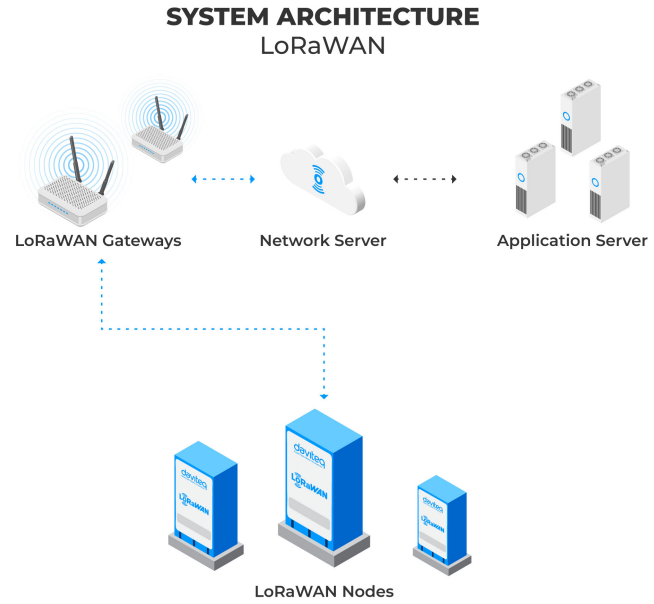
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allows the sensor can last up to 5 years with 2 x AA batteries 1.5VDC

High Accuracy & Stable

Advanced ultrasonic sensor with digital signal processing to deliver high accuracy and stable measurement of level or distance for solid surface of waste

IP68 Outdoor

IP68 design for both Indoor and Outdoor applications and easy cleaning



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Created date: Aug-29-2025 | Updated date: Sep-03-2025

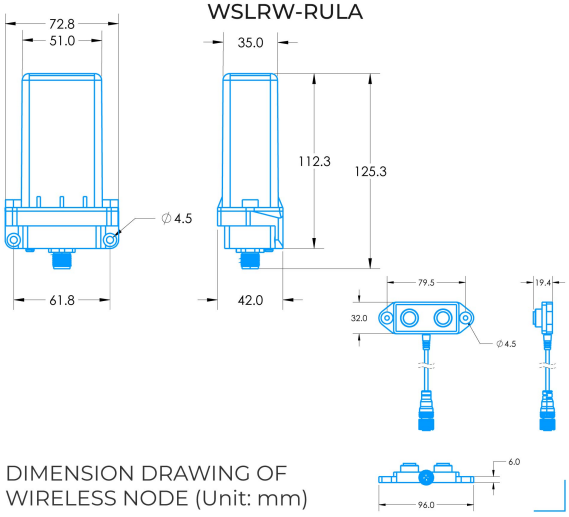
Specification

Sensor	Ultrasonic sensor 40kHz
Measurement range	3～450cm
Accuracy	±(1cm + 0.5% reading)
Resolutions	1mm OR 1‰
Alarm setting	setting the alarm threshold for calculated value
Working temperature/humidity	-15～60℃/ 0～99% RH (non-condensing)
Storage temperature/humidity	-25～80℃/ 0～99% RH (non-condensing)
Transducer material	Ceramic
COMMUNICATION	
SF Factors	SF7～SF12
Antenna	Internal Antenna 2.0 dbi
Battery	02 x AA size 1.5, battery not included
RF Frequency and Power	860～930MHz, 14～20dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN, class A
Data sending modes	Interval time and when alarm occurred
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Electronics working temperature	-40～60℃ (using L91 Energizer® battery)
Housing	H154xW68xD43, Polycarbonate, IP68
Net-weight	250g

LORAWAN ULTRASONIC LEVEL SENSOR
WITH REMOTE CABLE
WSLRW-RULA

INSTALLATION

LORAWAN ULTRASONIC LEVEL SENSOR
WITH REMOTE CABLE
WSLRW-RULA



DIMENSION DRAWING OF
WIRELESS NODE (Unit: mm)

RECOMMENDED BATTERIES

E91 AA
Alkaline battery

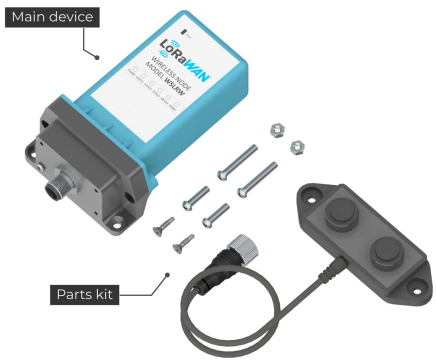
-18~60°C working temperature
10-year shelf life
3000 mAH capacity
Price: 1X

L91 AA
Lithium battery

-40~60°C working temperature
20-year shelf life
3500 mAH capacity
Price: 3.5X

POWERED BY PRIMARY BATTERY

LORAWAN ULTRASONIC LEVEL SENSOR
WITH REMOTE CABLE
WSLRW-RULA



STANDARD PRODUCT PACKAGE

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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-RULA-01	LORAWAN ULTRASONIC SENSOR WITH REMOTE CABLE IP67-68, STANDARD SENSOR 3-450 CM RANGE WITH 1M CABLE

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