

# Product Datasheet

## Specifications



## PowerGo

### Statement:

This specification details the pure AC energy storage device PowerGo. Before any operation on the device, the user should read this specifications carefully and comply with relevant industry safety regulations. The company is not responsible for any damage to the product caused by improper operation or use beyond the conditions specified in this specification.

Our company reserves the right to change the content of the specifications document without notifying customers.



This symbol indicates a dangerous situation that could result in fatal electrocution, serious personal injury, or fire.

All AC line terminal connections and exposed conductive parts must be fully insulated.



Ensure proper grounding of the PowerGo Schuko plug.



If the device remains unused for an extended period, fully charge it and turn off switches.

# CONTENT

1	Foreword .....	1
2	Introduction.....	2
3	Product Information.....	3
3.1	Product Overview.....	3
3.2	Product Features.....	4
3.3	Operating Mode .....	5
3.4	Product Parameters.....	7

## 2 *Introduction*

---

Welcome to use PowerGo, a pure AC energy storage device developed and produced by Batterlution Ltd

the PowerGo Series—a cutting-edge AC-coupled bidirectional energy storage battery designed to revolutionize your energy management. The PowerGo Series enables seamless charging and discharging, offering flexibility with its Schuko plug for true plug-and-play convenience. Whether you prefer manual timed charging/discharging, smart CT-meter-based automation, or integration with a Home Energy Management System (HEMS) through its fully open protocol, this system adapts to your needs effortlessly.

Ideal for retrofitting existing solar PV systems via AC coupling, the PowerGo Series enhances self-consumption and energy independence. It also empowers users to capitalize on dynamic electricity pricing, optimizing cost savings while reducing reliance on the grid. With its advanced technology and user-friendly design, the PowerGo Series is the smart, sustainable choice for modern energy storage.

## 3 Product Information

### 3.1 Product Overview

PowerGO series is an AC coupled energy storage system including power control module and battery module, which can store and release electric energy according to customized requirements. PowerGO series is a certified grid-connected energy storage machine with Schedule mode, Smart meter mode and HEMS mode. It discharges at peak electricity prices and charges at valley electricity prices, providing a more favorable electricity consumption method for dynamic electricity price areas. Additionally, excess PV generation can be stored in PowerGo through AC coupling, eliminating complex installation procedures.



A	On-grid in-/output port	Connect to the power outlet via the Schuko plug.
B	WIFI	User-replaceable dual-band antenna (2.4GHz & 5GHz, 3dB gain).
C	RJ45	Ethernet port for third-party box connectivity.
D	CT&DBG	For external CT connection and debugging purposes.
E	Battery breaker	Circuit breaker with protective functions.
F	Pressure relief valve	Battery pressure relief device.
G	Bluetooth set	Long press to activate Bluetooth pairing.

## 3.2 Product Features

- **Grid-connected Function**

Supports connection to the power grid, enabling bidirectional flow of electrical energy to meet different power consumption needs.

- **Intelligence and Convenience**

Support remote settings of the operation mode, charging and discharging periods, and power through a mobile APP, with convenient operation.

- **Reliable Product Design**

Battery low-voltage wake-up function to ensure the continuous operation of the device in low-voltage conditions.

- **Multi-Operation mode Collaboration**

The Schedule mode, Smart meter mode, and HEMS mode can be flexibly switched according to requirements to adapt to different usage scenarios.

- 1) Schedule Mode**

- Supports manual settings of the power and time periods for charging and discharging, with a simple and intuitive operation.

- 2) Smart Meter Mode**

- The Smart Meter Mode intelligently optimizes the battery charging and discharging strategies by detecting load power in real time, and it supports two operation modes:

- Self-Consumption

- Specifically designed for solar power systems with excess generation capacity. When the power generation capacity of the photovoltaic system is greater than the power consumption of the load, the excess electrical energy is automatically stored in the battery, maximizing the utilization of clean energy.

- Auto Feed

- The battery is preferentially used to supply power to the load, reducing the consumption from the grid and achieving high energy usage ratio.

