Version: November 28, 2024, Residential Energy Storage System

ROYPOW


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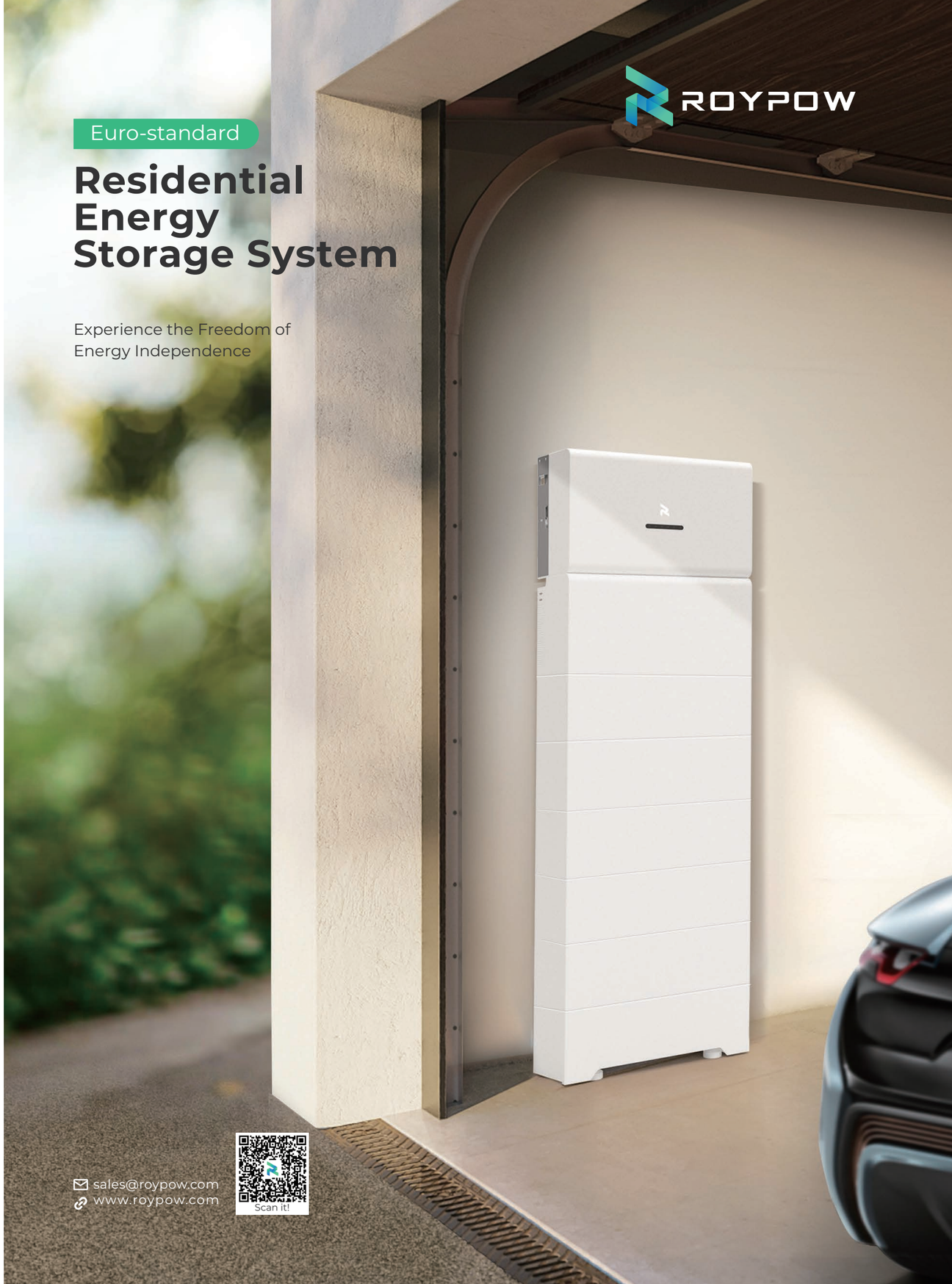
ROYPOW

Euro-standard

# Residential Energy Storage System

Experience the Freedom of Energy Independence



sales@roypow.com
www.roypow.com
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*ROYPOW,*
***Your Trusted Partner***

# Contents

# ROYPOW
## For One-stop New Energy Solutions

- R&D, manufacturing and sales of motive power systems and energy storage systems as one-stop solutions
- Fully automatic production lines, a full range of test equipment and an advanced MES
- Covering Low-Speed Vehicles' Batteries, Industrial Batteries, as well as Residential ESS, Commercial & Industrial ESS, and Mobile ESS
- Self-development of power electronics technologies, including PCS, BMS, and EMS

**750+** Employees

**190+** R&D People

**105,000 ㎡** Headquarters Floor Area

**2,500 ㎡** Testing Center

**202** Patents

## Quality Control Certificates:

- Environmental Management System: **ISO 14001:2015**
- Occupational Health and Safety Management System: **ISO45001:2018**
- Quality Management System: **ISO 9001:2015, IATF16949:2016**
- Information Security Management System: **ISO/IEC 27001:2022**
- Social Accountability Management System: **SA8000:2014**
- Hazardous Substance Process Management: **IECQ QC 080000**

## Product Certifications:

| | |
|---|---|
| UL 1973, UL 9540A, UL 9540, UL 2580, UL 2271, UL 1741 | FCC, IEC/EN 61000-6, BS EN IEC 61000-6 |
| IEEE 1547 | IEC 60730, ISO 13849-1 |
| IEC 62619 | UN 38.3 |
| EN 62477, EN 62040, (EU) 2023/1542, EN 62109-1, EN 62109-2 | RoHS Directive 2011/65/EU & (EU) 2015/863 |



## R&D and Manufacturing Highlights

As a result of these investments, ROYPOW is capable of “end-to-end” integrated delivery, making our products out-perform the industry norms.

- Fully Automatic Production Lines
- BMS, PCS, EMS All Designed in House
- All-round Testing
- Advanced MES System

## Global Sales and Service Network

- Timely Delivery
- Hassle-free After-sales Service
- Fast Response Technical Support

ROYPOW has comprehensively unfolded its overseas market layout to ensure the localization of R&D, manufacturing, marketing and service, becoming one of your most reliable and valuable partners.


## Upgrading to New Technology, with Our Turnkey Solutions.

With years of dedication to new energy solutions, we are proud to offer customers professional solutions for:

- Low-speed Vehicle Batteries
- Battery Systems for Off-highway Applications
- Residential Energy Storage Systems
- Mobile Energy Storage Systems
- Industrial Batteries
- Battery Systems for Emerging Applications
- Commercial & Industrial Energy Storage Systems
- Chargers

# ROYPOW Residential Energy Storage Solutions

Meet the high-performance, safe, and intelligent residential energy storage solutions. ROYPOW RESS combines the most advanced battery management system with super power supply capacity to provide uninterrupted, sustainable energy for your working and family usages all day and help reduce reliance on the grid, save electricity costs, and promote a better life.


## The solutions include:

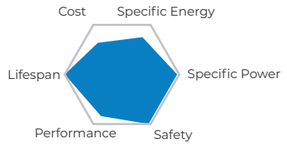
### All-In-One RESS

Integrate an efficient, reliable inverter with high-safety, long-life LFP batteries into a compact system for continuous power supply. The all-in-one modular system offers both aesthetic appeal and functionality, enhancing home life and providing whole-home backup support.

### Off-Grid ESS

Designed to enhance energy resilience and independence. Perfect for remote locations, forest vacation cottages, and areas with unstable grid connections and frequent outages, offering a consistent power supply without reliance on the utility grid.

# Safety




LiFePO4 batteries ensure premium electrical characteristics without any safety issues.

Enhanced safety with aerosol fire protection.

Integrated Arc Fault Circuit Interrupters (AFCI)


IP65 Rating, safe and reliable while using.

# Core Value

## Application

- Energy Transformation
- Smart Home
- Energy Conservation
- Capitalization

## Platform

- Prediction
- Scheduling
- AI Algorithm
- Big Data

## Communication Control

- WI-FI Power Carrier
- Cloud Communication

## Hardware

- Power Generation / Transformation / Distribution


### ROYPOW Research Institute

**30**+ BMS R&D veteran researchers with **16**+ years ESS BMS experiences

### High SOC Accuracy

Our SOC algorithm accuracy reaches **5**%

### Comprehensive Protection

**3**-level software protection, redundant hardware level protection



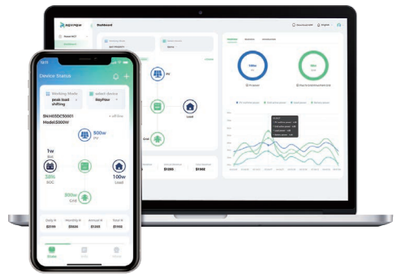
Real-time Monitoring & Comprehensive Visualization

Dynamic Power Flow & Generation Report

Multi-terminal Compatibility & Sharing

# App & Web Management

Everything at a glance and under control; the intuitive App / Web allows you to have full visibility into your self-powered home while providing real-time information on solar generation, battery power flow, and household consumption.



