MO SOLAR

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2026

SOLAR ENERGY

STORAGE SOLUTIONS

Version 2026-00-18

Off-grid High-frequency Solar Inverter

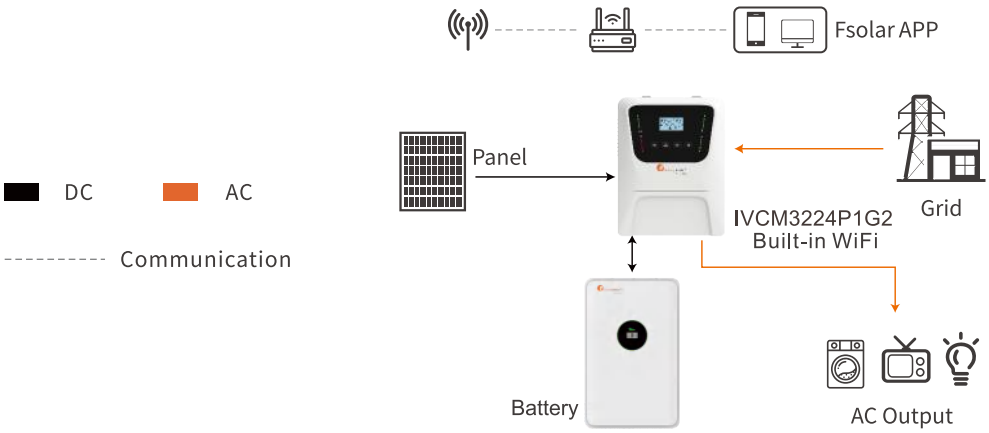
IVCM Series | IVCM2012/3224P1G2



Features

- Max. 120A charging current.
- Compatible with mains voltage or generator power.
- Built-in MPPT solar charge controller.
- Support parameters setting via LCD screen (input voltage/charging current/charge mode).
- Build-in WiFi for real-time monitoring.
- Optional Working Modes Setting: Backup mode / intelligent mode / economic mode.
- Supports battery-free mode and silent mode.
- Cold start function.

System Diagram



Specifications

Model	IVCM2012P1G2	IVCM3224P1G2
Line Mode Specifications		
Rated Output Power	2000VA/2000W	3200VA/3200W
Input Voltage Waveform	Sinusoidal (utility or generator)	
Nominal Input Voltage	230Vac	
Low Line Voltage Disconnect	170Vac±7V(UPS);90Vac±7V(Appliances)	
Low Loss Voltage Re-connect	180Vac±7V(UPS);100Vac±7V(Appliances)	
High Line Voltage Disconnect	280Vac±7V	
High Line Voltage Re-connect	270Vac±7V	
Nominal Input Frequency	50Hz/60Hz	
Low Line Frequency Disconnect	40Hz±1	
Low Line Frequency Re-connect	42Hz±1	
High Line Frequency Disconnect	65Hz±1	
High Line Frequency Re-connect	63Hz±1	
Output Voltage Waveform	As same as input waveform	
Output Short Circuit Protection	Battery mode: Electronic Circuits	
Transfer Time (Single Unit)	4ms typical (UPS); 20ms typical (Appliances)	
Max Bypass Overload Current	25A	
Max Inverter/Rectifier Current	15A/3450W	25A/5750W
Utility Charge Mode Specifications		
Nominal Input Voltage	230Vac	
Input Voltage Range	90-280Vac	
Nominal Output Voltage	Dependent on Battery Type	
Max. Charge Current	120A	
Charge Current Regulation	0-120A (Adj 5A)	
Over Charge Protection	Yes	
Solar Charging & Grid Charging		
Max. PV Open Circuit Voltage	105V	
MPPT Voltage Range	30-90V	
Max. Input Power	800W	1600W
Max. Solar Charging Current	60A	
Max. Charging Current(PV+Grid)	120A	
General Specifications		
Operating Temperature	-10°C~55°C	
Range Storage Temperature	-15°C~60°C	
Net Weight(KG)	6.5KG	
Product Size (D*W*H)	356x276x128MM	
Package Dimension (D*W*H)	438x358x202MM	

