

# PRODUCT CATALOGUE

2 0 1 8 - 2 0 1 9



Industry



Building



Energy



House





## Contact us

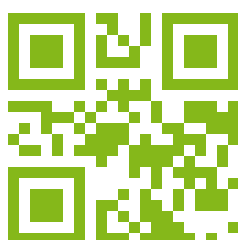
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## Follow us





# Introduction

Ewattch is an expert in the **IoT (Internet of Things)** and develops wireless sensors and innovative services mainly dedicated to **energy control**, intended for **industry**, office buildings and **Smart building** projects.

Since **2012**, our team of engineers has been developing simple and easy-to-install, quick-acting sensors communicating in a **LoRa®** wireless network (range up to 15 km) and **EnOcean**.

The data collected by these sensors allow you to manage your energy consumption in a simplified, dynamic and intuitive way.

In a spirit of protocol openness, our sensors are compatible with our **EwattchCloud** platform and other energy management partner platforms.

A **network** of Ewattch approved and qualified **partners** can assist you in implementing our solutions and adapting them to your needs.



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# Our **Values**



## Internal technical mastery.

Ewattch is a team of agile engineers permanently working on overall solutions :

- Development of connected sensors
- Programming the energy control platform
- Creation of tools and interfaces to improve and simplify their use by our customers.
- Adapting products and the platform to the needs of our customers.



## A consistent approach

Total mastery of our ecosystem :

- Conception of our products by our internal design office
- Manufacture of our products by two local sub-contractors.



## The end of proprietary systems.

Ewattch advocates for the openness of protocols and access to data !

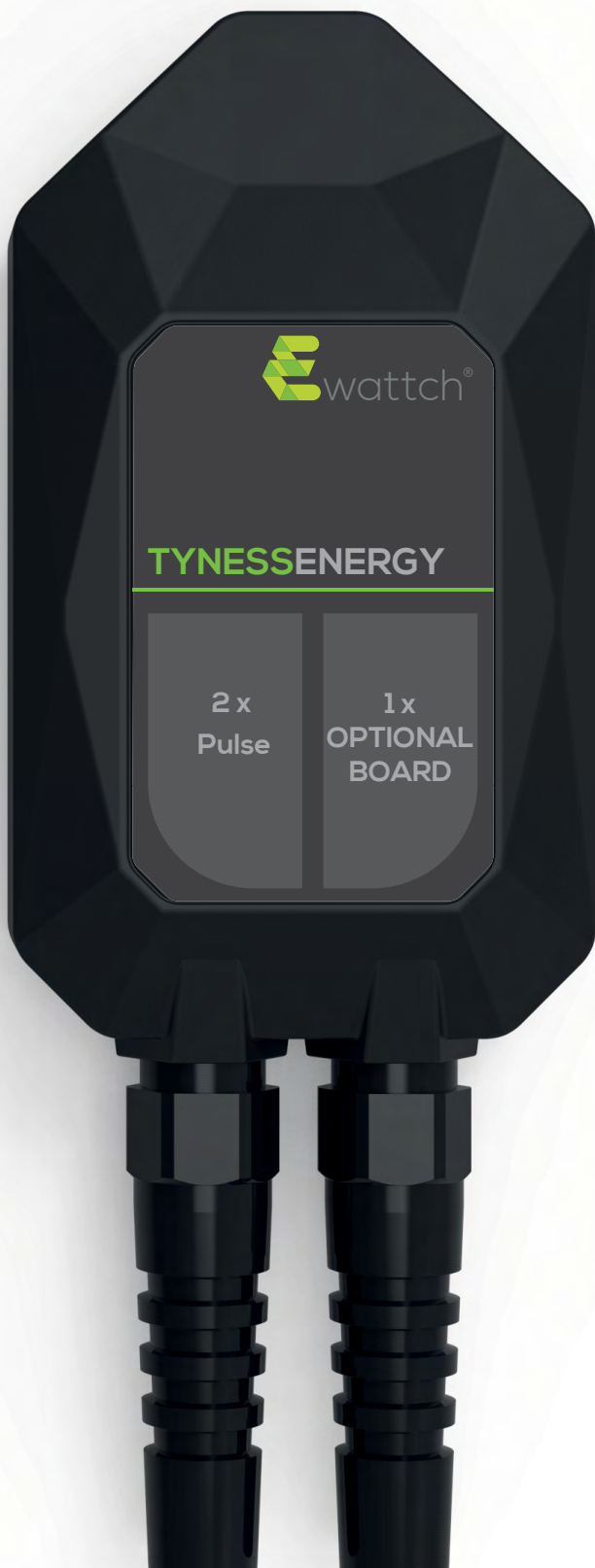
An API is available to connect our products with other IoT systems.