Backup Function & Data Encryption

Working Mode Switch & Profit Calculation

Integrated After-sales Service

# Sun Series Intelligent Residential Energy Storage System

**2** MPPTs

**35** dB Max. Noise

**7** kVA Max. AC Input

**7** kW Max. PV Input

**10** Years Warranty


- IP65 Protection
- Integrated Multiple Protections
- Natural Cooling
- Smart Load Function
- Modular & Integrated Design
- Smart App & Web Management

# System Specification

| Model | SUN3600S-E/A | SUN4600S-E/A | SUN5000S-E/A |
|---|---|---|---|
| Rated AC Output Power (W) | 3600 | 4600 | 5000 |
| Nominal Energy (kWh) | | 5 to 40 | |
| Noise（dB) | | <35 | |
| Operating Temperature Range | | -20~55℃ (>45℃ derating) | |
| Dimensions (WxDxH, mm) | | 650 x 240 x 750+330*N (N=1 to 8) | |
| Ingress Rating | | IP65 | |
| Mounting Options | | Indoor/Outdoor, Floor standing or Wall mounted (optional) | |

# Hybrid Inverter Specification

| Model | SUN3600S-E/I | SUN4600S-E/I | SUN5000S-E/I |
|---|---|---|---|
| **Input - DC (PV)** | | | |
| Max. Input Power (W) | 4600 | 6000 | 7000 |
| Max. Input Voltage (V) | | 580 | |
| MPPT Voltage Range (V) | | 120~550 | |
| MPPT Voltage Range (full load) | 180~550 | 200~550 | 200~550 |
| Start Voltage (V) | | 150 | |
| Max. Input Current（A) | | 13.5 / 13.5 | |
| Max. Short Current（A) | | 16 / 16 | |
| No. of MPPT | | 2 | |
| No. of String per MPPT | | 1 | |
| **Input - DC (Battery)** | | | |
| Battery Type | | Lithium-ion | |
| Nominal Voltage (V) | | 51.2 | |
| Operation Voltage Range (V) | | 40-60 | |
| Max. Charge / Discharge Power (W) | 3600 / 3600 | 4600 / 4600 | 5000 / 5000 |
| Max. Charge / Discharge Current (A) | 75 / 75 | 95.8 / 95.8 | 100 / 100 |
| Battery Charge Method | | Self-adaption to BMS | |
| **AC (On grid)** | | | |
| Rated Input Apparent Power (VA) | | 7000 | |
| Rated Output Power (W) | 3600 | 4600 | 5000 |
| Max. Output Apparent Power (VA) | 3600 | 4600 | 5000 |
| Rated Grid Voltage | | 230 Vac / L+N+PE | |
| Rated Grid Frequency (Hz) | | 50 / 60 | |
| Max. Input Current (A) | | 30 | |
| Max. Output Current (A) | 16 | 20.9 | 22 |
| THDI(Rated power) | | <3% | |
| Adjustable Power Factor | | 0.8 leading to 0.8 lagging | |
| **AC (Back Up)** | | | |
| Rated Output Power (W) | 3600 | 4600 | 5000 |
| Rated Output Current (A) | 15.6 | 20 | 22 |
| Rated Output Voltage (V) | | 230 | |
| Rated Frequency (Hz) | | 50 / 60 | |
| THDV (@linear load) | | < 3% | |
| Overload Capacity | | 105%＜Load≤125%, 10min. 125%＜Load≤150%, 1min. 150%<Load rate,10S | |
| Back-up Switch time | | < 20ms | |

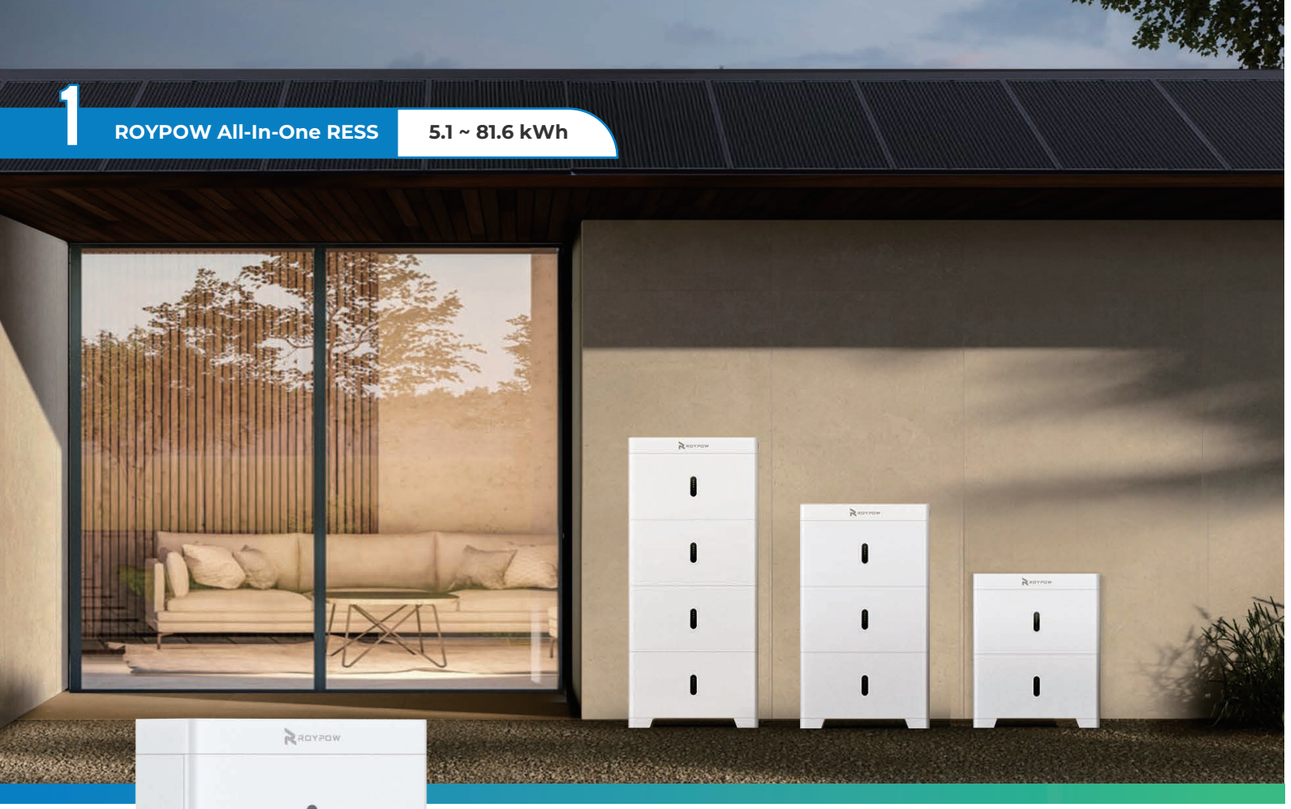


| Efficency | |
|---|---|
| Max.Efficiency（BAT to AC） | 93.8% |
| Max.Efficiency (PV to BAT) | 95.2% |
| Max.Efficiency（PV to AC） | 97.0% |
| Euro.Efficiency | 96.2% |
| Max.MPPT Efficency | 99.9% |
| **Protection** | |
| | DC Switch / GFCI / Anti-islanding Protection / DC Reverse-polarity Protection / Output Over/Under Voltage Protection / Output Over Current Protection / AC Short Circuit Protection / Insulation Resistor Detection |
| DC/AC Surge Protection | Type III |
| **General Data** | |
| PV Connection | MC4/H4 |
| DC Switch | Integated |
| Dimensions (WxDxH, mm) | 650 x 240 x 620 mm / 25.6 x 9.5 x 24.4 inch |
| Net Weight (kg) | 35 |
| Operating Temperature Range | -25~60℃ (-13~140°F), >45℃ (113°F) derating |
| Relative Humidity | 0~95% |
| Max. Altitude(m) | 3000 |
| Electronics Protection Degree | IP65 |
| Topology type | Transformer(Bat to AC) |
| Night Self Consumption (W) | <10 |
| Cooling | Natural |
| Noise（dB) | <35 |
| Display | Wifi+APP / LCD |
| Communication | RS485 / CAN / WiFi |
| **Standard Compliance** | |
| Safety / EMC | EN IEC 62109-1, EN IEC 62109-2, EN IEC 61000-6-1, EN IEC 61000-6-3 |
| Grid Connection Standard | VDE-AR-N 4105, NRS 097, EN 50549, G98, G99, AS 4777.2 |