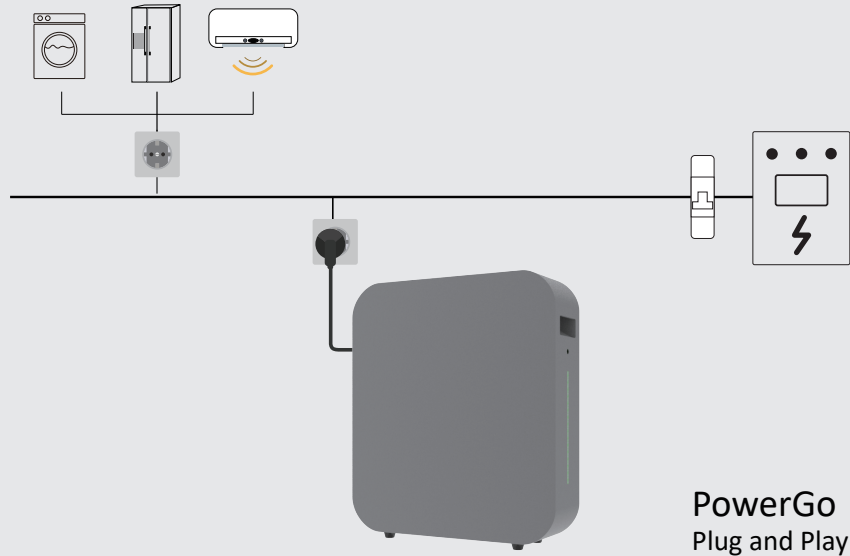
- 3) Efficient HEMS(Home Energy Management System) Mode**

- Supports seamless connection with third-part Home Energy Management Systems (HEMS) to achieve centralized control and optimization.

## 3.3 Operation Mode

### ① Schedule Mode

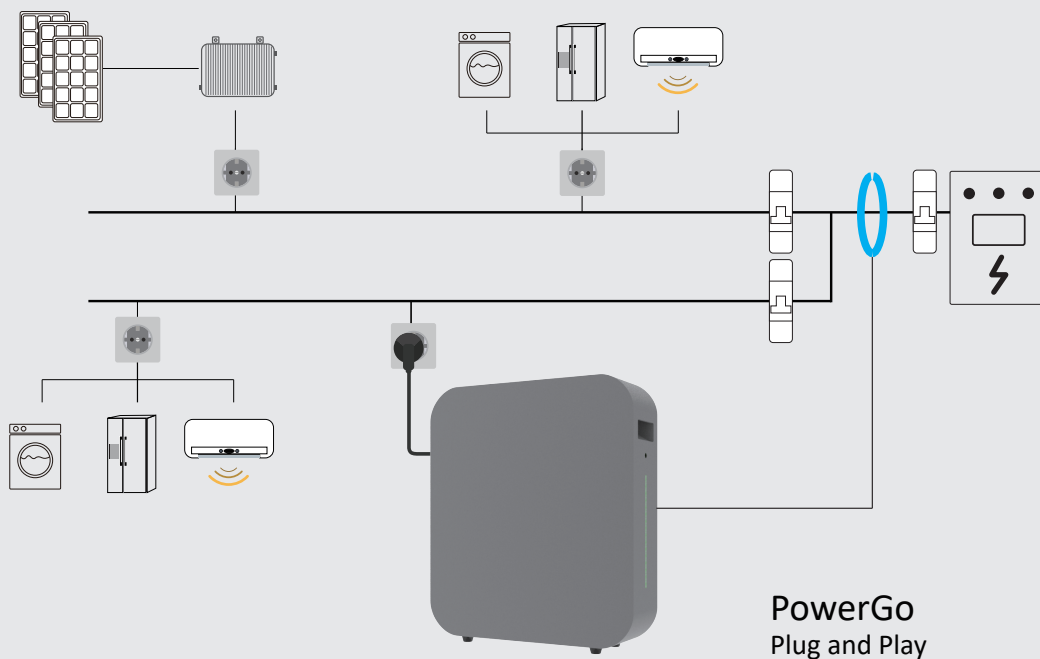
PowerGo is designed to connect to the grid in a plug-and-play manner. Through the APP, users can set the charging and discharging periods along with the corresponding power levels, enabling it to supply power to household loads even in the absence of internet connectivity