Choosing Ewattch guarantees a

**mastered technical solution :**

from the sensor up to your WEB platform and  
**expert customer service ready to listen to you.**



## You want to build a customized technical solution?

Choose the equipment you want from our range of products: electricity sub-meter, optical sensor, temperature measurement, water consumption metering, etc.

If you do not find a suitable product, **contact our customer service :**

[contact@ewattch.fr](mailto:contact@ewattch.fr)

## Ewattch sensor wireless technology

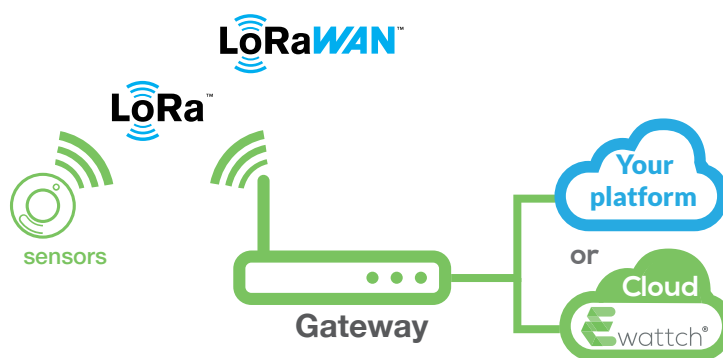
Ewattch has great expertise in **LoRa® technology**. This wireless network provides low consumption, long range communication, optimized for battery-operated equipment (several years of battery life). This network is perfectly adapted to energy control applications.

Private LoRa® network

LoRa® operated network

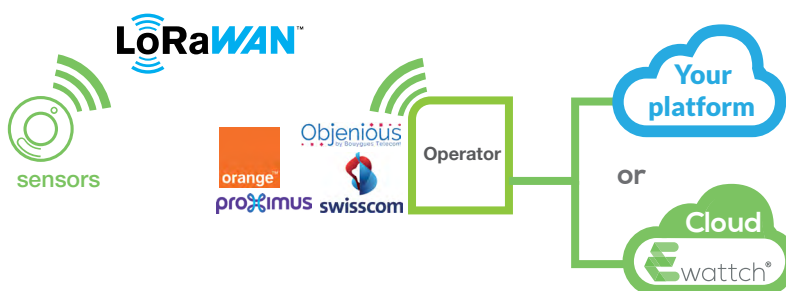
## Private LoRa® network

With a private network, you are the owner of your gateway and your **LoRaWAN™ network**. Thanks to this architecture, you directly manage the flow coming from the sensors to direct them to your platform. You do not pay for the cost of communication but you must maintain and manage your **LoRa® network**.



## LoRa® operated network

For an operated network, you use the **network of a LoRaWAN™ operator** which provides you with coverage over the entire zone needed. You must then direct the data flow from the operator's platform to your platform or directly use **EwattchCloud**. The advantage of this solution? You do not manage the set-up and maintenance of a gateway.

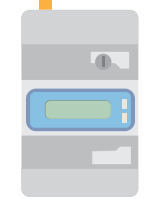


**If you are unsure about which architecture is right for you, do not hesitate to contact our customer service or your local partner.**

# Ewattch architecture



**TYNESS-ENERGY**  
2 x pulse metering  
1 x additional board



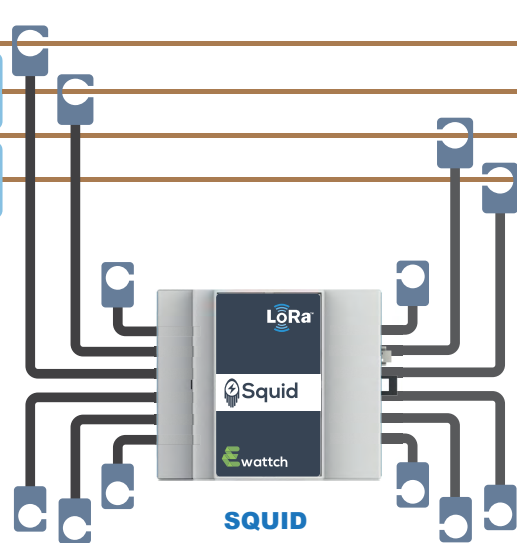
ELECTRICITY METER



WATER, GAS METER...