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

Off-grid High-frequency Solar Inverter

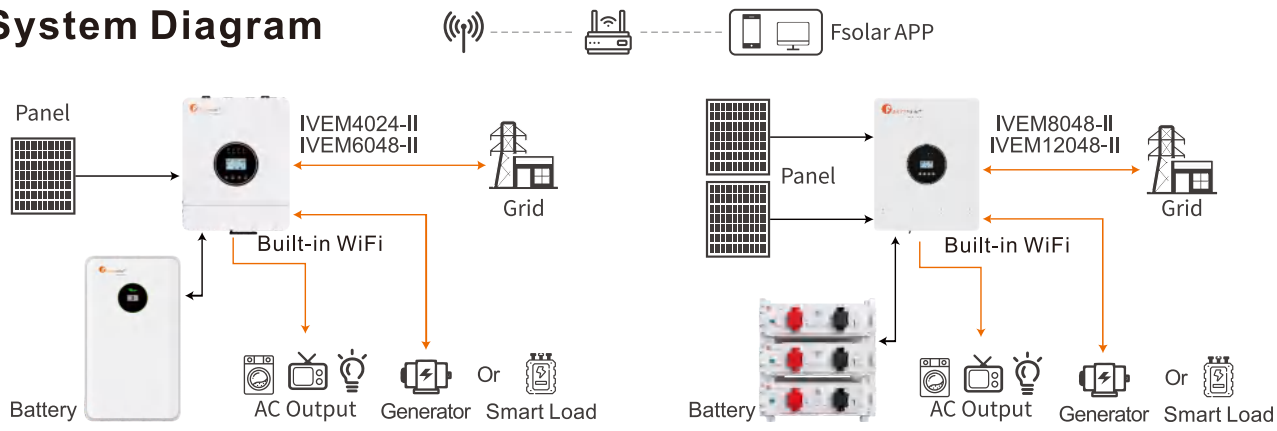
IVEM-II Series | IVEM4024/6048/8048/12048-II



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 (6kW) / 6 units (8kW & 12kW) in parallel (Battery must be connected).
- Supports generator input port reconfiguration to smart output port with customizable duration.
- Supports grid feed-in.
- 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.