# Battery Module Specification

| Model | RBmax5.1L | 2*RBmax5.1L | 3*RBmax5.1L | 4*RBmax5.1L | 5*RBmax5.1L | 6*RBmax5.1L | 7*RBmax5.1L | 8*RBmax5.1L |
|---|---|---|---|---|---|---|---|---|
| **Electric Data** | | | | | | | | |
| Nominal energy(kWh) | 5.12 | 10.24 | 15.36 | 20.48 | 25.6 | 30.72 | 35.84 | 40.96 |
| Usable energy(kWh) | 4.79 | 9.58 | 14.37 | 19.16 | 23.95 | 28.74 | 33.53 | 38.32 |
| Cell type | Lithium iron phosphate (LFP) | | | | | | | |
| Nominal voltage (V) | 51.2 | | | | | | | |
| Operating voltage range (V) | 44.8 ~ 56.8 | | | | | | | |
| Max. continuous charge current (A) | 50 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Max. continuous discharge current (A) | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| **General Data** | | | | | | | | |
| Weight | 47.5 kg 99.21 lbs. | 92.1 kg 203.04 lbs. | 136.7 kg 301.37 lbs. | 181.3 kg 399.69 lbs. | 228.8 kg 504.41 lbs. | 273.4 kg 602.74 lbs. | 318 kg 701.06 lbs. | 362.6 kg 799.39 lbs. |
| Dimensions (W × D × H) | 650x240x460 mm 25.6 x 9.5 x 18.1 inch | 650x240x790 mm 25.6x9.4x31.1 inch | 650x240x1120 mm 25.6x9.4x44.1 inch | 650x240x1450 mm 25.6x9.4x57.1 inch | Double tower 650x240x790 + 650x240x1120 mm 25.6x9.4x31.1 inch+ 25.6x9.4x44.1 inch | Double tower 650x240x1120 + 650x240x1120 mm 25.6x9.4x44.1 inch+ 25.6x9.4x44.1 inch | Double tower 650x240x1120 + 650x240x1450 mm 25.6x9.4x44.1 inch+ 25.6x9.4x57.1 inch | Double tower 650x240x1450 + 650x240x1450 mm 25.6x9.4x57.1 inch+ 25.6x9.4x57.1 inch |
| Operating temperature[1] | Charge: 32 ~ 131°F (0 ~ 55°C), Discharge: 4 ~ 131°F (-20 ~ 55°C) | | | | | | | |
| Storage temperature | ≤1 month: -20 to 45°C (-4 to 113°F), >1 month: 0 to 35°C (32 to 95°F) | | | | | | | |
| Relative humidity | 0 ~ 95% | | | | | | | |
| Max. altitude (m) | 4000 m / 13,123 ft (>2,000 m / >6,561.68 ft derating) | | | | | | | |
| Ingress rating | IP65 | | | | | | | |
| Mounting options | Indoor/Outdoor, Floor standing or Wall mounted | | | Communication | CAN, RS485 | | | |
| **Certification** | IEC 62619, UL 1973, EN 61000-6-1, EN 61000-6-3, FCC Part 15, UN38.3 | | | | | | | |

[1] When the ambient temperature is too low or too high, the performance of battery may be limited.




# LIFEPO4 BATTERY

**5.1 ~ 81.6 kWh**

Empowering Sustainable Energy Storage for Homes

Up to **16** Batteries
Flexible Capacity Expansion

**>6,000** Times
Cycle Life

**IP65**
Ingress Rating

**10** Years
Warranty

### Advanced LiFePO4 Technology
Safe, Cobalt-free Battery Chemistry

### Modular and Stacked Design
Easier Installation

### Safe Protection
Intelligent BMS & Built-in Fire Extinguishing System

### High Compatibility
Compatible with Inverters of Leading Brands



# Technical Specifications

| Model | 1*RBmax5.1L | 2*RBmax5.1L2 | 3*RBmax5.1L2 | 4*RBmax5.1L2 | 5*RBmax5.1L2 | 6*RBmax5.1L2 | 7*RBmax5.1L2 | 8*RBmax5.1L2 |
|---|---|---|---|---|---|---|---|---|
| Nominal Energy (kWh) | 5.12 | 10.24 | 15.36 | 20.48 | 25.6 | 30.72 | 35.84 | 40.96 |
| Usable Energy (kWh) | 4.79 | 9.58 | 14.37 | 19.16 | 23.95 | 28.74 | 33.53 | 38.32 |
| Scalability (kWh) | Max. 16 in parallel, Max. 81kWh | | | | | | | |
| Nominal Charge/ Discharge Current (A) | 50 / 50 | 100 / 100 | 150 / 150 | 200 / 200 | 250 / 250 | 300 / 300 | 350 / 350 | 400 / 400 |
| Max. Charge/ Discharge Current(A) | 100 / 100 | 100 / 200 | 150 / 300 | 200 / 400 | 250 / 400 | 300 / 400 | 350 / 400 | 400 / 400 |
| Cell type | Lithium iron phosphate (LFP) | | | | | | | |
| Nominal voltage (V) | 51.2 | | | | | | | |
| Operating voltage range (V) | 44.8 ~ 56.8 | | | | | | | |

## General Data

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Weight (Kg / lbs.) | 48.5 Kg 106.9 lbs. | 94.3 Kg 207.89 lbs. | 140 Kg 308.64 lbs. | 185.7 Kg 409.39 lbs. | 234.3 Kg 516.54 lbs. | 280 Kg 617.29 lbs. | 325.7 Kg 718.04 lbs. | 371.4 Kg 818.79 lbs. |
| Dimensions (W × D × H mm / inch) | 650x240x460 mm 25.6 x 9.5 x 18.1 inch | 650x240x790 mm 25.6x9.4x31.1 inch | 650x240x1120 mm 25.6x9.4x44.1 inch | 650x240x1450 mm 25.6x9.4x57.1 inch | 650x240x790 + 650x240x1120 mm 25.6x9.4x31.1 inch+ 25.6x9.4x44.1 inch | 650x240x1120 + 650x240x1120 mm 25.6x9.4x44.1 inch+ 25.6x9.4x44.1 inch | 650x240x1120 + 650x240x1450 mm 25.6x9.4x44.1 inch+ 25.6x9.4x57.1 inch | 650x240x1450 + 650x240x1450 mm 25.6x9.4x57.1 inch+ 25.6x9.4x57.1 inch |
| Operating temperature (°F/°C) [1] | Charge: 32 ~ 131°F (0 ~ 55°C), Discharge: 4 ~ 131°F (-20 ~ 55°C) | | | | | | | |
| Storage temperature (°F/°C) | ≤1 month: -4 ~ 113°F (-20 ~ 45°C), >1 month: 32 ~ 95°F (0 ~ 35°C) | | | | | | | |
| Installation location | Indoor/Outdoor, Floor standing or Wall mounted | | | | | | | |
| Communication | CAN, RS485 | | | | | | | |
| Relative humidity | 0 ~ 95% | | | | | | | |
| Max. altitude (m / ft.) | 4000 m / 13,123 ft (>2,000 m / >6,561.68 ft derating) | | | | | | | |
| Ingress rating | IP 65 | | | | | | | |
| **Certification** | IEC 62619, UL 1973, EN 61000-6-1, EN 61000-6-3, FCC Part 15, UN38.3 | | | | | | | |

[1] When the ambient temperature is too low or too high, the performance of battery may be limited.
[2] All pictures shown are for reference only and data are based on ROYPOW standard test procedures. Actual performance may vary according to local conditions. Only authorized personnel are allowed to operate or make adjustments to the batteries. We reserve the right to make revisions as well as product alterations and improvements at any time without prior notice.