MEASUREMENT OF CONSUMPTION  
IN ELECTRICAL PANELS



**SQUID**  
Electricity sub-metering with  
up to 12 measurement clamps



**AMBIANCE**  
Presence  
Luminosity  
Temperature  
Humidity



**ENVIRONMENT**  
Temperature  
Humidity

## SENSORS



**TYNESS-MODULAR**  
Modular sensor  
Combine up to 2 functions  
in one sensor !



Lots of other functions  
to discover

And 3 modes of communication :  
GPRS --LoRa LoRaWAN

LoRaWAN



**GATEWAY**  
Concentrator of  
LoRaWAN wireless data

Objenious  
by Bouygues Telecom



proximus

OPERATED NETWORK

LoRa



**TOOLBOX**  
Concentrator of  
LoRa wireless data

**DATA  
CONCENTRATION**



API available

**EWATTCHCLOUD**  
Energy control  
platform

OR



**THIRD-PARTY PLATFORM**  
Use your favorite  
platform

**APPLICATION**

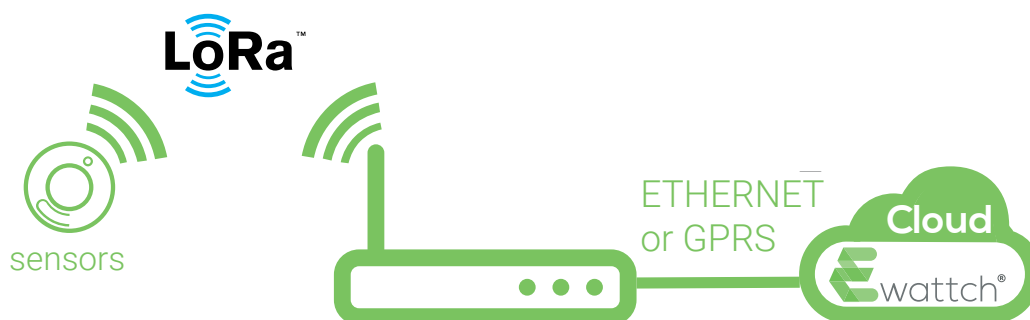
# TOOLBOX

## Gateway



## DETAILS

This is a data hub developed by our engineers that receives information sent by wireless sensors on the **LoRa®** network. The **ToolBox** then transmits the data **over the Internet, via Ethernet or GPRS**, to the EwatchCloud server, or a third-party server.



## FEATURES

- Wireless communication
- Up to 100 sensors
- Ethernet port
- Optional GPRS module
- 5V DC power supply
- Pre-configured for sending data to the [www.ewatchcloud.fr](http://www.ewatchcloud.fr) platform or a third-party server.
- No programming required, a configuration interface is integrated directly into the product.

## REFERENCES

### Individual products :

- **TOOLBOX-ETH** : Toolbox without accessories communicating via Ethernet only.
- **TOOLBOX-ETH-GPRS** : Toolbox without accessories communicating via Ethernet and GPRS.

### Kits :

- **KIT-TOOLBOX-ETH**
- **KIT-TOOLBOX-ETH-GPRS**

Kits with a **TOOLBOX-ETH** or a **TOOLBOX ETH-GPRS**, respectively, and all necessary accessories : a 5VDC power supply unit (ref: ALIM-BLOC-5V) and an adjustable antenna (ref: ANT-360)

## ACCESSORIES

### Antennas and power supply :



**ANT-360**

20 cm orientable antenna



**ANT-MAGN-SUP**

Antenna with magnetic base  
(cable length: 4m)



**ANT-LONGPORT**

Omni-directional fiber glass antenna. Supplied with wall mount.  
(Optional : 5 or 10m cable extension)



**ALIM-BLOC-5V**

Power supply 230 VAC - 5VDC mains type unit  
(cable length: 1,1m)

# SQUID

## Electricity sub-metering



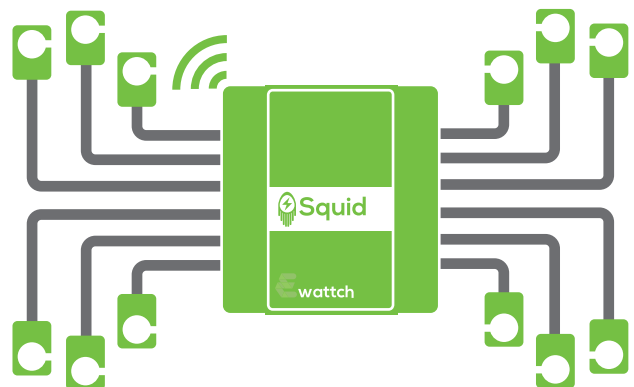
Finally, in order to meet all requirements, the SQUID is compatible with several different clamp sizes from 10mm to 36mm in diameter, with max currents ranging from 75A to 600A \*.

