



NB-IoT

Wireless water rope logger

The Efento NB-IoT water leak sensor is a smart, wireless data logger designed for reliable detection of water and other conductive liquid leaks in critical environments. With direct communication over the NB-IoT cellular network, it operates independently - no gateways, routers, or additional infrastructure required - ensuring seamless deployment and dependable data transmission wherever it's needed.



Key Features

- **Effortless installation** - thanks to built-in NB-IoT connectivity, installation is as simple as mounting the device on a wall or placing it on a shelf - no gateways, cabling, or Wi-Fi configuration required.
- **Fast and intuitive setup** - with an integrated Bluetooth Low Energy (BLE) module and a dedicated mobile app, the sensor can be configured and activated in under 15 minutes.
- **Up to 8 years of battery life** - engineered for long-term, maintenance-free operation, the device uses intelligent data handling and optimized transmissions to achieve up to 8 years of operation on a single battery.
- **Cloud and system integration** - seamlessly connects with the Efento Cloud platform for data visualization, analysis, and alerting. Standard communication protocols also enable easy integration with custom server-based systems.
- **Remote management** - supports over-the-air firmware updates and secure remote configuration, reducing the need for on-site maintenance.
- **Continuous leak detection** - the sensor continuously monitors for the presence of liquid and automatically reports both leak detection and resolution, ensuring full visibility of events in real time.

Applications

The device is designed to detect the presence of water or other liquids across larger areas using a zone leak detection probe. It enables continuous monitoring of entire floor sections or installations, ensuring rapid detection of leaks anywhere along the sensing cable. This solution is ideal for environments where early leak detection is critical, including server rooms, data centers, technical facilities, warehouses, archives, laboratories, as well as industrial installations and public buildings.

Sensors

Leak detection probe

Probe length	Standard – 3 m, maximum length up to 1500 m
Measurement range	Two states: OK - no leak detected, Alarm - leak detected (with configurable logic inversion)
Detection sensitivity	Guaranteed leak detection when the cable is submerged up to 50 mm at any point along the probe
Response time	≤ 5 s after immersion / ≤ 15 s after liquid removal

Technical data

Data logging

Memory size	100 000 measurements
Measurement interval	5 s - 18 hours (user-configurable)

Bluetooth interface

Radio module frequency	2.4 GHz
Power	2.5 mW (4 dBm)
Range	Up to 100 m (LOS)
Transmission period	1 s
Bluetooth version	Bluetooth Low Energy (4.0)

NB-IoT interface

NB-IoT bands	1, 2, 3, 4, 5, 8, 12, 13, 17, 18, 19, 20, 25, 28, 66, 70, 85
3GPP	13 i 14 (LTE Cat NB2)
Power	23 dBm ±2 dB

Communication

Protocol	CoAP
Transmission interval	1 min - 7 days (user-configurable) or on leakage detection

Operating and Storage Conditions

Main unit operating conditions	Temperature: -25°C to +70°C, humidity: 0-99% RH (non-condensing)
Probe operating conditions	Temperature: max +85°C
Storage conditions	Temperature: -25°C to +70°C
Charging conditions (variants with external power supply)	Temperature: 0°C to +45°C

Certifications

Regulatory	CE (RED), FCC
Environmental	RoHS

Variants

EAN	Power Supply	Enclosure	Weight
5905309603813	8,500 mAh battery (replaceable). Battery life up to 8 years	IP30, white ABS plastic Dimensions: 32.5 × 60 × 125 mm	230g (including battery)
5905309604100	USB-C, with a 1,300 mAh rechargeable backup battery to maintain operation in case of power loss	IP30, white ABS plastic Dimensions: 32.5 × 60 × 125 mm	215g
5905309605152	8,500 mAh battery (replaceable). Battery life up to 8 years	IP65, white ABS plastic Dimensions: 39.5 × 63.5 × 128.5 mm	285g (including battery)
5905309605312	9-26V, with a 1,300 mAh rechargeable backup battery to maintain operation in case of power loss	IP65, white ABS plastic Dimensions: 39.5 × 63.5 × 128.5 mm	270g