EFENTO®
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NB-IoT

Wireless atmospheric pressure, temperature and humidity logger

The Efento NB-IoT wireless data logger is designed for continuous monitoring of atmospheric pressure, temperature, and humidity, ensuring 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.
- **Calibration certificate (optional)** - the device can be supplied with a certificate issued by an accredited laboratory in accordance with ISO/IEC 17025, confirming measurement accuracy for high-precision applications.

Applications

The device is designed for wireless monitoring of atmospheric pressure, temperature, and relative air humidity. It is suitable for environmental monitoring in warehouses, laboratories, technical rooms, and other facilities requiring control of air parameters. It enables real-time data readings and analysis of changes in environmental conditions over time.

Sensors

	Temperature	Humidity	Atmospheric pressure
Model	Sensirion SHT41	Sensirion SHT41	Bosch BMP390
Measurement range	-25° to 70°C	0 to 100% RH	300-1250 hPa
Accuracy	+/- 0.2°C	2% in the 0–90% RH range 3% in the 90–99% RH range	+/- 0.5 hPa
Resolution	0.1°C	0.1%	0.1 hPa
Drift	<0.1°C /year	<0.2% RH / year	+/- 0.16 hPa /year

Technical data

Data logging	
Memory size	100 000 measurements (evenly distributed across each channel)
Measurement interval	5 s - 30 days (user-configurable)
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
5905309603967	8,500 mAh battery (replaceable). Battery life up to 8 years	IP30, white ABS plastic Dimensions: 32.5 × 60 × 125 mm	145g (including battery)
5905309604223	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	130g