



# ENERGY STORAGE SYSTEM



KING POLARIS NEW ENERGY STOCK CO., LTD., SHANDONG

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KING POLARIS NEW ENERGY STOCK CO., LTD., SHANDONG

# Hello!

Thank you for choosing and using CONCENPOWER energy storage system.

If you have any questions during use, please go to our official website ([www.cocenpower.com](http://www.cocenpower.com)) and we will provide you with corresponding technical support.

For more new products information, please check on the official website.



# Concentrate Power





# Stacked

## Energy Storage System

Stacked energy storage systems can be connected in series and parallel according to customer needs. The capacity of a single battery pack is divided into 2.66kwh, 5kwh, 10kwh, customers can choose according to their own needs

# High Voltage Series Connection System

7.5kWh-1200kWh energy storage system

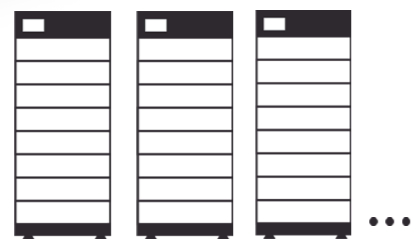
The CON-HVS battery cabinet is composed of 3-8 battery packs connected in series. The voltage range is from 153.6V to 409.6V. Depending on the capacity of a single battery pack, the capacity of a single battery cabinet ranges from 7.5kWh to 20kWh, 15kWh to 40kWh, and 30kWh to 80kWh. A single battery cabinet can support 1-3 phase inverters.

A CON-HVS energy storage system formed by connecting battery packs in series. In addition, 1 to 15 battery cabinets can be directly connected in parallel, and the total capacity can achieve 7.5kWh to 300kWh, 15kWh to 600kWh, 30kWh to 1200kWh. The high-voltage series system works with the battery combiner box, which can support 1 ~ 3 phase inverters



**Battery Cabinet**

Multiple battery package connected in series



**15 x Battery Cabinet**

Can support up to 15 battery cabinets in parallel connection  
Voltage Range 153.6V to 409.6V



**Change Anytime**

The capacity of the battery cabinets can be freely combined according to the actual situation



**High Voltage**

High voltage output matches more electrical appliances

## Battery Package Series Connection

The high-voltage battery cabinet is composed of 3-8 battery packs connected in series. The voltage range is from 153.6V to 409.6V. Depending on the capacity of a single battery pack, the capacity of a single battery cabinet ranges from 7.5kWh to 20kWh, 15kWh to 40kWh, and 30kWh to 80kWh. A single battery cabinet can support 1-3 phase inverters.

## Battery Cabinet Parallel Connection

A high-voltage series energy storage system formed by connecting battery packs in series. In addition, 1 to 15 battery cabinets can be directly connected in parallel, and the total capacity can achieve 7.5kWh to 300kWh, 15kWh to 600kWh, 30kWh to 1200kWh. The high-voltage series system works with the battery combiner box, which can support 1 ~ 3 phase inverters

### Off Grid & Backup

High-capacity energy storage systems can be used for off-grid applications and emergency backup power. Whether it is for remote large-scale equipments or backup power for sensitive loads, CONCENPOWER can provide you with a suitable energy storage combination solution.

### Residential & Commercial

Whether it is residential or commercial, you can build it with modular battery pack. For installers, the modular design can increase or decrease the capacity during the user's use.

### Self Consumption

With the rise of electricity prices around the world, the reduction of subsidies for new energy power generation, and the generation of 'peak and valley' electricity prices, the self-consumption of new energy power generation will become the future.

## 2.5kWh Series



| Battery Package      | High Voltage Battery Package (2.5kWh, 51.2V,26Kg) |                    |                    |                    |                    |                    |
|----------------------|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| Number of Package    | 3   | 4                  | 5                  | 6                  | 7                  | 8                  |
| Usable Capacity      | 7.5kWh  | 10kWh              | 12.5kWh            | 15kWh              | 17.5kWh            | 20kWh              |
| Cont. Output Current | 100A  | 100A               | 100A               | 100A               | 100A               | 100A               |
| Peak Output Current  | 120A,1s   | 120A,1s            | 120A,1s            | 120A,1s            | 120A,1s            | 120A,1s            |
| Nominal Voltage      | 153.6V  | 204.8V             | 256V               | 307.2V             | 358.4V             | 409.6V             |
| Operating Voltage    | 120~175.2V  | 160~233.6V         | 200~292V           | 240~350.4V         | 280~408.8V         | 320~467.2V         |
| Dimensions (H/W/D)   | 840*<br>300*550mm                                 | 1020*<br>300*550mm | 1200*<br>300*550mm | 1380*<br>300*550mm | 1560*<br>300*550mm | 1740*<br>300*550mm |

|                           |   |
|---------------------------|---|
| Operating Temperature     | -10°C~50°C                                      |
| Battery Type              | Lithium iron phosphate Battery (LiFePO4)        |
| Communication             | RS485 + CAN                                     |
| Enclosure Protection Rate | IP55  |
| Round-trip Efficiency     | ≥ 95%   |
| Applications              | OFF grid (Backup) / ON Grid + OFF Grid (Backup) |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

## 5 Kwh / 10Kwh Series



| Battery Package               | High Voltage Battery Package (5kWh, 51.2V,65Kg)   |                    |                    |                    |                    |                    |
|-------------------------------|---|--------------------|--------------------|--------------------|--------------------|--------------------|
| 5Kwh Package Usable Capacity  | 15kWh   | 20kWh              | 25kWh              | 30kWh              | 35kWh              | 40kWh              |
| Dimensions (H/W/D)            | 870*<br>435*700mm                                 | 1060*<br>435*700mm | 1250*<br>435*700mm | 1440*<br>435*700mm | 1630*<br>435*700mm | 1820*<br>435*700mm |
| Battery Package               | High Voltage Battery Package (10kwh, 51.2V,135Kg) |                    |                    |                    |                    |                    |
| 10Kwh Package Usable Capacity | 30kWh   | 40kWh              | 50kWh              | 60kWh              | 70kWh              | 80kWh              |
| Dimensions (H/W/D)            | 1095*<br>435*700mm                                | 1360*<br>435*700mm | 1625*<br>435*700mm | 1890*<br>435*700mm | 2155*<br>435*700mm | 2420*<br>435*700mm |
| Cont. Output Current          | 120A  | 120A               | 120A               | 120A               | 120A               | 120A               |
| Peak Output Current           | 150A,1s   | 150A,1s            | 150A,1s            | 150A,1s            | 150A,1s            | 150A,1s            |
| Nominal Voltage               | 153.6V  | 204.8V             | 256V               | 307.2V             | 358.4V             | 409.6V             |
| Operating Voltage             | 120~175.2V  | 160~233.6V         | 200~292V           | 240~350.4V         | 280~408.8V         | 320~467.2V         |

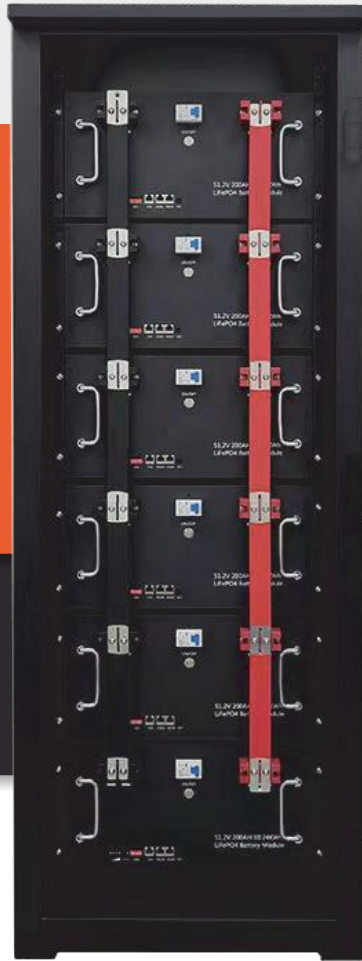
|                           |   |
|---------------------------|---|
| Operating Temperature     | -10°C~50°C                                      |
| Battery Type              | Lithium iron phosphate Battery (LiFePO4)        |
| Communication             | RS485 + CAN                                     |
| Enclosure Protection Rate | IP55  |
| Round-trip Efficiency     | ≥ 95%   |
| Applications              | OFF grid (Backup) / ON Grid + OFF Grid (Backup) |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

# Rack-mounted energy storage System

2.5kWh-900kWh energy storage system



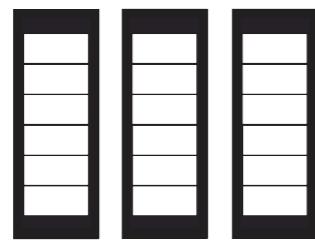
The Rack-mounted battery cabinet is composed of 1-6 battery packs connected in parallel. The voltage is stable at 51.2V. Depending on the capacity of a single battery pack, the capacity of a single battery cabinet ranges from 2.5kWh to 15kWh, 5kWh to 30kWh, and 10kWh to 60kWh. A single battery cabinet can support 1-3 phase inverters.

