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*Make life full of hope*

# SOLAR ENERGY STORAGE SOLUTIONS

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*Africa & Asia Version*



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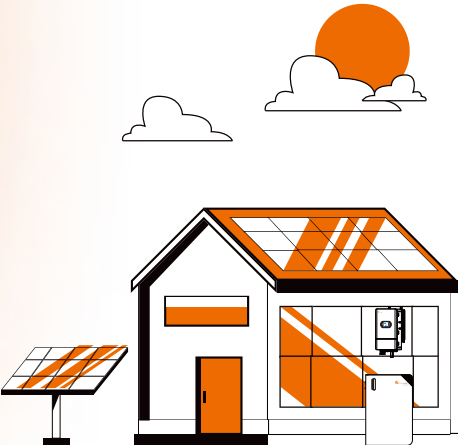


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Digital Version  
of Catalog

Version 2025-9-25



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# SOLAR INVERTER

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## Series

### Off-grid High-frequency

AC 230V-----11/12

### Hybrid Solar Inverter

Low-voltage -----13/18

High-voltage -----19/22

# Off-grid High-frequency Solar Inverter

## IVCM Series AC-220V

### Features

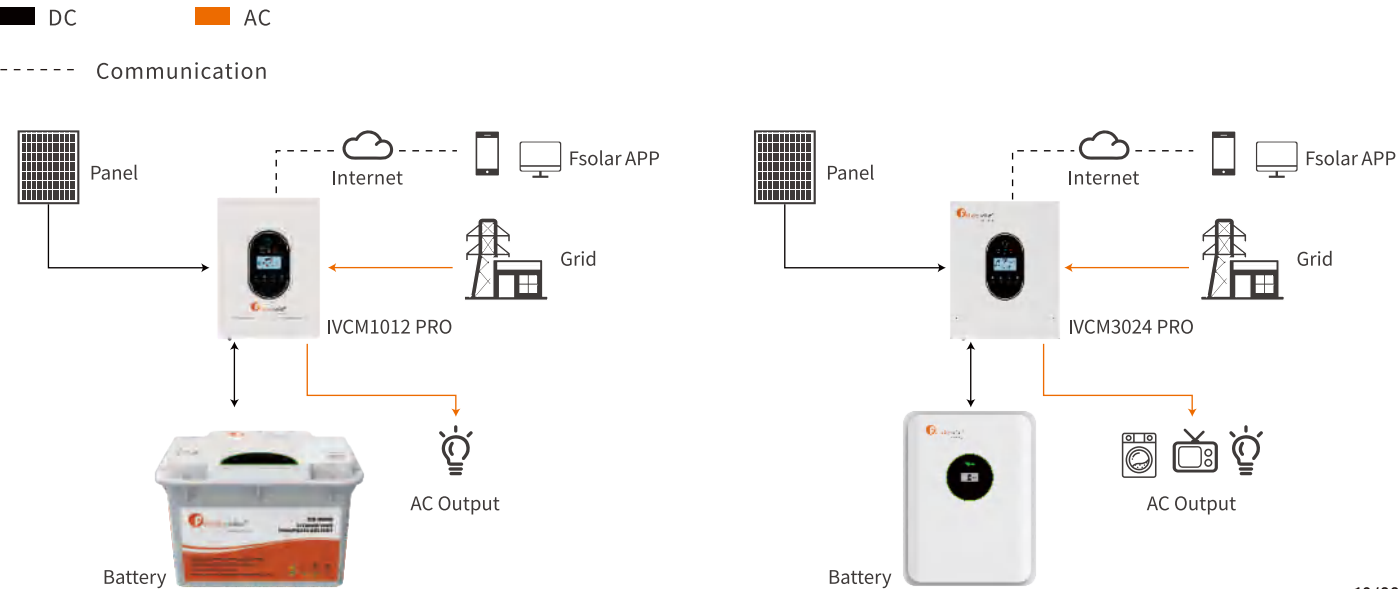
- Depending on the model, Turbo mode can be enabled in APL mode to use up to three times the maximum rated load.
- Support parameters setting via LCD screen (input voltage/charging current/charge mode).
- Overload/ over temperature/ short circuit protection.
- Compatible with mains voltage or generator power.
- Built-in MPPT solar charge controller.
- Auto restart while AC is recovering.
- Cold start function.



IVCM1012/2024 PRO    IVCM3024 PRO

| Model                              | IVCM1012 PRO                      | IVCM2024 PRO     | IVCM3024 PRO     |
|------------------------------------|-----------------------------------|------------------|------------------|
| Line Mode Specifications           |                                   |                  |                  |
| Rated Output Power                 | 1000VA/1000W                      | 2000VA/2000W     | 3000VA/3000W     |
| Instant Output Power (Turbo Mode)  | 3000W                             | 4000W            | 4500W            |
| Nominal DC Input Voltage           | 12V                               | 24V              | 24V              |
| Input Voltage Wave form            | Sinusoidal (Utility or Generator) |                  |                  |
| Nominal Input Voltage              | 230Vac                            |                  |                  |
| Nominal Input Frequency            | 50Hz / 60Hz(Auto Detection)       |                  |                  |
| Max. Bypass Overload Current       | 10A                               | 15A              | 30A              |
| Max. Inverter/Rectifier Current    | 5A/1000W                          | 10A/2000W        | 15A/3000W        |
| Utility Charge Mode Specifications |                                   |                  |                  |
| Nominal Input Voltage              | 230Vac                            |                  |                  |
| Input Voltage Range                | 90-280Vac                         |                  |                  |
| Nominal Output Voltage             | Dependent on Battery Type         |                  |                  |
| Max. Charge Current                | 20A                               | 20A              | 30A              |
| Charge Current Regulation          | 10-20A (Adj 10A)                  | 20-30A (Adj 10A) | 20-30A (Adj 10A) |
| Over Charge Protection             | Yes                               |                  |                  |
| Solar Charging & Grid Charging     |                                   |                  |                  |
| Max. PV Open Circuit Voltage       | 105V                              | 145V             | 145V             |
| Operating Voltage Range            | 15-90V                            | 30-120V          | 30-120V          |
| Max. Input Power                   | 800W                              | 1600W            | 1600W            |
| Max. Solar Charging Current        | 60A                               |                  |                  |
| Max. Charging Current(PV+Grid)     | 80A                               | 80A              | 90A              |
| Max. Input Current                 | 35A                               |                  |                  |
| General Specifications             |                                   |                  |                  |
| Operating Temperature              | -10°C~55°C                        |                  |                  |
| Range Storage Temperature          | -15°C~60°C                        |                  |                  |
| Net Weight(KG)                     | 5.5KG                             | 6.5KG            | 6.5KG            |
| Product Size (D*W*H)               | 340x248x107MM                     | 340x248x107MM    | 340x290x124MM    |
| Package Dimension (D*W*H)          | 422x330x181MM                     | 422x330x181MM    | 422x372x198MM    |

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.





# Off-grid High-frequency Solar Inverter

IVEM Series **AC-230V**

## Features

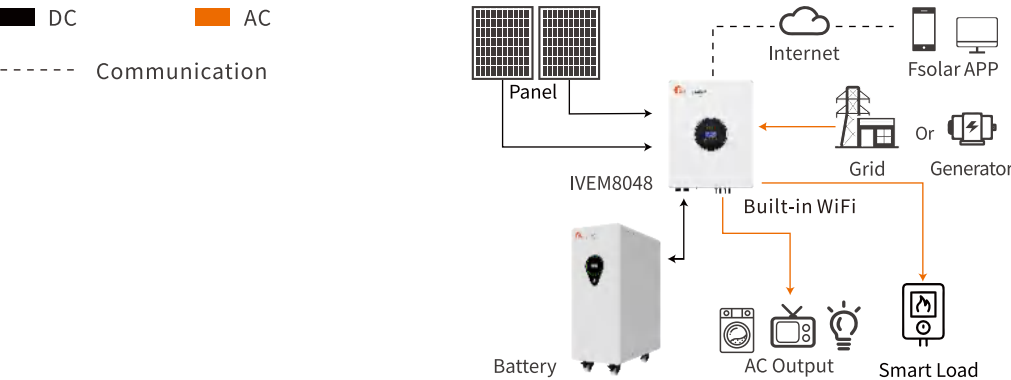
-  Built-in WiFi for mobile monitoring (APP is required).
-  Support parameters setting via LCD screen (input voltage/charging current/charge mode).
-  Supports up to 6 units in parallel (Battery must be connected).
-  Equipped with dual-output (Single machine mode).
-  The second path of the AC output can set the output time.
-  Overload/ over temperature/ short circuit protection.
-  Compatible with mains voltage or generator power.
-  Built-in MPPT solar charge controller with 2 strings of solar input.
-  Lithium battery activation function.
-  Inverter running without battery.
-  Auto restart while AC is recovering.
-  Cold start function.



IVEM8048

| Model                                            | IVEM8048                                                                                                                        |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Line Mode Specifications                         |                                                                                                                                 |
| Rated Output Power(VA)                           | 8000VA                                                                                                                          |
| Rated Output Power(W)                            | 8000W                                                                                                                           |
| Nominal DC Input Voltage                         | 48V                                                                                                                             |
| Nominal Input Voltage                            | 230Vac                                                                                                                          |
| Max. AC Input Voltage                            | 280Vac                                                                                                                          |
| Nominal Input Frequency                          | 50Hz / 60Hz (Auto Detection)                                                                                                    |
| Efficiency(Line Mode)                            | >95% (Rated R Load, Battery Full Charged)                                                                                       |
| Pass Through Without Battery                     | Yes                                                                                                                             |
| Utility Charge Mode Specifications               |                                                                                                                                 |
| Input Voltage Range                              | 230Vac                                                                                                                          |
| Over Charge Protection                           | 90-280Vac                                                                                                                       |
| Max. Charge Current                              | 150A                                                                                                                            |
| Over Charge Protection                           | Yes                                                                                                                             |
| Solar Charging & Grid Charging                   |                                                                                                                                 |
| Max.PV Open Circuit Voltage                      | 500V                                                                                                                            |
| PV Voltage Working Range                         | 90V-450V                                                                                                                        |
| Max. Input Power                                 | 10000W(5000W for single PV)                                                                                                     |
| Max. Solar Charging Current                      | 150A                                                                                                                            |
| Max. Charging Current(PV+Grid)                   | 150A                                                                                                                            |
| Max. Input Current                               | 20A X 2(MAX 40A)                                                                                                                |
| Min. Startup Voltage                             | 100V                                                                                                                            |
| Number of MPP Trackers / Strings Per MPP Tracker | 2/1                                                                                                                             |
| Inverter Mode Specifications                     |                                                                                                                                 |
| Output Voltage Waveform                          | Pure sine wave                                                                                                                  |
| Nominal Output Voltage                           | 230Vac+5%                                                                                                                       |
| Nominal Output Frequency(Hz)                     | 50±0.3Hz/60Hz±0.3Hz(Adjustable)                                                                                                 |
| Parallel Capability                              | Yes,up to 6 units                                                                                                               |
| Peak Efficiency                                  | 94.5%                                                                                                                           |
| Over-Load Protection(SMPS load)                  | 5s@≥150% load; 10s @105% ~150% load                                                                                             |
| Surge Rating                                     | 2* rated power for 5s                                                                                                           |
| Capable of Starting Electric                     | Yes                                                                                                                             |
| Output Short Circuit Protection                  | Yes                                                                                                                             |
| General Specifications                           |                                                                                                                                 |
| Operating Temperature                            | -10°C~50°C                                                                                                                      |
| Range Storage Temperature                        | -15°C~60°C                                                                                                                      |
| Net Weight(KG)                                   | 23.7KG                                                                                                                          |
| Gross Weight(KG)                                 | 27.4KG                                                                                                                          |
| Product Dimension(MM)                            | 607*464*141MM                                                                                                                   |
| Package Dimension(MM)                            | 712*582*259MM                                                                                                                   |
| Certification                                    | EN IEC 61000-6-2: 2019/EN IEC 61000-6-4: 2019/EN 61000-3-12: 2011/<br>EN IEC 61000-3-11: 2019/EN 62109-1: 2010/EN 62109-2: 2011 |