### ② Smart Meter Mode

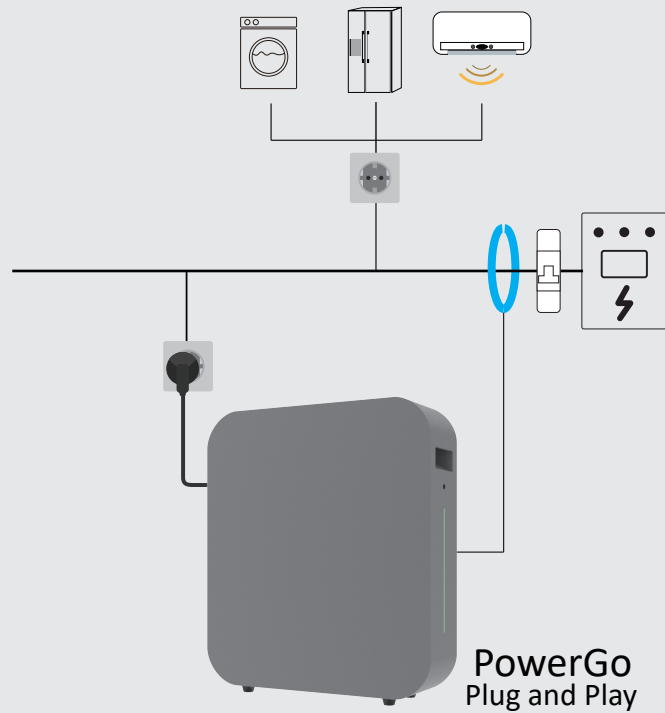
#### Self-Consumption

PowerGo is designed for energy systems with existing solar plants. It intelligently manages charging and discharging based on real-time surplus solar generation and home electricity consumption.



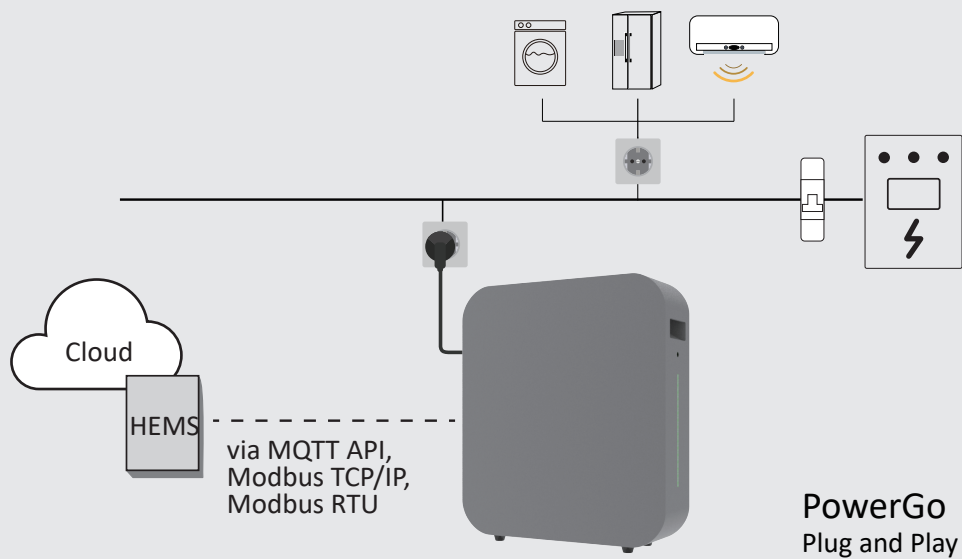
### Auto Feed

This mode is designed for energy systems without a solar PV system. PowerGo charges the battery at the user-defined power level and scheduled time, then intelligently discharges based on real-time home electricity demand during the designated discharge periods.



### ③ HEMS Mode

PowerGO supports cooperation with third-party smart boxes and can be controlled through Modbus TCP/IP, MQTT API; Modbus RS485; Bluetooth and other communication methods. Open source equipment, to achieve integration with other home intelligence in various families.



## 3.4 Specifications

Model	PowerGo 2500-1216	PowerGo 5000-1216
Rated AC Power	1200W Input, 1600W Output	
Battery Capacity	2.56kWh	5.12kWh
Weight	37kg	60kg

### Grid input

Cord cables	1 phase (L+N) + PE
Input AC Power	0~1200W
Input Current range	0~6A
Input voltage range	220/230VAC
Input frequency range	48Hz-51Hz

### Output (On Grid)

Output AC Power	0~1600W
Output Current range	0~7A
Output Voltage	L~N:230Vac
Output frequency	50Hz
PF	-0.9~0.9

### Efficiency

Grid charging(AC->BAT)	94%
Battery discharging(BAT ->AC)	93%
Eco-mode	<20W
Shutdown leakage current	<100uA

### Smart control

APP	Mobile app for managing and controlling grid-tied periods and power.
Communication	WiFi/ Bluetooth Modbus TCP/IP / MQTT API / Modbus RS485



## Battery

Battery rated voltage	51.2V	
Energy Capacity(kWh)	2.56 (3.2V 50Ah)	5.12 (3.2V 100Ah)
Battery type	LFP	
Life Cycling(0.5℃~25℃)	6000	
Operation Temperature	Charge: -10~55℃ / Dishcharge: -20~55℃	
DOD	90%	
Fire Supression module	Supported	

## Environmental parameters

Operating temperature range	-20℃~50℃
Operating humidity range	4-100%
Noise	<45dB
Ingress Protection:	IP54

## Structural Appearance

Size	535mm*145mm*600mm	585mm*145mm*785mm
Weight	37kg	60kg

## Protection

AC	Island protection AC input protection
DC	Over-temperature protection, low-temperature protection Over-voltage protection, under-voltage protection, Over-charge protection, over-discharge protection.