A Rack-mounted energy storage system formed by connecting battery packs in parallel. In addition, 1 to 15 battery cabinets can be directly connected in parallel, and the total capacity can achieve 2.5kWh to 225kWh, 5kWh to 450kWh, 10kWh to 900kWh. The low-voltage parallel system works with the battery combiner box, which can support 1-3 phase inverters



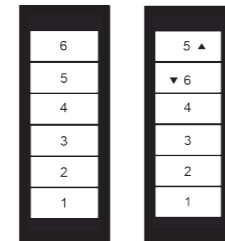
Battery Cabinet

Multiple battery package connected in series



15 x Battery Cabinet

Can support up to 15 battery cabinets in parallel connection  
Voltage Range stable at 51.2V



Change Anytime

The capacity of the battery cabinets can be freely combined according to the actual situation



51.2V Output

51.2V output matches more 1-3 phase high power inverter

## Battery Package Parallel Connection

The Rack-mounted battery cabinet is composed of 1-6 battery packs connected in parallel. The voltage is stable at 51.2V. Depending on the capacity of a single battery pack, the capacity of a single battery cabinet ranges from 2.5kWh to 15kWh, 5kWh to 30kWh, and 10kWh to 60kWh. A single battery cabinet can support 1-3 phase inverters.

## Battery Cabinet Parallel Connection

A Rack-mounted parallel energy storage system formed by connecting battery packs in parallel. In addition, 1 to 15 battery cabinets can be directly connected in parallel, and the total capacity can achieve 2.5kWh to 225kWh, 5kWh to 450kWh, 10kWh to 900kWh. The low-voltage parallel system works with the battery combiner box, which can support 1-3 phase inverters

### Off Grid & Backup

High-capacity energy storage systems can be used for off-grid applications and emergency backup power. Whether it is for remote large-scale equipments or backup power for sensitive loads, CONCENPOWER can provide you with a suitable energy storage combination solution.

### Residential Use

The product configuration is more suitable for the field of home energy storage, and the stable system voltage of 51.2V can match more home inverters.

### Self Consumption

With the rise of electricity prices around the world, the reduction of subsidies for new energy power generation, and the generation of 'peak and valley' electricity prices, the self-consumption of new energy power generation will become the future.

## 2.5kWh Parallel

| Battery Package      | Battery Package (2.5kWh, 51.2V,26Kg) |                   |                   |                    |                    |                    |
|----------------------|--------------------------------------|-------------------|-------------------|--------------------|--------------------|--------------------|
| Number of Package    | 1                                    | 2                 | 3                 | 4                  | 5                  | 6                  |
| Usable Capacity      | 2.5kWh                               | 5kWh              | 7.5kWh            | 10kWh              | 12.5kWh            | 15kWh              |
| Cont. Output Current | 52A                                  | 104A              | 104A              | 104A               | 104A               | 104A               |
| Peak Output Current  | 180A,1s                              | 180A,1s           | 180A,1s           | 180A,1s            | 180A,1s            | 180A,1s            |
| Nominal Voltage      | 51.2V                                | 51.2V             | 51.2V             | 51.2V              | 51.2V              | 51.2V              |
| Operating Voltage    | 40-58.4V                             | 40-58.4V          | 40-58.4V          | 40-58.4V           | 40-58.4V           | 40-58.4V           |
| Dimensions (H/W/D)   | 480*<br>300*550mm                    | 660*<br>300*550mm | 840*<br>300*550mm | 1020*<br>300*550mm | 1200*<br>300*550mm | 1380*<br>300*550mm |

|                           |   |
|---------------------------|---|
| Operating Temperature     | -10°C~50°C                                      |
| Battery Type              | Lithium iron phosphate Battery (LiFePO4)        |
| Communication             | RS485 + CAN                                     |
| Enclosure Protection Rate | IP55  |
| Round-trip Efficiency     | ≥ 95%   |
| Applications              | OFF grid (Backup) / ON Grid + OFF Grid (Backup) |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

## 5 kWh / 10kWh Parallel

| Battery Package               | Battery Package (5kWh, 51.2V,65Kg)   |                   |                    |                    |                    |                    |
|-------------------------------|--------------------------------------|-------------------|--------------------|--------------------|--------------------|--------------------|
| 5Kwh Package Usable Capacity  | 5kWh                                 | 10kWh             | 15kWh              | 20kWh              | 25kWh              | 30kWh              |
| Dimensions (H/W/D)            | 490*<br>435*650mm                    | 680*<br>435*650mm | 870*<br>435*650mm  | 1060*<br>435*650mm | 1250*<br>435*650mm | 1440*<br>435*650mm |
| Battery Package               | Battery Package (10kWh, 51.2V,135Kg) |                   |                    |                    |                    |                    |
| 10Kwh Package Usable Capacity | 10kWh                                | 20kWh             | 30kWh              | 40kWh              | 50kWh              | 60kWh              |
| Dimensions (H/W/D)            | 565*<br>435*700mm                    | 820*<br>435*700mm | 1095*<br>435*700mm | 1360*<br>435*700mm | 1625*<br>435*700mm | 1890*<br>435*700mm |
| Cont. Output Current          | 52A                                  | 104A              | 104A               | 104A               | 104A               | 104A               |
| Peak Output Current           | 180A,1s                              | 180A,1s           | 180A,1s            | 180A,1s            | 180A,1s            | 180A,1s            |
| Nominal Voltage               | 51.2V                                | 51.2V             | 51.2V              | 51.2V              | 51.2V              | 51.2V              |
| Operating Voltage             | 40-58.4V                             | 40-58.4V          | 40-58.4V           | 40-58.4V           | 40-58.4V           | 40-58.4V           |

|                           |   |
|---------------------------|---|
| Operating Temperature     | -10°C~50°C                                      |
| Battery Type              | Lithium iron phosphate Battery (LiFePO4)        |
| Communication             | RS485 + CAN                                     |
| Enclosure Protection Rate | IP55  |
| Round-trip Efficiency     | ≥ 95%   |
| Applications              | OFF grid (Backup) / ON Grid + OFF Grid (Backup) |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

# Wall Mounting ESS system

Parallel connection energy storage system

**4.8kWh / 9.6kWh  
Parallel System**

**Wall Mounting**

The wall design is adopted to reduce the position occupied during installation.

**Support Any  
Various Type Inverter**



**Villas**



**Nomadic area**



**Farm**



**Household**

## Product Parameters

| Model                                       | CON-WM4.8P  | CON-WM9.6P      |
|---|---|-----------------|
| Battery Voltage Range                       | 40V-58.4V   | 40-58.4V        |
| Battery Capacity Range                      | 100AH   | 200AH           |
| Maximum Charging/Discharging Current        | 50A/100A  | 100A/200A       |
| Battery Classification                      | LiFePO4   |                 |
| USB   | RS485/RS232/CAN(optional)   |                 |
| Battery Charging and Discharging Efficiency | ≥92%  |                 |
| Maximum power                               | 5.12KW  | 10.24KW         |
| Cooling Mode                                | Natural cooling   |                 |
| Dimension(H//L)                             | 568*165*453 mm  | 1000*100*770 mm |
| Weight                                      | 50kg  | 78kg            |
| Monitoring                                  | YES   |                 |
| PACK Cycle Life                             | 6000times >80% primary capacity<br>(25°C\$2°C, 0.2C charge /0.2C discharge) |                 |
| Design Life                                 | 10 Years  |                 |
| Number in parallel                          | 16P   |                 |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application





# Inverter+

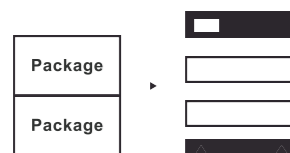
## Energy Storage System

Stacked energy storage systems can be connected in series and parallel according to customer needs. The capacity of a single battery pack is divided into 2.5kwh, 5kwh, 10kwh, customers can choose according to their own needs

# Stacked All in one Inverter + 51.2V Energy storage system

Build-in inverter 5 kWh-80 kWh  
51.2 V parallel energy storage system

The system adopts a stacked battery pack and inverter design, and distributors can freely combine the energy storage system capacity and inverter power according to the local market to cater to the local market. The battery capacity of this product is 2.5kWh, 5kWh, 10kWh, and can be matched with a 3-10kW inverter.



#### Modular System Design

Reducing transportation costs, users can freely combine according to their needs



#### Stacking Design

Reduce the product's requirements for the installation environment and reduce the difficulty of installation; increase the flexibility of system movement.



