LoRaWAN™ Smart Plug

LoRaWAN™

Smart Plug is a LoRaWAN™ Class C smart home device that monitors, controls and reports home's electronic appliances connected and electrical line quality.

APPLICATIONS

- Turn ON/OFF devices -Local and Remote Control
- Remote Power Scheduling – Easily create on/off schedules for your devices from your application
- Load Curve Report & Usage Statistics – Monitor & report power/energy consumption of connected devices
- Quality statistics – Monitor & report voltage and frequency of the electrical line

BENEFITS & KEY FEATURES

- LoRaWAN™, Class C
- Easy to use and deploy
- Up to 3500W - 16A switch ON/OFF capability
- Monitor & Report Power/Energy/Voltage/Frequency
- Up to 98% data compression for batch report
- EU and US version (230V/110V)

QUALITY & RELIABIITY

- RoHS compliant
- CE Compliant
- FCC Compliant

The Class C LoRaWAN™ Smart Plug from nke Watteco is a compact, multi-purposes and easy-to-use device that allows to monitor, control and report home's electronic devices from any wireless network using the LoRaWAN™ protocol.

It plugs into EU and US wall socket and enables to switch or schedule a connected electronic device on/off.

The Smart Plug exists in 2 versions:
- Europe Smart Plug
- US Smart Plug

The embedded multifunction meter continuously measure active/reactive power and energy. It also provides power quality measurements such as average/min/max voltage (rms/peak), frequency.

If the variation of one of the quality parameters (frequency, voltage) is greater than the threshold set by the user, a "change over variation" or CoV report 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 load curve reporting.

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 CARACTERISTICS

RF TRANSCEIVER	
Frequency (MHz)	EU: 863-870 US: 902-928
Transmit Power (dBm)	+14
Receiver Sensitivity (dBm)	-140
FIRMWARE	
Protocol	LoRaWAN™, Class C
Transmission cycles	10mn, 1h, 12h or defined by network
Activation method	Activation by Personalization (ABP) Over-The-Air Activation (OTAA)
Data encryption	AES128
ELECTRICAL	
Operating Voltage (VAC)	100-250
Power frequency (Hz)	50-60
Max load capacity	16A/250VAC
POWER METER	
Active/Reactive Power resolution (W / Var)	1
Active/Reactive energy resolution (W.h / Var.h)	1
Power accuracy	< 1% above 40W >1% below 40W
Energy measurement bandwidth	1,23kHz
QUALITY LINE INDICATOR	
Frequency	current/min/max values
RMS Voltage	current/min/max values
Over voltage	Number of occurrence the voltage exceed the overvoltage threshold
Sag	Number of occurrence the main voltage is lower than the "Sag voltage Threshold" for at least the number of half cycle defined by the "Sag cycle Threshold" attribute
INTERFACE	
LED Indicator	Configuration and pairing
Button	Reset, ON/OFF
MECHANICAL FEATURES	
Dimension (mm)	62x114x40
Plug Type	Europe and US version available
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, FCC part 15.247 subpart C, RoHS recommendation compliant	

ORDERING INFORMATION

REFERENCE	MODEL DESCRIPTION
50-70-003	SMART PLUG - Europe version
50-70-022	SMART PLUG - US version