

LoRaWAN Radar Level Sensor



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

SKU: WSLRW-RDW

LoRaWAN RADAR LEVEL SENSOR FOR HYDROLOGICAL APPLICATIONS WSLRW-RDW

LoRaWAN



WSLRW-RDW-H1.JPG

- ✓ **LoRaWAN communication**
LoRaWAN communication standard to allow sensor to connect to any LoRaWAN Gateway on the market.
- ✓ **Maintenance free**
No-moving part allows long life operation without maintenance
- ✓ **Powered by Solar**
Integrated with Solar Panel for Autonomous operation
- ✓ **Long life design**
10+ years life design without maintenance

✓ Safe Zone

○ Hazardous Zones

WSLRW-RDW is a LoRaWAN sensor with a pulse radar sensor to measure the water level in hydrological applications such as rivers, canals, lakes, and damp... Pulse radar sensor provides distance measurement based on the direct measurement of the running time of microwave pulses transmitted to and reflected from the surface of the product being measured. Sensor with its smart hardware and firmware design allows the sensor to operate with extremely low energy consumption while still delivering the best measurement efficiency as well as high accuracy and reliability. The sensor will transmit data over kilo-meters away to the LoRaWAN gateway, any brand on the market. It supports multi regions: EU868, IN865, RU864, KR920, AS923, AU915, US915.

Applications

Level Monitoring, Process Monitoring, Flood Monitoring, Safety Monitoring, Smart Irrigation, Infrastructure Monitoring

Notes For Applications

- Applications:
 - Liquid and slurry measurement in storage tanks, refineries, and tank terminals.
 - Some solid level measurement applications.
 - Operates across a wide range of temperatures, pressures, and vapor gas mixtures.
- Limitations:
 - Less suitable for low dielectric process fluids (e.g. fuel oil)

MONITORING THE LEVEL OF LIQUID SURFACE SUCH AS WATER, ...



WSLRW-RDW-H2.JPG

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Created date: Apr-15-2024

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Specification

SENSOR	
Technology	Pulse radar
Frequency	26GHz~±250MHz, PULSE radar emission pulse time <3ns
Range of level measuring	0.40~30m/ 0.60~70m
Resolution	1 mm
Level Measuring Accuracy	±5mm for 30m range/ ±10mm for 70m range
Beam Width	6°~18° (with antenna)
Dielectric constant range	2.5~100, Medium viscosity <1000cp
Process Temperature	-40~100°C/ -40~320°C (Distribution pipe flange)
Process Pressure	-0.1~4MPa
COMMUNICATION	
SF Factor	SF7~SF12
Antenna	External Antenna 2.0 dBi
Power	Solar Panel 18V/9W with Rechargeable batteries x 4 battery cell Li-on 3200mAh, 3.7 V
RF Frequency and Power	860~930MHz, 14~20 dBm, configurable for zones: EU868, IN865, RU864, KR920, AS923, AU915, US915
Protocol	LoRaWAN, class A
Data sending modes	Interval time or when alarm occurred or magnetic key touch
RF Module complies to	ETSI EN 300 220, EN 303 204 (Europe) FCC CFR47 Part15 (US), ARIB STD-T108 (Japan)
Operating temperature of device	-20~50°C (limited by Batteries)
Housing/ Protection	Aluminum & PC plastic
Mounting	Threaded mount to the flange
Dimension, weight	HxLxW = 500 x 260 x 500 exclude external antenna, 2500 gram

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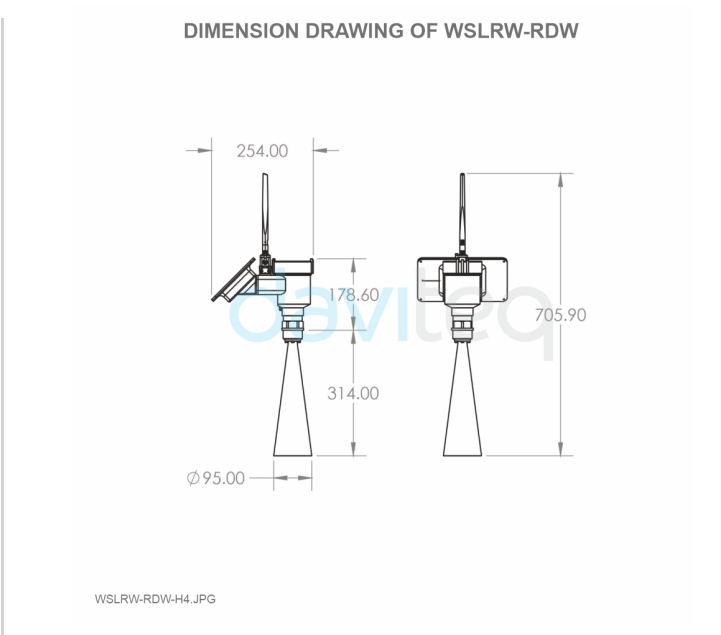
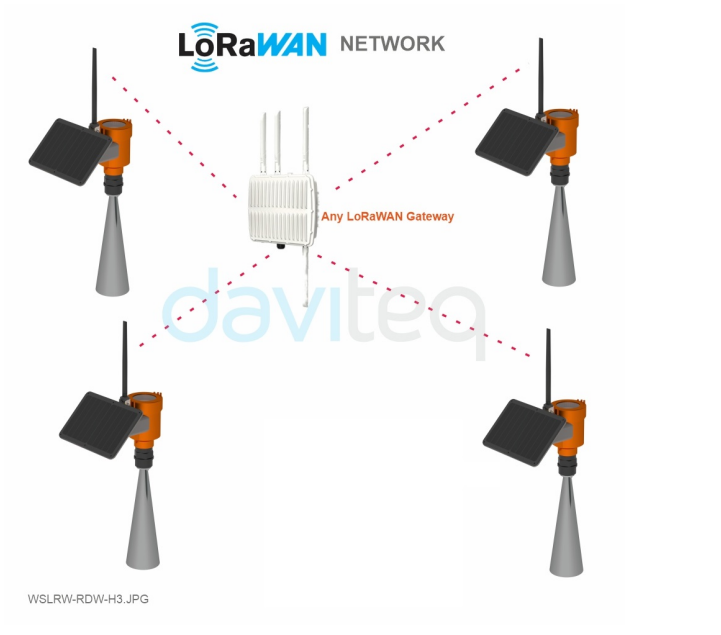
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Ordering Information

ITEM CODE	DESCRIPTIONS
WSLRW-RDW-01-XA	0.3-35M Calibrated Range, IP67, Solar Power, Extenal Antenna, 860-930 MHz
WSLRW-RDW-02-XA	0.6-70M Calibrated Range, IP67, Solar Power, Extenal Antenna, 860-930 MHz

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