#### Four-corner Horizontal Pads

Avoid the occurrence of electrical conduction caused by the direct contact of the metal shell with the ground, which will cause unnecessary losses; in addition, the adjustable foot design is more helpful for moisture-proofing the product and reducing the need for ground flatness.

## Multiple Protection System

### · BMU energy storage system centralized management protection system

Real-time monitoring of the operation of each battery unit, and centralized management of each battery unit. It has protection for the overall system overcurrent, overvoltage, overload, temperature, etc. In case of special circumstances, the system can be adjusted and managed in time.

### ·BMS battery unit management system

Protect the battery unit, and monitor the battery voltage, temperature, and various operating parameters of the battery unit in real time. While transmitting the running information to the BMU, the battery unit is also individually protected.

### ·Air switch protection

In order to increase the safety of the overall system, in addition to the one-button start function, each module of the system is equipped with an air switch. Avoid system overcurrent and overvoltage during installation and use.

## Zero-voltage Charging Start

This system supports zero-voltage charging start function. That is to avoid the situation that the system cannot be activated and operated after long-term transportation or storage. After the system has not been used for a long time, it only needs to be charged to activate the system.

## Build-in Industrial Frequency Invertet

This product contains a build-in 5kw power frequency inverter, which has strong overload capacity and stable operation. No additional configuration of inverter is required. The integrated combination design eliminates the need for users to reserve additional inverter installation space, avoids complicated system connection lines, and increases the safety factor.

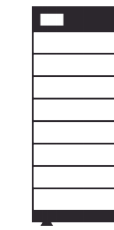
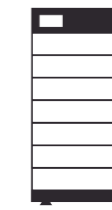
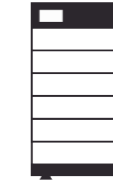
# 2.5 kWh 1-4 Battery Pack



| Battery Package      | Battery Package (2.5kWh, 51.2V,26Kg, J550*300*180mm) |               |               |                |
|----------------------|--|---------------|---------------|----------------|
| Number of Package    | 1  | 2             | 3             | 4              |
| Usable Capacity      | 2.5kWh   | 5kWh          | 7.5kWh        | 10kWh          |
| Cont. Output Current | 100A   | 100A          | 100A          | 100A           |
| Peak Output Current  | 150A   | 150A          | 150A          | 150A           |
| Nominal Voltage      | 51.2V  | 51.2V         | 51.2V         | 51.2V          |
| Operating Voltage    | 40~8.4V  | 40~58.4V      | 40~58.4V      | 40~58.4V       |
| Szie (L/W/H)         | 550*300*480mm  | 550*300*660mm | 550*300*840mm | 550*300*1020mm |
| Weight (Kg)          | 58   | 84            | 110           | 136            |

|                             |   |
|-----------------------------|---|
| Operating Temperature       | -10°C~50°C                              |
| Charging Temperature        | Above 0 °C                              |
| Battery Type                | Lithium iron phosphate battery(LiFePO4) |
| Communication               | RS485,CAN                               |
| Enclosure Protection Rating | IP55                                    |
| Life Cycle                  | 3000 times                              |
| Warranty                    | 5 Years                                 |

# 2.5 kWh 5 - 8 Battery Pack



| Battery Package      | Battery Package (2.5kWh, 51.2V,26Kg, 550*300*180mm) |                |                |                |
|----------------------|---|----------------|----------------|----------------|
| Number of Package    | 5   | 6              | 7              | 8              |
| Usable Capacity      | 12.5kWh   | 15kWh          | 17.5kWh        | 20kWh          |
| Cont. Output Current | 100A  | 100A           | 100A           | 100A           |
| Peak Output Current  | 150A  | 150A           | 150A           | 150A           |
| Nominal Voltage      | 51.2V   | 51.2V          | 51.2V          | 51.2V          |
| Operating Voltage    | 40~58.4V  | 40~58.4V       | 40~58.4V       | 40~58.4V       |
| Szie (L/W/H)         | 550*300*1200mm                                      | 550*300*1380mm | 550*300*1560mm | 550*300*1740mm |
| Weight (Kg)          | 162   | 188            | 214            | 240            |

## Inverter Parameter

|                           |                          |
|---------------------------|--------------------------|
| Inverter Type             | Power Frequency Inverter |
| Rate Output Power         | 3000W                    |
| AC Input/Output Voltage   | 160-260V / 80~130V       |
| AC Input/Output Frequency | 50 / 60Hz                |
| Solar Controller          | Build-in MPPT *2 Road    |
| Solar Input Current       | MAX. 60A*2               |
| Solar Input Voltage       | 60-180V                  |

# 5 kWh 1-4 Battery Pack



| Battery Package      | Battery Package (5.12kWh, 51.2V,45Kg, 700*435*190mm) |               |               |                |
|----------------------|--|---------------|---------------|----------------|
| Number of Package    | 1  | 2             | 3             | 4              |
| Usable Capacity      | 5.12kWh  | 10.24kWh      | 15.36kWh      | 20.48kWh       |
| Cont. Output Current | 100A   | 100A          | 100A          | 100A           |
| Peak Output Current  | 150A   | 150A          | 150A          | 150A           |
| Nominal Voltage      | 51.2V  | 51.2V         | 51.2V         | 51.2V          |
| Operating Voltage    | 40~58.4V   | 40~58.4V      | 40~58.4V      | 40~58.4V       |
| Szie (L/W/H)         | 700*435*490mm  | 700*435*680mm | 700*435*870mm | 700*435*1060mm |
| Weight (Kg)          | 95   | 143           | 192           | 240            |

# 5 kWh 5 - 8 Battery Pack



| Battery Package      | Battery Package (5.12kWh, 51.2V,45Kg, 700*435*190mm) |                |                |                |
|----------------------|--|----------------|----------------|----------------|
| Number of Package    | 5  | 6              | 7              | 8              |
| Usable Capacity      | 25.6kWh  | 30.72kWh       | 35.84kWh       | 40.96kWh       |
| Cont. Output Current | 100A   | 100A           | 100A           | 100A           |
| Peak Output Current  | 150A   | 150A           | 150A           | 150A           |
| Nominal Voltage      | 51.2V  | 51.2V          | 51.2V          | 51.2V          |
| Operating Voltage    | 40~58.4V   | 40~58.4V       | 40~58.4V       | 40~58.4V       |
| Szie (L/W/H)         | 700*435*1250mm                                       | 700*435*1440mm | 700*435*1630mm | 700*435*1820mm |
| Weight (Kg)          | 289  | 338            | 387            | 436            |

|                             |   |
|-----------------------------|---|
| Operating Temperature       | -10°C~50°C                              |
| Charging Temperature        | Above 0 °C                              |
| Battery Type                | Lithium iron phosphate battery(LiFePO4) |
| Communication               | RS485,CAN                               |
| Enclosure Protection Rating | IP55                                    |
| Life Cycle                  | 3000 times                              |
| Warranty                    | 5 Years                                 |

## Inverter Parameter

|                           |                          |
|---------------------------|--------------------------|
| Inverter Type             | Power Frequency Inverter |
| Rate Output Power         | 5000W/10000W             |
| AC Input/Output Voltage   | 160-260V / 80~130V       |
| AC Input/Output Frequency | 50 / 60Hz                |
| Solar Controller          | Build-in MPPT *2 Road    |
| Solar Input Current       | MAX. 80A*2               |
| Solar Input Voltage       | 60-180V                  |

# 10 kWh 1-4 Battery Pack



| Battery Package      | Battery Package (10.24kWh, 51.2V,83Kg, 700*435*265mm) |               |                |                |
|----------------------|---|---------------|----------------|----------------|
| Number of Package    | 1   | 2             | 3              | 4              |
| Usable Capacity      | 10kWh   | 20kWh         | 30kWh          | 40kWh          |
| Cont. Output Current | 200A  | 200A          | 200A           | 200A           |
| Peak Output Current  | 250A  | 250A          | 250A           | 250A           |
| Nominal Voltage      | 51.2V   | 51.2V         | 51.2V          | 51.2V          |
| Operating Voltage    | 40~58.4V  | 40~58.4V      | 40~58.4V       | 40~58.4V       |
| Szie (L/W/H)         | 700*435*565mm   | 700*435*830mm | 700*435*1095mm | 700*435*1010mm |
| Weight (Kg)          | 141   | 224           | 307            | 390            |

Operating Temperature -10°C~50°C

Charging Temperature Above 0 °C

Battery Type Lithium iron phosphate battery(LiFePO4)

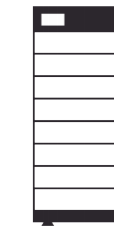
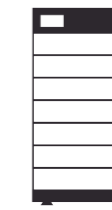
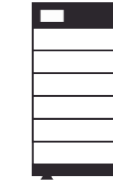
Communication RS485,CAN