UL FC UN38.3

1 ROYPOW All-In-One RESS | 8 - 30kW / 7.6 - 132kWh

# All-In-One ESS

- Three-phase
- 8 / 10 / 12 / 15 / 20 / 25 / 30kW
- 7.6 to 132kWh

Compatible with **AC-coupling**

Up to **6** in parallel

**Generator** Energy Storage

**Intelligent** Remote Monitoring




## System Specification

| Model | SUN8000T-E/A | SUN10000T-E/A | SUN12000T-E/A | SUN15000T-E/A |
|---|---|---|---|---|
| Rated AC Output Power (W) | 8000 | 10000 | 12000 | 15000 |
| Nominal Energy (kWh) | 7.6 to 132.7 | | | |
| Noise（dB) | <29 | | | |
| Operating Temperature Range | -18~50℃, >45℃ derating | | | |
| Dimensions (WxDxH) | 650 x 265 x (780 + 200*N (N=2 to 6)) mm | | | |
| Ingress Rating | IP65 | | | |
| Mounting Options | Indoor/Outdoor, Floor standing or Wall mounted (optional) | | | |

| Model | SUN20000T-E/A | SUN25000T-E/A | SUN30000T-E/A |
|---|---|---|---|
| Rated AC Output Power (W) | 20000 | 25000 | 30000 |
| Nominal Energy (kWh) | 44 to 132 | | |
| Noise（dB) | <60 | | |
| Operating Temperature Range | -18~50℃, >45℃ derating | | |
| Dimensions (WxDxH) | 650 x 265 x (890+200*N (N=2 to 6, single tower) mm | | |
| Ingress Rating | IP65 | | |
| Mounting Options | Indoor/Outdoor, Floor standing or Wall mounted (optional) | | |

8 / 10 / 12 / 15kW

# Hybrid Inverter

Three Phase / 2 MPPTs / Hybrid Inverter / HV

**200%** DC Oversizing

**200%** Overload Capacity

Up to **6** Units Parallel Working

**30A** Max. PV Input Current

**98.3%** Max. Efficiency

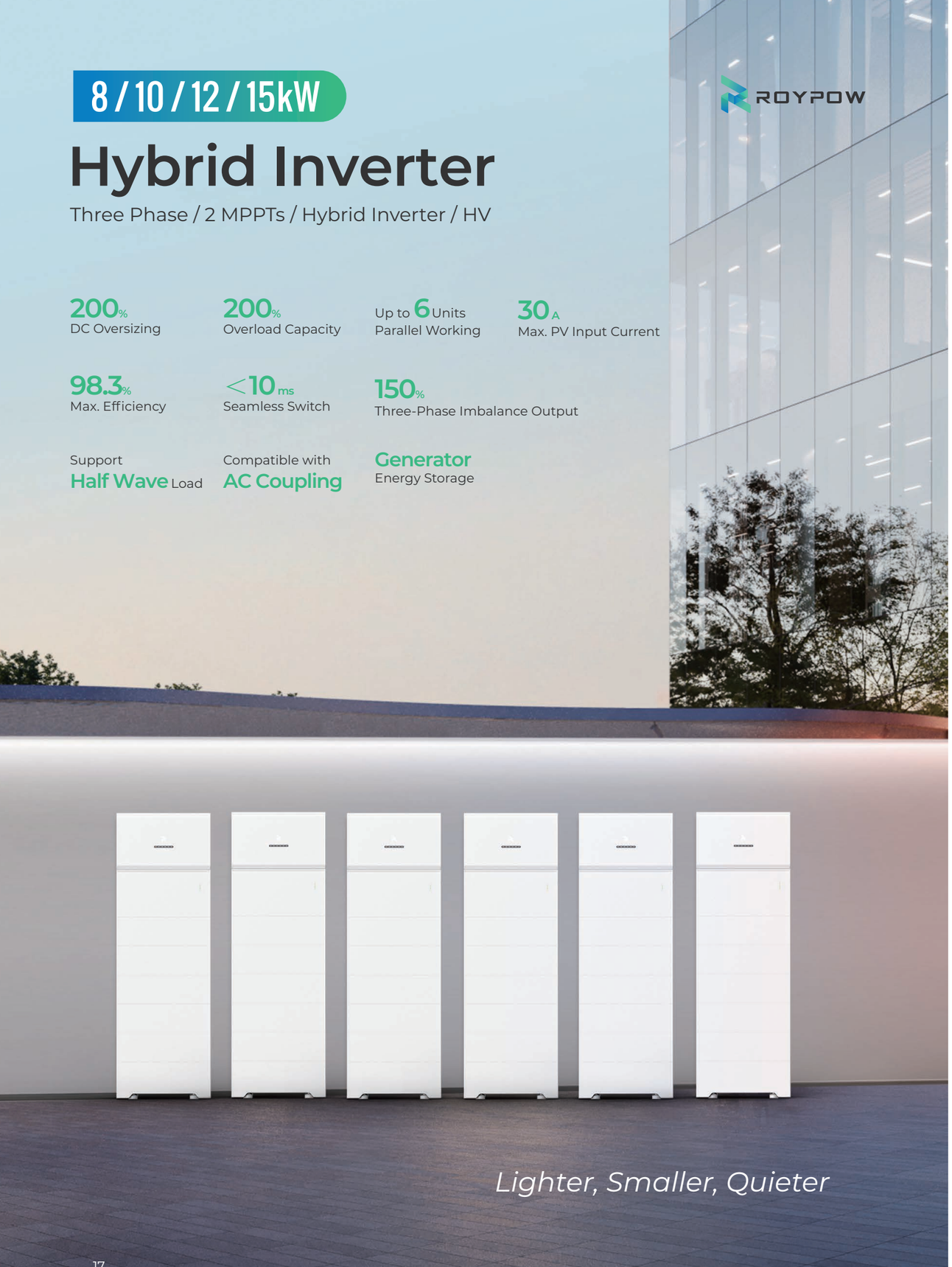
**<10ms** Seamless Switch

**150%** Three-Phase Imbalance Output

Support **Half Wave** Load

Compatible with **AC Coupling**

**Generator** Energy Storage






## Hybrid Inverter Specification

| Model | SUN8000T-E/I | SUN10000T-E/I | SUN12000T-E/I | SUN15000T-E/I |
|---|---|---|---|---|
| **Input - DC (PV)** | | | | |
| Max. Power (Wp) | 20000 | 20000 | 30000 | 30000 |
| Max. DC Voltage (V) | | 1000 | | |
| MPPT Voltage Range (V) | | 160~950 | | |
| MPPT Voltage Range (V, full load) | 200~850 | 240~850 | 240~850 | 280~850 |
| Start Voltage (V) | | 180 | | |
| Max. Input Current（A) | 30-20 | 30-20 | 30-30 | 30-30 |
| Max. Short Current（A) | 40-30 | 40-30 | 40-40 | 40-40 |
| Number of MPPT | | 2 | | |
| Number of String per MPPT | 2-1 | 2-1 | 2-2 | 2-2 |
| **Input - DC (Battery)** | | | | |
| Compatible Battery | | RBmax MH Battery System | | |
| Voltage Range (V) | | 550-950 | | |
| Max. Charge / Discharge Power (W) | 11000 / 8800 | 11000 / 11000 | 15000 / 13200 | 15000 / 15000 |
| Max. Charge / Discharge Current (A) | 20 / 16 | 20 / 20 | 27 / 24 | 27 / 27 |
| **AC (On grid)** | | | | |
| Rated Output Power (W) | 8000 | 10000 | 12000 | 15000 |
| Rated Output Apparent Power (VA) | 8800 | 11000 | 13200 | 15000 |
| Max. Output Apparent Power (VA) | 8800 | 11000 | 13200 | 15000 |
| Max. Output Power (W) | 8800 | 11000 | 13200 | 15000 |
| Rated Input Apparent Power (VA) | | 22500 | | |
| Max. Input Current (A) | | 3*32 | | |
| Rated Grid Voltage (V) | | 220/380, 230/400, 3W+N+PE | | |
| Rated Grid Frequency (Hz) | | 50 / 60 | | |
| Rated Output Current (A) | 3*12.8 | 3*16 | 3*19.2 | 3*21.8 |
| Max. Output Current (A) | 3*12.8 | 3*16 | 3*19.2 | 3*21.8 |
| THDI(Rated power) | | <3% | | |
| Power Factor | | ~1 (Adjustable from 0.8 leading to 0.8 lagging) | | |
| **AC (Back Up)** | | | | |
| Rated Output Power (W) | 8000 | 10000 | 12000 | 15000 |
| Rated Output Apparent Power (VA) | 8800 | 11000 | 13200 | 15000 |
| Rated Output Current (A) | 3*12.8 | 3*16 | 3*19.2 | 3*21.8 |
| Rated Bypass Power (VA) | | 22500 | | |
| Rated Bypass Current (A) | | 3*32 | | |
| Rated Output Voltage (V) | | 220/380, 230/400, 3W+N+PE | | |
| Rated Frequency (Hz) | | 50 / 60 | | |
| THDV (@linear load) | | < 2% | | |
| Overload Capacity | | 120% for 10 min, 200% for 10 S | | |
| THDV | | <2% (R load), <5% (RCD load) | | |
| Scalability | | Max. 6 in parallel | | |
| **Efficiency** | | | | |
| Max.Efficiency | 98.0% | 98.0% | 98.3% | 98.3% |
| Euro.Efficiency | 97.3% | 97.3% | 97.6% | 97.6% |
| Max. Charge Efficiency (PV to Bus) | | 99% | | |
| Max. Charge / Discharge Efficiency (Grid to Bus) | | 98% | | |
| **Protection** | | | | |
| | | GFCI / Anti-islanding Protection / DC Reverse-polarity Protection / AC Over/Under Voltage Protection / AC Over Current Protection / AC Short Circuit Protection / Insulation Resistor Detection | | |
| DC/AC Surge protection Device | | Type Ⅱ / Type Ⅲ | | |
| AFCI / RSD | | Optional | | |

