SENSE IT
TECHNOLOGIES
MONITORING AND CONTROL SOLUTIONS



LoRaWAN Radar Level Sensor - 12M

SKU: SI-LRW-LEV-002

Monitor liquid levels accurately without making contact with the measured medium. This radar level sensor provides reliable distance and level measurements in tanks, reservoirs, rivers, canals and wastewater applications, delivering dependable data in harsh outdoor environments with minimal maintenance.

OVERVIEW

The Sense It Radar Level Sensor provides accurate, non-contact measurement of liquid levels using millimetre wave radar technology. By measuring the distance between the sensor and the liquid surface, it delivers precise level information without requiring the sensor to come into contact with the medium being monitored.

Unlike traditional ultrasonic technologies, radar measurement is largely unaffected by temperature changes, dust, condensation, vapour or acoustic noise. This makes the sensor an excellent choice for challenging environments where reliable measurements are essential. It is suitable for monitoring clean water, wastewater, stormwater, reservoirs, rivers, canals, storage tanks, process tanks and high-salinity liquids such as seawater and concentrated brine.

The rugged enclosure is designed for permanent outdoor installation and offers excellent resistance to corrosion, moisture and harsh environmental conditions. Its IP68-rated construction and corrosion-resistant PVDF housing make it well suited to industrial, municipal, agricultural and environmental monitoring applications where long service life and low maintenance are important.

When connected to the Sense It monitoring platform, users can view live and historical level data from anywhere, receive automatic alarm notifications, analyse trends and generate reports. Configurable alerts can notify operators when levels exceed high or low limits, when rapid level changes occur or when abnormal operating conditions are detected. Historical data storage also assists with reporting and operational analysis.

The sensor incorporates advanced diagnostics and automated calibration tools to simplify commissioning and maintain reliable performance throughout its operating life. Its narrow radar beam enables accurate measurement in confined spaces while reducing interference from surrounding structures. The result is dependable, high-accuracy level monitoring that reduces maintenance requirements and provides continuous visibility of critical water and liquid assets.

KEY FEATURES

- Non-contact liquid level measurement
- Millimetre wave radar technology
- Suitable for tanks and open water applications
- Measures distances up to 12 metres
- High measurement accuracy
- Narrow radar beam reduces interference
- Unaffected by dust and condensation
- Reliable in changing temperatures
- Suitable for wastewater and stormwater monitoring

- Suitable for rivers and reservoirs
- Suitable for seawater and corrosive environments
- Corrosion-resistant PVDF enclosure
- IP68 waterproof construction
- Integrated tilt monitoring
- Supports configurable alarm thresholds
- Stores historical measurement data
- Remote diagnostics simplify maintenance
- Low maintenance operation
- Long battery life
- Integrates with the Sense It monitoring platform

TECHNICAL SPECIFICATIONS

General

- Measurement technology: 60 GHz millimetre wave radar
- Measurement type: Non-contact distance and liquid level measurement
- Measurement range: 0.3 m to 12 m
- Measurement resolution: 1 mm
- Measurement accuracy: Up to ±2 mm under ideal conditions
- Radar beam angle: 8°
- Supports liquid and smooth solid surface measurement

Performance

- Distance measurement
- Liquid level measurement
- Tilt detection
- High and low level alarms
- Distance change alarms
- Blind zone alarms
- Automatic calibration
- Diagnostic functions

Environmental

- Operating temperature: -40 °C to +70 °C
- Operating humidity: 0–100% RH non-condensing
- Ingress protection: IP68
- Submersible up to 1 m for 48 hours
- Resistant to dust, condensation and harsh outdoor environments

Power

- Internal 19,000 mAh lithium battery
- Battery life: Up to 7 years depending on reporting interval

Physical

- Housing material: PVDF
- Dimensions: 100 × 92.2 mm
- Weight: Approximately 400 g

Installation

- Wall mount

- Pole mount
- Tank thread mounting
- Compatible with G1½" and G2½" threaded fittings

Applications

- Water tanks
- Wastewater monitoring
- Sewers and manholes
- Rivers and canals
- Reservoirs
- Industrial process tanks
- Seawater and corrosive liquids
- Environmental monitoring

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