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# Off-grid High-frequency Solar Inverter

## IVEM Series AC-230V



### Features

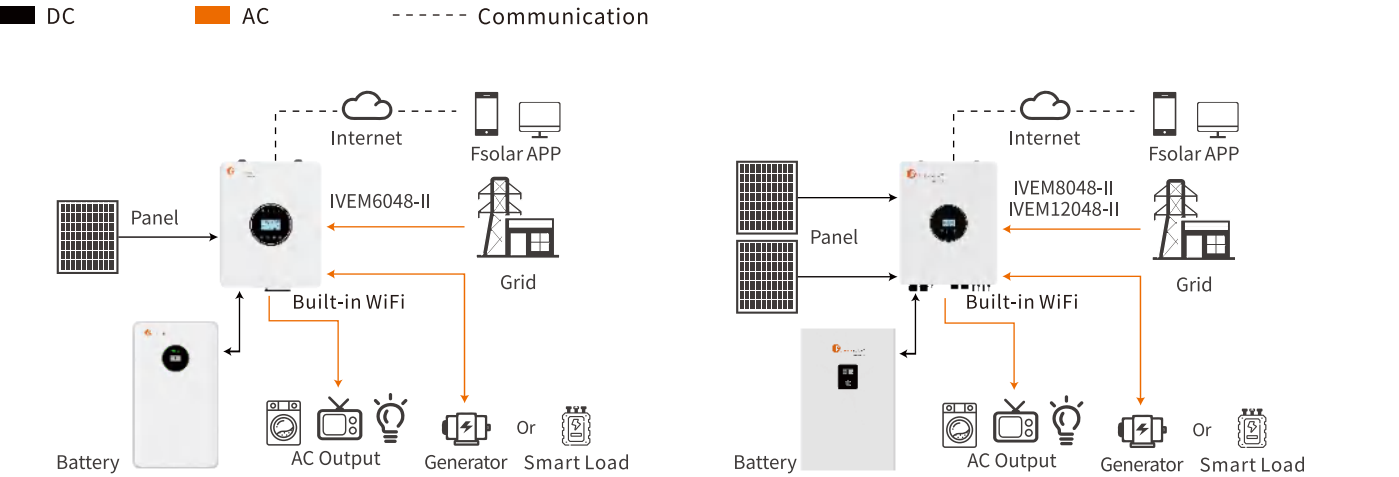
- Built-in WiFi for mobile monitoring (APP is required).
- Support parameters setting via LCD screen (input voltage/charging current/charge mode).
- Supports up to 12 units in parallel (6K) / 6 units (8K & 12K) in parallel (Battery must be connected).
- Supports generator input port reconfiguration to smart output port with customizable duration.
- Overload/ over temperature/ short circuit protection.
- Compatible with mains voltage or generator power.
- Built-in MPPT solar charge controller.
- Lithium battery activation function.
- Inverter running without battery.
- Auto restart while AC is recovering.
- Cold start function.



IVEM6048-II / 8048-II / 12048-II

| Model                                                                        | IVEM6048-II                     | IVEM8048-II                     | IVEM12048-II                    |
|------------------------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Line Mode Specifications                                                     |                                 |                                 |                                 |
| Rated Output Power(VA)                                                       | 6000VA                          | 8000VA                          | 12000VA                         |
| Rated Output Power(W)                                                        | 6000W                           | 8000W                           | 12000W                          |
| Nominal DC Input Voltage                                                     | 48V                             | 48V                             | 48V                             |
| Nominal Input Voltage                                                        | 230Vac                          |                                 |                                 |
| Max. AC Input Voltage                                                        | 280Vac                          |                                 |                                 |
| Nominal Input Frequency                                                      | 50Hz / 60Hz (Auto Detection)    |                                 |                                 |
| Pass Through Without Battery                                                 | Yes                             |                                 |                                 |
| Utility Charging Mode Specifications /Generator Charging Mode Specinications |                                 |                                 |                                 |
| Nominal Input Voltage                                                        | 230Vac                          |                                 |                                 |
| Input Voltage Range                                                          | 90-280Vac                       |                                 |                                 |
| Max. Charge Current                                                          | 120A                            | 150A                            | 240A                            |
| Charge Current Regulation                                                    | 10-120A (Adjustable Unit is 1A) | 10-150A (Adjustable Unit is 1A) | 10-240A (Adjustable Unit is 1A) |
| Over Charge Protection                                                       | Yes                             |                                 |                                 |
| Solar Charging & Grid Charging or GEN Charging                               |                                 |                                 |                                 |
| Max.PV Open Circuit Voltage                                                  | 500V                            |                                 |                                 |
| PV Voltage Working Range                                                     | 90V-450V                        |                                 |                                 |
| Max. Input Power                                                             | 7500W                           | 10000W(5000W for single PV)     | 15000W(7500W for Single PV)     |
| Max. Solar Charging Current                                                  | 120A                            | 150A                            | 240A                            |
| Max. Charging Current(PV+Grid or GEN)                                        | 120A                            | 150A                            | 240A                            |
| Max. Input Current                                                           | 27A                             | 20A X 2(MAX 40A)                | 27A X 2(MAX 54A)                |
| Min. Startup Voltage                                                         | 95V                             | 100V                            | 100V                            |
| Inverter Mode Specifications                                                 |                                 |                                 |                                 |
| Output Voltage Waveform                                                      | Pure Sine Wave                  |                                 |                                 |
| Nominal Output Voltage                                                       | 230Vac+5%                       |                                 |                                 |
| Nominal Output Frequency(Hz)                                                 | 50±0.3Hz/60Hz±0.3Hz(Adjustable) |                                 |                                 |
| Parallel Capability                                                          | Yes, Up to 12 Units             | Yes, Up to 6 Units              | Yes, Up to 6 Units              |
| Capable of Starting Electric                                                 | Yes                             |                                 |                                 |
| Output Short Circuit Protection                                              | Yes                             |                                 |                                 |
| General Specifications                                                       |                                 |                                 |                                 |
| Operating Temperature                                                        | -10°C~-50°C                     |                                 |                                 |
| Range Storage Temperature                                                    | -15°C~60°C                      |                                 |                                 |
| Net Weight(KG)                                                               | 12.5KG                          | 23.7KG                          | 26.8KG                          |
| Product Dimension(MM)                                                        | 420*335*142MM                   | 607*464*141MM                   | 634*476*141MM                   |
| Package Dimension(MM)                                                        | 512*417*216MM                   | 712*582*259MM                   | 726*594*258MM                   |
| Certification                                                                | CE-EMC、IEC 62109-1/2            | CE-EMC、IEC 62109-1/2            | CE-EMC、IEC 62109-1/2            |

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# Hybrid Solar Inverter

## IVGM Series Low-voltage | Single Phase

### Features

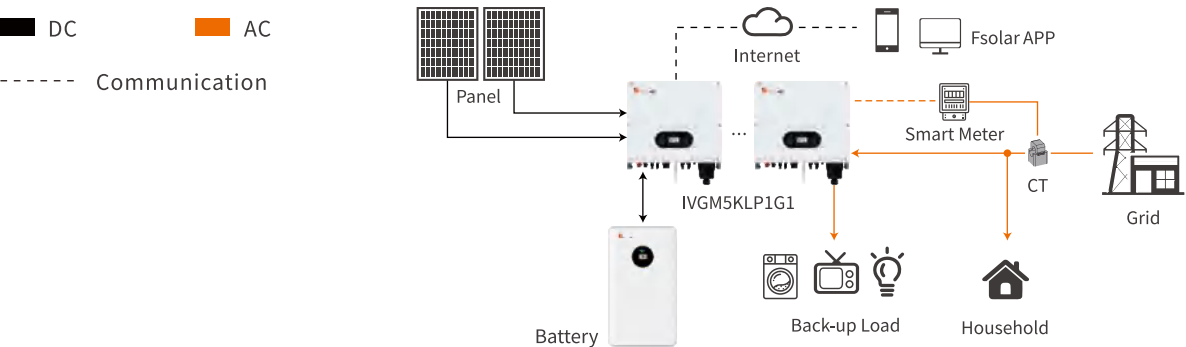
- Enables real-time monitoring via WiFi.
- 48V low voltage battery, transformer isolation topology.
- Max. charging/discharging current of 100A.
- AC couple to retrofit existing solar system.
- Support storing energy from diesel generator.
- Seamless power supply switching within 20ms.
- Scalable expansion up to 6pcs in parallel.



IVGM5KLP1G1

| Model                                            | IVGM5KLP1G1                                                                                           |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Battery Input Data                               |                                                                                                       |
| Battery Voltage Range                            | 40V~60V                                                                                               |
| Max. charging and discharging current            | 100A/100A                                                                                             |
| Max. charging and discharging power              | 5000W                                                                                                 |
| Battery type                                     | Li-Ion / Lead-acid                                                                                    |
| DC Input Data(PV side)                           |                                                                                                       |
| Max. Recommended PV Power                        | 6500W (3500W for Single PV)                                                                           |
| Max. PV Voltage                                  | 550V                                                                                                  |
| Start Oltage                                     | 130V                                                                                                  |
| PV Voltage Range                                 | 90V-550V                                                                                              |
| MPPT Voltage Range                               | 100V-500V                                                                                             |
| MPPT Voltage Range for Full Load                 | 220V-500V                                                                                             |
| Nominal Voltage                                  | 360V                                                                                                  |
| Max. Input Current                               | 15A/15A                                                                                               |
| Max. Shorted Current                             | 18A/18A                                                                                               |
| Number of MPP Trackers / Strings Per MPP Tracker | 2/1                                                                                                   |
| Grid Data                                        |                                                                                                       |
| Nominal Input Voltage                            | 230Vac                                                                                                |
| Nominal Grid Frequency                           | 50/60Hz                                                                                               |
| Max. Input Current                               | 40A                                                                                                   |
| Max. Charge Current                              | 100A                                                                                                  |
| Max. AC Output Power                             | 5000W                                                                                                 |
| AC Output Rated Current                          | 21.7A                                                                                                 |
| Max. Output Current                              | 25A                                                                                                   |
| Max. Continuous AC Passthrough                   | 30A                                                                                                   |
| Power Factor                                     | >0.99                                                                                                 |
| Displacement Power Factor                        | 0.8(Leading) to 0.8(Lagging)                                                                          |
| THDI                                             | <3%                                                                                                   |
| AC Output Data(Back Up)                          |                                                                                                       |
| Rated Output Power                               | 5000VA/5000W                                                                                          |
| Max. Output Current                              | 30A                                                                                                   |
| Rated AC Output Voltage                          | 230Vac                                                                                                |
| Rated AC Output Frequency                        | 50/60Hz                                                                                               |
| General Data                                     |                                                                                                       |
| Operating Temperature Range                      | -25°C~60°C,>45°C Derating                                                                             |
| Protection Degree                                | IP65                                                                                                  |
| Cooling Concept                                  | Nature                                                                                                |
| Communication                                    | RS232/RS485                                                                                           |
| BMS Communication                                | CAN/RS485                                                                                             |
| Monitor Module                                   | WiFi/GPRS                                                                                             |
| Display                                          | LCD+LED                                                                                               |
| Installation Style                               | Wall-mounted                                                                                          |
| Warranty                                         | 10 Years                                                                                              |
| Grid Regulation                                  | CEI 0-21、G99、VDE 4105、EN 50549-1、NRS 097-2-1、C10/11、NTS & UNE217001 & UNE217002、PORTARIA N° 140 & 515 |
| Safety Regulation                                | IEC 62109-1/-2                                                                                        |
| EMC                                              | IEC/EN 61000-6-1/2/3/4、EN/IEC 61000-3-11/12                                                           |
| Net Weight(KG)                                   | 32.4KG                                                                                                |
| Gross Weight(KG)                                 | 39.1KG                                                                                                |
| Product Dimension(MM)                            | 530*493*228MM                                                                                         |
| Package Dimension(MM)                            | 632*570*315MM                                                                                         |

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.





