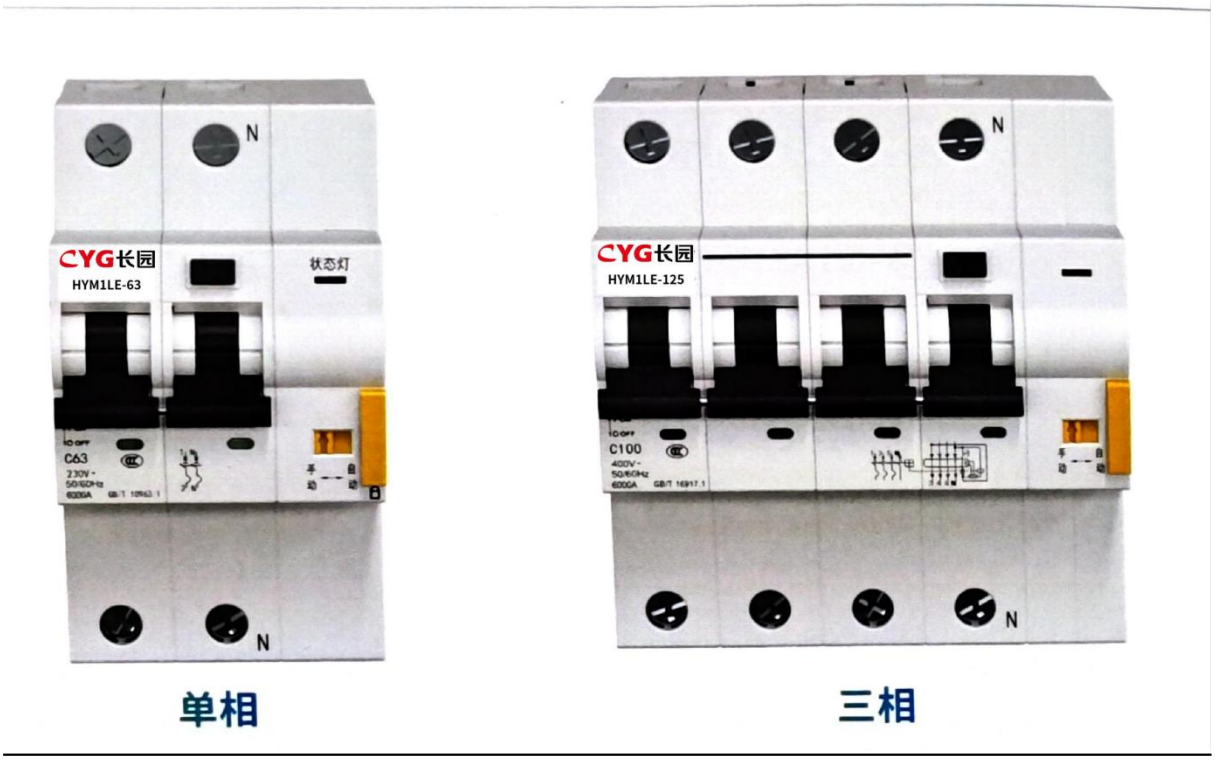
PIT-3331 Four-Capability Integrated Terminal

1、Product



2、Product Introduction

PIT-3331 Four-Capability Integrated Terminal integrates the functions of "metering, communication, control, protection, power quality monitoring, and protocol conversion" into one device. It supports HPLC dual-mode communication and high-precision metering, enabling real-time collection and monitoring of the operating status of distributed photovoltaic systems and charging piles. Equipped with multiple protection functions such as anti-islanding, automatic switching, isolation, and control, it achieves flexible regulation of terminal equipment while ensuring the grid-connection safety of distributed photovoltaics through remote switching operations, meeting the four-capability functional requirements of terminal equipment.

3、Product Features

Strong Protection Functions: Comprehensive protection including overload, short circuit, overvoltage, undervoltage, loss of voltage, residual current, terminal temperature measurement, anti-islanding, and power quality monitoring.

Power Metering & Measurement: Supports forward and reverse active power metering and four-quadrant reactive power metering, along with real-time measurement of current, voltage, active power, power factor, etc.

Power Quality Monitoring: Real-time monitoring of power quality data such as harmonics and three-phase current unbalance from photovoltaic generation, providing steady-state and transient data analysis.