*\*for larger currents, use a Tyness Rogowski.*

### DETAILS

The SQUID can simply and easily sub-meter your single-phase or three-phase electrical installation.

Installed in an electrical panel, the SQUID'S 12 clamps allow you to sub-meter your installation fully, without decommissioning or modification.



### FEATURES

- 12 measurement inputs with clip-on clamps
- 4 clamp sizes available
- Operates with three-phase and single-phase
- Max. rated current: 600A
- LoRa® or LoRaWAN™ wireless communication
- Dimensions: 5 modules (90mm)
- 1 power connector
- Power supply 5V DC +/- 5%
- Max power consumption: 3 watts
- Accuracy class: 5%
- Dimensions: 90 x 88 x 62 mm
- Operating temperature range: 0°C to +50°C
- Mounting on DIN or wall rail
- CE approved and RoHs compliant

## REFERENCES

### Individual products :

- **SQUID-HC-LORA** : SQUID accepting currents up to 600A, delivered without accessories and communicating via **LoRa®** Ewattch.
- **SQUID-HC-LORAWAN** : Same as LoRaWAN™ version

### Kits :

- **SQUID-HC-LORA-KIT / SQUID-HC-LORAWAN-KIT**

Kits with a SQUID-HC-LORA or a SQUID-HC-LORAWAN, respectively, and all necessary accessories: A power supply with attachment to a DIN rail 230 VAC-5VDC (ref: ALIM-RAIL-5V), and a magnetic antenna for external mounting outside the cabinet (ref: ANTMAGNSUP)

## ACCESSORIES

### Measurement clamps :



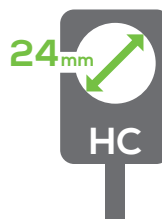
#### **CURCLAMP-HC-S1**

Measurement clamp -  
diameter 10mm -  
75A max - cable 2m  
(SQUID-HC compatible)



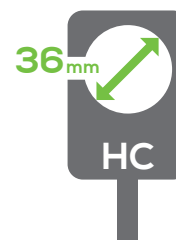
#### **CURCLAMP-HC-S2**

Measurement clamp -  
diameter 16mm -  
100A max - cable 2m  
(SQUID-HC compatible)



#### **CURCLAMP-HC-S3**

Measurement clamp -  
diameter 24mm -  
300A max - cable 2m  
(SQUID-HC compatible)



#### **CURCLAMP-HC-S4**

Measurement clamp -  
diameter 36mm -  
600A max - cable 2m  
(SQUID-HC compatible)

### Antenna and power supply :



#### **ANT-MAGN-SUP**

Antenna with magnetic base  
(cable length: 4m)



#### **ALIM-RAIL-5V**

Power supply 230VAC - 5VDC  
attachment on DIN rail

# TYNESS-ENERGY

## Pulse metering and Extension



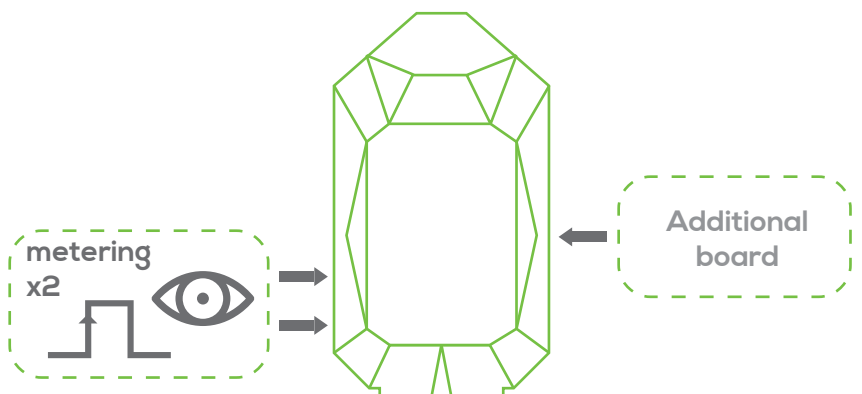
### DETAILS

The TYNESS-ENERGY is a sensor which allows all the pulse meters and electronic meters to communicate.

Two inputs permit data communication with all types of meters having a pulse output: water, electricity, calories, etc.

An optical sensor is available as an option to retrieve consumption data from the indicator lights of the different meters.

