

ESG-Logger

Analog and digital collection

ESG-Logger is a battery-powered device dedicated to industrial and environmental measurement. It offers a panel of sensors allowing precise sensing and making compensation measurement taking into account environmental temperature and pressure. Designed to be placed in hostile conditions, this device will acquire relevant and accurate data linked to your industrial processes.



Plug-and-Play

Automated network discovery and presence messages allow ESG-Logger to be easily installed wherever sensor monitoring is required. Natively capable of communicating in private Clover-Net RF and public LoRaWAN networks, the device is able to enlarge its working area.

Several features ease the commissioning and allow advanced management functionalities without requiring specific tools, like a push button, a bicolor LED indicating the device status locally, or even configuration through NFC.

An attached sensor and open case detection advise from any tamper tentative.

Basic inputs, but customizable purposes

Basically offering 4 active 0-5V analog 12-bit resolution inputs and a couple of 100Hz capable pulse-counting, its framework can support other industrial probe management (on-demand). Moreover, embedded temperature and ambient pressure sensors add values to the reports.

In specific use-cases, it can also manage digital outputs (pulse mode in battery-powered, continuous if main-powered).

Advanced features

When mechanical switches are connected to the counting inputs, a debouncing software filter can be activated to avoid faulty pulses. For all analog inputs and internal sensors, multiple sampling and dedicated configurable linear measure correction give a reliable read-to-use data. All events in the device are stored in a readable table as well as each sensor reading. Alarms can be triggered by event (tamper...) or threshold limit measurement. Data is periodically sent as a spontaneous message or on-demand, either in Clover-Net or LoRaWAN protocol. Seasonal schedules management and its 2 A size batteries make the device life time longer than ever.

Furthermore, other functionalities like Over The Air (OTA) firmware update or device usage management insure over time device full-featured and preventive maintenance operations.


High level protection

Designed to be hostile environment proof, their IP66 (potted IP68 in option) and IK08 protections added to flammability UL 94 HB give to this device the ability to be used in most constrained conditions, even with outgoing wires thanks to its IP67 grommets and O-ring seal.

Main features

- Detachment detection
- Open Case alarm
- NFC interface for configuration
- 1 button for commissioning
- 2 Replaceable batteries
- Main powered in option
- 1 bicolor LED
- Threshold alarm transmission
- Scheduled sensor reading
- 2 IP66 grommets for external probe wiring
- Scheduled spontaneous transmission time
- Both Clover-Net and LoRaWAN communications
- Datalogging mode
15,000 to 60,000 timestamped measurements

Mechanical & protection characteristics

- IP66 protection (optional IP68)
- IK08 resistance
- Flammability UL 94 HB
- ATEX pre-certified 
- Operating temperature: -20 to +70°C
- Optional external RF connector

Order references

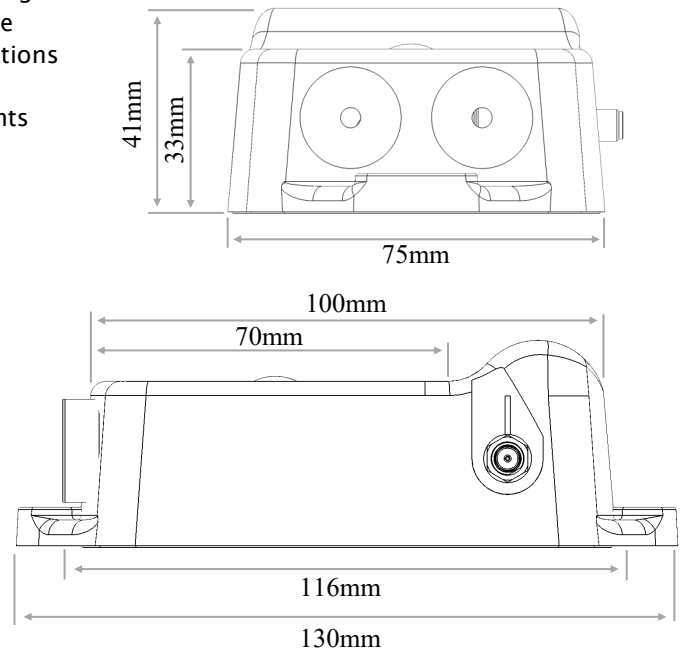
Order #	Description
ESG-LOG-IN-X8X-001	868MHz IP66 3 current sensors
ESG-LOG-PW-X8X-001	868MHz IP66 2 current and 2 voltage sensors
ESG-LOG-TK-X8X-001	868MHz IP66 1 Keller gauge
ESG-LOG-TK-X8X-002	868MHz IP66 2 Keller gauges
ESG-LOG-TK-X8X-003	868MHz IP66 1 Rochester gauge

Others on demand

Multi sensor inputs

- Up to 4 analog inputs 12-bit resolution
- 2 pulse counting for metering, up to 100Hz
- Debounced inputs (32Hz max in this case)
- 1 ambiance temperature probe, 0.5°C reliable
- 1 environmental pressure measurement from 200 to 1100hPa

Dimensions



Clover-Net generic features

- Transmission range up to 5,000m line of sight, up 500m indoor.
- Real-time 2-way communications: Scheduled transmission, automatic alarms and on-demand reading.
- Robust against physical and electronic interferences.
- Fast event reactivity, huge coexistence ability.
- Low cost for mass deployment
- Auto RTC propagation
- Native Three bands compatibilities (433, 868 and 915Mhz)
- CE & EN 300-220 & FCC 15-247 compliant
- LORA WAN compatible
- Use Multi-channel frequencies to avoid collision.
- Dedicated alarm frequency channel.
- Data Encryption by AES 128 with dynamic key mixt
- Include Full networks services (Broadcast, Repeater, Mesh, ...)