Enclosure Protection Rating IP55

Life Cycle 3000 times

Warranty 5 Years

# 10 kWh 5 - 8 Battery Pack



| Battery Package      | Battery Package (10.24kWh, 51.2V,83Kg, 700*435*265mm) |                |                |                |
|----------------------|---|----------------|----------------|----------------|
| Number of Package    | 5   | 6              | 7              | 8              |
| Usable Capacity      | 50kWh   | 60kWh          | 70kWh          | 80kWh          |
| Cont. Output Current | 200A  | 200A           | 200A           | 200A           |
| Peak Output Current  | 250A  | 250A           | 250A           | 250A           |
| Nominal Voltage      | 51.2V   | 51.2V          | 51.2V          | 51.2V          |
| Operating Voltage    | 40~58.4V  | 40~58.4V       | 40~58.4V       | 40~58.4V       |
| Szie (L/W/H)         | 700*435*1625mm  | 700*435*1890mm | 700*435*2115mm | 700*435*2420mm |
| Weight (Kg)          | 473   | 556            | 639            | 722            |

## Inverter Parameter

|                           |                          |
|---------------------------|--------------------------|
| Inverter Type             | Power Frequency Inverter |
| Rate Output Power         | 5000W /10000W            |
| AC Input/Output Voltage   | 160-260V / 80~130V       |
| AC Input/Output Frequency | 50 / 60Hz                |
| Solar Controller          | Build-in MPPT *2 Road    |
| Solar Input Current       | MAX. 80A*2               |
| Solar Input Voltage       | 60-180V                  |

# Integrative Power Bank

3kW-10kW all in one energy storage

An integrated power bank is a compact, self-contained, enclosed energy storage device that integrates a battery system and an inverter. It directly outputs AC power for use by electrical equipment. Depending on the model, the capacitance is 5kWh to 10kWh, the AC output power is 3kW to 10kW, and the output voltage is 110V/220V. This product can support customer customization.



## DUAL INPUT

- Support AC utility and solar dual input mode, convenient for different situations
- Quickly switch working modes to ensure stable power supply



## FELIXIBILITY

- Grounding design, installation does not require a load-bearing wall
- Wheel design, move the product easily



## COMPLETE PROTECTION

- More than 5 protection modes, ensure smooth operation of the product
- Multiple protection, protect your safety while protecting the product



## EASY INSTALLATION

- Compact and light, single person installation
- Integrated design, no need for multi-line links, simple operation

## Off-Grid & Backup

High-capacity energy storage systems can be used for off-grid applications and emergency backup power. In some areas where there is a shortage of electricity, this product can be used as a backup power supply. Whether it is home or work, CONCENPOWER can provide you with continuous power.

## Economical & Environmentally Friendly

With the rise of electricity prices, the global energy crisis and the changes in the global environment, new energy power generation can be environmentally friendly while being economical.

## LFP Batteries

The product uses Lithium Iron Phosphate (LFP) batteries to ensure maximum safety, life cycle and power. Strong stability allows the product to be used in a wide range of temperatures and regions.

### Integrative & convenient

With the design of the inverter + energy storage system, the user does not need redundant wiring, which simplifies the installation steps. In addition, users do not need to consider the choice of inverters, CONCENPOWER provides users with more suitable one-stop energy storage services

### 5ms Mode Switch Time

Shorter working mode switching, when the battery is exhausted, the system can automatically switch modes within 5ms, and the electrical appliances at the user end will not be affected in any way, protecting the life of the electrical appliances.

### Wider Application

This series of products reduces the requirements for the installation environment and is more in line with the diversified market. There is no need to configure an additional inverter, and there is no need to choose a load-bearing wall for installation.

# Energy Storage System

| General Information  |                                |         |          |          |          |           |
|----------------------|--------------------------------|---------|----------|----------|----------|-----------|
| Product No.          | CON-H53                        | CON-H55 | CON-H510 | CON-H103 | CON-H105 | CON-H1010 |
| Product size         | 600*300*1000 mm                |         |          |          |          |           |
| Product weight       | 80kg                           | 91kg    | 130kg    | 120kg    | 128kg    | 130kg     |
| Package size         | 695*395*1150 mm                |         |          |          |          |           |
| Product gross weight | 106kg                          | 117kg   | 156kg    | 146kg    | 154kg    | 156kg     |
| Working temperature  | 0 ~ 40 °C                      |         |          |          |          |           |
| Working altitude     | less than 2000m                |         |          |          |          |           |
| Battery information  |                                |         |          |          |          |           |
| Battery type         | Lithium iron phosphate battery |         |          |          |          |           |
| Battery rate voltage | 51.2V                          |         |          |          |          |           |
| Battery capacity     | 5000 Wh                        |         |          | 10000 Wh |          |           |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge & 1.5C discharge

2: Refer to battery warranty letter for conditional application

# Inverter Parameter

| AC output information               |                                   |      |      |     |      |      |
|-------------------------------------|-----------------------------------|------|------|-----|------|------|
| Inverter type                       | Pure sine wave frequency inverter |      |      |     |      |      |
| Inverter rate power                 | 3kW                               | 5kW  | 10kW | 3kW | 5kW  | 10kW |
| Inverter MAX. power                 | 6kW                               | 10kW | 20kW | 6kW | 10kW | 20kW |
| AC output voltage                   | 80-130V / 160-240V                |      |      |     |      |      |
| AC output frequency                 | 50Hz - 60Hz intelligent monitor   |      |      |     |      |      |
| Product input information           |                                   |      |      |     |      |      |
| AC input voltage                    | 80-130V / 160-240V                |      |      |     |      |      |
| AC input frequency                  | 50Hz - 60Hz intelligent monitor   |      |      |     |      |      |
| Solar controller                    | Build-in MPPT                     |      |      |     |      |      |
| Solar input voltage                 | 72V                               |      |      |     |      |      |
| Solar input current                 | 60A / 80A                         |      |      |     |      |      |
| Protection system                   |                                   |      |      |     |      |      |
| Over / under voltage protection     | YES                               |      |      |     |      |      |
| Over current protection             | YES                               |      |      |     |      |      |
| Over / under temperature protection | YES                               |      |      |     |      |      |
| DC breaker                          | YES                               |      |      |     |      |      |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge & 1.5C discharge

2: Refer to battery warranty letter for conditional application

# High Voltage ESS System + Hybrid Inverter

Build-in Hybrid 1/3 phase inverter  
High Voltage energy storage system

This system consists of 1 to 2 high-voltage battery banks connected in series and paired with a high-voltage hybrid inverter. Battery system customers can have two specifications: 4.8kwh and 9.6kwh. Customers can combine and form the required energy storage system according to their own needs.

The inverter matched with this series of products is a hybrid inverter, which can fully realize grid-connected, off-grid, UPS and other functions. In addition, there are 1phase output and 3phase output to choose from.

96%

**MAX.BATTERY EFFICIENCY 96%**

**MAX.SYSTEM EFFICIENCY 98%**

98%

## TWICE PV INPUT

Up to 2 times PV input, 50% kW for Loads and 50% for Battery charging.

## GRID FORMING FUNCTION

Found fixed grid for the operation of on-grid inverters during power outage.

## INVERTER PARALLEL FUNCTION

Supports a maximum of 6 inverters in parallel, with sharing one group of batteries.

## BATTERY SHARING

Support battery sharing of energy storage system, for balancing SOC equalization

## GENERATOR CONTROL

Automatic generator control with auto-start and state feedback. Local EMS+-Cloud+APP control interface.

## LOAD COMPATIBILITY

Load monitoring accuracy of 30 W. Battery discharging threshold of 10 W. UPS-level control, compatible with inductive loads.



## HIGH PERFORMANCE

200% PV over management;  
200% backup overload capacity,  
50A battery current;  
Max. efficiency 98%,  
Battery efficiency 96%;  
Load monitoring accuracy 10W  
Battery discharging threshold 10W;



## HIGH RELIABILITY

UPS level redundant protection against backup load breakdown;  
Three-level firmware  
two-level hardware battery protection;  
Multiple temperature monitoring delicate thermal management;  
Max. 6 Inverters in parallel to increase power availability.



## HIGH INTELLIGENCE

Internal EMS optimizes home energy supply automatically;  
PV production forecast;  
Built-in electric power service, FCAS, VPP  
Online monitoring, online diagnosis, online service.



