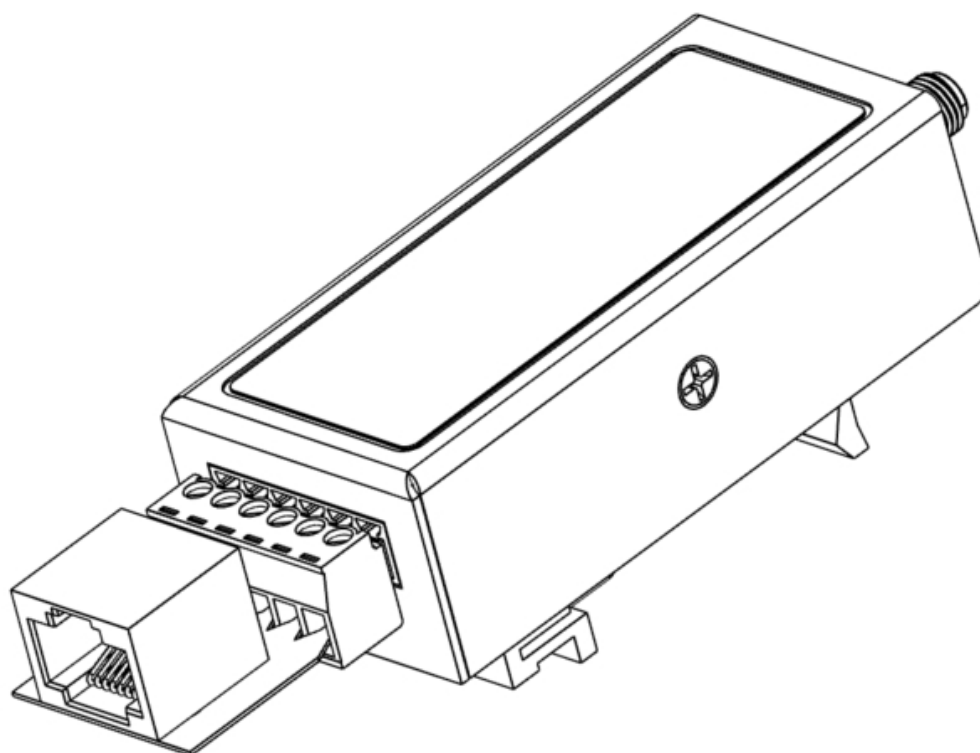


MPPT Solar Charge Controller

4G Module User Manual

Model NET01

Compatible with all SUNOPEN products featuring an RJ45 interface



Thank you for choosing our product!

Manual Version: V1.0 Subject to change without notice. Contact sales for the latest e-document.

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1. Product Overview and Specifications

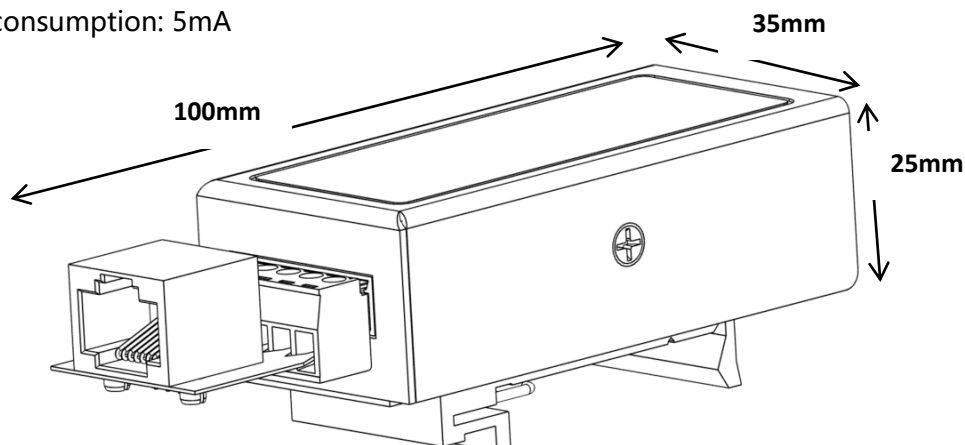
1.1 Product Overview

This network remote module features low power consumption, stable connectivity, and strong anti-interference capabilities. Custom-designed for SUNOPEN solar controllers, it supports WeChat mini-programs, Android APKs, and web interfaces, enabling customers to intuitively monitor system data via mobile devices.

- Proven in large-scale applications;
- Supports 4G transmission;
- Fully industrial-grade design for harsh environments;
- Hardware/software watchdog and multiple link detection mechanisms ensure stable operation without downtime;
- High availability and reliability;
- Supports multiple management tools and cloud platform configurations for flexible and efficient on-site or remote management;

1.2 Product Specifications and Appearance Description

- 4G Standard, Data Rate 2~8Mbps, Frequency Bands: LTE-TDD: B34/B38/B39/B40/B41; LTE-FDD: B1/B3/B5/B8
- Mechanical Features: DIN rail mount, wall mount compatible; Protection Rating: IP30; Housing: Sheet metal; Cooling Method: Natural convection;
- Power Supply: Removable industrial terminals; Reverse polarity protection; Overload protection; Input: 9V~36V; Standby: 10mA; Operating: 30mA;
- Reset Button: Pinhole reset button;
- Antenna: 50 ohms/SMA
- Operating Temperature: -30°C to +75°C; Operating Humidity: 5% to 95%;
- Communication: RS485; Baud rate: 1200bps~115200bps;
- Power consumption: 5mA



2. Pin Definitions for TTL Communication, RS485 Communication, and External

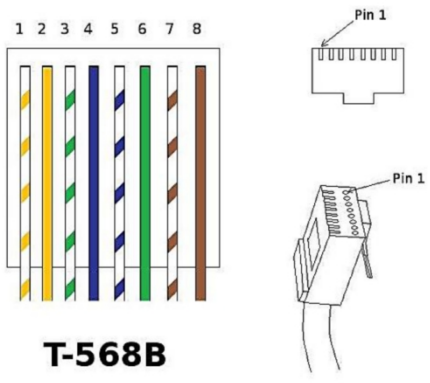
	Serial Number	Definition
	①	TTL-RXD
	②	TTL-TXD
	③	Not Used
	④	Not used
	⑤	GND
	⑥	12V
	⑦	485-B
	⑧	485-A

Note: 12V provides a maximum current of 300mA. Exceeding this may damage the interface with some probability. Reverse polarity on the controller.

3. Communication Cable Extension Length Fabrication

3.1 Network Cable Types

- Standard T568B: Orange-white, orange, green-white, blue, blue-white, green, brown-white, brown;



- Supported cable length: <2 meters;

4. Common Issues and Solutions

Symptom	Solution
Indicator light does not illuminate	Check for wiring errors and poor connections
Communication is not smooth	Check if the Bluetooth module is obstructed or shielded by a metal casing

Communication issues due to internal fixation within the embedded housing

The enclosure must feature a window for the Bluetooth module and ensure waterproofing

5. Product Installation Diagram