Finally, an extension allows an additional board to be added in order to expand the capacities of the Tyness: PT100, MBUS, current measurement, etc.



## FEATURES

- 2 pulse metering inputs (dry contact)
- 1 additional board slot
- Integrated antenna (*option : external antenna*)
- LoRa® or LoRaWAN™ wireless communication
- 2 possible power modes:
  - External power supply: 5VDC to 12VDC
  - External battery pack : 3.6 VDC lithium battery 19Ah (*option\**)
- Dimensions : 142 x 77 x 36 mm
- Operating temperature range: 0°C to +50°C
- Mounting on rail DIN or on wall
- CE approved and RoHs compliant
- With the GPRS option, the Tyness also becomes a LoRa® gateway (no need for ToolBox).

*\*works only with some additional boards  
(cf. battery icon in the next pages)*

## REFERENCES

### Individual products :

- **TYNESS-ENERGY-LORAWAN** : Product allowing communication with 2 pulse meters  
One slot for an additional board can expand Tyness's capacities with other functions: PT100, MBUS, current measurement, etc. Operating with external power supply or an external battery pack. Compatible LoRa® and LoRaWAN™.
- **TYNESS-ENERGY-GPRS** : same as the above version, but with a GPRS module, providing direct communication with a WEB platform (e.g. Ewattchcloud.fr or a third-party platform) without a gateway. The integrated LoRa® module also allows it to play the role of hub and to communicate with up to 20 LoRa® wireless sensors from the Ewattch product line.

*See available TYNESS options and accessories in the next pages*

# TYNESS-MODULAR

## Upgradeable and multifunction sensor



### DETAILS

The TYNESS is a multifunction and modular sensor for building the ideal sensor system.

It adapts to the most complex needs.



Combine up to 2 different functions: current measurement, active / reactive power, optical sensor, PT100 temperature measurement, 4-20mA / 0-10V interface, relay output, M-BUS protocol...

**Build your ideal sensor !**

## FEATURES

- 2 additional card slots available<sup>1</sup>
- LoRa® or LoRaWAN™ wireless communication
- Integrated antenna (*option : external antenna*)
- 2 possible power modes:
  - External power supply 5V to 12V DC
  - External battery pack : 3.6 VDC lithium battery - 19Ah (*option*<sup>2</sup>)
- 4 mounting modes: magnets, DIN rail, wall or double-sided (*option*)
- Dimensions : 142 x 77 x 36 mm
- Operating temperature range: 0°C to +50°C
- Industrial quality and design
- CE approved and RoHs compliant
- With the GPRS option, the Tyness also becomes a LoRa® gateway (no need for Toolbox)

<sup>1</sup> See relevant catalogue page for the different functions

<sup>2</sup> Works only with some additional boards  
(cf. battery icon in the next pages)

## REFERENCES

### The individual products :

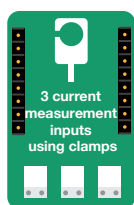
- **TYNESS-MODULAR-LORAWAN** : TyNess system main board for connecting up to 2 additional cards. Compatible LoRa® and LoRaWAN™.
- **TYNESS-MODULAR-GPRS** : Same as the above version, with the GPRS module providing direct communication with a WEB platform (e.g. ewattchcloud.fr or a third-party platform) without using a gateway. The integrated LoRa® module also allows it to play the role of hub and to communicate with up to 20 LoRa® wireless sensors from the Ewattch product line.

*See available TYNESS options and accessories in the next pages*

# TYNESS ACCESSORIES

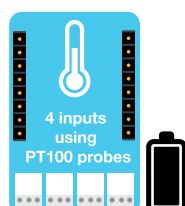
## OPTIONS, ADDITIONAL BOARDS AND ACCESSORIES FOR TYNESS

### Additional boards :



#### TYNESS-OPT- CURR

3 current measurement inputs using clip-on clamps (not supplied)



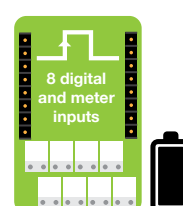
#### TYNESS-OPT- PT100

4 temperature measurement inputs using PT100 probes. Compatible with all types of PT100 probes



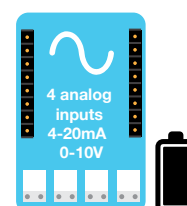
#### TYNESS-OPT- MBUS

MBUS interface communicating with: water meter, heat meter, gas meter, etc...



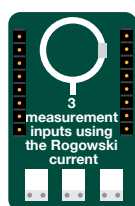
#### TYNESS-OPT- DIGITAL

8 digital inputs providing pulse metering, alarm or status transmission.