Control Functions: Can receive regulation commands from data acquisition systems and terminals to perform flexible control on inverters, charging piles, etc. It can also achieve rigid control through remote switching operations.

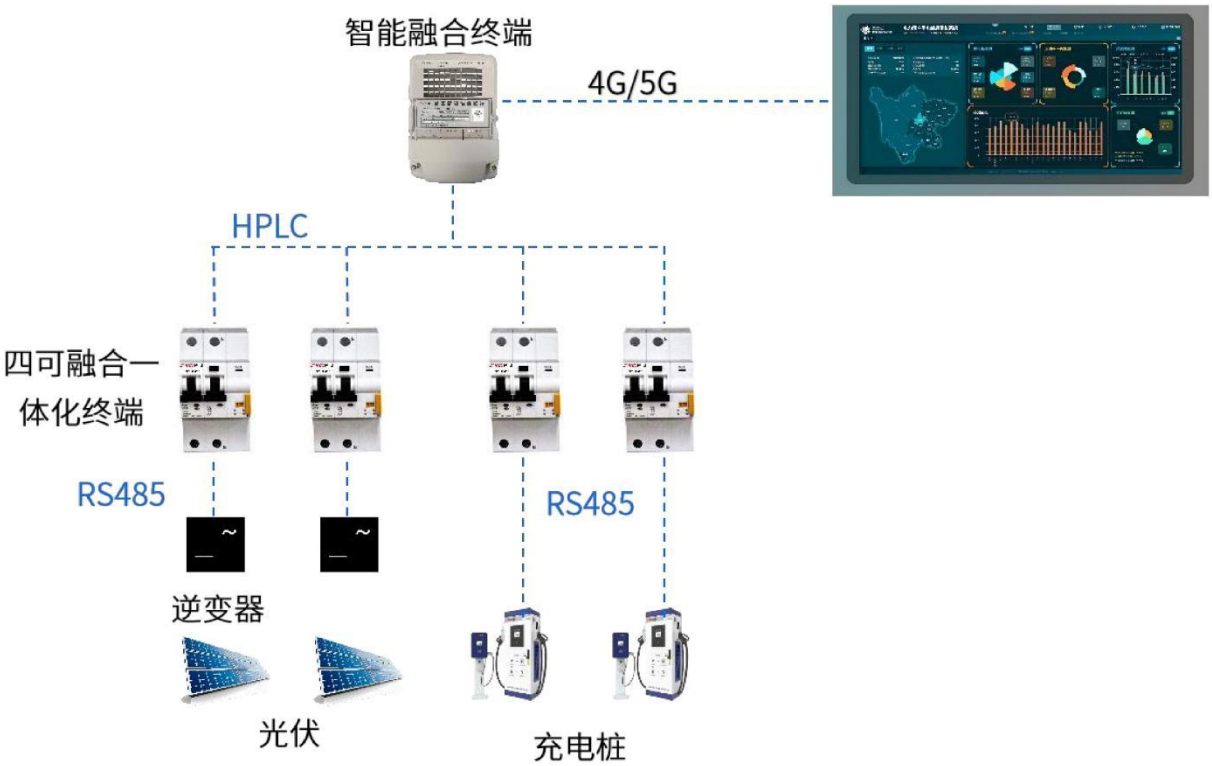
Protocol Self-Adaptation: Supports automatic protocol identification for downstream devices such as inverters and charging piles. It can automatically convert the upstream 698 protocol into the Modbus protocol for communication.

4、Solution

4.1 Main Functions

- Power Metering & Measurement
- Stable Access via Full Protocol Support
- Power Generation Quality Monitoring
- Flexible/Rigid Control Functions

4.2 System Diagram (Application topology diagram)



5、Application Scenarios

Four-Capability for Distributed Photovoltaics

In the traditional architecture, separate control of photovoltaic protocol converters and photovoltaic circuit breakers is required. The PIT-3331 Four-Capability Integrated Terminal can achieve unified access and control with just a single device, enabling the overall “Four-Capability for Photovoltaics” function. This results in low construction and maintenance costs and a simple application.

Four-Capability for AC Charging Piles

At dispersed charging piles within a distribution court area, installing just one Four-Capability Integrated Terminal per charging pile can complete functions such as charging data collection, charging status collection, charging rate control, and power supply disconnection for the charging pile, thereby realizing the four-capability function for charging piles.