# 3 Phase Inverter 4.8kwh battery pack

|                               | CON-INV-3PH8K                          | CON-INV-3PH10K  | CON-INV-3PH12K |
|-------------------------------|--|-----------------|----------------|
| <b>PV INPUT</b>               |  |                 |                |
| Max. PV Input Power           | 16kW                                   | 20kW            | 22.5kW         |
| Max. PV Input Voltage         |  | 1100V           |                |
| MPPT Range                    |  | 140~950V        |                |
| Max. Input Current            |  | 16A / 16A / 16A |                |
| Max. Short Circuit Current    |  | 24A / 24A / 24A |                |
| MPPT Trackers                 |  | 3               |                |
| Strings Per MPPT Tracker      |  | 1 / 1 / 1       |                |
| <b>AC PORT</b>                |  |                 |                |
| Rated Grid Output Power       | 8kVA                                   | 10kVA           | 12kVA          |
| Max. Grid Input Power         | 16kVA                                  | 20kVA           | 22.5kVA        |
| Rated Grid / Backup Voltage   | 220/380Vac,230/400Vac, 3/N/PE          |                 |                |
| Rated Grid / Backup Frequency | 50/60Hz                                |                 |                |
| Surge Backup Power            | 16kVA / 16kW                           | 20kVA/20kW      | 24kVA/24kW     |
| Rated Backup Power            | 8kVA                                   | 10kVA           | 12kVA          |
| THDi                          |  | <3%             |                |
| THDv                          | <3% (Linear Load)/<5%(Non-linear Load) |                 |                |
| DCV                           |  | <100mV          |                |
| Crest Ratio                   |  | 3:1             |                |
| Transfer Time                 |  | <10ms           |                |

| <b>EFFICIENCY</b>           |  |
|-----------------------------|--|
| Max. Efficiency             | 98.4%  |
| Max. Round Trip Efficiency  | 96%  |
| <b>GENERAL DATA</b>         |  |
| Operating Temperature Range | -20~60°C   |
| Topology                    | Transformerless  |
| Dimensions (W*H*D)          | 590×416×205mm  |
| Weight                      | 25kg   |
| Load Monitoring             | Meter / CT / Backup box  |
| External Communication      | RS-485 / WIFI / 4G / Ethernet  |
| Grid Regulation             | VDE-AR-N 4105:2018, G98, G99, C10/11:2021, NTS 631, RD647:2020<br>UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1 |
| Safety Regulation           | IEC/EN 62109-1&2, IEC/EN 62477-1:2012  |
| <b>BATTERT INFORMATION</b>  |  |
| Battery Type                | LFP  |
| Battery Capacity            | 4.8kWh   |
| Usable Capacity             | 4.6kWh   |
| Depth of Discharge (DoD)    | 95%  |
| Nominal Battery Voltage     | 96V  |
| Operating Voltage Range     | 90~108V  |
| Max. Charging Current       | 50A  |
| Max. Discharging Current    | 50A  |
| Operating Temperature Range | Charge:0<T<50°C / Discharge:-10<T<50°C   |
| Cycle Lifetime              | 8000   |
| Series                      | 1~6 in series  |
| Dimensions (W*H*D)          | 590x430x205 mm   |

| Weight                     | 39.2kg   |
|----------------------------|--|
| Communication              | CAN / RS-485 (Optional)  |
| Safety Regulation          | IEC 62619:2017, IEC 62040:2017   |
| Transportation             | UN38.3   |
| SYSTEM GENERAL INFORMATION |  |
| Operating Altitude         | ≤3000m (>3000m Derating)   |
| Relative Humidity          | 0~95% (No Condensing)  |
| Protection Degree          | IP65   |
| Cooling                    | Natural Convection   |
| Noise                      | <30dB  |
| Warranty                   | 5 years / 10 years   |
| EMC                        | IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4 |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

# 1 Phase Inverter 4.8kwh /9.6kwh battery pack

|                               | CON-INV-1PH4K                            | CON-INV-1PH5K   | CON-INV-1PH6K |
|-------------------------------|--|-----------------|---------------|
| <b>PV INPUT</b>               |  |                 |               |
| Max. PV Input Power           | 8kW                                      | 10kW            | 12kW          |
| Max. PV Input Voltage         |  | 1100V           |               |
| MPPT Range                    |  | 140~950V        |               |
| Max. Input Current            |  | 16A / 16A / 16A |               |
| Max. Short Circuit Current    |  | 24A / 24A / 24A |               |
| MPPT Trackers                 |  | 3               |               |
| Strings Per MPPT Tracker      |  | 1 / 1 / 1       |               |
| <b>AC PORT</b>                |  |                 |               |
| Rated Grid Output Power       | 4kVA                                     | 5kVA            | 6kVA          |
| Max. Grid Input Power         | 8kVA                                     | 10kVA           | 12kVA         |
| Rated Grid / Backup Voltage   | 220/380Vac, 230/400Vac, 3/N/PE           |                 |               |
| Rated Grid / Backup Frequency | 50 / 60Hz                                |                 |               |
| Surge Backup Power            | 8kVA / 8kW                               | 10kVA / 10kW    | 12kVA / 12kW  |
| Rated Backup Power            | 4kVA                                     | 5kVA            | 6kVA          |
| THDi                          | <3%                                      |                 |               |
| THDv                          | <3% (Linear Load) / <5%(Non-linear Load) |                 |               |
| DCV                           | <100mV                                   |                 |               |
| Crest Ratio                   | 3:1                                      |                 |               |
| Transfer Time                 | <10ms                                    |                 |               |

### EFFICIENCY

|                            |     |     |       |
|----------------------------|-----|-----|-------|
| Max. Efficiency            | 98% | 98% | 98.2% |
| Max. Round Trip Efficiency |     | 96% |       |

### GENERAL DATA

|                             |  |  |  |
|-----------------------------|--|--|--|
| Operating Temperature Range | -20~60 °C  |  |  |
| Topology                    | Transformerless  |  |  |
| Dimensions (W*H*D)          | 590×416×205mm  |  |  |
| Weight                      | 25kg   |  |  |
| Load Monitoring             | Meter / CT / Backup box  |  |  |
| External Communication      | RS-485 / WIFI / 4G / Ethernet  |  |  |
| Grid Regulation             | VDE-AR-N 4105:2018, G98, G99, C10/11:2021, NTS 631, RD647:2020<br>UNE 217002:2020, CEI 0-21, VDE 0126-1-1, NRS 097-2-1, AS/NZS 4777.2:2020, EN 50549-1 |  |  |
| Safety Regulation           | IEC/EN 62109-1&2, IEC/EN 62477-1:2012  |  |  |

### BATTERY INFORMATION

|                             |   |  |                 |
|-----------------------------|---|--|-----------------|
| Battery Type                | LFP                                     |  |                 |
| Battery Capacity            | 4.8kWh                                  |  | 9.6kWh          |
| Usable Capacity             | 4.6kWh                                  |  | 9.1kWh          |
| Depth of Discharge (DoD)    | 95%                                     |  |                 |
| Nominal Battery Voltage     | 96V                                     |  |                 |
| Operating Voltage Range     | 90~108V                                 |  |                 |
| Max. Charging Current       | 50A                                     |  |                 |
| Max. Discharging Current    | 50A                                     |  |                 |
| Operating Temperature Range | Charge:0<T<50 °C /Discharge:-10<T<50 °C |  |                 |
| Cycle Lifetime              | 8000                                    |  |                 |
| Series                      | 1~6 in Series                           |  | 1~6 in Parallel |
| Dimensions (W*H*D)          | 590x430x205 mm                          |  | 590x730x205 mm  |

|                   |                                |  |      |
|-------------------|--------------------------------|--|------|
| Weight            | 39.2kg                         |  | 86kg |
| Communication     | CAN / RS-485 (Optional)        |  |      |
| Safety Regulation | IEC 62619:2017, IEC 62040:2017 |  |      |
| Transportation    | UN38.3                         |  |      |

### SYSTEM GENERAL INFORMATION

|                    |  |  |  |
|--------------------|--|--|--|
| Operating Altitude | ≤3000m (>3000m Derating)   |  |  |
| Relative Humidity  | 0~95% (No Condensing)  |  |  |
| Protection Degree  | IP65   |  |  |
| Cooling            | Natural Convection   |  |  |
| Noise              | <30dB  |  |  |
| Warranty           | 5 years / 10 years   |  |  |
| EMC                | IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4 |  |  |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

A woman and a child are sitting on the back of a dark-colored car with its trunk open. They are looking out at a vast mountain range under a clear blue sky. The child is pointing towards the mountains. The scene is set in a scenic, outdoor environment with some trees in the foreground.

# Portable

## Power Station

The product is designed with a metal shell / light plastic shell, which is more suitable for a variety of use environments. Built-in inverter and photovoltaic controller. The product supports dual input mode. Meet the needs of users in different environments.