#### TYNESS-OPT- ANA

4 analog inputs to recover information from the 4-20mA or 0-10V sensors.



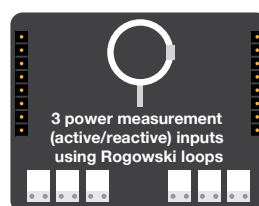
#### TYNESS-OPT- ROGOW

3 current measurement inputs using flexible loops (Rogowski)



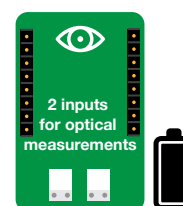
#### TYNESS-OPT- RELAIS

4 low power relay outputs for performing simple actions



#### TYNESS-OPT-POWER

3 current measurement inputs (Rogowski) and 3 voltage inputs. Allow active and reactive power and the phase shift to be measured. (Rogowski loops not supplied)



#### TYNESS-OPT- OPTIC

2 inputs for connecting optical sensors



Compatible boards with the option Tyness with external battery pack.

## Accessories for additional boards :

10<sub>mm</sub>



### **TYNESS-CUR-1**

Measurement clamp - diam. 10mm - 75A max - cable 2m (for TYNESS-OPT-CURR)

16<sub>mm</sub>



### **TYNESS-CUR-2**

Measurement clamp - diam. 16mm - 100A max - cable 2m (for TYNESS-OPT-CURR)

24<sub>mm</sub>



### **TYNESS-CUR-3**

Measurement clamp - diam. 24mm - 300A max - cable 2m (for TYNESS-OPT-CURR)

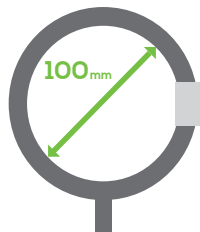
36<sub>mm</sub>



### **TYNESS-CUR-4**

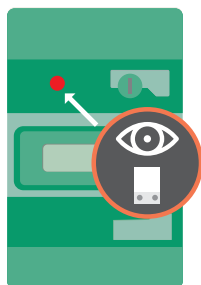
Measurement clamp - diam. 36mm - 300A max - cable 2m (for TYNESS-OPT-CURR)

3500A



### **TYNESS-ROG-1**

Rogowski type flexible loop - diam. 100mm - 3500A max - cable 2m (for TYNESS-OPT-ROGOW and POWER).



### **OPTIC-SENSOR**

Optical sensor with double-sided tape attachment. (For TYNESS-OPT-OPTIC)



### **TYNESS-FIX-AIMANT**

Fixing magnet for Tyness



### **TYNESS-FIX-RAIL**

DIN rail mounting kit for Tyness



### **SONDE- PT100\_2M**

PT100 Probe - 2m cable (for TYNESS-OPT-PT100)



### **SONDE- PT100\_3M**

PT100 Probe - 3m cable (for TYNESS-OPT-PT100)



### **SONDE- PT100\_4M**

PT100 Probe - 4m cable (for TYNESS-OPT-PT100)



### **SONDE- PT100\_6M**

PT100 Probe - 6m cable (for TYNESS-OPT-PT100)

## Available options :

- **TYNESS-OPT-PACK-PILE :**  
External case containing a 3.6V lithium battery - 19Ah.  
The option includes sensor adaptation for battery operation.
- **TYNESS-OPT-ANT-EXT :**  
Each TYNESS references is available on request with an external antenna connector (ANTMAGNSUP).  
Antenna not supplied.
- **TYNESS-OPT-WATERPROOF :**  
Each TYNESS reference is available on request with a waterproof case.
- **TYNESS-OPT-USBEXT:**  
USB cable allowing a connection to the TYNESS without opening the case.  
(With external power supply only)

## Power supply and antennas :



**ALIM-RAIL-5V**

Power supply 230VAC - 5VDC  
attachment on DIN RAIL



**TYNESS-ALIM-BLOC-5V**

Power supply 230 VAC -  
5VDC mains type unit  
(cable length: 1,1m)



**ANT-MAGN-SUP**

Antenna with  
magnetic base  
(cable length: 4m)