# Hybrid Solar Inverter

## IVGM Series Low-voltage | Split Phase

### Features

- Configurable parameters and working mode by LCD touch screen.
- Supporting WiFi monitoring and Fsolar smart cloud monitoring system.
- Battery charge and discharge current up to 190A.
- Optimize energy use with Time-of-Use, Sell-First, and Zero Export options to maximize savings and efficiency.
- Prevent grid overload with built-in limit function while seamlessly switching between battery and grid supply within 10ms for uninterrupted power.
- 4-channel PV, 2-channel MPPT, 1.5 times over configuration capacity.
- Programmable generator port, support smart load and micro inverter access.
- Support parallel operation with single-phase, split phase and three-phase.
- IP65 protection level.

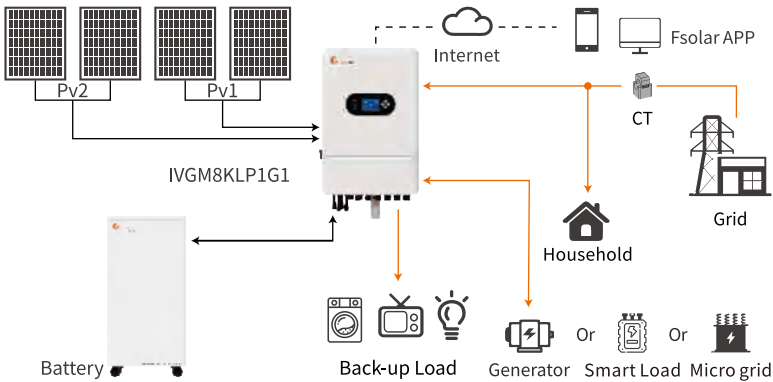


IVGM8KLP1G1

| Model                                            | IVGM8KLP1G1                                                                                                                                |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Battery Input Data                               |                                                                                                                                            |
| Battery Voltage Range                            | 40V~60V                                                                                                                                    |
| Max. Charging and Discharging Current            | 190A/190A                                                                                                                                  |
| Max. Charging and Discharging Power              | 8000W                                                                                                                                      |
| Battery Type                                     | Li-Ion /Lead-acid                                                                                                                          |
| DC Input Data(PV side)                           |                                                                                                                                            |
| Max. Recommended PV Power                        | 12000W                                                                                                                                     |
| Max. PV Voltage                                  | 500V                                                                                                                                       |
| Start Voltage                                    | 100V                                                                                                                                       |
| PV Voltage Range                                 | 90V-550V                                                                                                                                   |
| MPPT Voltage Range                               | 120V-425V                                                                                                                                  |
| MPPT Voltage Range for Full Load                 | 230V-425V                                                                                                                                  |
| Nominal Voltage                                  | 380V                                                                                                                                       |
| pv Input Current                                 | 26A+26A                                                                                                                                    |
| Max. Shorted Current                             | 44A+44A                                                                                                                                    |
| Number of MPP Trackers / Strings Per MPP Tracker | 2/2                                                                                                                                        |
| Grid Data                                        |                                                                                                                                            |
| Nominal Input Voltage                            | 220/230Vac (Split Phase)                                                                                                                   |
| Nominal Grid Frequency                           | 50/60Hz                                                                                                                                    |
| Max. AC Output Power                             | 8800W                                                                                                                                      |
| AC Output Rated Current                          | 33.3A                                                                                                                                      |
| Max. Output Current                              | 36.7A                                                                                                                                      |
| Max. Continuous AC Passthrough                   | 50A                                                                                                                                        |
| AC Output Data(Back Up)                          |                                                                                                                                            |
| Rated Output Power                               | 8000W                                                                                                                                      |
| Max. Output Current                              | 40A                                                                                                                                        |
| Rated AC Output Voltage                          | 220/230Vac (Split Phase)                                                                                                                   |
| Rated AC Output Frequency                        | 50/60Hz                                                                                                                                    |
| General Data                                     |                                                                                                                                            |
| Operating Temperature Range                      | -25°C~60°C,>45°C Derating                                                                                                                  |
| Protection Degree                                | IP65                                                                                                                                       |
| Cooling Concept                                  | Smart Cooling                                                                                                                              |
| Communication                                    | RS232/RS485                                                                                                                                |
| BMS Communication                                | CAN/RS485                                                                                                                                  |
| Monitor Module                                   | WiFi/GPRS                                                                                                                                  |
| Display                                          | LCD+LED                                                                                                                                    |
| Installation Style                               | Wall-mounted                                                                                                                               |
| Warranty                                         | 10 years                                                                                                                                   |
| Grid Regulation(In progress)                     | VDE 4105、CEI 0-21、G99、NRS 097-2-1、EN 50549-1、EN 50549-10、NC RFG(Poland)、EN 50549-1/-10+Netherlands、PPDS、NTS & UNE217001 & UNE217002、UL1741 |
| Safety Regulation                                | IEC 62109-1/-2                                                                                                                             |
| EMC                                              | IEC/EN 61000-6-1/2/3/4、EN/IEC 61000-3-11/12                                                                                                |
| Net Weight(KG)                                   | 33.5KG                                                                                                                                     |
| Gross Weight(KG)                                 | 40.5KG                                                                                                                                     |
| Product Dimension(MM)                            | 430*654*243MM                                                                                                                              |
| Package Dimension(MM)                            | 787*547*358MM                                                                                                                              |

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

■ DC      ■ AC  
----- Communication





# Hybrid Solar Inverter

## IVGM Series Low-voltage | Three Phase

### Features

-  Support WiFi for mobile monitoring.
-  Max. charging / discharging current of 200A.
-  AC couple to retrofit existing solar system.
-  Support storing energy from diesel generator.
-  Switch power supply within 20ms.
-  IP65 protection level.



IVGM10048

| Model                                            | IVGM10048                    |
|--------------------------------------------------|------------------------------|
| Battery Input Data                               |                              |
| Battery Voltage Range                            | 40V~60V                      |
| Max. charging and discharging current            | 200A/200A                    |
| Max. charging and discharging power              | 10000W                       |
| Battery type                                     | Li-Ion / Lead-acid           |
| DC Input Data(PV side)                           |                              |
| Max. Recommended PV Power                        | 13000W (6500W for Single PV) |
| Max. PV Voltage                                  | 900V                         |
| Start Oltage                                     | 180V                         |
| PV Voltage Range                                 | 160V-900V                    |
| MPPT Voltage Range                               | 200V-850V                    |
| MPPT Voltage Range for Full Load                 | 450V-850V                    |
| Nominal Voltage                                  | 720V                         |
| Max. Input Current                               | 15A/15A                      |
| Max. Shorted Current                             | 18A/18A                      |
| Number of MPP Trackers / Strings Per MPP Tracker | 2/1                          |
| Grid Data                                        |                              |
| Nominal Input Voltage                            | L1/L2/L3/N/PE, 230/400Vac    |
| Nominal Grid Frequency                           | 50/60Hz                      |
| Max. Input Current                               | 30A                          |
| Max. Charge Current                              | 200A                         |
| Max. AC Output Power                             | 10000W                       |
| AC Output Rated Current                          | 14.5A                        |
| Max. Output Current                              | 18A                          |
| Max. Continuous AC Passthrough                   | 30A                          |
| Power Factor                                     | >0.99                        |
| Displacement Power Factor                        | 0.8(Leading) to 0.8(Lagging) |
| THDI                                             | <3%                          |
| AC Output Data(Back Up)                          |                              |
| Rated Output Power                               | 10000VA/10000W               |
| Max. Output Current                              | 30A                          |
| Rated AC Output Voltage                          | L1/L2/L3/N/PE, 230/400Vac    |
| Rated AC Output Frequency                        | 50/60Hz                      |
| Protection                                       |                              |
| Output Over Current Protection                   | Integrated                   |
| Output Over Power Protection                     | Integrated                   |
| Output Short-Circuit Protection                  | Integrated                   |
| Anti-islanding Protection                        | Integrated                   |
| GFCI Protection                                  | Integrated                   |
| Insulation Resistor Detection                    | Integrated                   |
| General Data                                     |                              |
| Operating Temperature Range                      | -25°C~60°C,>45°C Derating    |
| Protection Degree                                | IP65                         |
| Cooling Concept                                  | Smart cooling                |
| Communication                                    | RS232/RS485                  |
| BMS Communication                                | CAN/RS485                    |
| Monitor Module                                   | WiFi/GPRS                    |
| Display                                          | LCD+LED                      |
| Installation Style                               | Wall-mounted                 |
| Warranty                                         | 10 Years                     |
| Grid Regulation                                  | VDE-AR-N 4105                |
| Safety Regulation                                | IEC 62109-1/-2               |
| Net Weight(KG)                                   | 38.9KG                       |
| Gross Weight(KG)                                 | 47.1KG                       |
| Product Dimension(MM)                            | 655*475*266MM                |
| Package Dimension(MM)                            | 792*597*351MM                |

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.



# Hybrid Solar Inverter

## IVGM Series High-voltage | Three Phase

### Features

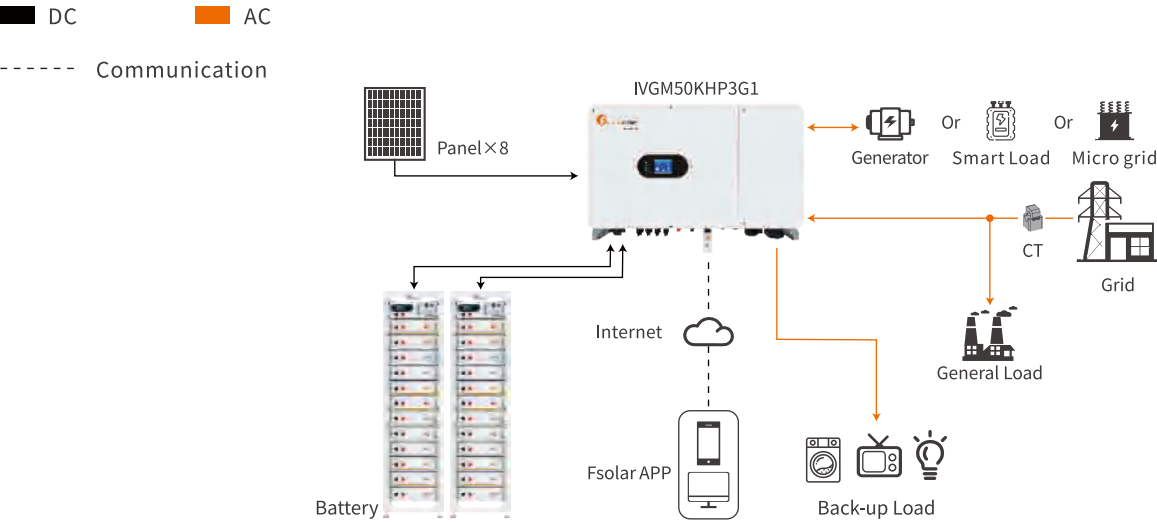
- Supports WiFi monitoring and Fsolar smart cloud monitoring system.
- Seamless power supply switching within 10ms.
- Configurable parameters and working mode via LCD touch screen.
- Programmable supply priority for battery or grid.
- Programmable multiple operation modes: On grid, off grid and UPS.
- 8-channel PV,4-channel MPPT, 1.3 times over configuration capacity.
- 2 independent battery inputs, effectively reducing inter-cluster circulation.
- Wide battery voltage input and high battery charge and discharge current up to 50A.
- Programmable generator port, support smart load and micro inverter access.
- IP65 protection level.
- 12pcs in parallel maximum.
- Auto restart while AC is recovering.



