



NB-IoT

Wireless pulse counter

The Efento NB-IoT wireless data logger is designed for continuous collection of electrical pulses in applications requiring reliable data transmission. Using Narrowband IoT connectivity, it communicates directly over the cellular network. No gateways or additional infrastructure required.



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.
- **Versatility** - enables connection to any meter or device with a pulse output. Pulses can be counted cumulatively or within defined time intervals (e.g., 24 hours).

Applications

The device is designed for counting pulses from external measuring and signaling devices such as water, gas, and electricity meters, flow meters, reed switches, encoders, and pulse-output sensors. It is ideal for use in utility monitoring, Building Management Systems (BMS), Energy Management Systems (EMS), industrial applications, and IoT installations requiring precise tracking of consumption, flow, events, or operating cycles.

Sensors

Pulse counter

Model	The device is supplied with a 40 cm cable allowing connection to up to three pulse sources
Measurement range	From 0 to 999 999 999 999 ($10^{12} - 1$) pulses
Minimum pulse duration	7.14 milliseconds
Maximum pulse duration	Configurable maximum allowed pulse duration
Resolution	1 pulse

Technical data

Data logging

Memory size	50 000 measurements (evenly distributed across each channel)
Measurement interval	5 s - 7 days (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, 26, 28, 66, 70, 71, 85
3GPP	13 i 14 (LTE Cat NB2)
Power	23 dBm $\pm$ 2 dB

Communication

Protocol	CoAP
Transmission interval	1 min - 7 days (user-configurable)

Operating and Storage Conditions

Main unit operating conditions	Temperature: -25°C to +70°C, humidity: 0-99% RH (non-condensing)
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
5905309603660	8,500 mAh battery (replaceable). Battery life up to 8 years	IP30, white ABS plastic Dimensions: 32.5 × 60 × 125 mm	155g (including battery)
5905309603554	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	140g
5905309604773	8,500 mAh battery (replaceable). Battery life up to 8 years	IP65, white ABS plastic Dimensions: 39.5 × 63.5 × 128.5 mm	210g (including battery)
5905309605374	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	195g