RADIO SENSOR

Technology

Add-on

RADIO SENSOR FOR LPWA NETWORKS

LoRaWAN   **M-Bus wireless**   **NB-IoT**

A plug-and-play telemetry solution that allows two-way communication between the meter and the user/utility to contribute to smart water usage.

The value of this insights leads to improved systems efficiency, lower operating costs and, ultimately improved customer satisfaction.

LPWA Connectivity
Low Power Wide Area

Walk-By | Drive-By or Fixed Network

Up to 15 years lifetime

NFC
Near Field Communication

FOTA
Firmware Over the Air

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JANZ Technology

- **Innovation** – JANZ radio Add-on brings a definitive separation between the reading points and the communication infrastructure. This innovative Telemetry solution developed by JANZ allows the **integration of water meters in Smart City** projects in an easy and efficient way.

- **Installation** – **Plug & Play** - easy to retro fitting and install.

- **Scalability** - tailored to the customer in density populated urban areas or rural areas. Featuring LPWA network coverage that allows for **clear and accurate communication** without the need of creating additional network infrastructure.

Add-on offers:

- **FOTA** (Firmware Over The Air) - Ability of firmware updates over the network. No need for field intervention.
- Uses protocols **LoRaWAN, wM-Bus or NB-IoT** individually or LoRaWAN and wM-Bus simultaneously.
- **On demand alarms** (configurable)
- **LoRa Technology**: 96 daily readings – carrying out an intelligent data management to minimize the number of messages sent.
- **wM-Bus Technology** – Messages every 15 secs by default. Configurable.
- **RTC** (Real Time Clock) – allows a permanent synchronization of the information to enable rigorous water balances.
- **Bi-directional communication** – allowing remote (re)parametrization.
- Radio sensor with **direct coupling** – for JANZ meters' up to DN50.
- **Security**: Buffer up to 1 year.
- Communication Interface: **NFC** (Near Field Communication) for parametrization and data collection.
- Temperature register.

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OPERATIONAL FEATURES:

Dimensions: 128 x 68 x 31 mm

Battery lifetime*: Standard Profile: up to 15 years (multi-protocol LoRaWAN, wM-Bus)

Up to 13 years (NB-IoT)

Extreme Profile: up to 11 years (multi-protocol LoRaWAN, wM-Bus)

Up to 9 years (NB-IoT)

Electric Power: Lithium battery - SOCI 3,6 V

Protection: IP68

Operating Temperature: -10º C to 55ºC

Recommended Warehousing Temperature: 10ºC to 30ºC

Communication technology: LoRaWAN, wM-Bus and NB-IoT

Certificates: CE, RED 2014/53/EU, EMC 62311, ETSI 301489, EN 300220 and 62368, RoHS, WEE, LoRaWAN, OMS and NFC in conformity with ISO/IEC 15693.

*2 transmissions a day (LoRa) depending on the profile and external environmental conditions (coverage, temperature, etc)

TECHNICAL DATA:

Protocol	LoRaWAN	wM-Bus	NB-IoT
Frequency	868 MHz / 915 MHz	868 MHz	B5, B8, B20
Modulation/ Transmission Mode	Bi-direcional	T1/T2 and C1/C2	Bi-direcional
Protocol	LoRaWAN	Wireless wM-Bus	UDP proprietary and DLMS
Potency	14 dBm (25mW) - 868 MHz 22 dBm (158 mW) - 915 MHz	14 dBm (25mW)	23 dBm (200 mW)
Message	51 Bytes	Std OMS 57 Bytes	77 Bytes
Security	Encryption AES 128 bits, Data Codification, Multichannel emission		

TRANSMISSION

- **Standard Profile:** 1 transmission each 12 hours (for LoRa), 1 transmission each 24 hours (for NB-IoT)
- **Extreme Profile:** 1 transmission each 3 hours (for LoRa), 1 transmission each 6 hours (for NB-IoT)
- **Software Application:** Unique interface to all IoT communication protocols

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ADVANCED FEATURES:

- **Volume**: Sends meter index, meter serial number, radio serial number, battery status, Deltas (LoRa Tech.), daily reading (wM-Bus Tech.) from previous day.
- **Data logging:**
  - 1 (one) year of daily readings
  - 1 (one) year of alarms history
  - 1 (one) year of temperature recordings
  - 96 daily deltas
- **Transmission:** Data transmission time configurable

ALARMS:

- **Leak:** configurable
- **Reverse Flow:** configurable
- **Under and Over Consumption:** configurable
- **Blocked Meter:** configurable
- **Magnetic Fraud**: not configurable
- **Mechanical Fraud**: not configurable
- **On demand Alarms-** optional
- **Battery Status**: not configurable
- **Temperature out of Operational range**: not configurable
- **Occasional Hardware error**: not configurable
- **Permanent Hardware error**: not configurable

OPTIONS:

External Radio Sensor version – Can be attached to any meter of any brand or model, if equipped with pulse output.

For more information, please contact:

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