IVGM50KHP3G1

| Model                         | IVGM50KHP3G1                                                                                                   |
|-------------------------------|----------------------------------------------------------------------------------------------------------------|
| Battery Input Data            |                                                                                                                |
| Battery Type                  | LFP (LiFePO4)                                                                                                  |
| Battery Voltage Range         | 160~800Vdc                                                                                                     |
| Max. Charging Current         | 50+50(A)                                                                                                       |
| Max. Discharging Current      | 50+50(A)                                                                                                       |
| Number of Battery Input       | 2                                                                                                              |
| PV String Input Data          |                                                                                                                |
| Max. DC Input Power           | 65KW(16KW for Single PV)                                                                                       |
| Max. DC Input Voltage         | 1000Vdc                                                                                                        |
| Min. DC Input Voltage         | 150Vdc                                                                                                         |
| Start-up Voltage              | 250Vdc                                                                                                         |
| Rated DC Input Voltage        | 600Vdc                                                                                                         |
| MPPT Range                    | 200~850Vdc                                                                                                     |
| Full Load DC Voltage Range    | 450~850Vdc                                                                                                     |
| PV Input Current              | 36+36+36+36(A)                                                                                                 |
| Max. PV Isc                   | 55+55+55+55(A)                                                                                                 |
| No.of MPP Trackers            | 4                                                                                                              |
| No.of Strings Per MPP Tracker | 2                                                                                                              |
| AC Output Data                |                                                                                                                |
| Rated AC Output Power         | 50 KW                                                                                                          |
| Max. AC Output Power          | 55 KW                                                                                                          |
| AC Output Rated Current       | 72.5 A                                                                                                         |
| Max. AC Current               | 79.7 A                                                                                                         |
| Rated AC Voltage              | 220/380,230/400 Vac (-20%~+15%)                                                                                |
| AC Wiring Mode                | 3L+N+PE                                                                                                        |
| Rated AC Frequency            | 50 /60 Hz (45~55Hz/55~65Hz)                                                                                    |
| THDI                          | <3% (At Rated Power)                                                                                           |
| Power Factor                  | 0.8( Leading) to 0.8( Lagging)                                                                                 |
| Certification and Standards   |                                                                                                                |
| Grid Regulation               | NTS & UNE217001 & UNE217002、CEI 0-21、NRS 097-2-1、NC RFG(Poland)、VDE 4105、G99、EN 50549-1、EN 50549-1+Netherlands |
| Safety Regulation             | EN 62477-1、IEC 62109-1/-2                                                                                      |
| EMC                           | IEC/EN 61000-6-2/4、EN/IEC 61000-3-11/12                                                                        |
| General Data                  |                                                                                                                |
| Net Weight                    | 85.6KG                                                                                                         |
| Gross Weight                  | 98.4KG                                                                                                         |
| Product Dimension             | 940*582*340MM                                                                                                  |
| Package Dimension             | 1110*770*463MM                                                                                                 |
| Protection Degree             | IP65                                                                                                           |
| Operating Temperature Range   | -25 to 60°C(> 50°C Derating)                                                                                   |
| Cooling                       | Smart Cooling                                                                                                  |
| Communication with BMS        | RS485,CAN                                                                                                      |
| Monitor Module                | WiFi/GPRS                                                                                                      |
| Installation Style            | Wall-mounted                                                                                                   |
| Warranty                      | 10 Years                                                                                                       |

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.





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# SOLAR BATTERY

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## C & I ess Series

# LiFePO4 Battery Pack

Low-voltage-----25/44

High-voltage-----45/48

# Commercial & Industrial Energy Storage System

Liquid Cooling System-----49/50

Air Cooling System-----51/52



# OFFICIAL INVERTER

## Low-Voltage Battery Packs



# COMPATIBILITY LIST

## High-Voltage Battery Packs





# LiFePO4 Battery Pack

## LPBF Series Low-voltage

### Features

- Big capacity with small volume for household.
- High-quality lithium iron phosphate battery.
- ≥6000 times deep cycle charge and discharge.
- High class of safety with built-in BMS and fuse.
- Scalable expansion up to 6 pcs in parallel.
- Up to 5-year long warranty.



LPBF24100-M

LPBF24200-M

| Model                                 | LPBF24100-M                   | LPBF24200-M                   |
|---------------------------------------|-------------------------------|-------------------------------|
| Battery Type                          | LiFePO4                       | LiFePO4                       |
| Nominal Energy                        | 2.5kWh                        | 5kWh                          |
| Nominal Voltage                       | 25.6V                         | 25.6V                         |
| Operating Voltage                     | 24-28.8V                      | 24-28.8V                      |
| Recommend Charge/Discharge Current[1] | ≤60A                          | ≤80A                          |
| Recommend Charge/Discharge Power[1]   | ≤1,500W                       | ≤2,000W                       |
| Maximum Charge/Discharge Current(15s) | 100A                          | 120A                          |
| Maximum Charge/Discharge Power(15s)   | 2,500W                        | 3,000W                        |
| Depth of Discharge(DOD)               | ≥95%                          | ≥95%                          |
| Scalability                           | Max. 6 pcs in Parallel(15kWh) | Max. 6 pcs in Parallel(30kWh) |
| Communication                         | RS485/CAN                     | RS485/CAN                     |
| Protection Degree                     | IP21                          | IP21                          |
| Cycle Life[2]                         | ≥6,000 Cycles                 | ≥6,000 Cycles                 |
| Charging Temperature Range            | 0°C-55 °C                     | 0°C-55 °C                     |
| Discharging Temperature Range         | -20°C-60 °C                   | -20°C-60 °C                   |
| Display                               | LCD+LED                       | LED                           |
| Installation Style                    | Wall-Mounted / Floor-Mounted  | Wall-Mounted / Floor-Mounted  |
| Protection                            | Built-in Smart BMS, Fuse      | Built-in Smart BMS, Fuse      |
| Warranty                              | 5 Years                       | 5 Years                       |
| Certification                         | UN38.3、CE-EMC、IEC 62619       | UN38.3、CE-EMC、IEC 62619       |
| Product Weight                        | 22KG                          | 36.5KG                        |
| Package Weight                        | 26KG                          | 41.5KG                        |
| Product Dimension                     | 420x341x195MM                 | 415x400x213MM                 |
| Package Dimension                     | 517x433x243MM                 | 537x522x298MM                 |

[1] Recommend Charge/Discharge Current/Power is Affected by Temperature and SOC.

[2] Test Conditions: 0.2C Charging/Discharging @25°C, 80% DOD.

\*Product specifications may vary during continuous improvements. Please contact us for latest details.  
\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

### Product Display



Longer Lasting LiFePO4 Battery



Support 6 Pcs in Parallel



≥ 6000 High Cycle Life



Real-time Status via LCD Screen



Support Wall Mounted Installation



# LiFePO4 Battery Pack

## LPBF Series Low-voltage

### Features

- Scalable expansion up to 6 pcs in parallel.
- LiFePO4: higher safe performance and longer cycle life.
- Multiple Protection with built-in smart BMS, breaker and fuse.
- Flexible Installation: Wall-Mounted or Floor-Mounted.
- Compatible with leading inverter brands.
- Up to 5-year long warranty.



LPBF48100-M



LPBF48150-P



LPBF48200-H

| Model                                                                            | LPBF48100-M                   | LPBF48150-P                     | LPBF48200-H                   |
|----------------------------------------------------------------------------------|-------------------------------|---------------------------------|-------------------------------|
| Battery Type                                                                     | LiFePO4                       | LiFePO4                         | LiFePO4                       |
| Nominal Energy                                                                   | 5kWh                          | 7.2kWh                          | 10kWh                         |
| Nominal Voltage                                                                  | 51.2V                         | 51.2V                           | 51.2V                         |
| Operating Voltage                                                                | 48-57.6V                      | 48-57.6V                        | 48-57.6V                      |
| Recommend Charge/Discharge Current[1]                                            | ≤50A                          | ≤60A                            | ≤80A                          |
| Recommend Charge/Discharge Power[1]                                              | ≤2,500W                       | ≤3,000W                         | ≤4,000W                       |
| Maximum Charge/Discharge Current(15s)                                            | 100A                          | 120A                            | 120A                          |
| Maximum Charge/Discharge Power(15s)                                              | 5,000W                        | 6,000W                          | 6,000W                        |
| Depth of Discharge(DOD)                                                          | ≥95%                          | ≥95%                            | ≥95%                          |
| Scalability                                                                      | Max. 6 pcs in Parallel(30kWh) | Max. 6 pcs in Parallel(43.2kWh) | Max. 6 pcs in Parallel(60kWh) |
| Communication                                                                    | RS485/CAN                     | RS485/CAN                       | RS485/CAN                     |
| Protection Degree                                                                | IP21                          | IP21                            | IP21                          |
| Cycle Life[2]                                                                    | ≥6,000 Cycles                 | ≥6,000 Cycles                   | ≥6,000 Cycles                 |
| Charging Temperature Range                                                       | 0°C-55 °C                     | 0°C-55 °C                       | 0°C-55 °C                     |
| Discharging Temperature Range                                                    | -20°C-60 °C                   | -20°C-60 °C                     | -20°C-60 °C                   |
| Display                                                                          | LCD+LED                       | LED                             | LCD+LED                       |
| Installation Style                                                               | Wall-Mounted / Floor-Mounted  | Wall-Mounted / Floor-Mounted    | Wall-Mounted / Floor-Mounted  |
| Protection                                                                       | Built-in Smart BMS, Fuse      | Built-in Smart BMS, Fuse        | Built-in Smart BMS, Fuse      |
| Warranty                                                                         | 5 Years                       | 5 Years                         | 5 Years                       |
| Certification                                                                    | UN38.3                        | UN38.3、CE-EMC、IEC 62619         | UN38.3、CE-EMC、IEC 62619       |
| Product Weight                                                                   | 40KG                          | 54.5KG                          | 72KG                          |
| Package Weight                                                                   | 44kKG                         | 59.5KG                          | 86KG                          |
| Product Dimension                                                                | 507x455x184MM                 | 654x425x203MM                   | 664x468x213MM                 |
| Package Dimension                                                                | 585x537x258MM                 | 752x527x268MM                   | 748x556x358MM                 |
| [1] Recommend charge/discharge current/power is affected by temperature and SOC. |                               |                                 |                               |
| [2] Test conditions: 0.2C Charging/Discharging @25°C, 80% DOD.                   |                               |                                 |                               |

\*Product specifications may vary during continuous improvements. Please contact us for latest details.  
\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

### Product Display



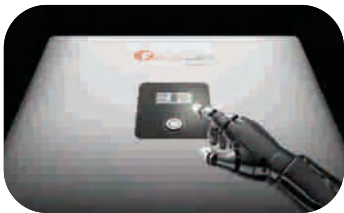
Longer Lasting LiFePO4 Battery



Support 6 Pcs in Parallel



Wide Inverter Compatibility



Real-time Status via LCD Screen  
(LPBF48100-M & LPBF48200-H)



Support Wall Mounted Installation



# LiFePO4 Battery Pack

## LPBF Series Low-voltage

### Features

- High-quality lithium iron phosphate battery.
- Big capacity with small volume for household.
- ≥6000 times deep cycle charge and discharge.
- High class of safety with built-in BMS protection.
- Scalable expansion up to 6 pcs in parallel.
- Up to 5-year long warranty.

