

Pulse SENS'O



The **Pulse Sens'O** sensor is used to remotely read metering data from three meters: water, electricity or energy. It turns existing meters into smart meters via a public or private LoRaWAN® network.

APPLICATIONS

- Remote reading of water, electricity or energy meters with a pulse output.
- Remote reading of the load curve.
- Cost-effective and fast solution that turns any pulse meter into a smart meter.

BENEFITS & KEY FEATURES

- LoRaWAN®, Class A
- Easy to install and use
- 3 configurable inputs for pulse counting and/or status reporting
- Waterproof for protected indoor or outdoor environments (waterproof version available)
- Up to 12 years of autonomy

CERTIFICATION

- RED, UKCA, RoHS



The **Pulse SENS'O** sensor from Watteco is a long range, low power consumption, high performance and high quality wireless pulse sensor that transmits data from water, electricity & energy meters.

Up to three meters can be supported simultaneously by the **Pulse SENS'O**, thus significantly reducing implementation and deployment costs.

Installation and commissioning are quick and easy.

The sensor is equipped with:

- a switch (ILS) used for its activation or deactivation
- LEDs to monitor the configuration and pairing to the network

Each sensor is identified by a QR code on the label and an NFC tag inside the housing.

The counting data (index) is transmitted individually or aggregated and compressed (batch mode) before being transmitted over the public or private LoRaWAN® network.

The batch mode considerably reduces the amount of data transmitted while preserving the autonomy of the sensor.

Powered by a 3.6V/3.6Ah battery, the autonomy of the sensor is up to 12 years with a configuration of 2 measurements and 2 transmissions per day.

The battery voltage level can be regularly monitored remotely.

2 versions of the Sens'O sensor are available:

- Indoor or Outdoor protected (IP55).
- Waterproof (IP68).

THE LARGEST IOT PRODUCTS RANGE FOR YOUR PROJECT

WATTECO is a European leader in the design and manufacture of smart IoT devices to suit all remote reading and data collection solutions.

WATTECO is a LoRa Alliance®.

TECHNICAL DATA

RADIO	
Frequency (MHz)	EU: 863-870
Transmit power (dBm)	14
Sensitivity (dBm)	-140
FIRMWARE	
Protocol	LoRaWAN®, Class A
Measurement periodicity (index)	Configurable from 10 minutes to 24 hours
Transmission interval	Immediate following measurement or batch at 30min to 48hrs (configurable)
Data compression	Yes (differential coding)
Activation method	ABP or OTAA
Data encryption	AES128
COUNT or STATE REPORT	
Number of inputs	Up to 3 inputs can be activated
Features	Impedance > 1MΩ; Capacitance 1nF (typical); Voltage 0 to 30V; Current 3.5μA
Inputs performances	Pulse counting from 0Hz to 100Hz; or reporting on change of state
ALARMS	
Index variation	Configurable thresholds.
POWER SUPPLY	
Characteristics	3.6V / 3600mAh lithium battery (can be replaced after removing the cover, only for IP55 version) Transmitted battery voltage level (configurable in 0.1V steps)
Autonomy (in the range of +10°C to +25°C)	Up to 12 years with SF12, 2 measurements per day and 2 transmissions per day
USER INTERFACE	
ILS + LED switch	Network pairing; sensor status indication; visible when sensor is closed
Electrical connection	IP55: cable connection to spring-loaded connectors on the circuit board IP68: 1.5m cable supplied; free ends to be connected in dry areas
ENCLOSURE	
Size / Weight	92 x 92 x 56mm / 150g
Material	ABS UL94-V0HB
Fastenings	2 screws and 2 dowels (supplied); optional DIN rail kit
ENVIRONMENT	
Operation	- 20°C / +50°C
Storage	0°C / +30°C ; +0%rH / +60%rH
STANDARDS & REGULATIONS	
Radio Equipment Directive 2014/53/EU, RoHS	



PRODUCT REFERENCES

REFERENCE	Sealing	DESCRIPTION
50-70-160	IP55	PULSE SENS'O, IP55
50-70-039	IP68	PULSE SENS'O, IP68 1 metre for 72 hours