Smart Metering Smart Building Smart Energy

LoRaWAN™ SELF-POWERED TIC SENSOR

The SELF-POWERD TIC SENSOR is a LoRaWAN™ Class A sensor radio transmitting the customer tele-information (TIC) from residential electric meters.

APPLICATIONS

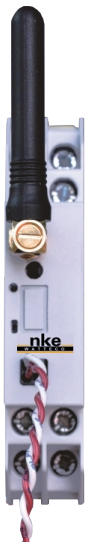
- Wireless AMR – Smart metering
- Real time monitoring of energy consumption
- Monitoring of energy efficiency in homes, offices, administrative centres

BENEFITS & KEY FEATURES

- LoRaWAN™, Class A
- Easy to deploy and use
  - ✓ PTSM connector for TIC Signal
  - ✓ DIN Rail 1U
- Self-Powered via Electronic meter output (CIS signal)
- Electronic meter supported:
  - ✓ CBEMM
  - ✓ CBEMM-ICC
  - ✓ CJE
  - ✓ ICE
- Data compression for batch report
- Data upload: up to 2 frame per minutes

QUALITY & RELIABIITY

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



The SELF-POWERD TIC SENSOR from nke Watteco is wireless sensor operating from any wireless network using the LoRaWAN™ protocol.

It has been designed to monitor and transmit the TIC data (index, base, consumption, active and reactive power, ..) from homes, offices, administrative centres and small industrial premises.

The energy transmitted by the TIC output of the electric meter allows the LoRaWAN™ TIC sensor to continuously decode the TIC signal from the meter and to transmit over the air up to 2 information frame per minute without requiring any other power supply such as battery or sector.

If the variation of one of the active/reactive power/energy is greater than the threshold set by the user an alarm is automatically generated allowing to track and analysis electrical line disturbances.

The measured parameters can be locally stored, concatenated and compressed. This unique batch mechanism significantly reduce the amount of data transmission for demanding applications such as loading curve.

The standard DIN rail mount design allows easy mounting and fast connections to the electrical board.

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

LoRaWAN™ SELF-POWERED TIC SENSOR

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
Activation method	Activation by Personnalization (ABP) Over-The-Air Activiation (OTAA)
Data encryption	AES128
TIC	
Electronic Meter supported	"Blue" electronic single-phase, multi-rate meter (CBEMM) "Blue" electronic single-phase, multi-rate meter (CBEMM - ICC upgrade) "Yellow" electronic meter (CJE) "Emeraude Customer Interface" (ICE) meter
Connector type	PTSM
Frame transmission rate	Up to 2 per minute
ALARMS	
Active/Reactive Power	Occurs when variation is greater than the threshold set by the user
Active/Reactive Energy	Occurs when variation is greater than the threshold set by the user
POWER	
Power supply	Self-powered by the TIC output of the electric meter
INTERFACE	
LED Indicator	Network pairing & configuration
Switches	Reset, ON/OFF
MECHANICAL FEATURES	
DIN Rail Dimension (mm)	1U – 36 x 85 x 66
ENVIRONMENTAL	
Operating temperature (°C)	-20 / +50
DIRECTIVES & STANDARD	
EN, 61000-4-2 EN 300-220-1 V2-4-1, EN 301 489 V1-6-1 CE and RoHS recommendation compliant	

ORDERING INFORMATION

REFERENCE	MODEL DESCRIPTION
50-70-008	LoRaWAN™ SELF-POWERED TIC SENSOR

© nkeWatteco - Head Quarter: rue Gutenberg, ZI Kerandré , 56700 Hennebont, France - Tel: 33 (0)2 97 36 10 12
Paris Office: 33, rue Pierre Marin, 91270 Vigneux sur Seine, France - Tel +33(0)1 69 52 28 31
For further information, please contact us: info.watteco@nke.fr - www.nke-watteco.com