## General Data

| | | | |
|---|---|---|---|
| Switch Time | < 10ms | Topology | Transformerless |
| Generator Interface | Optional | Noise（dB) | <29 |
| PV Switch | Integated | Night Self Consumption (W) | <10 |
| PV Connection | MC4/H4 | Cooling | Natural Convection |
| AC Connection | Connector | Display | LED + APP (Bluetooth) |
| Operating Temperature Range | -25~60℃, >45℃ derating | Protection Degree | IP65 |
| Relative Humidity | 0~95% | Dimensions (WxDxH) | 650 x 265 x 390mm |
| Altitude | 4000 m | Net Weight | 30 kg |
| Communication Interface | RS485 / CAN / USB / (Wi-Fi / GPRS / 4G / Ethernet optional) | | |

## Standard Compliance

| | | | |
|---|---|---|---|
| Grid Connection standards | VDE-AR-N 4105, EN 50549, AS4777.2 | Safety/EMC/RED Standards | EN IEC62109-1/-2, EN 61000-6-1/-2/-3/-4, EN301489, EN300328, EN 62479, EN50663, EN62920, RCM |

20 / 25 / 30kW

ROYPOW

# Hybrid Inverter

Three Phase / 3 MPPTs / Hybrid Inverter / HV

**150%** Overload Capacity

Up to **6** Units Parallel Working

**30A** Max. PV Input Current

**98.8%** Max. Efficiency

**<10ms** Seamless Switch

**100%** Three-Phase Imbalance Output

Support **Half Wave** Load

Compatible with **AC Coupling**

**Generator** Energy Storage


*Reliable, Efficient, Powerful*



## Hybrid Inverter Specification

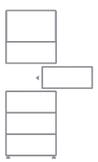
| Model | SUN20000T-E/I | SUN25000T-E/I | SUN30000T-E/I |
|---|---|---|---|
| **Input - DC (PV)** | | | |
| Max. Power (Wp) | 30000 | 45000 | 45000 |
| Max. DC Voltage (V) | | 1000 | |
| MPPT Voltage Range (V) | | 160~950 | |
| MPPT Voltage Range (V, full load) | 340~800 | 270~800 | 340~800 |
| Start Voltage (V) | | 180 | |
| Max. Input Current（A) | 30-30 | 30-30-30 | 30-30-30 |
| Max. Short Current（A) | 40-40 | 40-40-40 | 40-40 / 40 |
| Number of MPPT | 2 | 3 | 3 |
| Number of String per MPPT | 2-2 | 2-2-2 | 2-2-2 |
| **Input - DC (Battery)** | | | |
| Compatible Battery | | RBmax MH Series | |
| Number of Battery Input | | 2 | |
| Voltage Range (V) | | 550-950 | |
| Max. Charge / Discharge Power (W) | 22000/22000 | 27500 / 27500 | 30000 / 30000 |
| Max. Charge / Discharge Current (A) | | 50 / 50 | |
| **AC (On grid)** | | | |
| Rated Output Power (W) | 20000 | 25000 | 30000 |
| Max. Output Apparent Power (VA) | 22000 | 27500 | 30000 |
| Max. Output Power (W) | 22000 | 27500 | 30000 |
| Rated Input Apparent Power (VA) | | 45000 | |
| Max. Input Current (A) | | 3*65 | |
| Rated Grid Voltage (V) | | 220/380, 230/400, 3W+N+PE | |
| Rated Grid Frequency (Hz) | | 50 / 60 | |
| Max. Output Current (A) | 3*28.9 | 3*36.3 | 3*43.5 |
| THDI(Rated power) | | <3% | |
| Power Factor | | ~1 (Adjustable from 0.8 leading to 0.8 lagging) | |
| **AC (Back Up)** | | | |
| Rated Output Power (W) | 20000 | 25000 | 30000 |
| Rated Output Current (A) | 3*28.9 | 3*36.3 | 3*43.5 |
| Rated Bypass Power (VA) | | 37950 | |
| Rated Bypass Current (A) | | 3*65 | |
| Rated Output Voltage (V) | | 220/380, 230/400, 3W+N+PE | |
| Rated Frequency (Hz) | | 50 / 60 | |
| THDV (@linear load) | | < 2% | |
| Overload Capacity | | 120%@10min /150% @200ms | |
| THDV | | <2% (R load), <5% (RCD load) | |
| Scalability | | Max. 6 in parallel | |
| **Efficiency** | | | |
| Max.Efficiency | | 98.8% | |
| Euro.Efficiency | 97.2% | 97.9% | 97.9% |
| Max. Charge Efficiency (PV to Bus) | | 98% | |
| Max. Charge / Discharge Efficiency (Grid to Bus) | | 98% | |
| **Protection** | | | |
| GFCI / Anti-islanding Protection / DC Reverse-polarity Protection / AC Over/Under Voltage Protection / AC Over Current Protection / AC Short Circuit Protection / Insulation Resistor Detection | | | |
| DC/AC Surge protection Device | | Type Ⅱ / Type Ⅲ | |
| AFCI / RSD | | Optional | |

| **General Data** | | | |
|---|---|---|---|
| Switch Time | < 10ms | Topology | Transformerless |
| Generator Interface | Optional | Noise（dB) | <60 |
| PV Switch | Integated | Night Self Consumption (W) | <15 |
| PV Connection | MC4/H4 | Cooling | Smart Fan |
| AC Connection | Connector | Display | LED + APP (Bluetooth) |
| Operating Temperature Range | -25~60℃, >50℃ derating | Protection Degree | IP65 |
| Relative Humidity | 0~95% | Dimensions (WxDxH) | 650 x 265 x 500mm |
| Altitude | 4000 m | Net Weight | 43 kg |
| Communication Interface | RS485 / CAN / USB / (Wi-Fi / GPRS / 4G / Ethernet optional) | | |

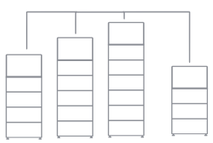
| **Standard Compliance** | | | |
|---|---|---|---|
| Grid Connection standards | EN 50549 | Safety Standards | EN 62109-1/-2, EN 61000-6-1/-2/-3/-4, EN301489, EN300328, EN62479, EN 50663, EN62920 |


# Battery

**No Additional Wiring Required**



**Modular & Stackable Design**



**7.6 ~ 132 kWh Flexible Capacity Expansion**

**LFP**
Safe, Cobalt-Free Battery

**IP65**
Ingress Rating



## Battery System Specification

| Model | 2*RBmax3.8MH | 3*RBmax3.8MH | 4*RBmax3.8MH | 5*RBmax3.8MH | 6*RBmax3.8MH |
|---|---|---|---|---|---|
| Battery Module | RBmax3.8H (3.84 kWh, 76.8 V, 40kg) | | | | |
| Number of Battery Modules | | | | | |
| Nominal Energy (kWh) | 7.68 | 11.52 | 15.36 | 19.2 | 23.04 |
| Usable Energy (kWh)[1] | 7.06 | 10.6 | 14.13 | 17.66 | 21.2 |
| Rated Current (A) | 45 | 45 | 45 | 45 | 45 |
| Nominal Power (kW) | 6.9 | 10.3 | 13.8 | 15 | 15 |
| Peak Output Power (kW) | 8 for 10 sec. | 12 for 10 sec. | 16 for 10 sec. | 17 for 10 sec. | 17 for 10 sec. |
| Weight | 100.4 kg | 140.4 kg | 180.4 kg | 220.4 kg | 260.4 kg |

| Model | 2*RBmax5.5MH | 3*RBmax5.5MH | 4*RBmax5.5MH | 5*RBmax5.5MH | 6*RBmax5.5MH |
|---|---|---|---|---|---|
| Battery Module | RBmax5.5H (5.5 kWh, 76.8 V, 45 kg) | | | | |
| Number of Battery Modules | | | | | |
| Nominal Energy (kWh) | 11.06 | 16.59 | 22.12 | 27.65 | 33.18 |
| Usable Energy (kWh)[1] | 10.18 | 15.26 | 20.35 | 25.44 | 30.53 |
| Rated Current (A) | 50 | 50 | 50 | 50 | 50 |
| Nominal Power (kW) | 7.6 | 11.5 | 15 | 15 | 15 |
| Peak Output Power (kW) | 8 for 10 sec. | 12 for 10 sec. | 16 for 10 sec. | 17 for 10 sec. | 17 for 10 sec. |
| Weight | 110.4 kg | 155.4 kg | 200.4 kg | 245.4 kg | 290.4 kg |

