

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.
- 3 configurable inputs for pulse counting and/or status reporting.
- IP55 or IP68.
- Up to 12 years of autonomy.

CERTIFICATION

- RoHS, CE.



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

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

Installation and commissioning is quick and easy.

The sensor is equipped with:

- a switch (ILS) to activate or deactivate it
- LEDs to monitor the configuration and association on the network

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

The counting data (index) is transmitted individually or aggregated and compressed (batch mode) before being transmitted on 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/3.6 Ah battery, the sensor's autonomy is at least 12 years with a configuration of 2 measurements and 2 transmissions per day.

The battery voltage level can be regularly monitored remotely.

The Sens'O sensor exists in 2 versions:


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

THE LARGEST IOT PRODUCTS RANGE FOR YOUR PROJECT

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

nke WATTECO is a LoRa Alliance®.

TECHNICAL CHARACTERISTICS

RADIO	
Frequency (MHz)	EU: 863-870
Emitted 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 30mn to 48h (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 > 1 MW; Capacitance 1nF (typical); Voltage 0 to 30V; Current 3.5µA
Inputs performances	Pulse counting from 1Hz to 100Hz; or reporting on change of state (by configuration)
ALARMS	
Index variation	Configurable minimum or maximum threshold
POWER SUPPLY	
Characteristics	Lithium battery 3,6V / 360mAh (changeable after removing the cover) Transmitted battery voltage level (configurable in 0.1V steps)
Autonomy (in the range of +10°C to +25°C)	12 years with SF12, 2 measurements per day and 2 transmissions per day
USER INTERFACE	
ILS + LED switch	Association on the network; visible sensor status indication closed sensor
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
CASING	
Dimensions / weight	92x92xw.56mm / 150grs
Material	ABS UL94-V0HB
Attachment	2 screws and 2 dowels (supplied); optional DIN rail kit
TEMPERATURE	
Operation	- 20°C / +50°C
Storage	0+C / +30°C ; +0%rH / +60%rH
STANDARDS & REGULATIONS	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE, RoHS	
	

PRODUCT REFERENCES

REFERENCE	Sealing	DESCRIPTION
50-70-160	IP55	PULSE SENS'O, Indoor or Outdoor protected
50-70-039	IP68	PULSE SENS'O, Waterproof 1 meter for 48 hours