nke
W A T T E C O

Smart
Metering

Smart
Building

Smart
Energy

LoRaWAN™ Water Sens'O

LoRaWAN™

Water Sens'O is a LoRaWAN™ , Class A sensor radio transmitting data index and alarms from water meter

APPLICATIONS

- Wireless AMR – Smart metering
- Management of water resource.

BENEFITS & KEY FEATURES

- LoRaWAN™, Class A
- Easy to use and deploy
- Detect and monitor:
  - ✓ Water leakage
  - ✓ Water reverse flow
  - ✓ Min/Max water flow every 24hours
  - ✓ Water meter risk of freezing
  - ✓ Water consumption histogram
- Alarm thresholds and transmit periodicity programmable over the air
- Data compression for batch report
- IP68
- Up to 15 years autonomy

QUALITY & RELIABIITY

- CE Compliant
- RoHS compliant
- Radio-equipment directive 2014/53/UE

The Class A LoRaWAN™ WATER SENS'O from nke Watteco is a long range, low power consumption, high performance and high quality wireless sensor transmitting index data from water meters.

WATER SENS'O has the data processing capabilities to transmit the water consumption histogram and the min/max water flow every 24hours. It also alerts you in case of:
  – Water leakage
  – Water reverse flow
  – Water Sens'O removal from water meter

The configuration of WATER SENS'O can be done over the air via the LoRaWAN™ network allowing the remote setting of the transmit periodicity from 4 to 120 hours as well as the choice of the   alarms threshold values (leakage, reverse flow).

WATER SENS'O is integrated quickly and cost-effectively into a LoRaWAN™ network without expensive and time-consuming cabling. It clips directly onto the meter leaving visible the mechanical index.

It operates with commercial meter products such as ARAD composite volumetric water meters type DN15 & DN20

The measured parameters are locally stored, concatenated and compressed. This unique batch mechanism significantly reduce the amount of data transmission for demanding water consumption histogram applications and drastically increase the autonomy.

Powered through a lithium battery, it allows an autonomy up to 15 years when transmitting data one time per day.

NKE WATTECO, YOUR PARTNER IN SMART SENSORS & ACTUATORS

We are a European leader in designing and manufacturing highly reliable and low power consumption smart sensors, actuators and multiprotocol remote data solutions.

nke Watteco is an adopter member of the LoRa® Alliance

TECHNICAL CHARACTERISTICS

RF TRANSCEIVER	
Frequency (MHz)	EU: 863-870 US: 902-928 (On demand)
Transmit Power (dBm)	+14
Receiver Sensitivity (dBm)	-140

FIRMWARE	
Protocol	LoRaWAN™, Class A
Transmission cycles	10mn, 1h, 12h or defined by network
Data history	Available
Data processing	Water leakage detection Water reverse flow detection Water meter risk of freezing detection Min/Max water flow computation every 24hours Water consumption histogram computation
Activation method	Activation by Personalization (ABP) Over-The-Air Activation (OTAA)
Data encryption	AES128
Power supply	3,6V / 3600mAh 3,6V lithium battery
Autonomy within a +10°C to +25°C temperature range	15 years for 1 transmission per day

ALARMS	
Water reverse flow	Alarm level can be adjusted over the air during operation
Water leakage	Alarm level can be adjusted over the air during operation
Water Sens'O module removal from meter	

ENVIRONMENTAL	
Operating temperature (°C)	-20 / +50
Storage temperature (°C)	-10 / +30

DIRECTIVES & STANDARD	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE and RoHS recommendation compliant	

MECHANICAL FEATURES	
IP Class	IP68
Dimension – L x W x H (mm)	97x76.23x105.5

ORDERING INFORMATION

REFERENCE	DESCRIPTION
50-70-011	LoRaWAN™ Water Sens'O