# Portable Power Station

500W - 2000W Portable Energy Storage system



The portable power station is specially designed for customers with mobile power needs. The product power ranges from 500W to 2000W, which can meet the needs of different electrical appliances. Customers can use this product to charge mobile electronic devices such as mobile phones and laptops, which solves the problem of power shut down of mobile devices during the journey; secondly, for customers traveling outdoors, this product can drive high-power electrical appliances, such as Electric rice cooker, kettle and other heating equipment



## DUAL INPUT

- Support AC utility and solar dual input mode, convenient for different situations
- Quickly switch working modes to ensure stable power supply



## STRONG SHELL

- Solve the shortcomings of traditional plastic products fragile
- Not afraid of heavy pressure, durable



## COMPLETE PROTECTION

- More than 5 protection modes, ensure smooth operation of the product
- Multiple protection, protect your safety while protecting the product



## SEPARATED DC + AC DESIGN

- The AC part and the DC part are designed on both sides of the chassis, which not only increases the safety factor of the user, but also improves the product life

## Travel Friendly

During travel, it can effectively charge various travel equipment and mobile electronic equipment. Improve the travel experience.

## Emergency Power Supply

In an emergency, the product can be used as an emergency power supply, and the multi-function charging port can match different types of equipment.

## Multiple Protection

Multiple protection, such as under-voltage protection, over-voltage protection, etc. make the product safe, reliable, and have a long service life. While protecting the safety of consumers, it also improves the service life of products and electrical appliances.

## 2 Charge Mode

Support 2 charging modes, photovoltaic charging and mains charger charging. Ensure that the environment can operate normally under different usage environments.

## Multiple Electrical Port

In order to adapt to the use of different electronic equipment, the product is equipped with a variety of AC output ports, equipped with various electric port, USB and Type-C, it can charge various mobile devices.

## Attractive and Durable

The metal shell has a high level of protection and is attractive and durable.

The surface treatment technology of the plastic sprayed shell is anti-corrosion and wear-resistant, and is more suitable for various environments.

# Energy Storage System



| General Information   |                                 |          |                |          |
|-----------------------|---------------------------------|----------|----------------|----------|
| Product No.           | IBO-55                          | IBO-1010 | IBW-2020       | IBW-2025 |
| Product size          | 310*300*200 mm                  |          | 310*460*280 mm |          |
| Working temperature   | 0 ~ 40 °C                       |          |                |          |
| Working altitude      | less than 2000m                 |          |                |          |
| Battery information   |                                 |          |                |          |
| Battery type          | Lithium iron phosphate battery  |          |                |          |
| Battery rate voltage  | 12.8V                           | 25.6V    | 25.6V          | 25.6V    |
| Battery capacity      | 614 Wh                          | 1075Wh   | 1843 Wh        | 2560 Wh  |
| AC output information |                                 |          |                |          |
| Inverter type         | Pure sine wave inverter         |          |                |          |
| Inverter rate power   | 500W                            | 1000W    | 2000W          | 2000W    |
| Inverter MAX. power   | 1000W                           | 2000W    | 4000W          | 4000W    |
| AC output voltage     | 80-130V / 160-240V              |          |                |          |
| AC output frequency   | 50Hz - 60Hz intelligent monitor |          |                |          |

# Product Information

| Product input information           |                                 |     |     |     |
|-------------------------------------|---------------------------------|-----|-----|-----|
| AC input voltage                    | 80-130V / 160-240V              |     |     |     |
| AC input frequency                  | 50Hz - 60Hz intelligent monitor |     |     |     |
| Solar controller                    | Build-in PWM                    |     |     |     |
| Solar input voltage                 | 24V                             | 36V | 36V | 36V |
| Solar input current                 | 15A                             |     |     |     |
| Protection system                   |                                 |     |     |     |
| Over / under voltage protection     | YES                             |     |     |     |
| Over current protection             | YES                             |     |     |     |
| Over / under temperature protection | YES                             |     |     |     |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge & 1.5C discharge

2: Refer to battery warranty letter for conditional application

# DC Portable Power Station

768Wh - 1280Wh DC Energy Storage system



The DC portable power bank uses high-efficiency photovoltaic panels for charging, which effectively solves the inconvenience caused by no charging input outdoors. This outdoor power bank can be effectively connected to DC power equipments, such as DC refrigerators, fans and charge mobile phones and other electronic devices to charge. It is widely used in camping, self-driving tours, yurts and other places.



**Balance protection**



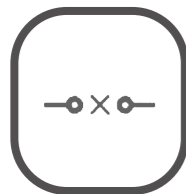
**Low-voltage protection**



**Charge protection**



**Temperature protection**



**Short-circuit protection**



**High-voltage protection**



**Over-current protection**



**Overload protection**

## Product Information

### Product Parameter

| Product model               | CON-BL60  | CON-BL80         | CON-BL100        |
|-----------------------------|---|------------------|------------------|
| Battery capacity            | 12.8v 60AH 786Wh  | 12.8v 60AH 786Wh | 12.8v 60AH 786Wh |
| Battery type                | Lithium iron phosphate battery  |                  |                  |
| Protection system           | Overcharge protection, over-discharge protection, over-current protection<br>over-temperature protection, short-circuit protection, over-voltage protection |                  |                  |
| DC output                   | 12V 15A 2*USB   |                  |                  |
| Power indicator             | Voltmeter indicator light   |                  |                  |
| Matching lighting equipment | 12v 2w LED  |                  |                  |
| Input                       | Original charger or 50w solar panel<br>(it is recommended to use original solar panel 50w*2)  |                  |                  |
| Product weight              | 10.2kg  | 12.4kg           | 14kg             |
| Product size                | 31*36*9cm   |                  |                  |
| Product size                | 31*39*9cm (including terminal)  |                  |                  |
| Lighting system (optional)  | 2*5w LED bulbs (including 5m wire)  |                  |                  |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge& 1.5C discharge

2: Refer to battery warranty letter for conditional application

# Iron Shell DC Battery Bank

768Wh - 1280Wh DC Battery Bank

This series product has a waterproof plug and an anti-collision metal shell, and the inverter is built into the sub-power supply, which effectively saves product space and is more convenient to carry and store. It is widely used in fishing, cross-country, yurts and other travel.

In addition, the DC battery bank can also be equipped with an external inverter according to the customer's own needs, and has high flexibility.



## WIDER RANGE OF USE

- Not only can be used as a separate battery system, but also can be used as accessories for new energy power generation systems. For example, the power supply system of various DC appliances such as photovoltaic refrigerators and photovoltaic small appliances.



## FREE COMBINATION

- Customers can freely match inverters with different powers according to their own needs. In this way, if the customer needs to replace the inverter later, or the inverter is damaged, there is no need to dismantle the machine for maintenance, and the corresponding accessories can be directly replaced.



## EASY CUSTOMIZATION

- Customers can provide manufacturers with corresponding technical parameters according to their actual needs. The high flexibility and adaptability of this product can provide supporting services for different users.

## Energy Storage System

| Product Paramete             |  |                |                |
|------------------------------|--|----------------|----------------|
| Model                        | CON-BL60A  | CON-BL80A      | CON-BL100A     |
| Battery capacity             | 60AH (786Wh)   | 80AH (1024Wh)  | 100AH (1280Wh) |
| Battery Voltage              | 12.8V  | 12.8V          | 12.8V          |
| Battery type                 | lithium iron phosphate battery   |                |                |
| Protection system            | overcharge protection, overdischarge protection, overcurrent protection, overtemperature protection, short-circuit protection, over voltage protection |                |                |
| Power indicator              | voltmeter indicator  |                |                |
| Input                        | 100w Solar panel(recommended to use the original solar panel) or the original optional charger   |                |                |
| Product weight               | 10kg   | 12.8kg         | 15kg           |
| Product volume               | 33.5*23*12cm   | 33.5*29.5*12cm | 40*29.5*12cm   |
| External inverter (optional) | 300w 500w 700w   |                |                |

## Inverter

| Product Paramete    |                             |      |      |
|---------------------|-----------------------------|------|------|
| Inverter type       | Pure sine wave              |      |      |
| Rated output power  | 300W                        | 500W | 700W |
| AC output voltage   | 220V                        |      |      |
| AC output frequency | 50Hz                        |      |      |
| AC output plug      | 1*50Hz multifunctional plug |      |      |





# Industrial

## Energy Storage System

This series of products is specially designed for industrial new energy power generation and energy storage, and is mainly used in projects of "lithium batteries instead of lead-acid batteries", photovoltaic farm power generation and energy storage projects, comprehensive new energy power generation and energy storage, and signal tower base station projects.

# Industry Energy storage system

## BOX-type Cabinet



A single battery cabinet is composed of 8 battery packs connected in series, with a voltage of 409.6V. A single battery cabinet can support a 3-phase inverter. In addition, 1 to 16 battery cabinets can be directly connected in parallel, and the capacity of a single cabinet can reach 80 kWh to 114 kWh.

The flexible and diverse product combination of the industrial and commercial energy storage system can meet the different energy storage needs in the industrial and commercial fields. Support the use of mechanical equipment in large factories and commercial places.



