

Wireless Single-Phase Current Meter with 1 x 3000A Clamp-On CT

Wireless Sensor Network Based on LoRa Technology



R718N1300 Data Sheet

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Introduction

Netvox wireless single-phase current detector is used to detect the input current of single-phase AC. The device is compatible with LoRaWAN protocol. The chip module conforming to LoRaWAN wireless protocol is integrated inside and added to the gateway to display the collected data in the gateway.

Features

- SX1276 wireless communication module
- Power supplied by 2* 3.6V ER14505 AA size batteries
- Main body IP53; CT: IP30
- Clamp-on current transformer
- Magnetic base
- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Third-party online wireless sensor monitoring and notification system to configure sensors, view data, and set alerts via SMS text and email (optional)
- Available third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne
- Low power consumption and long battery life

Note: Please visit http://www.netvox.com.tw/electric/electric_calc.html for information about battery life.

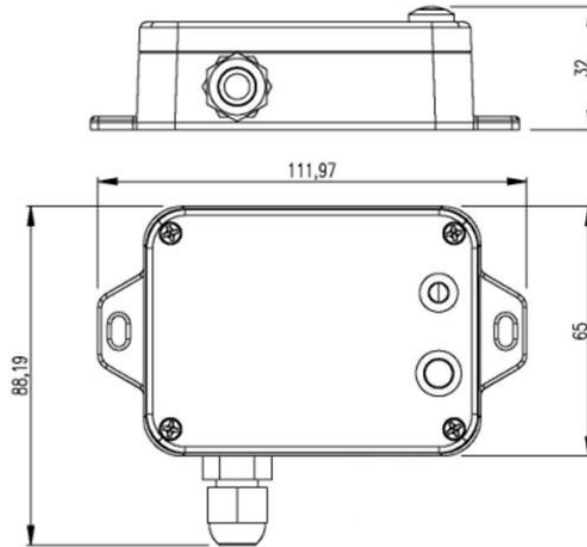
Applications

- Indoor current detecting devices for homes, hotels, office buildings, shopping malls, etc.
- Smart city
- Thermal system devices

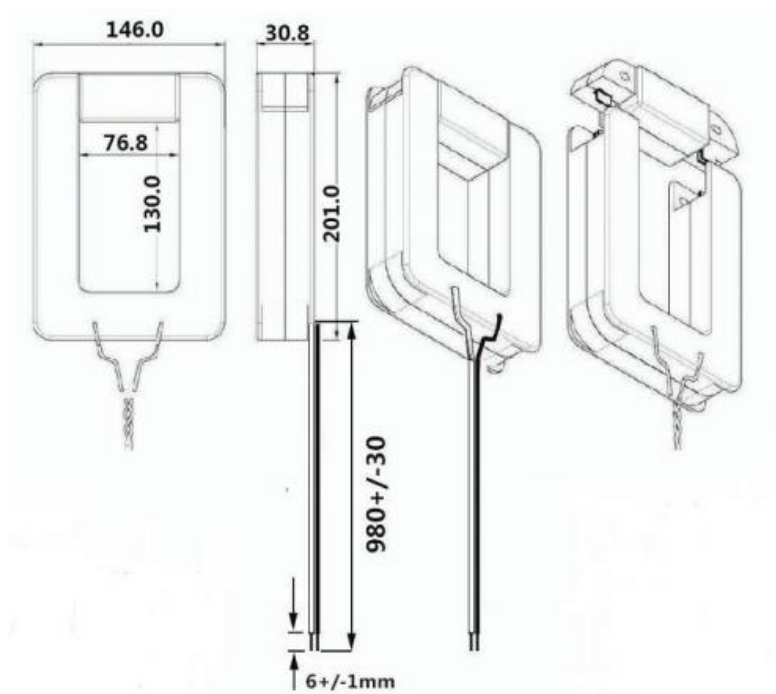
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Dimensions

Main body: 112mm (L) x 88.19mm (W) x 32mm (H)



CT: 201mm (L) x 30.8mm (W) x 146mm (H)



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Electrical Specifications

Power Supply	2* 3.6V 2400mAh ER14505 lithium batteries in parallel
Battery Life	5 years (conditions: Ambient temperature 25 °C, report once every 30 mins, txpower = 20dBm, LoRa spreading factor SF = 10)
Standby Current	25uA
Device Wakeup Current	0.8mA to 20mA (without transmitting and receiving LoRa data)
Module Wakeup Current	0.8mA to 8mA
RF Receiving Current	11mA @3.3V
RF Emission Current	127mA @3.3V
Battery Measurement Accuracy	± 0.1V
Current Measurement Error	<±1%
Current Resolution	1mA
Current Measurement Range	150A to 3000A (varies according to the configuration of the current transformer)

Note: The specific electrical characteristics will vary according to the power supply voltage

Clamp-On Current Transformer Parameters

Rated Primary Input Current	3000A, 50Hz to 60Hz
Rated Secondary Output Current	500mA
Transformation Ratio	6000: 1
Load Resistance	0.3Ω
Accuracy	1%
Rated Voltage	0.66KV
Isolation Withstand Voltage	AC3KV/ 3mA/ 3s
Housing Material	Flame retardant grade 94-V0 UL material
Certification	UL, CE

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Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
Power Output	19dBm±1dBm (max)
Tx Power	US915 20dbm AS923 16dbm AU915 20dbm CN470 19.15dbm EU868 16dbm KR920 14dbm IN865 20dbm
Rx Sensitivity	-136 dBm (LoRa, Spreading Factor = 12, Bit Rate = 293bps) -121 dBm (FSK, Frequency deviation = 5kHz, Bit Rate = 1.2kbps)
Antenna Type	Built-in antenna
Communication Distance	10 km (line of sight) Note: The actual transmission distance depends on the environment.
Data Transfer Rate	0.3 kbps to 50 kbps (LoRa) 1.2 kbps to 300 kbps (FSK)
Modulation	LoRa / FSK (Note: One modulation method is required.)
Available LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923, IN865, CN470-510 (Note: Optional, to be done in factory configuration.)

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Physical Properties

Dimensions	Main body: 112mm (L) x 88.19mm (W) x 32mm (H) CT: 201mm (L) x 30.8mm (W) x 146mm (H)
Main Body Weight	141g
CT Weight	1kg
CT Cable Length	980mm
Operating Temperature Range	-20°C to +50°C
Storage Temperature Range	-20°C to +50°C
Environment Humidity	<90% RH (No condensation)
Mounting	Screw / Magnet