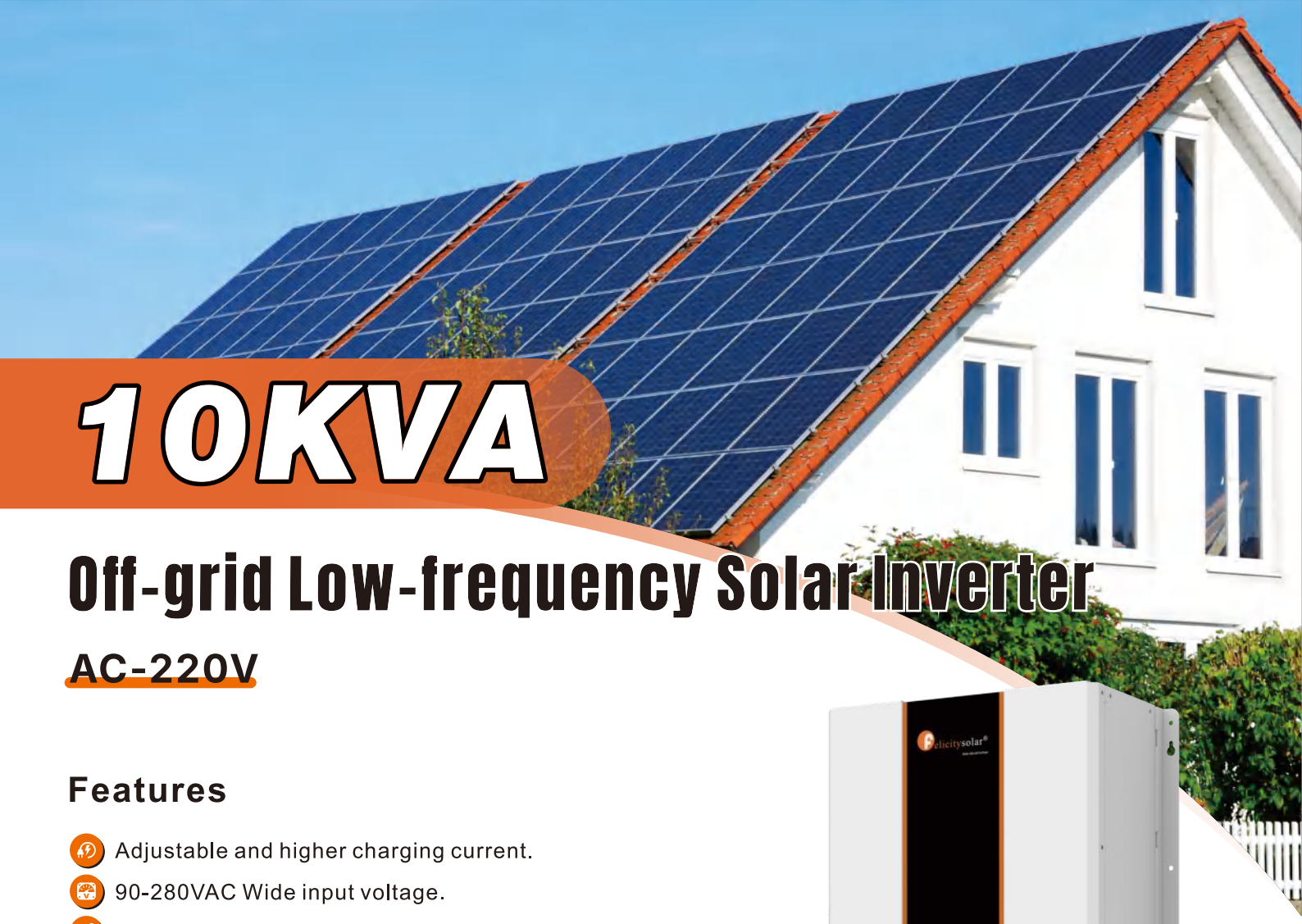
System Diagram



Specifications

Model	IVEM4024-II	IVEM6048-II	IVEM8048-II	IVEM12048-II
Line Mode Specifications				
Rated Output Power(VA)	4000VA	6000VA	8000VA	12000VA
Rated Output Power(W)	4000W	6000W	8000W	12000W
Nominal DC Input Voltage	24V	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	120A	150A	240A
Charge Current Regulation	10-120A (Adjustable Unit is 1A)	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	60V-500V	90V-450V	90V-450V	90V-450V
Max. Input Power	6000W	7500W	10000W(5000W for single PV)	15000W(7500W for Single PV)
Max. Solar Charging Current	120A	120A	150A	240A
Max. Charging Current(PV+Grid or GEN)	120A	120A	150A	240A
Max. Input Current	27A	27A	20A X 2(MAX 40A)	27A X 2(MAX 54A)
Min. Startup Voltage	60V	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	No	Yes, Up to 12 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)	10.4KG	12.5KG	23.7KG	26.8KG
Product Dimension(MM)	430*310*120MM	420*335*142MM	607*464*141MM	634*476*141MM
Package Dimension(MM)	507*387*197MM	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	CE-EMC、IEC 62109-1/2

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



10KVA

Off-grid Low-frequency Solar Inverter

AC-220V

Features

- Adjustable and higher charging current.
- 90-280VAC Wide input voltage.
- Seamless bypass charging and AC charging when powered off.
- Selectable charging priority (grid/battery).
- Communicate with Felicitysolar MPPT charge controller.
- Intelligent protection, higher class of security.
- Supports up to 6 units in parallel for 10KVA (Battery must be connected).



