EFENTO®
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NB-IoT

Wireless 0-10V sensor interface



The Efento NB-IoT wireless data logger is designed for monitoring 0–10 V analog signals in applications requiring reliable data transmission and high measurement accuracy. 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 device or probe with a 0–10 V output, regardless of the measured parameter.

Applications

The device is designed for monitoring and recording analog signals from sensors and measuring devices operating in the 0–10 V standard. It enables measurement of parameters such as temperature, humidity, pressure, liquid level, light intensity, and gas concentration. It is suitable for use in building automation (BMS), HVAC systems, industrial installations, and energy management systems (EMS).

Sensors

Analog signal	
Model	Supports up to 2 devices with 0–10 V output
Measurement range	0-10 V
Accuracy	0.3% with default calibration, 0.01% with user 4-point calibration
Resolution	0.001 V
Drift	Not applicable

Technical data

Data logging	
Memory size	100 000 measurements (evenly distributed across each channel)
Measurement interval	5 s - 30 days (user-configurable) *the minimum measurement interval applies when no probe is connected and may increase depending on the probe type
Bluetooth interface	
Radio module frequency	2.4 GHz
Power	2.5 mW (4 dBm)
Range	Up to 100 m (LOS)
Transmision 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)
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
5905309603684	8,500 mAh battery (replaceable). Battery life up to 8 years	IP30, white ABS plastic Dimensions: 32.5 × 60 × 125 mm	150g (including battery)
5905309604247	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	135g
5905309605398	38,000 mAh battery (replaceable). Battery life up to 8 years	IP67, dark grey ABS plastic Dimensions: 189.5 x 81.5 x 55	425g (including battery)
5905309605404	9-26V, with a 1,300 mAh rechargeable backup battery to maintain operation in case of power loss	IP67, dark grey ABS plastic Dimensions: 189.5 x 81.5 x 55	-