Wireless Liquid Level Sensor RA0711 Data Sheet

Wireless Sensor Network Based on LoRa Technology

RA0711

Copyright©Netvox Technology Co., Ltd.

This document contains proprietary technical information which is the property of NETVOX Technology. It shall be maintained in strict confidence and shall not be disclosed to other parties, in whole or in part, without written permission of NETVOX Technology.

The specifications are subject to change without prior notice.

LoRa Alliance Member™ zigbee alliance member

Wireless Liquid Level Sensor

General Description

The RA0711 is a wireless communication device that detects the depth of liquid. RA0711 detects the depth of liquid in the container. The wireless liquid level sensor uses a solid state, continuous (multi-level) fluid level sensor for measuring levels in water, non-corrosive water based liquids and dry fluids (powders).

Note: Different types of liquids correspond to different requirements for the sensor, so it is necessary to select the sensor according to the type of liquid.

Principle of Operation

The body and the sensor are connected through the RS485 interface, and the detected data is transmitted to data center through the wireless network for display. The wireless communication method is compatible with the LoRa™ protocol standard.

Example Applications

• Monitor and track tank levels
• Monitor and track container levels
• Track non-corrosive fluid levels
• Monitor sump pit levels

Features of NETVOX Sensors

• Wireless range of 10 km [1]
• LoRaWAN™ Class A compatible
• Frequency Hopping Spread Spectrum (FHSS)
• Improved interference immunity
• Improved power management for longer battery life
• Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
• Battery Life[2]:
        Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html
        At this website, users can find battery life time for varier models at different configurations.
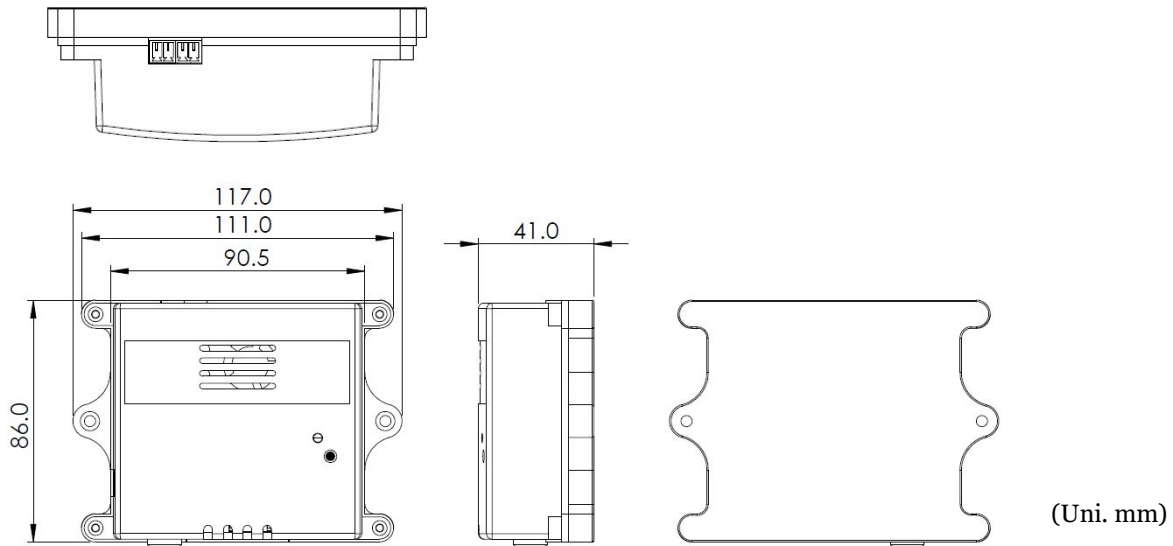• Over-the-air updates (future)
• Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
• Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne

*1. Actual range may vary depending on environment.
*2. Battery life is determined by sensor reporting frequency and other variables

Wireless Liquid Level Sensor

Technical Specifications

(Uni. mm)

Electric

Power Supply Power Supply	DC Power Supply, DC12V/1A
Operating current 1	80mA (no RF signal emission)
Operating current 2	120mA (with RF signal emission)

Frequency

TX Power	19dBm±1dBm
Rx Sensitivity	-136dBm (LoRa，Spreading Factor=12，Bit Rate=293bps) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	10 km (line-of-sight, the actual transmission distance depends on the environment)
Data Transfer Rate	0.3kbps～50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870，US902-928，AU915-928， KR920-923，AS923，CN470-510 Configured before shipment

Wireless Liquid Level Sensor

Liquid Level Sensor

Power Supply	12VDC
Liquid Level Sensor Length	3m, 5m, 10m...etc. (Confirm before shipment)
Liquid Level Sensor Accuracy	0.25%FS（Typical）

Physical

Dimension	111mm*86mm*42mm
Working Temp	-20°C ～ +55°C
Storage Temp	-40°C ～ +85°C
Humidity Detecting Range	＜90%RH

Contact:

NETVOX TECHNOLOGY CO., LTD.

TEL: 886-6-2617641
FAX: 886-6-2656120
E-mail: sales@netvox.com.tw
WEB: www.netvox.com.tw

NETVOX TECHNOLOGY CO., LTD (XIAMEN)
TEL: 86-592-5717188
FAX: 86-592-5717180
E-mail: dyx@netvox.com.cn
WEB: www.netvox.com.cn

ISO 9001 SGS UKAS QUALITY MANAGEMENT 005 LoRa Alliance Member™ zigbee alliance member