An innovative wireless electrical energy monitoring sensor

ÉTS – 078

Partner institution:
ÉTS

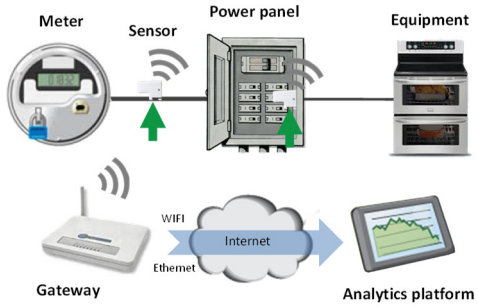
BACKGROUND

A new technology able to measure energy usage in real-time from utility meters, electrical panels, subpanels, and equipment.

TECHNOLOGY

A product ready for integration in a commercial solution

The product is a non-invasive, low power consumption, miniature wireless current sensor that can be clipped onto an electric wire. It measures the magnetic field (Hall effect) for monitoring the flow of electricity at multiple levels of granularity (utility meters, electrical panels, subpanels, and equipment) and then wirelessly send the information back to a central gateway.



The central gateway is responsible for receiving information from multiple sensors, processing it and routing it to an analytics platform. This allows detailed real-time and historical energy usage data observation through various type of services: cloud-based analytics software or advanced metering infrastructure. The gateway can be integrated in an existing home power usage display architecture.

A LICENSING BUSINESS OPPORTUNITY

- ✓ An industrialized and ready for commercialization technology
- ✓ A proven product already deployed and tested in various installations
- ✓ A Patent-pending technology that is only available through Aligo Management
- ✓ Applications in residential, buildings and industrial facilities markets as a standalone product or integrated in an existing commercial solution

EASY TO INSTALL AND SETUP

Tens of sensors can be deployed in a few minutes.

COMPACT OVERALL SIZE

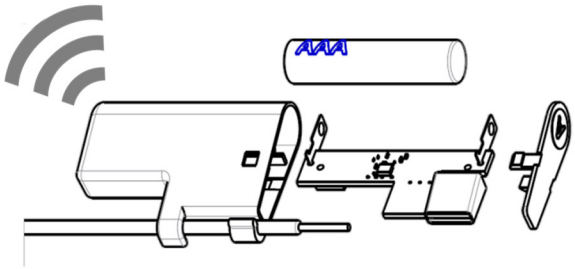
2"w x 1.6"h x 0.4"d (5cm x 4cm x 1cm)

REAL TIME DATA COLLECTION

An optimized proprietary protocol based on ZigBee and MiWi IEEE 802.15.4 standards.

LOW POWER CONSUMPTION

At one measure per second and one data transfer every two minutes an AAA battery lifetime is around 2 years.



NON-INVASIVE

The casing fits easily to on an electric wire without need for any disconnection.

HIGH REPEATABILITY

Auto-calibration algorithms provide a precision of around 99.98% (stdev of 0.3A with a measurement cycle of 10s).

COST EFFECTIVE

Sensors' cost <$5 for 1M+ units and gateways' cost <$50 for 100K+ units.

WIDE CURRENT MEASUREMENT RANGE

0-100A and 0-230V, supporting both US and EU AC frequencies.

PATENT STATUS

Patent for the US

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