### Automatic switching of two-way mode

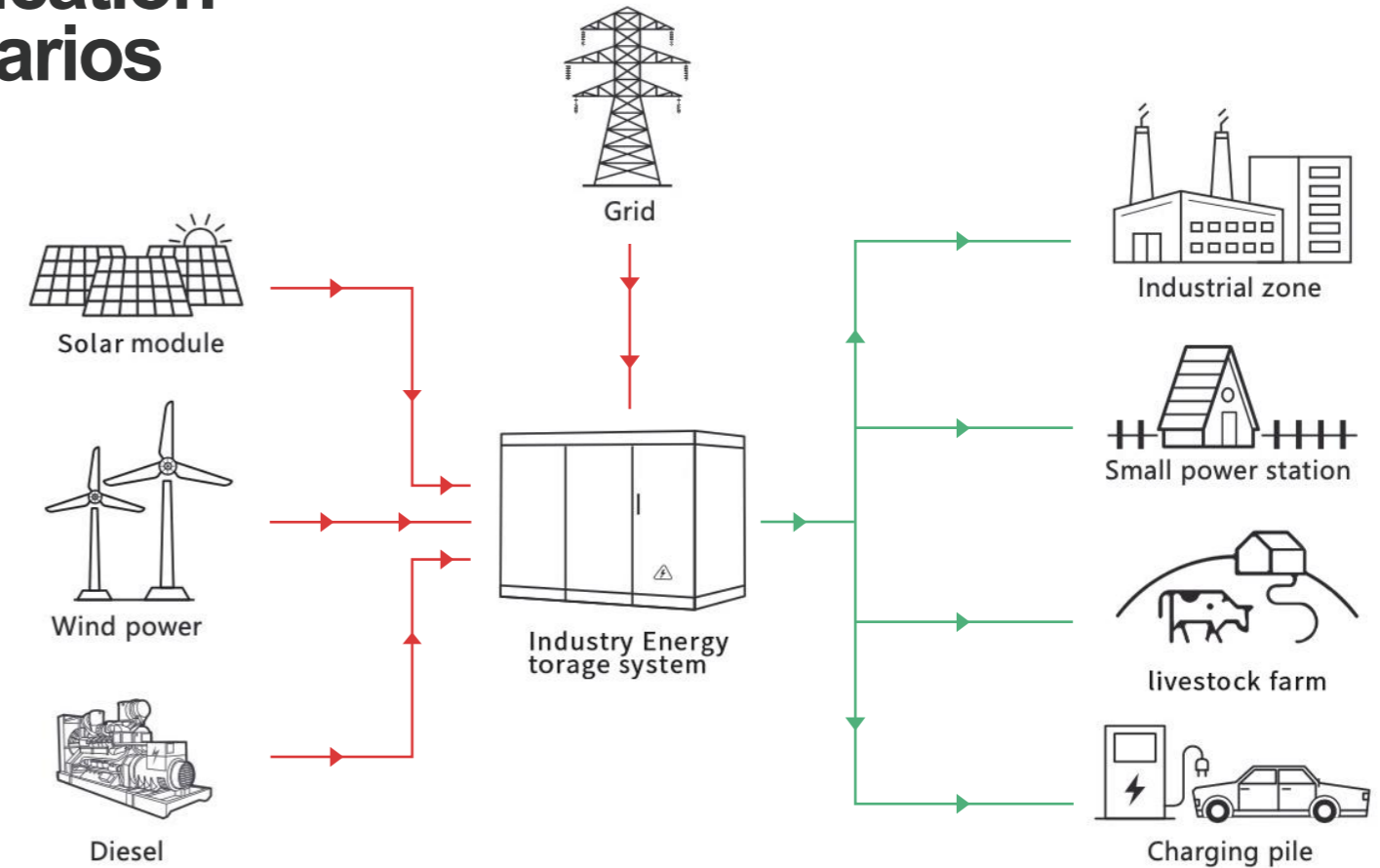
- Automatically detect the operation of the system. When the battery is exhausted, it automatically switches to AC mains mode.
- Built-in timer, you can set the operating time of different working modes independently.



### Multiple input modes

- Suitable for hybrid energy storage such as Solar, diesel, and wind power
- Off-grid energy storage

## Application scenarios



### Support the use of high-power mechanical equipment

1. The use of industrial frequency inverter can support the use of high-power industrial and commercial equipment.
2. Strong overload capacity, can withstand the instantaneous high current release when large equipment is started.

### Large-capacity grid energy storage system

1. Expandable energy storage solution.
2. Customized design based on customer requirements.
3. Applicable to large-capacity energy storage system occasions.

# Parameters

| Model                          | CIC20  | CIC30 | CIC40 | CIC50 | CIC60 | CIC80 |
|--------------------------------|--|-------|-------|-------|-------|-------|
| <b>Inverter parameters</b>     |  |       |       |       |       |       |
| Inverter power                 | 20KVA  | 30KVA | 40KVA | 50KVA | 60KVA | 80KVA |
| Inverter type                  | Power frequency inverter   |       |       |       |       |       |
| Phase                          | 3 phase+N+G  |       |       |       |       |       |
| AC input range                 | 380Vac ± 20%   |       |       |       |       |       |
| Frequency range                | 45Hz ~ 55Hz  |       |       |       |       |       |
| Output voltage                 | Battery mode: 380Vac ± 3%; AC mode: 380Vac ± 20%                                 |       |       |       |       |       |
| Frequency range (ACs mode)     | 45Hz ~ 55Hz  |       |       |       |       |       |
| Frequency range (Battery mode) | 50Hz ± 0.1Hz   |       |       |       |       |       |
| Overload (AC mode)             | AC mode (100% ~ 110%: 10 minutes; 110% ~ 130%: 1 minute; >130%: 1 second)        |       |       |       |       |       |
| Overload (Battery mode)        | Battery mode (100% ~ 110%: 30 seconds; 110% ~ 130%: 10 seconds; >130%: 1 second) |       |       |       |       |       |
| Current peak ratio             | 3: 1 max   |       |       |       |       |       |
| Total harmonic distortion      | Linear load <3%; non-linear load   |       |       |       |       |       |
| Balanced load voltage          | < ± 1%   |       |       |       |       |       |
| Unbalanced load voltage        | < ± 5%   |       |       |       |       |       |
| Switching time                 | <10ms  |       |       |       |       |       |
| Waveform                       | Pure sine wave   |       |       |       |       |       |
| Maximum efficiency             | 85%  |       |       |       |       |       |
| Noise                          | <58dB ( 1m distance )  |       |       |       |       |       |
| Load monitoring                | Yes  |       |       |       |       |       |
| <b>PV input MPPT</b>           |  |       |       |       |       |       |
| System voltage                 | 384V   |       |       |       |       |       |
| Rated current                  | 100A   |       |       |       |       |       |
| Charging method                | MPPT automatic maximum power point tracking                                      |       |       |       |       |       |
| Dynamic response recovery time | ≤10s   |       |       |       |       |       |

|                            |                    |
|----------------------------|--------------------|
| Static power consumption   | ≤500us             |
| Overall efficiency         | ≤2W                |
| Voltage range              | ≥96.5%             |
| MPPT working voltage range | 384V: DC450V–750V; |
| Maximum PV input power     | 36kW               |

## Battery parameters

|                           |   |
|---------------------------|---|
| Battery type              | Lithium iron phosphate Battery(LiFePO4) |
| Battery cabinet capacity  | 114.4kWh ( Single battery cabinet )     |
| Battery nominal voltage   | 409.6V                                  |
| Working voltage range     | 320 ~ 467.2V                            |
| Continuous output current | 120A                                    |
| Peak output current       | 150A,1s                                 |
| Working temperature range | -10°C ~ 50°C                            |

