

Continuous DC Power Module – Cold Climate Edition



MODEL _ **PS100-ACH**

KEY FEATURES

The **PS100-ACH Continuous DC Power Module** is a self-contained outdoor power system designed to provide uninterrupted 12VDC power for remote equipment in locations where utility power is available only during scheduled periods.

Unlike conventional battery backup systems, the integrated **self-heating LiFePO₄ battery** serves as the primary operating power source, while the intelligent AC charger automatically recharges the battery whenever utility power is available.

The battery's integrated self-heating technology enables safe charging in freezing temperatures, making the PS100-ACH ideal for cold-weather deployments. Connected equipment continues operating seamlessly during normal charging operation.

Factory assembled and fully tested, the PS100-ACH integrates intelligent battery charging, industrial DC power distribution, thermal management, and a rugged outdoor enclosure into a compact, ready-to-install solution.

- Continuous 12VDC Power Module
- Battery Operates as the Primary Power Source
- Automatic AC Battery Charging
- **100Ah Self-Heating LiFePO₄ Smart Battery**
- 1.28kWh Energy Storage
- 4,000+ Battery Charge Cycles
- Industrial Gigabit PoE Switch
- Up to 60W Continuous DC Output
- Automatic Temperature-Controlled Cooling
- Heavy-Duty Outdoor Steel Enclosure
- Pole or Wall Mount Ready
- Factory Assembled and Tested

PS100-ACH

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SPECIFICATIONS

Model	PS100-ACH
Power System Specifications	
Specification	Value
AC Input Voltage	90–264VAC Universal Input
AC Input Frequency	45–65 Hz
Maximum AC Input Current	5.0A @115VAC
Battery Type	Self-Heating LiFePO₄ with Smart BMS
Battery Voltage	12.8VDC
Battery Capacity	100Ah
Stored Energy	1,280Wh (1.28kWh)
Battery Monitoring	Bluetooth
Battery Cycle Life	4,000+ Cycles (80% Capacity)
Charger Type	Industrial Programmable Smart Charger
Charging Method	Automatic 2-Stage / 3-Stage Smart Charging
Maximum Charging Current	25A
Charger Output Voltage	Programmable for LiFePO ₄ Batteries
Battery Charging	Automatic Recharge when AC Power is Available
Maximum Continuous Output	60W
Integrated Power Distribution	
Specification	Value
Integrated PoE Switch	6-Port Industrial Gigabit
DC Input	12–52VDC
PoE Standard	IEEE 802.3af / at
Total PoE Power Budget	60W
Ethernet Speed	10/100/1000 Mbps
SFP Uplink	1 Gigabit SFP Port
Mechanical Specifications	
Specification	Value
Enclosure	Heavy-Duty Powder-Coated Steel
Cooling	Automatic Temperature-Controlled Fan
Mounting	Pole or Wall Mount
Finish	Outdoor Powder Coat
Color	White
Environmental Specifications	

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Model	PS100-ACH
Specification	Value
Operating Temperature	-4°F to 140°F (-20°C to 60°C)
Battery Charging Temperature	-4°F to 122°F (-20°C to 50°C) with Automatic Self-Heating
Environmental Specifications	
Specification	Value
Storage Temperature	-4°F to 140°F (-20°C to 60°C)
Relative Humidity	5–95% Non-Condensing

*Note: The integrated self-heating battery automatically activates when charging begins below **32°F (0°C)**. Battery charging resumes automatically once the battery reaches a safe charging temperature, allowing reliable charging in freezing environments without user intervention.

Estimated Runtime*	
Continuous Load Estimated Runtime	
20W	Up to 60 Hours
30W	Up to 40 Hours
40W	Up to 30 Hours
50W	Up to 24 Hours
60W	Up to 20 Hours

*Estimated runtime is based on battery capacity under typical operating conditions. Actual runtime varies depending on connected load, battery age, ambient temperature, and charging schedule.

Typical Applications

- Construction Sites
- Temporary Job Sites
- Utility & Light Poles
- Parking Facilities
- Parks & Recreation
- Municipal Infrastructure
- Transportation Systems
- Remote Monitoring Stations
- Industrial Facilities
- Temporary Communications Equipment
- Cold Climate Installations

System Protection

- Smart Battery Management System (BMS)
- Automatic Multi-Stage Battery Charging
- **Automatic Self-Heating Battery**
- Low Temperature Charging Protection
- Overcharge Protection
- Overcurrent Protection
- Short Circuit Protection
- Reverse Polarity Protection
- Manual Reset DC Circuit Breaker
- Automatic Temperature-Controlled Cooling



Standard Components

- Heavy-Duty Outdoor Steel Enclosure
- **100Ah Self-Heating LiFePO₄ Smart Bluetooth Battery**
- 25A Programmable Smart AC Battery Charger
- Industrial 6-Port Gigabit PoE Switch
- Digital Temperature Controller
- 92mm Cooling Fan
- Manual Reset DC Circuit Breaker
- Internal Factory Wiring
- Factory Tested Assembly