
Wireless 3-Phase Current Meter with 3 x 150A Clamp-On CT

**Wireless 3-Phase Current Meter
with 3 x 150A Clamp-On CT
R718N315 Data Sheet**

Wireless Sensor Network Based on LoRa Technology



R718N315

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General Description

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

The device is powered by a battery and receives AC current through a current transformer. This device adopts open-loop current transformer, which can be easily connected to the device to be tested. The A phase line, the B phase line and the C phase line of the three-phase electric power are respectively connected to the corresponding current transformers.

Example Applications

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

Features of NETVOX Sensors

- LoRaWAN™ Class A compatible
- Frequency Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Improved power management for longer battery life
- Encrypt-RF™ Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Battery Life*2:

Please refer to web: http://www.netvox.com.tw/electric/electric_calc.html

At this website, users can find battery life time for varier models at different configurations.

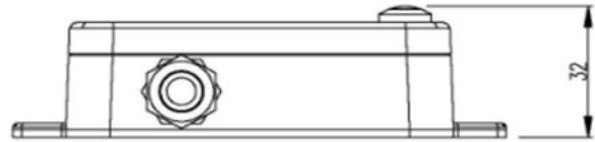
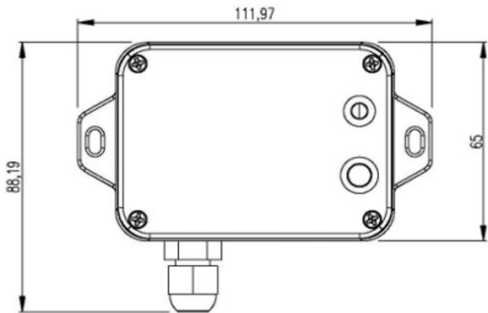
- Over-the-air updates (future)
- Third-Party online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email (optional)
- Available third-party platform: Actility/ThingPark, TTN, MyDevices/Cayenne
- R718X series carry magnets which can be attached to ferromagnetic materials and objects

*1. Actual range may vary depending on environment.

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

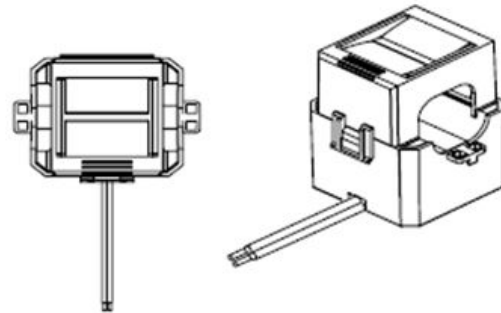
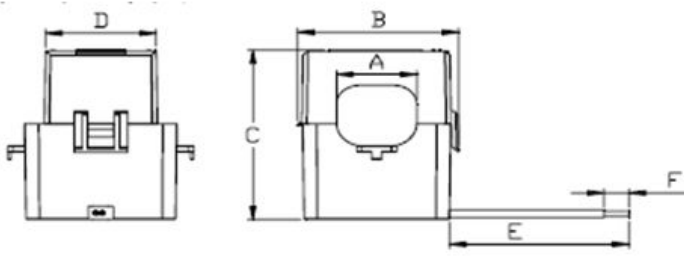
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Technical Specifications (Main Part)



(Uni. mm)

Current Transformer Appearance and Dimension Drawing



A	B	C	D	E	F
16±0.5	33±0.5	43.5±0.5	22.8±0.3	900±30	6±1

(Uni. mm)

Electric

Input Power	2 x 3.6V ER14505 AA lithium batteries (3.6V, 2400mah/section)
Sleeping Current	25uA
Wake up Current	7mA
Receiving Current (max)	11mA @3.3V
Transmitting Current (max)	127mA @3.3V
Battery Voltage Measurement Accuracy	±0.1V
Current Measurement Accuracy	<+-1%
Current measurement Accuracy Range	1A to 150A (depending on the current transformer configuration)

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

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Frequency

TX Power	19dBm±1dBm
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 to10 km, the actual transmission distance depends on the environment.
Data Transfer Rate	0.3kbps~50kbps
Spread Technique	LoRa/FSK
Available Frequency	EU863-870, US902-928, AU915-928, KR920-923, AS923, CN470-510 Configured before shipment

Current Transformer

Rated Input Current	100A, 50Hz~60Hz
Rated Output Current	33.33mA
Saturation Current	≥150A
Ratio	3000:1
Load Resistance	10 Ω
Linearity	1% (1A-150A)
Isolation Withstand Voltage	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: 65mm*H: 32mm
Weight	141g
Environment Temperature Range	-20°C ~ 55°C
Environment Humidity Range	<90% RH (No condensation)
Storage Temperature	-40° C~+85° C

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