## Safety standards and electromagnetic compatibility standards

Safety Standards	EN IEC 61000-6-1/-2/-3/-4 EN IEC 62109-1-2
Grid connection certification	EN 50549-1/-10 VDE-AR-N 4105
Battery	EN IEC 62619
Transport	UN 38.3
ROHS	YES
REACH	YES

## Main

### Model PowerGo 2500-1208 PowerGo 5000-1208

Rated AC Power	1200W Input, 800W Output	
Battery Capacity	2.56kWh	5.12kWh
Weight	37kg	60kg

### Grid input

Cord cables	1 phase (L+N) + PE
Input AC Power	0~1200W
Input Current range	0~6A
Input voltage range	220/230VAC
Input frequency range	48Hz-51Hz

### Output (On Grid)

Output AC Power	0~800W
Output Current range	0~4A
Output Voltage	L~N:230Vac
Output frequency	50Hz
PF	-0.9~0.9

### Efficiency

Grid charging(AC->BAT)	94%
Battery discharging(BAT ->AC)	93%
Eco-mode	<20W
Shutdown leakage current	<100uA

### Smart control

APP	Mobile app for managing and controlling grid-tied periods and power.
Communication	WiFi/ Bluetooth Modbus TCP/IP / MQTT API / Modbus RS485

## Battery

Battery rated voltage	51.2V	
Energy Capacity(kWh)	2.56 (3.2V 50Ah)	5.12 (3.2V 100Ah)
Battery type	LFP	
Life Cycling(0.5℃~25℃)	6000	
Operation Temperature	Charge: -10~55℃ / Dishcharge: -20~55℃	
DOD	90%	
Fire Supression module	Supported	

## Environmental parameters

Operating temperature range	-20℃~50℃
Operating humidity range	4-100%
Noise	<45dB
Ingress Protection:	IP54

## Structural Appearance

Size	535mm*145mm*600mm	585mm*145mm*785mm
Weight	37kg	60kg

## Protection

AC	Island protection AC input protection
DC	Over-temperature protection, low-temperature protection Over-voltage protection, under-voltage protection, Over-charge protection, over-discharge protection.

## Safety standards and electromagnetic compatibility standards

Safety Standards	EN IEC 61000-6-1/-2/-3/-4 EN IEC 62109-1-2
Grid connection certification	EN 50549-1/-10 VDE-AR-N 4105
Battery	EN IEC 62619
Transport	UN 38.3
ROHS	YES
REACH	YES

Main	PowerGo 5000-1208-BK
Rated AC Power	800 W Output, 1200 W Input
Battery Capacity	5.12kWh
Weight	61kg

## Grid input

Cord cables	1 phase (L+N) + PE
Input AC Power	0~800W
Input Current range	0~4A
Input voltage range	220/230VAC
Input frequency range	48Hz-51Hz

## Output (On Grid)

Output AC Power	0~1200W
Output Current range	0~6A
Output Voltage	L~N:230Vac
Output frequency	50Hz
PF	-0.9~0.9

## Backup

Output AC Power	0~1600W
Output Current range	0~7A
Output Voltage	L~N:230Vac
Max. Peak Output Power	50Hz

## Efficiency

Grid charging(AC->BAT)	94%
Battery discharging(BAT ->AC)	93%
Eco-mode	<20W
Shutdown leakage current	<100uA

## Smart control

APP	Mobile app for managing and controlling grid-tied periods and power.
Communication	WiFi/ Bluetooth Modbus TCP/IP / MQTT API / Modbus RS485

## Battery

Battery rated voltage	51.2V
Energy Capacity(kWh)	5.12 (3.2V 100Ah)
Battery type	LFP
Life Cycling(0.5℃~25℃)	6000
Operation Temperature	Charge: -10~55℃ / Dishcharge: -20~55℃
DOD	90%
Fire Supression module	Supported

## Environmental parameters

Operating temperature range	-20℃~50℃
Operating humidity range	4-100%
Noise	<45dB
Ingress Protection:	IP54

## Structural Appearance

Size	585mm*145mm*785mm
Weight	61kg

## Protection

AC	Island protection AC input protection
DC	Over-temperature protection, low-temperature protection Over-voltage protection, under-voltage protection, Over-charge protection, over-discharge protection.

## Safety standards and electromagnetic compatibility standards

Safety Standards	EN IEC 61000-6-1/-2/-3/-4 EN IEC 62109-1-2
Grid connection certification	EN 50549-1/-10 VDE-AR-N 4105
Battery	EN IEC 62619
Transport	UN 38.3
ROHS	YES
REACH	YES