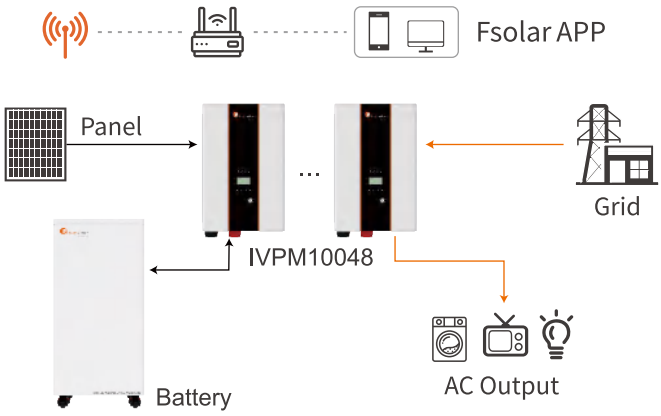
IVPM10048

System Configuration

DC

AC

Communication



Model	IVPM5048	IVPM7548	IVPM10048
Line Mode Specifications			
Rated Output Power(VA)	5000VA	7500VA	10000VA
Rated Output Power(W)	4000W	6000W	8000W
Nominal DC Input Voltage	48V		
Nominal Input Voltage	220Vac		
Max. AC Input Voltage	280Vrms		
Nominal Input Frequency	50Hz / 60Hz		
Efficiency(Line Mode)	⩾95% (Rated R Load, Battery Full Charged)		
Pass Through Without Battery	No		
Max. Bypass Overload Current	AC 63A		
Utility Charge Mode Specifications			
Nominal Input Voltage	220Vac		
Input Voltage Range	90~280Vac		
Nominal Output Voltage	Dependent on Battery Type		
Max. Charge Current	50A	60A	80A
Charge Current Regulation	0A-50A	0A-60A	0A-80A
Battery Initial Voltagen	Circuit Breaker		
Charger Short Circuit	AC 63A		
Breaker Size	Dependent on Battery Type or Self-defined		
Over Charge Protection	Yes		
Solar Charging & Utility Charging(MPPT bulit-in controller is optional)			
Max. PV Open Circuit Voltage	170Vdc	170Vdc	170Vdc
PV Voltage Working Range	65~145Vdc	65~145Vdc	65~145Vdc
Max. Input Power	6600W	6600W	6600W
Max. Solar Charging Current	120A	120A	120A
Max. Charging current(Utility + Solar)	170A	180A	200A
Inverter Mode Specifications			
Output Voltage Waveform	Pure Sine Wave		
Nominal Output Voltage	220Vac±5%		
Nominal Output Frequency(Hz)	50±0.3Hz/60Hz±0.3Hz(Adjustable)		
Output Voltage Regulation	±5%rms		
General Specifications			
Operating Temperature	0°C~40°C		
Range Storage Temperature	-15°C~60°C		
Package Dimension(MM)	607*540*290MM		670*470*355MM

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

Low-voltage Hybrid Solar Inverter

IVGM Series | IVGM16KLP1G1

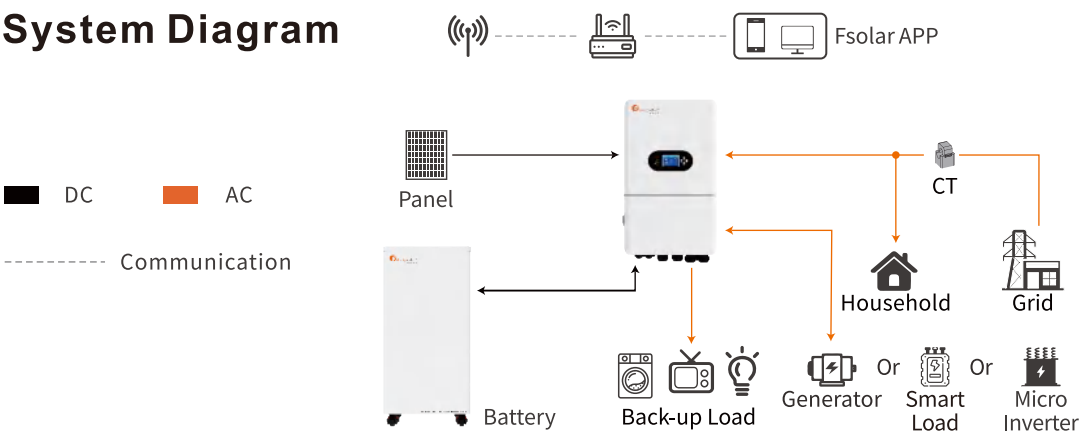
Single Phase



Features

- Configurable parameters and working mode by LCD touch screen.
- Supporting WiFi monitoring and Fsolar smart cloud monitoring system.
- Supports high current for battery charging/discharging.
- Prevent grid overload with built-in limit function while seamlessly switching between battery and grid supply within 10ms for uninterrupted power.
- IP65 protection level.
- Customizable battery charge / discharge scheduling.
- Optimize energy use with Time-of-Use, Sell-First, and Zero Export options to maximize savings and efficiency.
- Built-in multiple MPPTs for enhanced PV input capability.
- Programmable generator port, support smart load and micro inverter access.
- Max. 6 units in parallel.