(LPBF48300-II optimizes wiring ports)



LPBF48250~48300-II    LPBF48350

| Model                                 | LPBF48250                         | LPBF48300                      | LPBF48300-II                   | LPBF48350                       |
|---------------------------------------|-----------------------------------|--------------------------------|--------------------------------|---------------------------------|
| Battery Type                          | LiFePO4                           |                                |                                |                                 |
| Nominal Energy                        | 12.5kWh                           | 15kWh                          | 15kWh                          | 17.5kWh                         |
| Nominal Voltage                       | 51.2V                             |                                |                                |                                 |
| Operating Voltage                     | 48-57.6V                          |                                |                                |                                 |
| Recommend Charge/Discharge Current[1] | ≤120A                             |                                |                                |                                 |
| Recommend Charge/Discharge Power[1]   | ≤6,000W                           |                                |                                |                                 |
| Maximum Charge/Discharge Current(15s) | 200A                              |                                |                                |                                 |
| Maximum Charge/Discharge Power(15s)   | 10,000W                           |                                |                                |                                 |
| Depth of Discharge(DOD)               | ≥95%                              |                                |                                |                                 |
| Scalability                           | Max. 6 pcs in Parallel (90kWh)    | Max. 6 pcs in Parallel (90kWh) | Max. 6 pcs in Parallel (90kWh) | Max. 6 pcs in Parallel (105kWh) |
| Communication                         | RS485/CAN                         |                                |                                |                                 |
| Protection Degree                     | IP21                              |                                |                                |                                 |
| Cycle Life[2]                         | ≥6,000 Cycles                     |                                |                                |                                 |
| Charging Temperature Range            | 0°C-55 °C                         |                                |                                |                                 |
| Discharging Temperature Range         | -20°C-60 °C                       |                                |                                |                                 |
| Display                               | LED                               | LED                            | LED                            | LCD+LED                         |
| Installation Style                    | Floor-Mounted                     |                                |                                |                                 |
| Protection                            | Built-in Smart BMS, Breaker, Fuse |                                |                                |                                 |
| Warranty                              | 5 Years                           |                                |                                |                                 |
| Certification                         | UN38.3、CE-EMC、IEC 62619           | UN38.3、CE-EMC、IEC 62619        | UN38.3                         | UN38.3、CE-EMC、IEC 62619         |
| Product Weight                        | 154KG                             | 154KG                          | 155.5KG                        | 162KG                           |
| Package Weight                        | 177KG                             | 177KG                          | 178.5KG                        | 185KG                           |
| Product Dimension                     | 615x350x955MM                     | 615x350x955MM                  | 615x350x955MM                  | 622x350x955MM                   |
| Package Dimension                     | 718x450x1112MM                    | 718x450x1112MM                 | 718x450x1112MM                 | 718x450x1112MM                  |

[1] Recommend charge/discharge current/power is affected by temperature and SOC.

[2] Test conditions: 0.2C Charging/Discharging @25°C, 80% DOD.

\*Product specifications may vary during continuous improvements. Please contact us for latest details.

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

### Product Display



Real-time status via LCD Display



Support 6 Pcs in Parallel



Longer Lasting LiFePO4 Battery



LPBF48250/48300/48350 Wire Ports  
(LPBF48300-II optimizes port placement compared to the LPBF48300 model.)



LPBF48300-II Wire Ports

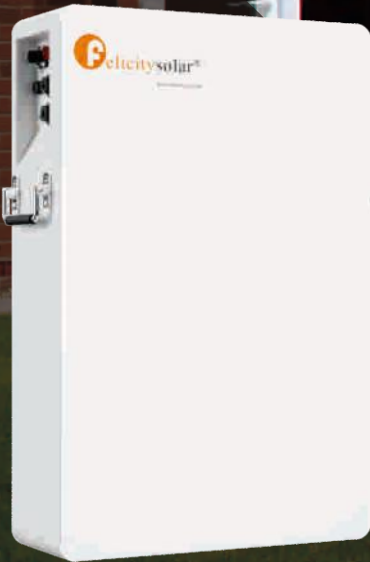


# LiFePO4 Battery Pack

## LPBA Series Low-voltage

### Features

- LiFePO4: Higher safe performance and longer cycle life.
- Multiple Protection with built-in smart BMS, breaker and fuse.
- Compatible with leading inverter brands.
- Flexible Installation: Wall- Mounted or Floor-Mounted.
- Scalable expansion up to 12 pcs in parallel.
- Resist harsh environment with IP65-rate protection.
- Aerosol Fire Extinguishing System.
- Up to 10-year long warranty.



LPBA48100-OL

| Model                                                                            | LPBA48100-OL                      |
|----------------------------------------------------------------------------------|-----------------------------------|
| Battery Type                                                                     | LiFePO4                           |
| Nominal Energy                                                                   | 5.12kWh                           |
| Nominal Capacity                                                                 | 100Ah                             |
| Nominal Voltage                                                                  | 51.2V                             |
| Operating Voltage                                                                | 44.8-57.6V                        |
| Recommended Charge/Discharge Current                                             | 50A                               |
| Max.continuous charge/Discharge current[1]                                       | 60A                               |
| Peak Charge/Discharge Current(15s)                                               | 100A                              |
| Scalability                                                                      | Max. 12 pcs in Parallel(61.44kWh) |
| Depth of Discharge(DOD)                                                          | ≥95%                              |
| Display Type                                                                     | LED                               |
| Protection Degree                                                                | IP65                              |
| Working Temperature Range                                                        | Charge: 0°C~55 °C                 |
|                                                                                  | Discharge: -20°C~55 °C            |
| Storge Temperature Range                                                         | 0°C~+35°C                         |
| Humidity                                                                         | 5%~95%                            |
| Altitude                                                                         | ≤ 2000M                           |
| Communication                                                                    | RS485/CAN                         |
| Cycle Life[2]                                                                    | ≥6,000 Cycles                     |
| Installation                                                                     | Wall-Mounted / Floor-Mounted      |
| Protection                                                                       | Built-in smart BMS, Breaker, Fuse |
| Warranty Period                                                                  | 10 Years                          |
| Certification                                                                    | UN38.3、CE-EMC、IEC 62619、CB        |
| Product Weight                                                                   | 48.5KG                            |
| Package Weight                                                                   | 64.5KG                            |
| Product Dimension                                                                | 665X440X175 MM                    |
| Package Dimension                                                                | 760X540X345 MM                    |
| [1] Max. Continuous Charge/Discharge Current is Affected by Temperature and SOC. |                                   |
| [2] Test conditions: 0.2C Charging/Discharging @25°C, 80% DOD.                   |                                   |

\*Product specifications may vary during continuous improvements. Please contact us for latest details.  
\*Refer to Felicitysolar’s Warranty Policy for applicable conditions.

### Product Display



IP65 Protection Level



> 6000 High Cycle Life



Aerosol Fire Extinguishing System



Support 12 Pcs in Parallel





# LiFePO4 Battery Pack

## FLA Series Low-voltage

### Features

- Scalable expansion up to 16 pcs in parallel.
- Flexible Installation: Floor-Mounted.
- LiFePO4: Higher safe performance and longer cycle life.
- Multiple Protection with built-in smart BMS, and fuse.
- Compatible with leading inverter brands.
- Up to 5-year long warranty.



FLA12100

FLA12200

FLA12300

| Model                                                                                                  | FLA12100                          | FLA12200                          | FLA12300                       |
|--------------------------------------------------------------------------------------------------------|-----------------------------------|-----------------------------------|--------------------------------|
| Battery Type                                                                                           | LiFePO4                           |                                   |                                |
| Nominal Energy                                                                                         | 1.28kWh                           | 2.56kWh                           | 3.75kWh                        |
| Nominal Voltage                                                                                        | 12.8V                             | 12.8V                             | 12.8V                          |
| Operating Voltage                                                                                      | 11.2V-14.4V                       | 11.2V-14.4V                       | 11.2V-14.4V                    |
| Recommend Charge/Discharge Current[1]                                                                  | ≤100A                             | ≤100A                             | ≤100A                          |
| Recommend Charge/Discharge Power[1]                                                                    | ≤1,250W                           | ≤1,500W                           | ≤1,875W                        |
| Maximum Charge/Discharge Current(15s)                                                                  | 150A                              | 200A                              | 200A                           |
| Maximum Charge/Discharge Power(15s)                                                                    | 1,875W                            | 2,500W                            | 2,500W                         |
| Scalability                                                                                            | Max. 16 pcs in Parallel(20.48kWh) | Max. 16 pcs in Parallel(40.96kWh) | Max. 16 pcs in Parallel(60kWh) |
| Depth of Discharge(DOD)                                                                                | ≥95%                              |                                   |                                |
| Communication                                                                                          | RS485/CAN                         |                                   |                                |
| Protection Degree                                                                                      | IP21                              |                                   |                                |
| Cycle Life[2]                                                                                          | ≥6,000 Cycles                     |                                   |                                |
| Charging Temperature Range                                                                             | 0°C~+55 °C                        |                                   |                                |
| Discharging Temperature Range                                                                          | -20°C~+55 °C                      |                                   |                                |
| Display Type                                                                                           | LED                               |                                   |                                |
| Installation                                                                                           | Floor-Mounted                     |                                   |                                |
| Protection                                                                                             | Built-in smart BMS, Fuse          |                                   |                                |
| Warranty Period                                                                                        | 5 Years                           |                                   |                                |
| Certification                                                                                          | UN38.3                            |                                   |                                |
| Product Weight                                                                                         | 10KG                              | 15KG                              | 26KG                           |
| Package Weight                                                                                         | 12KG                              | 18KG                              | 29KG                           |
| Product Dimension                                                                                      | 295X201X199MM                     | 328X248X199MM                     | 379X241X286MM                  |
| Package Dimension                                                                                      | 357X263X261MM                     | 391X310X257MM                     | 443X305X344MM                  |
| [1] Max. Continuous Charge/Discharge Current is Affected by Temperature and SOC.                       |                                   |                                   |                                |
| [2] Test Conditions: 0.2C Charging/Discharging @25°C,80% DOD                                           |                                   |                                   |                                |
| *Product specifications may vary during continuous improvements. Please contact us for latest details. |                                   |                                   |                                |
| *Refer to Felicitysolar's Warranty Policy for applicable conditions.                                   |                                   |                                   |                                |

### Product Display



Longer Lasting LiFePO4 Battery



Support 16 Pcs in Parallel



Real-time Status via LCD Screen & LED



Wide Inverter Compatibility





# LiFePO4 Battery Pack

## FLA Series Low-voltage

### Features

- Scalable expansion up to 15 pcs in parallel.
- Built-in WiFi for remote monitor the battery pack data.
- Flexible Installation: wall-mounted or floor-mounted.
- LiFePO4: Higher safe performance and longer cycle life.
- Multiple Protection with built-in smart BMS, breaker and fuse.
- Compatible with leading inverter brands.
- Up to 7-year long warranty.



