

Wireless 3-Phase Current Meter Interface R718N360D DataSheet

Wireless Sensor Network Based on LoRa Technology



R718N360D

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Wireless 3-Phase Current Meter Interface

1. Introduction

R718N360D, 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 is powered by DC and receives AC via current transformers (CTs). Through the copper wires, devices can be connected to CTs, which proportionally converts high-voltage current in the primary winding into the lower-value current in the second winding.

2. Features

- SX1276 wireless communication module
- Power adapter (input: AC 100V to 240V 50/60Hz, output: DC 3.3V/1A)
- IP30 main body
- Magnetic base
- LoRaWAN™ 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

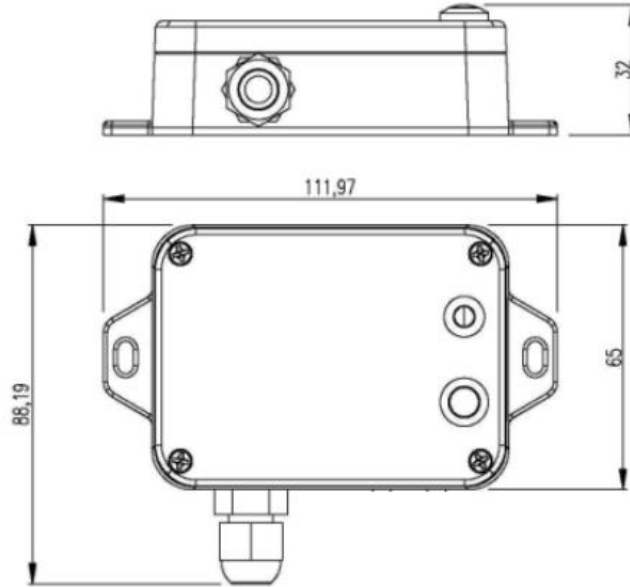
3. Applications

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

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4. Dimensions

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



5. Electrical Specifications

Power Supply	DC 3.3V/1A
Power Consumption	≤ 0.5W
Current Measurement Range and Accuracy	<p>Current Transformer Specification: R718N360D can be connected with CTs as long as the output current of the second winding does not exceed 1A. The measurement range of it is not limited, but the accuracy cannot be guaranteed.</p> <p>In-Plant Testing and Measurement: Using CT with the accuracy of 1% and maximum detection current of 600A, R718N360's accuracy can be in the range of 1.5% when the current is in the range of 6A-600A. If it exceeds the range, the accuracy cannot be guaranteed, and it needs to be confirmed according to the actual measurement.</p>
RF Receiving Current	11mA @3.3V
RF Emission Current	120mA @3.3V

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6. CT Electrical Specifications for In-Plant Testing

Rated Primary Current	300A
Saturation Current	≥ 600A
Rated Secondary Current	500mA
Accuracy	1% (6A to 600A)
Electrical Strength	3000VAC 1mA60s
Load Resistance	10Ω

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

7. 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 depends on the environment.)
Data Transfer Rate	Lora: 0.3 to 50kbps FSK:1.2 to 300kbps (could be configured)
Modulation	LoRa / FSK (Note: Please choose one modulation method.)

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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)
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8. Physical Properties

Dimensions	Main body: L: 112 mm *W: 88.19 mm *H: 32 mm
Host body Weight	About 141g
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