

# Wireless 1-Phase Current Meter with 1 x 630A Clamp-On CT R718N163 Data Sheet

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Wireless Sensor Network Based on LoRa Technology

**DIREKTRONIK**  
Dataprodukter utöver det vanliga



**R718N163**

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## Wireless 1-Phase Current Meter with 1 x 150A Clamp-On CT

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### General Description

The Netvox wireless single-phase current detector is used to detect single-phase electrical input current. The device is compatible with the LoRaWAN protocol, and integrates a chip module that conforms to the LoRaWAN wireless protocol to display the collected data in the gateway.

The device is powered by battery and obtains the load AC current value through the current transformer. The device adopts the clamp-on current transformer, which can be conveniently connected to the measuring device.

### Working Principle

This device is connected to a current transformer. The current transformer is an instrument that converts

the primary side large current into a secondary side small current according to the principle of electromagnetic induction, and the primary side large current is isolated from the secondary side small

current. This device is to monitor the secondary side small current and is powered by batteries to ensure the safety of the users.

### Example Applications

- Smart current detection equipment in the city such as home or business
- Smart city
- Thermal system equipment

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### Features of NETVOX Sensors

- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- IP Rating: Host body-IP53, CT- IP30
- Improved power management for longer battery life
- 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 platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- The base is attached with a magnet that can be attached to a ferromagnetic material object
- Battery Life\*2:
  - Please refer to web: [http://www.netvox.com.tw/electric/electric\\_calc.html](http://www.netvox.com.tw/electric/electric_calc.html)
  - At this website, users can find battery life time for various models at different configurations.

\*1. Actual range may vary depending on environment.

\*2. Battery life is determined by sensor reporting frequency and other variables

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**Electric**

Input Power	2 x 3.6V ER14505 lithium batteries (2400mah/section )
Stand by Current	25uA
Wake up Current	7mA
Receiving Current (max)	11mA @3.3V
Transmitting Current (max)	127mA @3.3V
Battery Measurement Accuracy	±0.1V
Current Measurement Accuracy	<±1%
Current Resolution	1 mA
Current Measurement Range	5A to 630A (depending on the current transformer configuration)

\* Specific electrical characteristics may vary depending on the power supply voltage.

**Frequency**

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915 20dbm ; AS923 16dbm ; AU915 20dbm ; CN470 19.15dbm ; EU868 16dbm ; KR920 14dbm ; IN865 20dbm ;
Rx Sensitivity	-136dBm (LoRa , Spreading Factor=12, Bit Rate=293bps ) -121dBm (FSK,Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Build-in antenna
Communication Range	Up to 10 km, the actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps~50kbps
Modulation	LoRa/FSK
Available Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 Configured before shipment

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**Split-core Current Transformer Parameters**

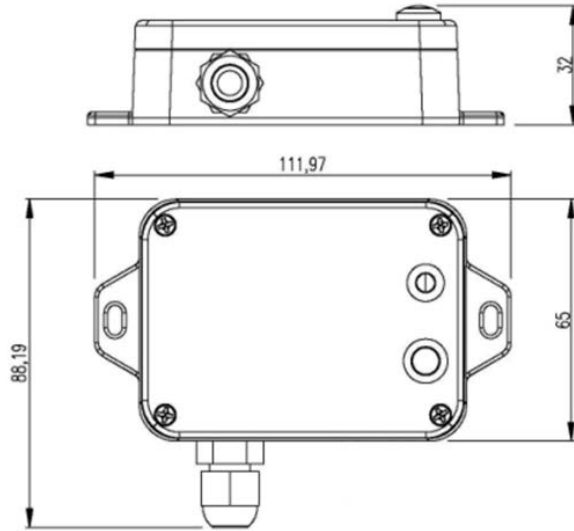
Rated Primary Current	300A, 50Hz~60Hz
Rated Secondary Current	50 mA
Saturation Current	≥630A
Ratio	6000:1
Load Resistance	10Ω
Accuracy	1% (5A-720A)
Electrical Strength	3000V
Housing Material	Flame Retardant Grade 94-V0 UL Material
Environmentally Friendly	In line with ROHS
Working Temperature	-40° C~+85° C

**Physical**

Dimension	Main Part: L: 112mm*W: 88.19mm*H: 32mm Sensor Size : 84.8mm*40.8mm*48mm
Main Part Weight	141g
Sensor Weight	365.4 g
Sensor External Wiring Length	900 mm
Environment Temperature Range	-20°C ~ 55°C
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40°C ~ 85°C
Mounting	Screw / Magnet

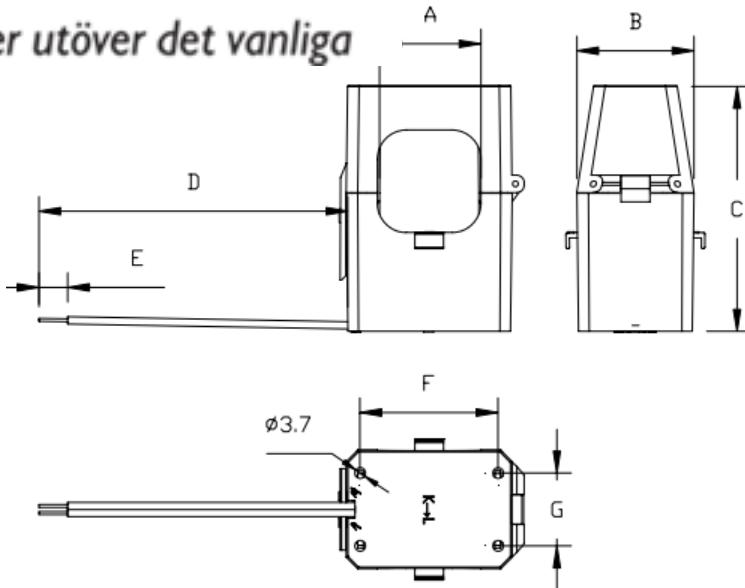
Wireless 1-Phase Current Meter with 1 x 150A Clamp-On CT

Technical Specifications



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A	B	C	D	E	F	G
35±0.5	40.3±0.3	84.8 max	900±30	6±1	48±0.3	25±0.3