FLA 24V Series  
(The battery's size varies according to its capacity.)

| Model                                 | FLA24100                          | FLA24200                       | FLA24250                       | FLA24300                          | FLA24500                          |
|---------------------------------------|-----------------------------------|--------------------------------|--------------------------------|-----------------------------------|-----------------------------------|
| Battery Type                          | LiFePO4                           |                                |                                |                                   |                                   |
| Nominal Energy                        | 2.56kWh                           | 5kWh                           | 6.4kWh                         | 7.5kWh                            | 12.5kWh                           |
| Nominal Voltage                       | 25.6V                             | 25.6V                          | 25.6V                          | 25.6V                             | 25.6V                             |
| Operating Voltage                     | 22.4-28.8V                        | 22.4-28.8V                     | 22.4-28.8V                     | 22.4-28.8V                        | 22.4-28.8V                        |
| Recommend Charge/Discharge Current[1] | ≤100A                             | ≤120A                          | ≤150A                          | ≤150A                             | ≤200A                             |
| Recommend Charge/Discharge Power[1]   | ≤2,500W                           | ≤3,000W                        | ≤3,750W                        | ≤3,750W                           | ≤5,000W                           |
| Maximum Charge/Discharge Current(15s) | 150A                              | 150A                           | 200A                           | 200A                              | 300A                              |
| Maximum Charge/Discharge Power(15s)   | 3,750W                            | 3,750W                         | 5,000W                         | 5,000W                            | 7,500W                            |
| Scalability                           | Max. 15 pcs in Parallel(38.4kWh)  | Max. 15 pcs in Parallel(75kWh) | Max. 15 pcs in Parallel(96kWh) | Max. 15 pcs in Parallel(112.5kWh) | Max. 15 pcs in Parallel(187.5kWh) |
| Depth of Discharge(DOD)               | ≥95%                              |                                |                                |                                   |                                   |
| Communication                         | RS485/CAN                         |                                |                                |                                   |                                   |
| Protection Degree                     | IP21                              |                                |                                |                                   |                                   |
| Cycle Life[2]                         | ≥6,000 Cycles                     |                                |                                |                                   |                                   |
| Charging Temperature Range            | 0°C~+55 °C                        |                                |                                |                                   |                                   |
| Discharging Temperature Range         | -20°C~+55 °C                      |                                |                                |                                   |                                   |
| Display type                          | LCD+LED                           |                                |                                |                                   |                                   |
| Installation                          | Wall-Mounted / Floor-Mounted      |                                |                                |                                   |                                   |
| Protection                            | Built-in Smart BMS, Breaker, Fuse |                                |                                |                                   |                                   |
| Warranty Period                       | 7 Years                           |                                |                                |                                   |                                   |
| Certification                         | UN38.3                            | UN38.3                         | UN38.3                         | UN38.3、CE-EMC、IEC 62619           | UN38.3                            |
| Product Weight                        | 27KG                              | 39KG                           | 52.5KG                         | 71KG                              | 93KG                              |
| Package Weight                        | 30KG                              | 44KG                           | 57KG                           | 90KG                              | 113KG                             |
| Product Dimension                     | 454X380X154MM                     | 482X433X194MM                  | 527X400X280MM                  | 700X430X253MM                     | 783X405X274MM                     |
| Package Dimension                     | 543X472X232MM                     | 600X555X282MM                  | 646X522X358MM                  | 780X550X427MM                     | 900X525X450MM                     |

[1] Max. Continuous Charge/Discharge Current is Affected by Temperature and SOC.  
[2] Test conditions: 0.2C Charging/Discharging @25°C,80% DOD  
\*Product specifications may vary during continuous improvements. Please contact us for latest details.  
\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

### Product Display



Real-time status via LCD Display



Built-in WiFi/Bluetooth for Remote Monitoring



Support Wall Mounted Installation



Wide Inverter Compatibility





# LiFePO4 Battery Pack

## FLA Series Low-voltage

### Features

-  Built-in fire protection system.
-  Scalable expansion up to 15 pcs in parallel.
-  Built-in WiFi for remote monitor the battery pack data.
-  LiFePO4: Higher safe performance and longer cycle life.
-  Multiple Protection with built-in smart BMS, breaker and fuse.
-  Compatible with leading inverter brands.
-  Up to 7-year long warranty.



**FLA 48V Series**  
The battery's size varies according to its capacity.

| Model                                 | FLA48100                                         | FLA48200                           | FLA48250                           |
|---------------------------------------|--------------------------------------------------|------------------------------------|------------------------------------|
| Battery Type                          |                                                  |                                    |                                    |
| Nominal Energy                        | 5.12kWh                                          | 10kWh                              | 12.5kWh                            |
| Nominal Voltage                       | 51.2V                                            | 51.2V                              |                                    |
| Operating Voltage                     | 44.8-57.6V                                       | 44.8-57.6V                         | 44.8-57.6V                         |
| Recommend Charge/Discharge Current[1] | ≤100A                                            | ≤120A                              | ≤150A                              |
| Recommend Charge/Discharge Power[1]   | ≤5,000W                                          | ≤6,000W                            | ≤7,500W                            |
| Maximum Charge/Discharge Current(15s) | 150A                                             | 150A                               |                                    |
| Maximum Charge/Discharge Power(15s)   | 7,500W                                           | 7,500W                             | 10,000W                            |
| Scalability                           | Max. 15 pcs<br>in Parallel(76.8kWh)              | Max. 15 pcs<br>in Parallel(150kWh) | Max. 15 pcs<br>in Parallel(187kWh) |
| Depth of Discharge(DOD)               | ≥95%                                             |                                    |                                    |
| Communication                         | RS485/CAN                                        |                                    |                                    |
| Protection Degree                     | IP21                                             |                                    |                                    |
| Cycle Life                            | ≥ 6000 Cycles (25°C±2°C,0.5C/0.5C,90%DOD,70%EOL) |                                    |                                    |
| Charging Temperature Range            | 0°C~+55 °C                                       |                                    |                                    |
| Discharging Temperature Range         | -20°C~+55 °C                                     |                                    |                                    |
| Display Type                          | LCD+LED                                          |                                    |                                    |
| Installation                          | Wall-Mounted / Floor-Mounted                     |                                    |                                    |
| Protection                            | Built-in smart BMS, Breaker, Fuse                |                                    |                                    |
| Warranty Period                       | 7 Years                                          |                                    |                                    |
| Certification                         | UN38.3、CE-EMC、<br>IEC 62619                      | UN38.3、CE-EMC、<br>IEC 62619、CB     | UN38.3、CE-EMC、<br>IEC 62619        |
| Product Weight                        | 48KG                                             | 68KG                               | 97KG                               |
| Package Weight                        | 55KG                                             | 88KG                               | 115KG                              |
| Product Dimension                     | 663X400X178MM                                    | 735X433X188MM                      | 783X450X274MM                      |
| Package Dimension                     | 782X522X262MM                                    | 849X550X362MM                      | 900X570X450MM                      |

[1] Max. Continuous Charge/Discharge Current is Affected by Temperature and SOC.  
\*Product specifications may vary during continuous improvements. Please contact us for latest details.  
\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

### Product Display



Built-in WiFi/Bluetooth for Remote Monitoring



Aerosol Fire Extinguishing System



Support Wall Mounted Installation



Wide Inverter Compatibility



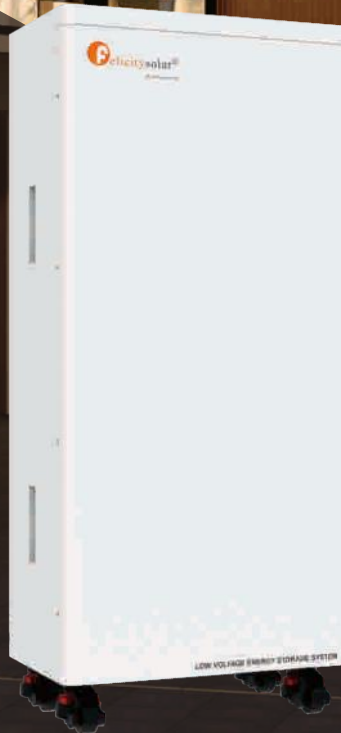


# LiFePO4 Battery Pack

## FLA Series Low-voltage

### Features

- LiFePO4: higher safe performance and longer cycle life.
- Multiple protection with built-in smart BMS, breaker and fuse.
- Flexible Installation: floor-mounted.
- Compatible with leading inverter brands.
- Scalable expansion up to 15 pcs in parallel.
- Built-in WiFi for remote monitor the battery pack data.
- Equipped with an aerosol fire extinguishing system.
- Easily replace the battery fuse when it blows.



FLA48300

| Model                                       | FLA48300                                         |
|---------------------------------------------|--------------------------------------------------|
| Battery Type                                | LiFePO4                                          |
| Nominal Energy                              | 15kWh                                            |
| Nominal Capacity                            | 300Ah                                            |
| Nominal Voltage                             | 51.2V                                            |
| Operating Voltage                           | 44.8-57.6V                                       |
| Recommend Charge/Discharge Current          | 120A                                             |
| Max. Continuous Charge/Discharge Current[1] | 150A                                             |
| Peak Charge/Discharge Current(15s)          | 200A                                             |
| Scalability                                 | Max. 15 pcs in Parallel(225kWh)                  |
| Depth of Discharge(DOD)                     | ≥95%                                             |
| Display Type                                | LCD                                              |
| Protection Degree                           | IP21                                             |
| Working Temperature Range                   | Charge: 0°C~55 °C                                |
|                                             | Discharge: -20°C~55 °C                           |
| Storge Temperature Range                    | 0°C~+35°C                                        |
| Humidity                                    | 5%~95%                                           |
| Altitude                                    | ≤ 2000m                                          |
| Communication                               | RS485/CAN                                        |
| Cycle Life                                  | ≥ 6000 Cycles (25°C±2°C,0.5C/0.5C,90%DOD,70%EOL) |
| Installation                                | Wall-Mounted / Floor-Mounted                     |
| Protection                                  | Built-in Smart BMS, Breaker, Fuse                |
| Warranty Period                             | 7 Years                                          |
| Certification                               | UN38.3、CE-EMC、IEC 62619                          |
| Product Weight                              | 135KG                                            |
| Package Weight                              | 160KG                                            |
| Product Dimension                           | 480X1100X300MM                                   |
| Package Dimension                           | 1150X635X498MM                                   |

[1] Max. Continuous Charge/Discharge Current is Affected by Temperature and SOC.

\*Product specifications may vary during continuous improvements. Please contact us for latest details.

