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Item Number:	0130809210002	Project Name:	Peak Controller
Product mode:	EVPC-3P100	Product Name:	Peak Controller
Date:			

Peak Controller

Product Specification

Wanbang Digital Energy Co., Ltd.

文档名称	产品技术规格书	版本号	A/2
文档编号	IPD-SE-L30-01R	密级	内部资料

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1 Abstract

The Peak Controller optimizes the energy balance between household electricity and charging vehicles, so as to charge more quickly when more power is available. This product measures the total real-time power of household electricity, and transmits the converted power to the charging pile in real time. The charging pile automatically adjusts the charging power to charge the vehicle in the fast and safe way.

1.1 Purpose

This product specification describes the electrical and mechanical characteristics of Peak Controller.

1.2 Application environment requirements

Operating temperature: - 30~+50℃;

Humidity:5%~95% , there is no condensation inside the product;

Storage temperature: - 40~+85℃;

Altitude:< 2000 m;

Indoor use (installed in the distribution box);

Pollution level: II.

1.3 Standard

EN61326-1-2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

EN61010-1-2010 Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements



2 Performance requirements

2.1 Electrical performance index

Table 2.1 List of Electrical Performance Indexes

Parameter name		Description
Power supply	Voltage range	220V/230/240VAC(±10%)
	Power consumption	<5W
Total users real time power	Voltage sampling	Three phase voltage sampling, each phase voltage sampling range:220V/230/240VAC(±10%)。
	Current sampling	Three phase current sampling, each phase current sampling range:1 ~ 100A

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sampling	Sampling accuracy	Accuracy level: 2.0, Measurement error: $\pm 2\%$
	Sampling cycle	1s
Communication interface	Communication mode with charging pile: Ethernet or PLC	
	O&M communication interface: RS485	
Data storage	The configuration information, algorithm and other core data are permanently saved.	
Status display	The red and green dual color LED displays the system status (), red is always on to indicate the fault status, and green is always on to indicate the normal status	
	The green LED shows the communication type of the charging pile (), green constant light indicates Ethernet communication, and green flashing indicates PLC communication	
Firmware update	Firmware upgrade via RS485 interface	
Incoming current specification setting	Set the incoming current specification parameters through three position dial switches	
Communication Type Settings	Set the communication type through three position dial switches	
Power connection form	Permanent connection	
Overvoltage category	III	
Equipment operation mode	Continuous work	

2.2 Product anti-interference index

Conform to EN 61326-1:2013 Electrical Equipment for Measurement, Control and Laboratory - Electromagnetic Compatibility Requirements - Part 1: General Requirements.

2.3 Structural parameters

2.3.1 Protection level

IP20

2.3.2 Refrigeration mode

Natural heat dissipation

2.3.3 Installation

DIN rail

2.3.4 Size

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Length*Width*Height: 91.9mm x 71.9mm x 77.2mm

2.3.5 Weight

180g

2.4 Appearance

The product diagram is as follows:



3 Function description

Category	Function	Description
Power Sampling	Voltage Sampling	Measure the three-phase voltage of the user.
	Current Sampling	Measure three-phase real-time electric current of users.
Adaptive function		Automatic detection of connected charging pile type, compatible with single-phase and three-phase charging piles
Power Control		The controller establishes communication with single-phase/three-phase charging piles through Ethernet or PLC, and dynamically distributes the available power to charging piles

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	according to control strategy calculation.
Configuration	Set the incoming current specification parameters and communication mode through three position dial switches.
Status display	System status, communication mode and other information

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Appendix A Environment and Reliability Testing

No.	Test items	Test object	Remarks
1. General environmental testing			
1	Low temperature working	Peak Controller	Mandatory
2	High temperature working	Peak Controller	Mandatory
3	Low temperature storage	Peak Controller	Mandatory
4	High temperature storage	Peak Controller	Mandatory
5	Vibration test	Peak Controller	Mandatory
6	Drop Test	Peak Controller	Mandatory
2. Accelerated life testing			
7			
8			
9			
10			
11			
12			
13			
14			
3. Reliability verification			
15	Reliability review and evaluation		Optional