### RBmax3.8MH & RBmax5.5MH Series

| | | | | | |
|---|---|---|---|---|---|
| Operating Voltage Range (V) | 550-950 | | | | |
| Dimensions (W x D x H) | 650 x 265 x 780 mm | 650 x 265 x 980 mm | 650 x 265 x 1180 mm | 650 x 265 x 1380 mm | 650 x 265 x 1580 mm |
| Battery Nominal Voltage (V) | 153.6 | 230.4 | 307.2 | 384 | 460.8 |
| Battery Operating Voltage Range (V) | 124.8~172.8 | 187.2~259.2 | 249.6~345.6 | 312~432 | 374.4~518.4 |
| Battery Chemistry | Lithium Iron Phosphate ($LiFePO_4$) | | | | |
| Scalability | Max. 4 in parallel | | | | |
| Operating Temperature | Charge: 0~ 50°C, Discharge: -18~50°C (>45°C derating) | | | | |
| Storage Temperature | ≤1 month: -20~45°C, >1 month: 0~35°C | | | | |
| Relative Humidity | 5~95% | | | | |
| Max. Altitude (m) | 4000 m (>2,000 m derating) | | | | |
| Protection Degree | IP65 | | | | |
| Cooling Method | Natural Convection | | | | |
| Mounting Options | Indoor / Outdoor, Floor standing, Wall mounted | | | | |
| DC Protection | Circuit Breaker, Fuse, DC-DC converter | | | | |
| Protection Features | Over Voltage / Over Current / Short Circuit / Reverse Polarity | | | | |
| Certifications | CE, VDE-AR-E 2510-50, IEC 62619, EN 62477, EN IEC62040, RCM, CEC, UN38.3 | | | | |

| Battery Optimizer | RMH95050 |
|---|---|
| Voltage Range(V) | 550-950 |
| Max. Charge / Discharge Current(A) | 27 |
| Communication | CAN, RS485 |
| Scalability | Max. 4 in parallel |
| Dimensions (W x D x H) | 650 x 265 x 270mm |
| Weight | 15 kg |

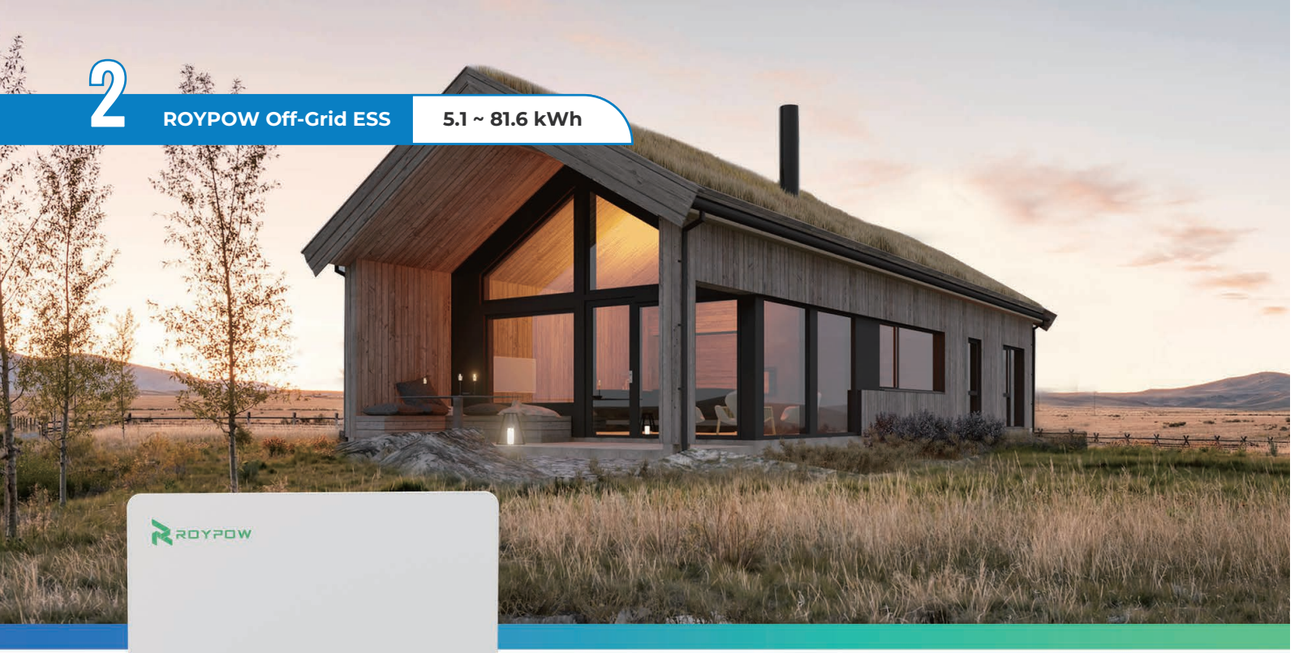
# **Versatile**
# Off-Grid System

Ideal for powering homes, remote cabins, resorts, rural areas, and businesses in regions where the grid access is limited or unavailable. Go off the grid with peace of mind.










# LIFEPO4 BATTERY

## 5.1 ~ 81.6 kWh

Reliable Power for Off-Grid Living

Up to **5** kW / Module
Maxinum Continuous Discharge Power

Up to **16** Units
Flexible Capacity Expansion

**>6,000** Times
Cycle Life

**10** Years
Warranty

### Safe

- Advanced Cobalt-free $LiFePO_4$ Battery Technology
- Intelligent BMS with Multiple Protections

### Reliable

- Long Design Life
- Zero Maintenance and No Frequent Swapping

### Convenient

- Modular and Stacked Design for Easy Installation
- Ground-mounted or Wall-mounted Installation



# System Specification

| | RBmax5.1L-F |
|---|---|
| **Electric Data** | |
| Nominal Energy (kWh) | 5.12 |
| Usable Energy (kWh) | 4.79 |
| Cell Type | LFP ($LiFePO_4$) |
| Nominal Voltage (V) | 51.2 |
| Operating Voltage Range (V) | 44.8 ~ 56.8 |
| Max. Continuous Charge Current (A) | 100 |
| Max. Continuous Discharge Current (A) | 100 |
| **General Data** | |
| Weight (Kg / lbs.) | 48 Kg / 105.8 lbs. |
| Dimensions (W × D × H) (mm / inch) | 500 x 167 x 490 mm / 19.69 x 6.57 x 19.29 inch |
| Operating Temperature (°C) | 0 ~ 55°C (32 ~ 131°F) (Charge), -20 ~ 55°C (4 ~ 131°F) (Discharge) |
| Storage Temperature (°C)Delivery SOC State (20~40%) | >1 Month: 0 ~ 35°C (32 ~ 95°F); ≤1 Month: -20 ~ 45°C (-4 ~ 113°F) |
| Relative Humidity | ≤ 95% |
| Max. Altitude (m) | 4000 m / 13,123 ft (>2,000 m / >6,561.68 ft derating) |
| Protection Degree | IP 20 |
| Installation Location | Ground-Mounted; Wall-Mounted |
| Communication | CAN, RS485 |
| **Certification** | |
| EMC | CE |
| Transportation | UN38.3 |
| **Warranty** | |
| Warranty (Years) | 10 Years |

| Model | 1*RBmax5.1L-F/FA | 2*RBmax5.1L-F/FA | 3*RBmax5.1L-F/FA | 4*RBmax5.1L-F/FA | 5*RBmax5.1L-F/FA | 6*RBmax5.1L-F/FA | 7*RBmax5.1L-F/FA | 8*RBmax5.1L-F/FA |
|---|---|---|---|---|---|---|---|---|
| Nominal Energy (kWh) | 5.12 | 10.24 | 15.36 | 20.48 | 25.6 | 30.72 | 35.84 | 40.96 |
| Usable Energy (kWh) | 4.79 | 9.58 | 14.37 | 19.16 | 23.95 | 28.74 | 33.53 | 38.32 |
| Scalability (kWh) | Max. 16 in parallel, Max. 81kWh | | | | | | | |
| Nominal Voltage (V) | 51.2 | | | | | | | |
| Operating Voltage Range (V) | 44.8-56.8 | | | | | | | |
| Nominal Charge/ Discharge Current (A) | 50 / 50 | 100 / 100 | 150 / 150 | 200 / 200 | 250 / 250 | 300 / 300 | 350 / 350 | 400 / 400 |
| Max. Charge/ Discharge Current(A) | 100 / 100 | 100 / 200 | 150 / 300 | 200 / 400 | 250 / 400 | 300 / 400 | 350 / 400 | 400 / 400 |