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

### Product Display



Real-time status via LCD Display



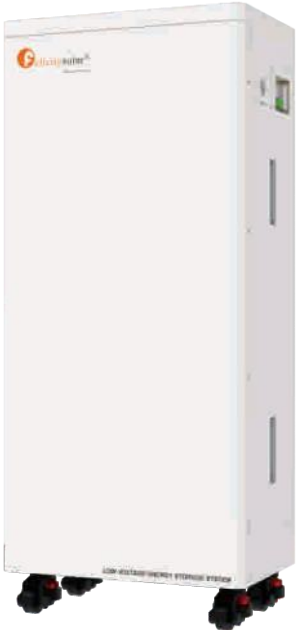
Aerosol Fire Extinguishing System



Support 15 Pcs in Parallel



Built-in WiFi/Bluetooth for Remote Monitoring



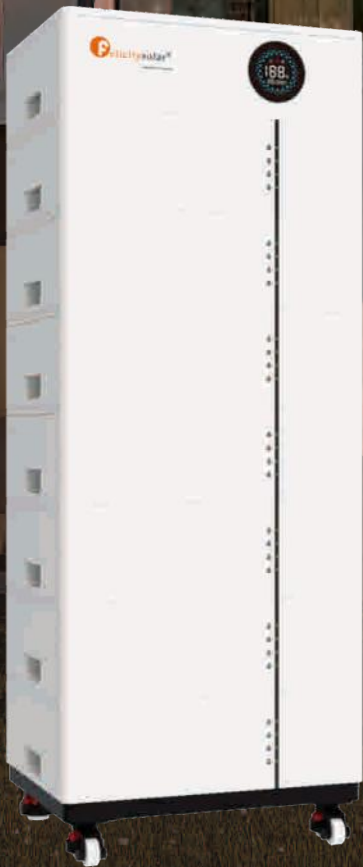


# LiFePO4 Battery Pack

## FLS Series Low-voltage

### Features

-  LiFePO4: Higher safe performance and longer cycle life.
-  Flexible Installation: floor-mounted.
-  Multiple Protection with built-in smart BMS, breaker and fuse.
-  Compatible with leading inverter brands.
-  Scalable expansion up to 8 units in parallel.
-  Modular design for easy installation and increased capacity.
-  Aerosol Fire Extinguishing System.



FLS48100SG1

| Model                                       |                            | FLS48100SG1                               |          |          |          |         |          |          |          |
|---------------------------------------------|----------------------------|-------------------------------------------|----------|----------|----------|---------|----------|----------|----------|
| Battery Type                                |                            | LiFePO4                                   |          |          |          |         |          |          |          |
| Module Nominal Energy                       |                            | 5.12kWh                                   |          |          |          |         |          |          |          |
| Module Nominal Capacity                     |                            | 100Ah                                     |          |          |          |         |          |          |          |
| Module Nominal Voltage                      |                            | 51.2V                                     |          |          |          |         |          |          |          |
| Number of Battery Modules                   |                            | 1                                         | 2        | 3        | 4        | 5       | 6        | 7        | 8        |
| System Nominal Energy                       |                            | 5.12kWh                                   | 10.24kWh | 15.36kWh | 20.48kWh | 25.6kWh | 30.72kWh | 35.84kWh | 40.96kWh |
| System Nominal Voltage                      |                            | 51.2V                                     |          |          |          |         |          |          |          |
| System Operating Voltage                    |                            | 44.8-57.6V                                |          |          |          |         |          |          |          |
| Recommend Charge/Discharge Current          |                            | 50A                                       | 100A     | 150A     | 200A     | 250A    | 300A     | 350A     | 400A     |
| Max. Continuous Charge/Discharge Current[1] |                            | 60A                                       | 120A     | 180A     | 240A     | 300A    | 360A     | 400A     | 400A     |
| Peak Charge/Discharge Current(15S)          |                            | 100A                                      | 200A     | 300A     | 400A     | 500A    | 600A     | 700A     | 800A     |
| Scalability                                 |                            | Max. 8 pcs in Parallel                    |          |          |          |         |          |          |          |
| Depth of Discharge(DOD)                     |                            | ≥95%                                      |          |          |          |         |          |          |          |
| Display Type                                |                            | Control Module: LCD/Battery Module: LED*4 |          |          |          |         |          |          |          |
| Protection Level                            |                            | IP21                                      |          |          |          |         |          |          |          |
| Working Temperature Range                   |                            | Charge: 0°C~55 °C                         |          |          |          |         |          |          |          |
|                                             |                            | Discharge: -20°C~55 °C                    |          |          |          |         |          |          |          |
| Storge Temperature Range                    |                            | 0°C~~+35°C                                |          |          |          |         |          |          |          |
| Humidity                                    |                            | 5%~95%                                    |          |          |          |         |          |          |          |
| Altitude                                    |                            | ≤ 2000M                                   |          |          |          |         |          |          |          |
| Communication                               |                            | RS485/CAN                                 |          |          |          |         |          |          |          |
| Cycle Life[2]                               |                            | ≥ 6000 Cycles                             |          |          |          |         |          |          |          |
| Installation                                |                            | Floor-Mounted                             |          |          |          |         |          |          |          |
| Protection                                  |                            | Built-in Smart BMS, Breaker, Fuse         |          |          |          |         |          |          |          |
| Warranty Period                             |                            | 10 Years                                  |          |          |          |         |          |          |          |
| Certification                               |                            | UN38.3、CE-EMC、IEC 62619、CB                |          |          |          |         |          |          |          |
| Control Module<br>FLS48100SCG1              | Product Weight Approximate | 46KG                                      |          |          |          |         |          |          |          |
|                                             | Package Weight Approximate | 60KG                                      |          |          |          |         |          |          |          |
|                                             | Product Dimension          | 600X450X180 MM                            |          |          |          |         |          |          |          |
|                                             | Package Dimension          | 712X562X333 MM                            |          |          |          |         |          |          |          |
| Battery Module<br>FLS48100SMG1              | Product Weight Approximate | 46KG                                      |          |          |          |         |          |          |          |
|                                             | Package Weight Approximate | 50KG                                      |          |          |          |         |          |          |          |
|                                             | Product Dimension          | 600X450X180 MM                            |          |          |          |         |          |          |          |
|                                             | Package Dimension          | 712X562X298 MM                            |          |          |          |         |          |          |          |

[1] Max. Continuous Charge/Discharge Current is Affected by Temperature and SOC.  
[2] Test Conditions: 0.2C Charging/Discharging @25°C, 80% DOD.  
\*Product specifications may vary during continuous improvements. Please contact us for latest details.  
\*Refer to Felicitysolar's Warranty Policy for applicable conditions.

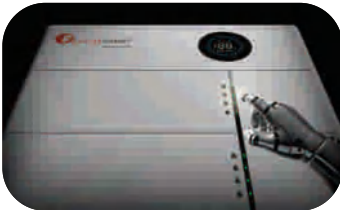
### Product Display



Wide Inverter Compatibility



Aerosol Fire Extinguishing System



Real-time Status via LCD Display & SOC Display



Module Design for Easy Expansion



# LiFePO4 Battery Pack

## FLH Series High-voltage

### Features

- Multiple protections: over voltage, over current, external short circuit, reverse polarity/ground. fault, over temp.
- Battery Protection: internal short circuit, over voltage, over current, over temp, under voltage.
- Higher safe performance and longer cycle life with LFP battery.
- Flexible Installation: rack-Mounting.
- Compatible with leading inverter brands.
- Up to 7-year long warranty.
- Configurable parameters and working mode via LCD touch screen.



FLH48100UG1

| Model                                       |                            | FLH48100UG1                               |            |            |
|---------------------------------------------|----------------------------|-------------------------------------------|------------|------------|
| Battery Type                                |                            | LiFePO4                                   |            |            |
| Nominal Energy                              |                            | 5.12KWh                                   |            |            |
| Nominal Voltage                             |                            | 51.2V                                     |            |            |
| Nominal Capacity                            |                            | 100Ah                                     |            |            |
| Number of Battery Modules                   |                            | 4(Min)                                    | 8          | 12         |
| System Nominal Energy                       |                            | 20.48kWh                                  | 40.96kWh   | 61.44kWh   |
| System Nominal Voltage                      |                            | 204.8V                                    | 409.6V     | 614.4V     |
| System Operating Voltage                    |                            | 192-230.4V                                | 384-460.8V | 576-691.2V |
| Recommend Charge/Discharge Current          |                            | 50A                                       |            |            |
| Max. Continuous Charge/Discharge Current[1] |                            | 100A                                      |            |            |
| Peak Charge/Discharge current(15S)          |                            | 120A                                      |            |            |
| Depth of Discharge(DOD)                     |                            | ≥ 95%                                     |            |            |
| Display Type                                |                            | LED+LCD(Touch)                            |            |            |
| IP Rating of Enclosure                      |                            | IP21                                      |            |            |
| Operating Temperature Range                 |                            | Charge:0~+55°C                            |            |            |
|                                             |                            | Discharge:-20°C~+55°C                     |            |            |
| Storge Temperature Range                    |                            | 0°C~+35°C                                 |            |            |
| Humidity                                    |                            | 5%~95%                                    |            |            |
| Altitude                                    |                            | ≤2000M                                    |            |            |
| Cycle Life[2]                               |                            | ≥ 6000                                    |            |            |
| Installation                                |                            | Rack-Mounting                             |            |            |
| Protection                                  |                            | Built-in smart BMS, Breaker               |            |            |
| Communication Port                          |                            | RS485 / CAN                               |            |            |
| Warranty Period                             |                            | 10 Year                                   |            |            |
| Certification                               |                            | UN38.3、CB、CE-EMC、IEC 62619、EN IEC 62040-1 |            |            |
| Control Module<br>FLH48100UCG1              | Product Dimension          | 482.6x565x150MM                           |            |            |
|                                             | Package Dimension          | 687x562x269MM                             |            |            |
|                                             | Product Weight Approximate | 10.3KG                                    |            |            |
|                                             | Package Weight Approximate | 16.7KG                                    |            |            |
| Battery Module<br>FLH48100UMG1              | Product Dimension          | 482.6x565x131MM                           |            |            |
|                                             | Package Dimension          | 687x562x250MM                             |            |            |
|                                             | Product Weight Approximate | 41.3KG                                    |            |            |
|                                             | Package Weight Approximate | 45KG                                      |            |            |
| Rack<br>FLH48100R13G1                       | Battery Designation[3]     | IFpP/54/150/120/[(1P16S)NS]M/-20+50/95    |            |            |
|                                             | Product Dimension          | 560×590×2137.5MM (13th Floor)             |            |            |
|                                             | Package Dimension          | 165×640×2142MM                            |            |            |
|                                             | Product Weight Approximate | 62KG                                      |            |            |
| Rack<br>FLH48100R9G1                        | Package Weight Approximate | 69.5KG                                    |            |            |
|                                             | Product Dimension          | 560×590×1565.5MM (9th Floor)              |            |            |
|                                             | Package Dimension          | 168×642×1570MM                            |            |            |
|                                             | Product Weight Approximate | 46KG                                      |            |            |
|                                             | Package Weight Approximate | 52KG(Approx)                              |            |            |

[1] Max. Continuous Charge/Discharge Current/Power is Affected by Temperature and SOC.

[2] Test Conditions: 0.2C Charging/Discharging @25°C, 80% DOD.

[3] "N" Means the Number of Battery Packs Connected Series and Should not Exceed 12.(N≤12)

\*Product specifications may vary during continuous improvements. Please contact us for latest details.

\*Refer to Felicitysolar's Warranty Policy for applicable conditions.



# Commercial & Industrial Energy Storage System

Air Cooling System

## Features

- ☀️ ≥ 6000 long cycle life.
- 🏗️ Easy expansion with module design.
- 🏠 High Efficiency: battery 94%, system 87%.
- 🔌 Multi Branches: Support load, battery and PV.
- 🛡️ High Safety: no parallel/circulating currents/ three fire prevention.
- 🔧 Easy maintenance with self diagnosis and fault location.
- 🔄 User-friendly experience with ready to work, auto switch on grid / off grid mode.



