



**CMU R1 ETH Smart Gateway
Product Manual**

Shanghai Polycent Technologies Co., LTD.

www.polycent.com

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1. Scope of Application and Intended Use

The CMU R1 ETH Smart Gateway is an Ethernet communication gateway designed specifically for smart power applications. Its primary function is to collect and transmit data from downstream connected smart circuit breakers. Through the Ethernet port, it reliably uploads key data such as device power consumption status and load information to a cloud platform or local management system.

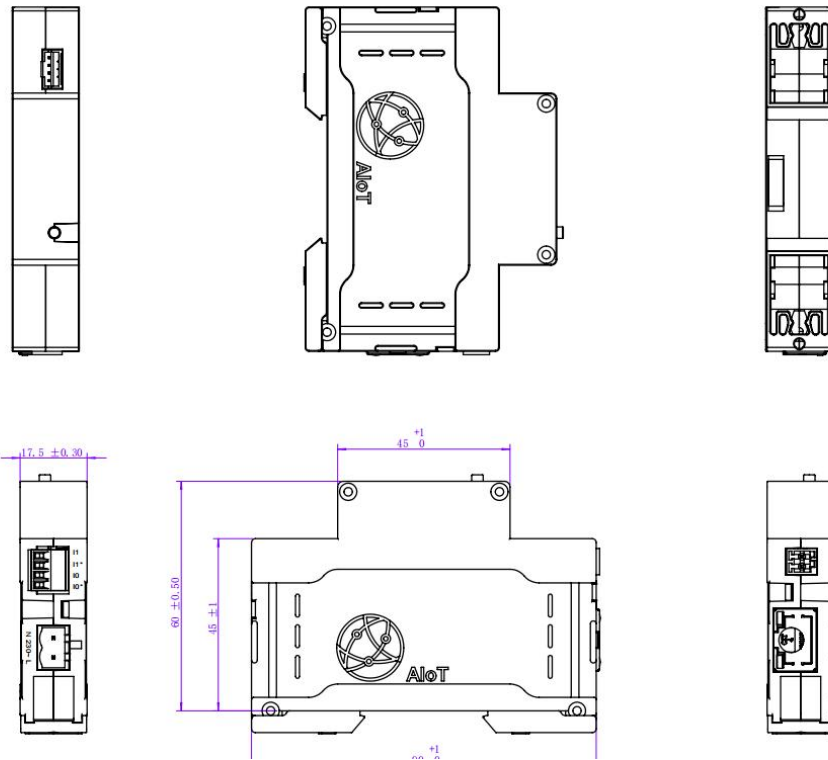
In addition to data acquisition and communication, the gateway integrates a DO (Digital Output) interface. Based on cloud control commands, local control strategies, or acquired device status, it can output switching control signals to control contactors, relays, and other external devices that support digital control, enabling complete closed-loop control from status acquisition, data analysis, and control decision-making through device actuation.

The gateway is suitable for a variety of environments, including smart homes, building automation, and industrial electrical monitoring. It enables real-time status monitoring, remote control, automated linkage, and centralized management of electrical devices in a circuit. Through the DO output, it can further enable load start/stop control, device linkage, and automatic control under abnormal conditions, effectively improving electrical safety, automation, and management efficiency.

2. Product Appearance and Dimensions



Gateway Appearance



Gateway Dimensions

3. Technical Specifications

Technical Specifications	Description
Power Supply	AC185V~265V
Standby Power Consumption	<3W
Uplink Communication	Ethernet
Uplink Protocol	MQTT / Modbus TCP / Transparent Transmission
Downlink Communication	RS485, 1-channel relay DO output (optional)
Downlink Protocol	Modbus RTU / Transparent Transmission
Maximum Number of Connected Devices	32 Modbus RTU slave devices (e.g., smart circuit breakers)
Firmware Upgrade	Supported
Automatic Sub-device Discovery	Supported
Default IP	10.10.100.1

Technical Specifications	Description
Default Configuration Page	http://10.10.100.1:80
Indicator Status	Solid red: The product is using the default IP address. Flashing green: Failed to obtain the user-configured IP address. Solid green: The user-configured IP address was obtained successfully.
Button Operation	Press and hold (2–5 s): Restore the default IP address and restart.
Configuration	Built-in web page / Bluetooth app
Module Width	1P
Installation	35 mm DIN rail mounting
Flame Retardancy	V0
Altitude Requirement	2500m
Operating Temperature	-20 °C to 65 °C
Accessories	Communication Cascade Cable × 1 Power Terminal × 1

4. Configuration

Connect the gateway to the host device (PC, industrial computer, server, etc.) using an Ethernet cable, and then power on the gateway.

- 1) Configure the Ethernet adapter of the host device (PC, industrial computer, server, etc.): set the IP address to 10.10.100.X (X cannot be 1); set the default gateway to 10.10.100.1; set the subnet mask to 255.255.255.0.
- 2) Use the ping command to test whether the IP address 10.10.100.1 can be reached.
- 3) Enter the product default IP address, 10.10.100.1, in the browser address bar to access the configuration page.
- 4) On the configuration page, set the new product IP address, uplink protocol, and other parameters. Click "Save All Settings" to submit all settings. The product will restart automatically.

5) After configuration, access the configuration page using the new IP address. If the new IP address is forgotten, press and hold the product button for 2–5 seconds to restore the product to its default settings.

5. Installation

Port Definitions:

Port	Description
L	Live (Line)
N	Neutral
A1	RS485 A
B1	RS385 B
C	DO relay output common terminal
O	DO relay normally open output terminal; when the relay is energized, it is electrically connected to terminal C.
ETH	RJ-45 port

6. Firmware Upgrade

The product has a built-in web page. In a LAN environment, firmware packages can be imported for offline upgrades; with Internet access, online upgrades are supported.

7. Precautions

Personnel Qualifications: Installation personnel must hold an electrician qualification or a fire protection system training certificate.

Pre-power-on Check: Confirm that there are no short circuits or open circuits and that the supply voltage is within the rated range.