CE UN38.3



# LIFEPO4 BATTERY

## 5.1 ~ 81.6 kWh

Long-Lasting, Reliable Power Storage Solution

Up to **16** Units
Flexible Capacity Expansion

**>6,000** Times
Cycle Life

**10** Years
Warranty

### Advanced LiFePO4 Technology
Safe Battery Cells from Global Top 3 Brands

### Intelligent BMS
Intelligent Monitoring & Multiple Protections

### High Compatibility
Compatible with Many Brands of Inverter Protocols

### Easy Installation
Stackable with Flexible Brackets

### APP Support
Remote Monitoring of Battery Status

### Wake-up Function
Reactivate and Recharge Asleep Batteries



# System Specification

| Model | RBmax5.1L-FX |
|---|---|
| **Electric Data** | |
| Nominal Energy (kWh) | 5.12 |
| Usable Energy (kWh) | 4.79 |
| Cell Type | LFP (LiFePO4) |
| Nominal Voltage (V) | 51.2 |
| Operating Voltage Range (V) | 44.8~56.8 |
| Max. Continuous Charge Current (A) | 100 |
| Max. Continuous Discharge Current (A) | 100 |
| **General Data** | |
| Weight (Kg / lbs.) | 45 Kg / 99.2 lbs. |
| Dimensions (W × D × H) (mm / inch) | 442 x 560 x 173 mm / 17.4 x 22.05 x 6.81 inch |
| Operating Temperature (°C) | 0 ~ 55°C (32 ~ 131°F) (Charge), -20 ~ 55°C (4 ~ 131°F) (Discharge) |
| Storage Temperature (°C) Delivery SOC State (20~40%) | >1 Month: 0 ~ 35°C (32 ~ 95°F); ≤1 Month: -20 ~ 45°C (-4 ~ 113°F) |
| Relative Humidity | ≤ 95% |
| Max. Altitude (m) | 4000 m / 13,123 ft (>2,000 m / >6,561.68 ft derating) |
| Protection Degree | IP 20 |
| Installation Location | Ground-Mounted or Wall-Mounted |
| Communication | CAN, RS485 |
| **Certification** | |
| Safety | IEC 62619 |
| EMC | CE |
| Transportation | UN38.3 |
| **Warranty** | |
| Warranty (Years) | 10 years |

| Model | 1*RBmax5.1L-FX | 2*RBmax5.1L-FX | 3*RBmax5.1L-FX | 4*RBmax5.1L-FX | 5*RBmax5.1L-FX | 6*RBmax5.1L-FX | 7*RBmax5.1L-FX | 8*RBmax5.1L-FX |
|---|---|---|---|---|---|---|---|---|
| Nominal Energy (kWh) | 5.12 | 10.24 | 15.36 | 20.48 | 25.6 | 30.72 | 35.84 | 40.96 |
| Usable Energy (kWh) | 4.79 | 9.58 | 14.37 | 19.16 | 23.95 | 28.74 | 33.53 | 38.32 |
| Scalability (kWh) | Max. 16 in parallel, Max. 81kWh | | | | | | | |
| Nominal Voltage (V) | 51.2 | | | | | | | |
| Operating Voltage Range (V) | 44.8-56.8 | | | | | | | |
| Nominal Charge/ Discharge Current (A) | 50 / 50 | 100 / 100 | 150 / 150 | 200 / 200 | 250 / 250 | 300 / 300 | 350 / 350 | 400 / 400 |
| Max. Charge/ Discharge Current(A) | 100 / 100 | 100 / 200 | 150 / 300 | 200 / 400 | 250 / 400 | 300 / 400 | 350 / 400 | 400 / 400 |

CE IEC 62619 UN38.3

2 ROYPOW Off-Grid ESS | 9.8 ~ 78 kWh

# LIFEPO4 BATTERY

**9.8 ~ 78 kWh**

Larger Capacity for Continuous Power Supply

Up to **8** Units
Flexible Capacity Expansion

**>6,000** Times
Cycle Life

**10** Years
Warranty

### Advanced LiFePO4 Technology
Safe Battery Cells from Global Top 3 Brands

### Intelligent BMS
Intelligent Monitoring & Multiple Protections

### High Compatibility
Compatible with Many Brands of Inverter Protocols

### Fast Charging
Extended Uptime for Home Backup

### APP Support
Remote Monitoring of Battery Status

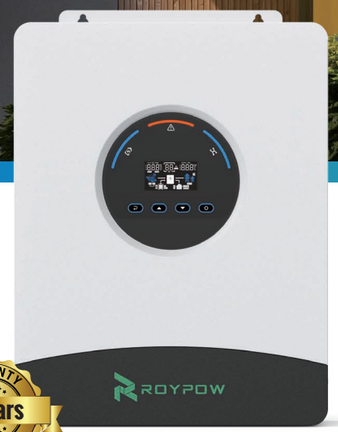
### Wake-up Function
Reactivate and Recharge Asleep Batteries



## System Specification

| Model | RBmax10L-F |
|---|---|
| Nominal Energy (kWh) | 9.84 |
| Usable Energy (kWh) | 9.05 |
| Cell Type | LFP (LiFePO4) |
| Nominal Voltage (V) | 48 |
| Rated Capacity（Ah） | 205 |
| Combination Method | 15S1P |
| Operating Voltage Range (V) | 40.5 ~ 54 |
| Max. Continuous Charge Current (A) | 200 |
| Max. Continuous Discharge Current (A) | 200 |
| **General Data** | |
| Weight (Kg / lbs.) | 90 Kg / 198.42 lbs. |
| Dimensions (W × D × H) (mm) | 500 x 180 x 800 mm / 19.69 x 7.09 x 31.49 inch |
| Operating Temperature (°C) | 0 ~ 55℃ (32 ~ 131℉) (Charge), -20 ~ 55℃ (4 ~ 131℉) (Discharge) |
| Storage temperature (°C)Delivery SOC State (20~40%) | >1 Month: 0 ~ 35℃ (32 ~ 95℉); ≤1 Month: -20 ~ 45℃ (-4 ~ 113℉) |
| Relative Humidity | ≤ 95% |
| Max. Altitude (m) | 4000 m / 13,123 ft (>2,000 m / >6,561.68 ft derating) |
| Protection Degree | IP 20 |
| Installation Location | Ground-Mounted or Wall-Mounted |
| Communication | CAN, RS485 |
| **Certification** | |
| Safety | / |
| EMC | CE |
| Transportation | UN38.3 |
| **Warranty** | |
| Warranty (Years) | 10 years |

| Model | 1*RBmax10L-F | 2*RBmax10L-F | 3*RBmax10L-F | 4*RBmax10L-F | 5*RBmax10L-F | 6*RBmax10L-F | 7*RBmax10L-F | 8*RBmax10L-F |
|---|---|---|---|---|---|---|---|---|
| Nominal Energy (kWh) | 9.84 | 19.68 | 29.52 | 39.36 | 49.2 | 59.04 | 68.88 | 78.72 |
| Usable Energy (kWh) | 9.05 | 18.1 | 27.15 | 36.2 | 45.25 | 54.3 | 63.35 | 72.4 |
| Scalability (kWh) | Max. 8 in parallel, Max. 78 kWh | | | | | | | |
| Nominal Voltage (V) | 51.2 | | | | | | | |
| Operating Voltage Range (V) | 44.8-56.8 | | | | | | | |
| Nominal Charge/ Discharge Current (A) | 100 / 100 | 200 / 200 | 300 / 300 | 400 / 400 | 400 / 400 | 400 / 400 | 400 / 400 | 400 / 400 |
| Max. Charge/ Discharge Current(A) | 200 / 200 | 400 / 400 | 400 / 400 | 400 / 400 | 400 / 400 | 400 / 400 | 400 / 400 | 400 / 400 |





