Wireless 3-Phase Current Meter with 3 x 630A Clamp-On CT R718N363D DataSheet

Wireless Sensor Network Based on LoRa Technology

R718N363D

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1. Introduction

R718N363D, the three-phase current meter, is to detect the current of three-phase load. The device is compatible with the LoRaWan protocol and equipped with a wireless communication module to display the collected data in the gateway. The R718N3xxD series is powered by DC and receives AC via current transformers (CTs), which proportionally convert high-voltage current in the primary winding into the lower-value current in the second winding.

2. Features

- Clamp-on current transformers
- Power adapter (input: AC 100V to 240V 50/60Hz, output: DC 3.3V/1A)
- IP30 main body and sensor
- SX1276 wireless communication module.
- Magnetic base
- LoRaWAN^TM Class C compatible
- Frequency-hopping spread spectrum
- Configuring parameters and reading data via third-party software platforms, and set alarms via SMS text and email (optional)
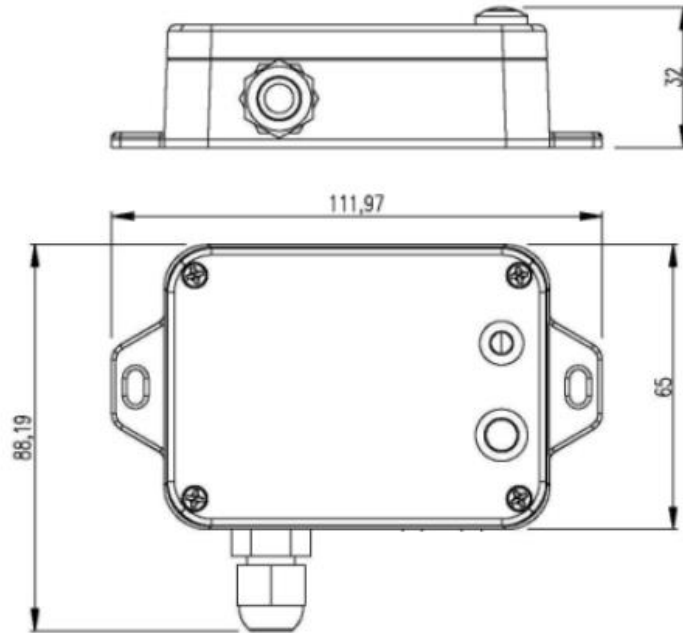- Available third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne

3. Applications

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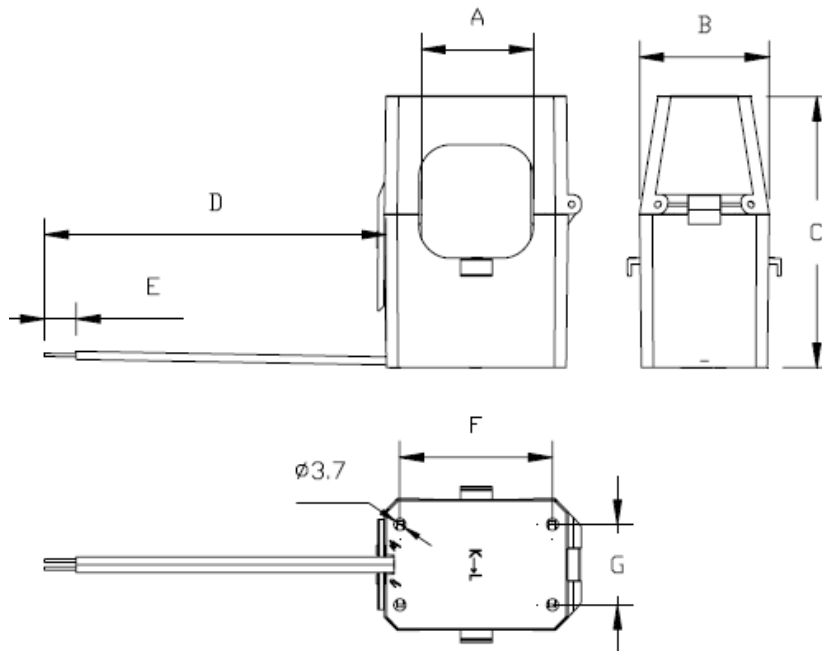- Smart city
- Thermal system equipment

Wireless 3-Phase Current Meter with 3 x 630A Clamp-On CT

4. Dimensions

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

CT: H: 84.8mm x L: 40.8mm x W: 48mm

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

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5. Electrical Specifications

Power Supply	DC 3.3V/1A
Power Consumption	≤ 0.5W
RF Receiving Current	11mA @3.3V
RF Emission Current	120mA @3.3V
Current Measurement Accuracy	<±1%
Current Resolution	1mA
Current Measurement Range	10A to 630A

Note: Electrical characteristics may vary due to the voltage of power supply.

6. 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	-136dBm （LoRa, Spreading Factor=12, Bit Rate=293bps）； -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	Built-in antenna
Communication Range	10km (Actual transmission distance may vary due to the environment.)
Data Transfer Rate	Lora: 0.3 to 50kbps FSK:1.2 to 300kbps (could be configured)

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Modulation	LoRa/FSK (Note: Please choose one modulation.)
Available LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 (Note: optional, to be done in the factory configuration)

7. Clamp-On Current Transformer Parameter

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

8. Physical Properties

Dimensions	Main body: L: 112 mm * W: 88.19 mm * H: 32 mm Sensor: H: 84.8mm * L: 40.8mm * W: 48mm
Main Body Weight	About 141g
Sensor Weight	About 365.4*3g
Sensor External Wiring Length	About 900mm
Ambient Temperature Range	-20°C to 55°C
Storage Temperature Range	-40°C to +85°C
Ambient Humidity Range	<90% RH (No condensation)
Mounting	Screw / Magnet