Wireless Single-Phase Current Meter

R718N1100D(E) Data Sheet

Wireless Sensor Network Based on LoRa Technology

R718N1100D

R718N1100DE (detachable cable)

Wireless Single-Phase Current Meter with 1 x 1000A Clamp-On CT (DC-Powered)

Introduction

R718N1100D(E) is a single-phase current meter that measures 1000A alternating current. With the CT clamped around a wire, current can be measured easily and accurately. It 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.

Features

- Clamp-on current transformer (with detachable and non-detachable cable)
- DC power supply (input: AC 100V to 240V 50/60Hz; output: DC 3.3V/1A)
- Main body: IP53; Sensor: IP30
- Magnetic base
- SX1276 wireless communication module
- LoRaWAN™ Class C compatible
- Frequency hopping spread spectrum
- Configuration parameters can be configured through third-party software platforms, data can be read and alarms can be set via SMS text and email (optional)
- Applicable to the third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne

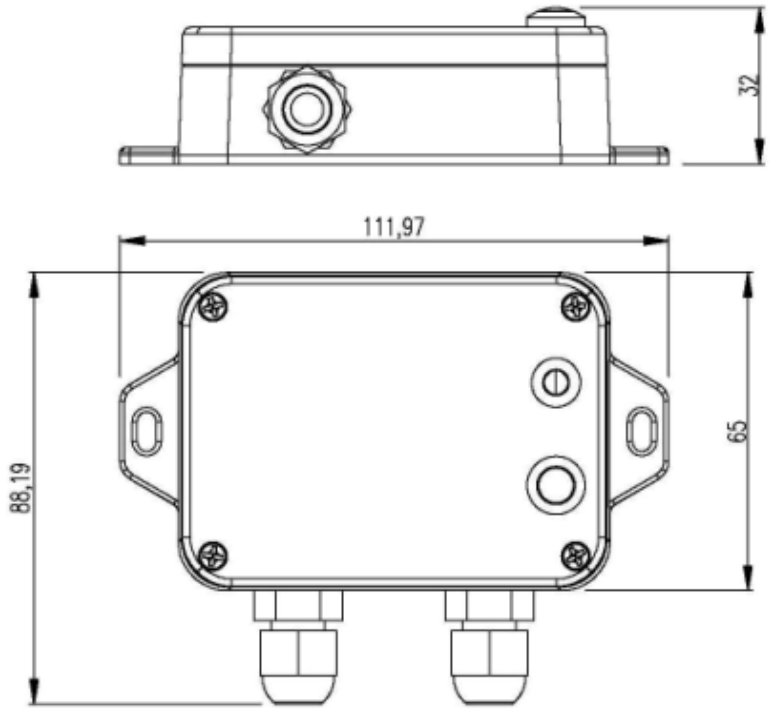
Applications

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

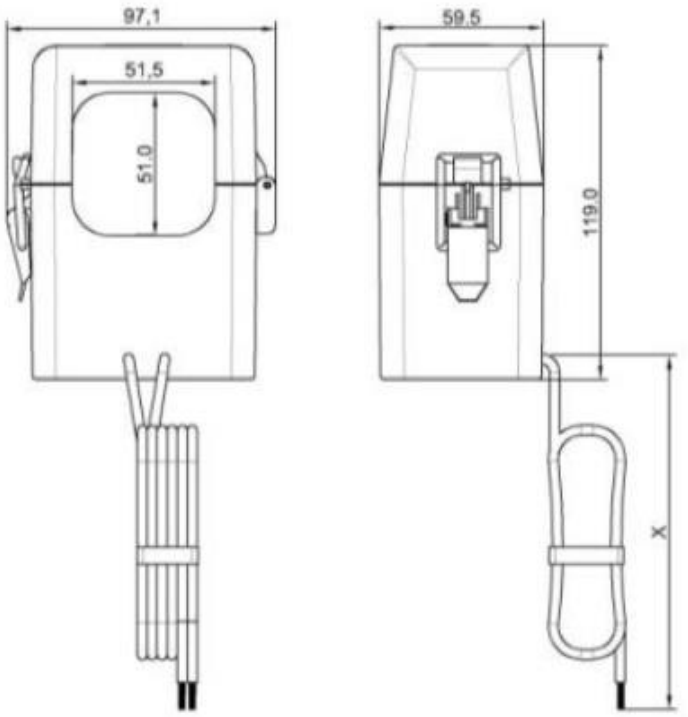
Wireless Single-Phase Current Meter with 1 x 1000A Clamp-On CT (DC-Powered)

Dimensions

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



CT: 119mm x 97mm x 59.5mm



Electrical Specifications

Power Supply	DC 3.3V/1A
Power Consumption	≤ 0.5W
RF Receiving Current	11mA @3.3V
RF Emission Current	127mA @3.3V
Current Measurement Accuracy	<±1%
Current Resolution	1mA
Current Measurement Range	10A – 1000A (varies according to the configuration of the current transformer)

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

Clamp-On Current Transformer

Rated Primary Current	1000A, 50Hz – 60Hz
Rated Secondary Current	500mA
Saturation Current	1000A
Ratio	2000: 1
Load Resistance	0.36Ω
Accuracy	0.5%
Electrical Strength	2000V/0.3mA/3S
Case Material	Flame Retardant Grade 94-V0 UL Material
Environmentally Friendly	ROHS compliant, CE/UL certified
Operating Temperature	-20 ℃ to +50 ℃

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	Built-in antenna
Communication Range	10km (line of sight) Note: The actual communication range may vary due to the environment.
Data Transfer Rate	0.3kbps – 50kbps (LoRa) 1.2kbps – 300kbps (FSK)
Modulation	LoRa / FSK (Note: One modulation method is required.)
Available LoRaWAN Band	EU863-870, US902-928, AU915-928, KR920-923, AS923-1, AS923-2, AS923-3, IN865-867, CN470-510 (Note: optional, need to be configured before shipment)

Physical Properties

Dimension	Main body: 112mm (L) x 88.19mm (W) x 32mm (H) Sensor: 119mm x 97mm x 59.5mm
Main Body Weight	About 141g
Sensor External Wiring Length	Non-detachable cable: about 900mm Detachable cable: 1200mm
Ambient Temperature Range	-20℃ to +55℃
Storage Temperature Range	-40℃ to +85℃
Ambient Humidity Range	<90%RH (No condensation)
Mounting Method	Screw / Magnet