# SOLAR INVERTER

## 6 ~ 72 kW

Compact and Light, Designed for Efficient Energy Production

**98%** Peak Efficiency

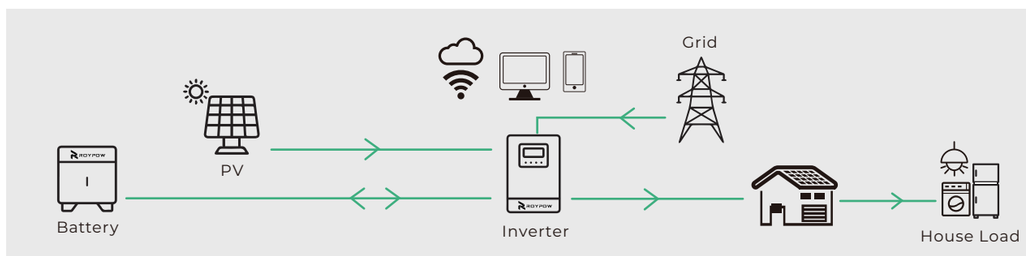
Up to **12** Units Parallel Working

**10**ms UPS Seamless Switch

**Three-Phase** Connection via Parallel Connection

**5** Years Additional Cost for Extended Warranty

- Pure Sine Wave Output
- Wide MPPT Operating Range
- Built-in BMS Communication
- Multiple Safe Protections






# System Specification

| Model | R6000S-E |
|---|---|
| **PV (DC Input)** | |
| Recommended Max. PV Input Power (W) | 6000 |
| Max. Input Voltage (VOC) (V) | 500 |
| MPPT Operating Voltage Range (V) | 85 V - 450 V (@75V Start up) |
| Number of MPPT | 1 |
| Max. Number of Input Strings per MPPT | 1 |
| Max. Input Current per MPPT (A) | 27 |
| Max. Short-circuit Current per MPPT (A) | 35 |
| **Grid (AC Input)** | |
| Max. Input Power (W) | 11500 |
| Max. Input Current (A) | 50 |
| Rated Grid Voltage (Vac) | 220 / 230 / 240 |
| Rated Grid Frequency (Hz) | 50 / 60 |
| Acceptable Range | 170 - 280 Vac (For UPS); 90 - 280 Vac (For Home Appliances) |
| **Battery (Bi-direction)** | |
| Battery Type | $LiFePO_4$ / Lead-acid |
| Battery Voltage Range (Vdc) | 40-60 |
| Rated Battery Voltage (Vdc) | 48 |
| Max. Charge / Discharge Current (A) | 120 / 130 |
| BMS Communication Mode | RS485 |
| **Backup Output (AC Output)** | |
| Rated Output Power | 6000W / 6000VA |
| Rated Output Current (A) | 27.3 |
| Rated Output Voltage / Frequency | 220 / 230 / 240Vac 50 / 60Hz |
| Parallel Capacity | Max. 12 Units |
| Surge Power | 12000 VA 5 s |
| THDv (@ Linear Load) | <3% |
| Switch Time | 10ms Typical (For UPS), 20ms Typical (For Home Appliances) |
| **Efficiency** | |
| Peak Efficiency | 98% |
| Max. MPPT Efficiency | 99.90% |
| **Protection** | |
| Inner Protection | Output Short-circuit Protection, Output Overvoltage Protection |
| Surge Protection | PV: Type III, AC: Type III |
| IP Rating | IP54 |
| **General Specifications** | |
| Operating Temperature Range | -10°C ~ 55°C |
| Relative Humidity Range | 5% ~ 95% |
| Max. Operating Altitude | >2,000 m / >6,561.68 ft derating |
| Standby Self-consumption (W) | <10 |
| Installation Type | Wall-mounted |
| Cooling Mode | Fan Cooling |
| Communication | RS232/RS485/Dry Contact/Wi-Fi |
| Display | LCD |
| **Mechnical Specifications** | |
| Inverter Dimension (L x W x H) (mm / inch) | 444.7 x 346.6 x 120 mm / 17.51 x 13.65 x 4.72 inch |
| Net Weight (kg) | 12.4 Kg / 27.33 lbs. |
| Shipping Dimension (mm) | 560 x 465 x 240 mm / 22.05 x 18.31 x 9.45 inch |
| Gross Weight (kg) | 14.6 Kg / 32.19 lbs. |
| Warranty Period | 3 years / 5 years (optional) |

CE EN 62109-1 EN 62109-2 IEC 61000

2 ROYPOW Off-Grid ESS | 12 ~ 72 kW

# SOLAR INVERTER

**12 ~ 72 kW**

Efficient, Safe, Reliable for Home Backup

**98%** Max. MPPT Tracking Efficiency

Up to **6** Units Parallel Working

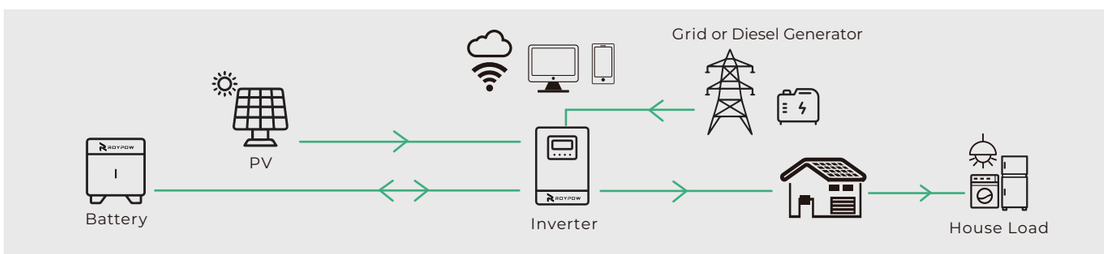
**Three-Phase** Connection via Parallel Connection

**10** Years Long Lifespan

Up to **72** kW High Power

**5** Years Additional Cost for Extended Warranty

- Pure Sine Wave AC Power
- Wide MPPT Operating Range
- Comprehensive Safety Protections
- Easy Installation and Setup
- Intelligent Management via LCD Display and Wi-Fi
- Built-in Li-ion Battery BMS Communication






# System Specification

| Model | R12000S-E |
|---|---|
| **PV Input** | |
| Max. PV Input Power (W) | 12000 |
| Max. DC Voltage (V) | 500 |
| MPPT Voltage Range (V) | 85V-450 |
| Rated Voltage (V) | 380 |
| Startup Voltage (V) | 75 |
| Max. DC Current (A) | 27 / 27 |
| Number of MPPT | 2 |
| Number of String per MPPT | 1 |
| DC Terminal Type | TBD |
| **Battery** | |
| Battery Type | Lead-acid / LFP |
| Rated Voltage (V) | 48 |
| Voltage Range (V) | 40V-60 |
| Max. Charge / Discharge Power (W) | 12000 |
| Max. Charge Current | 210A (MPPT: 210A; Grid: 210A) |
| Max. Disharge Current (A) | 230 |
| Max. Charge Voltage (V) | 60 |
| Temperature Compensation | Yes (Lithium Battery) |
| Current / Voltage Monitoring | Yes |
| **AC Input** | |
| Max. Input Power (W) | 20700 |
| Max. Input Current (A) | 90 |
| Rated Input Voltage (V) | 220 / 230 / 240 |
| Rated Input Frequency (Hz) | 50 / 60 |
| THDi | <3% (Linear Load) |
| Power Factor | 1 |
| **AC Output** | |
| Max. Output Power (W) | 12000 |
| Rated Frequency (Hz) | 50 / 60 |
| Frequency Accuracy | ±2% |
| Voltage Class (V) | 220 / 230 / 240 |
| Max. Output Current (A) | 54.5 |
| Voltage Stabilization Accuracy | ±1% |
| THDV (Full Load) | <3% (Linear Load) |
| Overload Capacity | 105%<Load≤150%, Alarm and Shutdown after 10.5 s; Load≥150%, Alarm and Shutdown after 5.5 s |
| **Efficiency** | |
| Max. Efficiency (Grid) | 95% |
| Max. Efficiency (Battery) | 93% |
| **Protection** | |
| Protection | Over-/Under-Voltage Protection, Output Over-Current Protection, Output Short-Circuit Protection, Over-Temperature Protection |
| **General Specifications** | |
| Dimension (L x W x H) | 125 x 535 x 630 mm / 4.92 x 21.06 x 24.80 inch |
| Weight | 25 kg / 55.11 lbs. |
| Installation | Wall-Mounted |
| Environmental Temperature Range | -10~55℃,>40℃ Derated (14~131°F, >104°F Derated) |
| Relative Humidity | 5~95% |
| Max. Altitude | >2,000 m / >6,561.68 ft derating |
| Ingress Rating | IP54 |
| Standby Self-Consumption | <10 W |
| Cooling Mode | Forced Air Cooling |
| Noise | <60 dB |
| Display Type | LCD Display |
| Communication | RS232 / Dry Contact / Wi-Fi / RS485 |
| Warranty | 3 years / 5 years (optional) |
| Parallel Units | 6 |