## General data

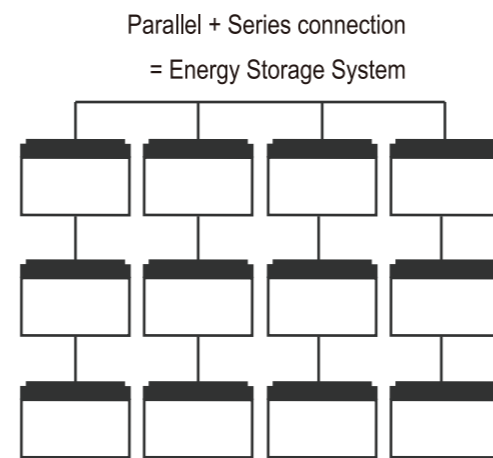
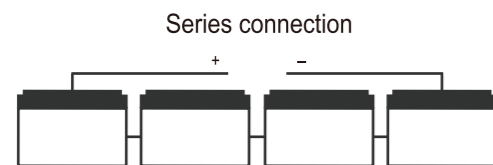
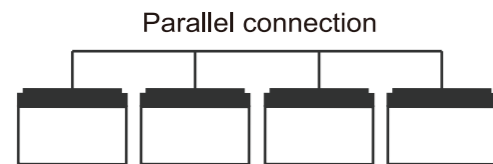
| Model                     | CIC20   | CIC30    | CIC40    | CIC50    | CIC60    | CIC80    |
|---------------------------|---|----------|----------|----------|----------|----------|
| Working temperature range | 0 ~ 40°C  |          |          |          |          |          |
| Working altitude          | <95% and no condensation  |          |          |          |          |          |
| Working relative humidity | <1000m (power decreases by 1% for every 100m increase, up to 5000m)   |          |          |          |          |          |
| External communication    | RS485 + CAN   |          |          |          |          |          |
| Grid regulation           | Yes   |          |          |          |          |          |
| Safety supervision        | Yes   |          |          |          |          |          |
| Waterproof device         | Yes   |          |          |          |          |          |
| Surge protection device   | Yes   |          |          |          |          |          |
| Protection level          | IP65  |          |          |          |          |          |
| Protection                | Input polarity reverse protection; output polarity reverse protection; high voltage protection; low voltage protection; short circuit protection; over temperature protection |          |          |          |          |          |
| Cooling device            | Air-cooled  |          |          |          |          |          |
| Fire protection device    | Aerosol   |          |          |          |          |          |
| Application area          | Off-grid (backup)   |          |          |          |          |          |
| Dimensions ( L*W*H )      | 2437*1000*1824cm  |          |          |          |          |          |
| Weight                    | 1616.1Kg  | 1676.1Kg | 1726.1Kg | 1776.1Kg | 1896.1Kg | 1976.1Kg |

# Replacement LiFePO4 to Lead-acid

LiFePO4 battery replaces lead-acid battery for series and parallel connection

This product can directly replace traditional lead-acid batteries for series and parallel use. While retaining the characteristics of lead-acid batteries that can be freely connected and combined, it integrates the high discharge depth of lithium iron phosphate batteries.

Widely applicable to various lead-acid battery application environments, such as golf carts, electric low-speed vehicles, sightseeing vehicles, solar lamps, solar monitoring, etc.



## Energy Storage System

### Product Parameter

| Battery Type                | Lithium iron phosphate Battery (LiFePO4) |
|-----------------------------|--|
| Battery Pack Capacity       | 1331 Wh                                  |
| Cont. Output Current        | 100A                                     |
| Max Output Current          | 120A                                     |
| Cont. Input Current         | 100A                                     |
| Max. Input Current          | 120A                                     |
| Battery Pack Voltage        | 12.8V                                    |
| Operating Voltage           | 10V~14.4V                                |
| Operating Temperature       | -10°C~50°C                               |
| Enclosure Protection Rating | ≥ 95%                                    |
| Weight                      | 10.5Kg                                   |
| Dimensions (H/W/D)          | 212mm**330mm*175mm                       |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 1C charge & 1.5C discharge

# Communication Base Station

## Rack-mounted energy storage system

This product is designed for large-scale photovoltaic power generation, communication signal base stations, and large-scale factory backup power. With the self-developed management system, it can detect the operation status of the energy storage system in each location in real time.

The product supports customized services according to the application scenario and actual situation. You only need to provide the corresponding parameters, and we can provide the product. In addition, we can also provide the design of the overall plan.

### CUSTOMIZATION

Design

Design your product in the most cost effective way possible.

Develop

Develop your working prototype for mass production.

Create

Manufacture your product to the quality and timeline you need.

## Case Parameter

30KW/61.44kWh for base station

Application Picture



Battery Type

Lithium iron phosphate Battery (LiFePO4)

Battery Pack Capacity

3.2V 100Ah

Cont. Output Current

250A

System Rate Voltage

614.4 Vdc

System Working Voltage

480V~700.8 Vdc

Charging /Discharging Rate

≤ 0.5C

DOD

90%

Temperature Control

Industrial Air Conditional

Operating Temperature

-20°C ~ +55°C

Protection Level

IP54

Communication

RS 485 / RJ485

Fire Protection

Aerosol

Weight

1t

Size

1300mm \* 820mm \* 2300mm

# Wall-mounted Rack-mounted Energy storage system

## 51.2V Energy Storage Pack

### Safety

More the 5+protection system

### Optimal Electricity Cost

Long cycle life & excellent performance

### Compact Design (3U in Height)

Module design

### Easy Installation & Scale Up

Multiple to be parallel setting on software

### Hight Compatibility

Compatible with most of brands inverter



### SAFETY

- Excellent high temperature performance
- Use lithium iron phosphate battery, high safety performance



### CYCLE LIFE

- Excellent performance, module design
- Long cycle life, up to 6000 times of use



### CONVERSION EFFICIENCY

- High energy density and conversion efficiency
- Multiple devices can be set in parallel



### BMS BATTERY MANAGEMENT SYSTEM

- Adopt high-performance BMS battery management system
- Compatible with most brands of inverters

## RACK-MOUNTED

Rack-mounted energy storage batteries can be used for industrial energy storage, can be used with inverters of different specifications, can also be used with UPS or PCS, can be used as a backup power supply, can be started immediately when the city power is interrupted provide continuous power supply, ensure the normal operation of the data center, help enterprises reduce electricity costs and improve power quality.

## WALL-MOUNTED

Wall-mounted energy storage batteries can be used for home energy storage, and can support inverters of various specifications. It can be used as a home emergency power supply. When the city power is cutoff, it can provide emergency power to ensure the continuity of home electricity use.

### Parallel connection

If the power stored in a single battery pack is limited and cannot meet the power demand, the system can be expanded by connecting multiple low-voltage energy storage batteries in parallel, supporting up to 8 batteries in parallel to meet large power consumption requirements.

### Wide compatibility

Compatible with most hybrid inverters, the application scenarios are not limited to home energy storage, but also widely used in communication base stations, UPS, computer rooms and other scenarios.

### Customization

Design and customize products according to different customer needs and local infrastructure construction to meet customer needs to the greatest extent.

# Product Parameter



|   |   |
|---|---|
| Model                                     | NP51100A1 Pover Lite                          |
| Cell Type                                 | LiFePO4                                       |
| Net Weight                                | 43kg  |
| Dimension(LengthxwidthxHeight)            | 440*530*132mm                                 |
| Waterproof Rate                           | IP20  |
| Calendar Life                             | 10 years                                      |
| Nominal Current(Recommended)              | 50A(0.5C)                                     |
| Nominal Energy                            | 5.12kWh                                       |
| Discharge Depth                           | 90%   |
| Nominal Voltage                           | 51.2V   |
| Working Voltage Range                     | 48V-57.6V                                     |
| Designed Life-span                        | 6000 Cycles                                   |
| Max Continuous Discharging Current (Cell) | 100A(1C)                                      |
| Working Temperature Range                 | 0℃~50℃  |
| Communication Protocol                    | CAN/RS485/RS232 / Dry Contact                 |
| Certificate                               | TUV/IEC 62619/I=CE-IEC 61000 IEC 62040/UN38.3 |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 0.5C charge& 1C discharge

2: Refer to battery warranty letter for conditional application

# Product Parameter



|                                      |  |
|--------------------------------------|--|
| Nominal Voltage                      | 51.2V(16S )  |
| Nominal Capacity                     | 100Ah/200Ah  |
| Working Voltage Range                | 37.5V~54.7V (16S)  |
| Working Current Range                | 40V~58.4V (16S)  |
| Standard Charging Current            | 0.5C   |
| Maximum Charging Current             | 1C   |
| Standard Discharging Current         | 0.5C   |
| Maximum Discharging Current          | 1C   |
| Maximum Cut-off Voltage for Charging | 58.4V(16S)   |
| End-off Current                      | 0.05C  |
| End-off Voltage                      | 40V(16S)   |
| PACK Cycle Life                      | 6000 times ≥80% primarycapacity (25°C±2°C 0.2C charge/0.2Cdischarge) |
| Battery System Shell Material        | Black Q235   |
| Design Life                          | 10 years   |
| Parallel Function                    | A maximum of 64 batteries can beconnected in parallel                |
| Charging Current limited Function    | 10A 15A 20A  |
| Communication Mode                   | RS232, RS485, CAN  |
| Working Temperature(°C)              | Charge 0~ 55°c, Discharge-20~+60°C                                   |
| Storage Temperature(°C)              | Recommended temperature0~+30°C                                       |

1: Test conditions: 25 °C, 100 % depth of discharge (DOD), 0.5C charge& 1C discharge

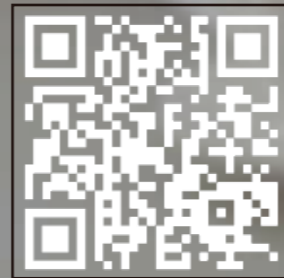
2: Refer to battery warranty letter for conditional application

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Make Impossible to Possible

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