# AMBIANCE

## 4-in-1 SENSOR

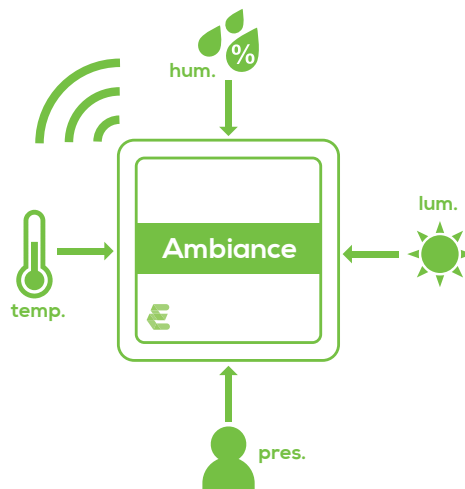


## DETAILS

The AMBIANCE sensor integrates all the functions necessary for the analysis of environmental and behavioral data, into a single product :

**Temperature / Humidity / Presence / Luminosity**

**An accurate sensor, with good stand-alone characteristics and easy to install !**



## FEATURES

- Temperature measurement range: -40°C to 60°C
- Relative humidity measurement range: 0 to 100%
- Presence detection distance: 5m / 130° angle
- Luminosity measurement: 0 to 65535Lux
- Power supply : 2 lithiums battery 2700mAh included
- Battery life: 2 to 5 years
- External power supply (*option*): 5VDC to 12VDC (required with CO2 option)
- Dimensions (H x W x D) : 86 x 86 x 25.5 mm
- Wall mounting (*option : double-sided mounting*)
- CE approved and RoHs compliant

# ENVIRONNEMENT

## TEMPERATURE AND HUMIDITY



## DETAILS

The ENVIRONNEMENT sensor measures temperature and indoor humidity.



## FEATURES

- Temperature measurement range: -40°C to 60°C
- Relative humidity measurement range: 0 to 100%
- Power supply : 2 lithiums battery 2700mAh included
- Battery life: 2 to 5 years
- External power supply (*option*): 5VDC to 12VDC
- Dimensions (H x W x D) 86 x 86 x 25.5 mm
- Wall mounting (*option : double-sided mounting*)
- CE approved and RoHs compliant

## REFERENCES

### AMBIANCE :

- **AMBIANCE-LORA** : AMBIANCE sensor measuring temperature, humidity, luminosity, presence detection, with 3.6V lithium batteries included, and communicating via LoRa® Ewattch
- **AMBIANCE-LORAWAN** : Same as above but communicating in LoRaWAN™

### ENVIRONNEMENT :

- **ENVIRONNEMENT-LORA** : ENVIRONNEMENT sensor measuring temperature and humidity, including lithium 3.6V batteries, and communicating via LoRa® Ewattch.
- **ENVIRONNEMENT-LORAWAN** : Same as above but communicating in LoRaWAN™

## OPTIONS

### Available options for AMBIANCE and/or ENVIRONNEMENT sensors :

- **AMBIANCE-OPT-CO2** : Option including the CO2 module, AMBIANCE / ENVIRONNEMENT sensor modifications and a 12V DC 500mA power supply unit.
- **AMB-ENV-OPT-ALIM-EXT** : AMBIANCE or ENVIRONNEMENT modifications for an external power supply type 12VDC 500mA or 230VAC - 5VDC.

## ACCESSORIES

### Batteries and power supply :



**PILE-LITH-AA**

Lithium battery 3.6V type AA.  
Battery capacity 2.7Ah



**ALIM-RAIL-5V**

Power supply 230VAC - 5VDC  
attachment on DIN RAIL



**ALIM-BLOC-5V**

Power supply 230 VAC - 5VDC  
mains type unit  
(cable length: 1,1m)

# EnOcean Range

## SQUID ENOCEAN



Installed in an electrical panel, the SQUID'S 12 clamps allow you to sub-meter your single-phase or three-phase electrical installation, without decommissioning or modification.

In order to meet all requirements, the SQUID is compatible with several different clamp sizes from 6mm to 24mm in diameter, with max currents up to 600A in this EnOcean version.

## REFERENCES

- **SQUID-HC-EN** : SQUID accepting currents up to 600A, delivered without accessories and communicating via EnOcean.
- **KIT-SQUID-HC-ENOCEAN** : Kit including a SQUID-HC-EN sensor, and a power supply with attachment to a DIN rail 230 VAC-5VDC (ref. : ALIM-RAIL-5V).

## ACCESSORIES

### Measurement clamps :



**CURCLAMP-HC-S0**  
Measurement clamp -  
diameter 6mm



**CURCLAMP-HC-S1**  
Measurement clamp -  
diameter 10mm



**CURCLAMP-HC-S2**  
Measurement clamp -  
diameter 16mm



**CURCLAMP-HC-S3**  
Measurement clamp -  
diameter 24mm

### Antenna and power supply :



**ANTMAGNSUP**

Antenna with magnetic base  
(cable length: 4m)



**ALIM-RAIL-5V**

Power supply 230VAC - 5VDC  
attachment on DIN rail

# IMPULSE



The IMPULSE is a powerful EnOcean sensor that manages pulse outputs (water, gas, calorimeter ...)