FLS-MES215AF-S

| Model                                    | FLS-MES215AF-S                                               |
|------------------------------------------|--------------------------------------------------------------|
| DC                                       |                                                              |
| Cell                                     | LFP 280Ah                                                    |
| Number of MPPT                           | 2                                                            |
| MPPT Operating Voltage/Full Load Voltage | 250~ 850/450 ~850                                            |
| Protection                               | Circuit Braker and Fuse                                      |
| Pack Capacity /Arrangement               | 14.336kWh / 1P16S                                            |
| Maximum PV Input Voltage/Power           | 1000V / 120kW                                                |
| System Capacity /Arrangement             | 215kWh/1P240S                                                |
| Nominal Current                          | 140A                                                         |
| Charge/Discharge Rate                    | ≤0.5Cp                                                       |
| DC Efficiency                            | 94%                                                          |
| AC (On Grid)                             |                                                              |
| Nominal Output Power                     | 100KW                                                        |
| Nominal Input Voltage                    | AC340V~460V                                                  |
| Power Factor                             | -1~1                                                         |
| Nominal Output Current                   | 144A                                                         |
| Nominal Grid Frequency                   | 50Hz/60Hz                                                    |
| Wiring                                   | 3P+N+PE                                                      |
| AC (Off Grid)                            |                                                              |
| Nominal Output Power                     | 100KW                                                        |
| Nominal Input Voltage                    | AC400V                                                       |
| THD                                      | Linear ≤1%/Nonlinear ≤5%                                     |
| Nominal Output Current                   | 144A                                                         |
| Nominal Grid Frequency                   | 50Hz/60Hz                                                    |
| Output Wiring                            | 3P+N+PE (Isolated Transformer, STS Inside)                   |
| System                                   |                                                              |
| Overall System Efficiency                | 87%&0.5P (STD)                                               |
| Communication                            | RS485, CAN, TCP/IP                                           |
| Fire Prevention                          | Fk5112                                                       |
| DOD                                      | 5~95%                                                        |
| Charging/Discharging Rate                | ≤0.5Cp                                                       |
| Cooling Power                            | 1.1 kW/ 3.0 kW                                               |
| Cooling                                  | Forced air Cooling                                           |
| Operation Temperature                    | -20°C~50°C(>45°C Derating )                                  |
| Cabinet Enclosure Protection for Cabinet | IP54                                                         |
| Warranty Period                          | 5 Years                                                      |
| Relative Humidity Range                  | 5~95%RH (no Condensing)                                      |
| Noise                                    | <75dB                                                        |
| Weight                                   | 3900KG                                                       |
| Max. Operation Altitude                  | ≤3000M                                                       |
| Size (MM)                                | 2450(L)×1550(D)×2400(H)                                      |
| Certification                            | Battery: UN38.3<br>PCS: EN 50549-1、EN 50549-10、CE-EMC、CE-LVD |

\*Conditions Apply, Refer to Felicitysolar Warranty Letter.



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# COMPONENTS

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## Series

**MPPT Solar Charge  
Controller**-----81/86

**Solar Panels**-----87/88

**PV Combiner Box**-----89/90

**Battery Combiner Box**-----91/92



# Monocrystalline Solar Panels

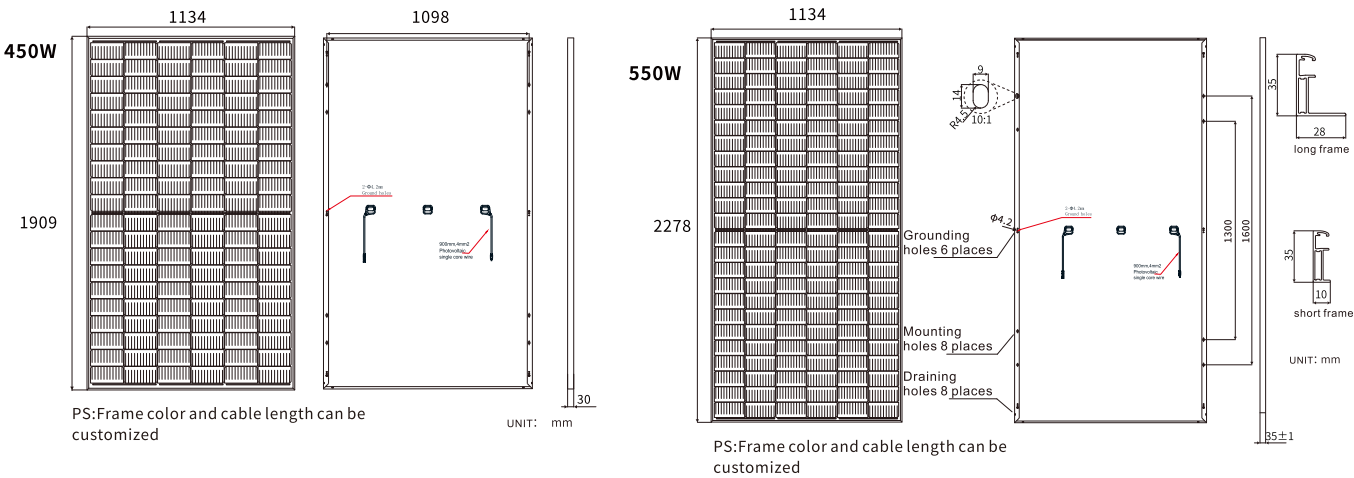
Levelized Cost of Energy Reduced by 6-8%

- ↓7% Saving cable cost.
- ↓6% Saving logistics cost.
- ↓9% Saving labor cost.
- ↓8% Saving bracket cost.



MSD450W~550W

## Mechanical Diagrams



| Model                                  | MSD120-EM450W                                     | MSD144M-EM550W |
|----------------------------------------|---------------------------------------------------|----------------|
| Rated Maximum Power(Pmax)[W]           | 450Wp                                             | 550Wp          |
| Open Circuit Voltage(Voc)[V]           | 42.72V                                            | 51.1V          |
| Maximum Power Voltage(Vmp)[V]          | 35.6V                                             | 42.6V          |
| Short Circuit Current(Isc)[AJ          | 13.3A                                             | 13.6A          |
| Maximum Power Current(Imp)[A]          | 12.6A                                             | 12.9A          |
| Power Tolerance                        | ± 3%                                              | ± 3%           |
| Temperature Coefficient of Isc(α_Isc)  | -0.046%/°C                                        | -0.046%/°C     |
| Temperature Coefficient of Voc (β_Voc) | -0.276%/°C                                        | -0.276%/°C     |
| Temperature Coefficient of Pmax(γ_Pmp) | -0.350%/°C                                        | -0.350%/°C     |
| Operating Conditions                   |                                                   |                |
| Maximum System Voltage                 | 1500Vdc                                           |                |
| Operating Temperature                  | -40°C~+85°C                                       |                |
| Maximum Series Fuse                    | 25A                                               |                |
| Maximum Static Load, Front             | 5400Pa(112lb/ft²)                                 |                |
| Maximum Static Load, Back              | 2400Pa(501b/ft²)                                  |                |
| NOCT                                   | 45+2°C                                            |                |
| Backside Ratio                         | 70%±10%                                           |                |
| Fireproof Performance                  | UL Type 29                                        |                |
| STC                                    | Irradiance 1000W/m2, Cell Temperature 25°C, AM1.5 |                |

\*Standard Test Conditions: Solar Irradiance 1000 W/m%, Solar Spectrum 1.5AM and Cell Temperature 25 °C



# Battery Combiner Box

## Features

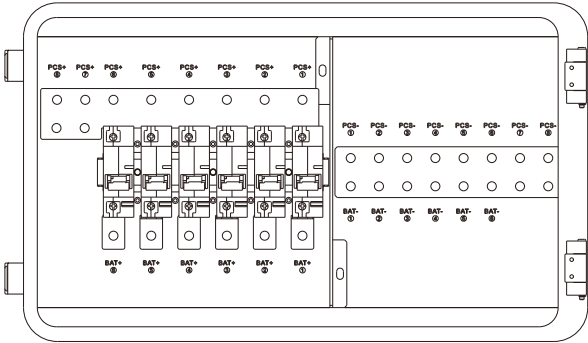
-  Convenient circuit wiring.
-  Superior flow expansion for higher efficiency.
-  Robust high-current handling for reliable performance.



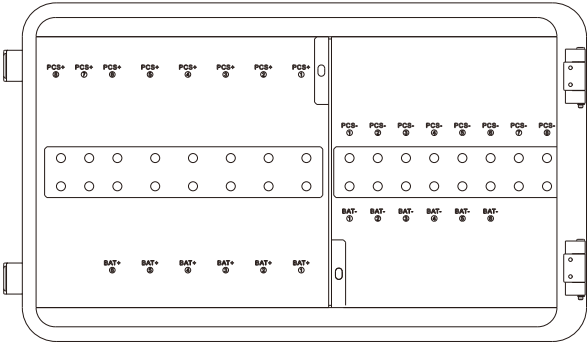
BTCB0606/0303-120/200

| Model                           | BTCB0606-120  | BTCB0606-200 | BTCB0303-120 | BTCB0303-200 |
|---------------------------------|---------------|--------------|--------------|--------------|
| Max. Imum Number of Input Paths | 6             | 6            | 3            | 3            |
| Rated Voltage of Branch[V]      | 80            | /            | 80           | /            |
| Branch Rated Current[A]         | 125           | 200          | 125          | 200          |
| Battery Switch                  | PEBS-L        | /            | PEBS-L       | /            |
| Shell Material                  | Metal Chassis |              |              |              |
| Protection Level                | IP21          |              |              |              |
| Operating Temperature Range     | -10°C~50°C    |              |              |              |
| Net Weight(KG)                  | 8.1KG         | 7.1KG        | 7.4KG        | 6.8KG        |
| Gross Weight(KG)                | 9.7KG         | 8.7KG        | 9.0KG        | 8.4KG        |
| Product Dimension(MM)           | 516×300×136MM |              |              |              |
| Package Dimension(MM)           | 592×392×218MM |              |              |              |

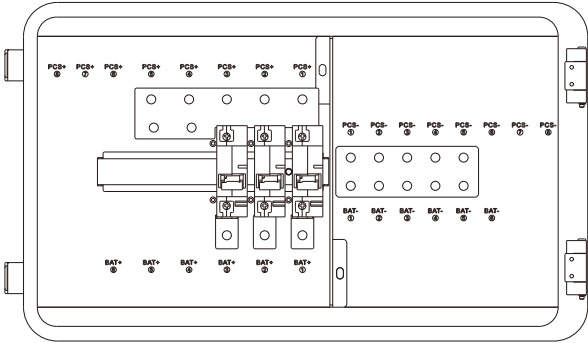
### Internal schematic diagram of the product



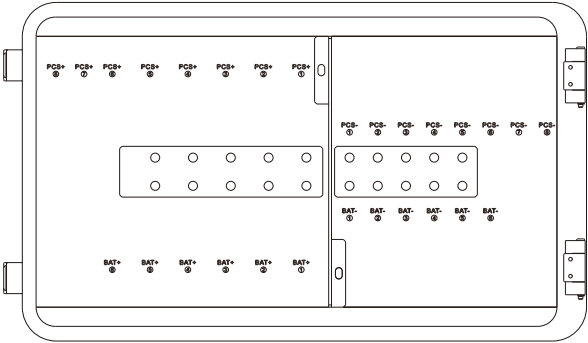
BTCB0606-120 with breaker 125A\*6PCS



BTCB0606-200 with out breaker



BTCB0303-120 with breaker 125A\*3PCS



BTCB0303-200 with out breaker