ENOCEAN wireless communication

## REFERENCES

- **IMPULSE-QM** : EnOcean sensor with 1 pulse input. Battery included.
- **IMPULSE-FULL-QM** : EnOcean sensor with 2 pulse inputs and 1 external power input.

# SUPERVISEUR



Thanks to its wireless connectivity, the EWATTCH monitor is able to communicate with various sensors: temperature, humidity, CO2, VOC, SQUID.

The Ewattch energy manager does much more than simply comply with RT2012, it goes much further by offering functionalities that are a real plus for the user: metering of water, gas, sending reports by email, water leak detection, VMC defects...

Finally, it is equipped with an integrated dashboard displaying the euros for your consumption of electricity, water and gas.

## REFERENCES

- **RFB1206** : SUPERVISEUR without wireless communication and 3 toroids included
- **RFB1206-EN**: SUPERVISEUR with EnOcean wireless communication and 3 toroids included



# Our services

## Expertise and IoT architecture

*Do you have a global project which has integration constraint ? You'd like advise on the best solution from architecture, sensor to platform ?*

Ewattch's engineers bring you their expertise and assist you in the drafting of specifications and the possible realization of a POC (Proof of concept).

**Duration :** 3 days

**Reference :** SER-EXP-IOT

## Integration assistance and decoding data

*You want to use your own hardware or software instead of using our Ewattch solutions?*

Our engineers assist you to minimize integration time.

Assistance exemple : installation with a Multitech or Cloudgate gateway, payloads decoding for Ewattch sensors, implementation on platforms like PTC or Azure ...

**Duration :** ask for a quotation

**Reference :** SER-ASS-INTEG

## Library for decoding Ewattch payloads

Providing a library in JavaScript or Java to quickly use data collected by Ewattch sensors.

Also include phone support and library updates for 2 years

(ex : adding new sensors)

**Duration :** 1 day

**Reference :** SER-BIB-PLAYLOADS

## Technical assistance

*You haven't been trained to use our products and you're not one of our partners?*

*You'd like to be assisted for your commissioning ?*

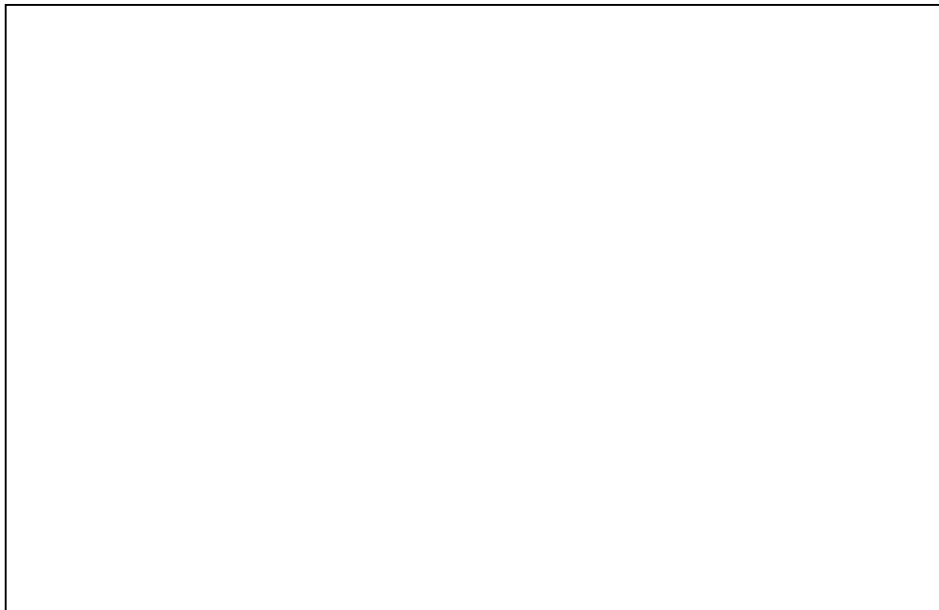
Ewattch customer service will be at your disposal upstream and by telephone, to prepare the equipment. They will also assist you during the installation.

**Duration :** 2 days

**Reference :** SER-ASS-TECH

## Notes


## Partner contact details



For all information requests or quotations, do not hesitate to contact us or to speak with the nearest Ewattch partner.



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