System Diagram



Specifications

Model	IVGM16KLP1G1
Battery Input Data	
Battery Type	Lead-acid or Lithium-ion
Battery Voltage Range	40V~60V
Max. Charging and Discharging Current	290A/290A
Charging Strategy for Li-ion Battery	Self-adaption to BMS
Number of Battery Input	2
PV String Input Data	
Max. PV Access Power	32000W
Max. PV Input Power	25600W
Max. PV Input Voltage	500V
Start-up Voltage	125V
MPPT Voltage Range	150V-425V
Rated PV Input Voltage	370V
Max Input Short-Circuit Current	44A+44A+44A
Max Operating PV Input Current	26A+26A+26A
No.of MPP Trackers/No.of String Per MPP Tracker	3/2+2+2
Grid Data	
Rated AC Input/Output Active Power	16000W
Max. AC Input/Output Apparent Power	17600VA
Peak Power (off-grid)(W)	2 Times of Rated Power, 10s
Rated AC Input/Output Current	72.7A/69.6A
Max. AC Input/Output Current	80A/76.5A
Max. Continuous AC Passthrough (grid to load)	100A
Rated Input/Output Voltage/Range	220V/230V 0.85Un-1.1Un
Grid Connection Form	L+N+PE
Rated Input/Output Grid Frequency/Range	50Hz/45Hz-55Hz 60Hz/55Hz-65Hz
Power Factor Adjustment Range	0.8 Leading to 0.8 Lagging
Total Current Harmonic Distortion THDi	<3% (of Nominal Power)
DC Injection Current	<0.5% In
Protection	
DC Reverse Polarity Protection	Integrated
AC Output Overcurrent Protection	Integrated
Thermal Protection	Integrated
AC Output Overvoltage Protection	Integrated
AC Output Short Circuit Protection	Integrated
DC Component Monitoring	Integrated
Arc Fault Circuit Interrupter (optional)	Integrated
Anti-islanding Protection	Integrated
DC Switch	Integrated
Insulation Impedance Detection	Integrated
Residual Current Detection	Integrated
Surge Protection Level	(TYPE II(DC), TYPE II(AC))
Interface	
Communication Interface	RS485/RS232/CAN
Monitor Mode	WIFI/Bluetooth
General Data	
Operating Temperature Range	-25°C~60°C, >45°C Derating
Ingress Protection (IP) Rating	IP65
Inverter Topology	Non-Isolated
Over Voltage Category	OVC II(DC), OVC III(AC)
Net Weight	53 kg
Gross Weight	63,6 kg
Product Dimension	760*450*285 mm
Package Dimension	895*570*419 mm
Type Of Cooling	Intelligent air Cooling
Warranty	5 Years
Grid Regulation(In progress)	IEC61727, IEC62116, NRS097
Safety Regulation & EMC	IEC/EN61000-6-1/2/3/4, IEC/EN62109-1, IEC/EN62109-2

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



16kW

Hybrid Solar Inverter

IVGM Series Low-voltage | Three Phase

Features

- Remote Monitoring via Fsolar APP
- 1.6 x PV input oversizing
- 100% Unbalanced Three-phase Output, Flexible Load Connection
- Supports Single-phase/Three-phase Output
- IP65-rated Protection
- Time of Use Function
- Generator / Smart Load / Microinverter Compatible
- Max.10 Units in Parallel

Three Phase



IVGM16KLP3G1

Model	IVGM16KLP3G1
Battery Input Data	
Battery Type	Li-Ion / Lead-acid
Battery Voltage Range	40V~60V
Max. Charging/Discharging Current	300A
PV String Input Data	
Max. PV Input Power	25.6kW
Max. PV Input Voltage	800V
Start-up Voltage	160V
MPPT Voltage Rang	160V-650V
Rated DC Input Voltage	550V
Full Load DC Voltage Range	445V-800V
Max. Operating PV Input Current	36+36(A)
Max. Input Short-Circuit Current	54+54(A)
No. of MPP Trackers /No. of Strings MPP Tracker	2/2+2
AC Input/Output Data	
Rated AC Input/Output Active Power	16kW
Max. AC Input/Output Apparent Power	17.6kVA
Peak Power (Off-grid)	2 Times of Rated Power, 10s
Rated AC Input/Output Current	23.2A
Max. AC Input/Output Current	25.5A
Max. Continuous AC Passthrough (Grid to Load)	70A
Max. Output Overcurrent Protection	92A
Rated Input/Output Voltage/Range	220/380,230/400Vac(-20%~+15%)
AC Wiring Mode	3L+N+PE
Rated Input/Output Grid Frequency/Range	50/60 Hz(45~55Hz/55~65Hz)
Equipment Protection	
DC Polarity Reverse Connection Protection	Yes
AC Output Overcurrent Protection	Yes
AC Output Overvoltage Protection	Yes
AC Output Short Circuit Protection	Yes
Thermal Protection	Yes
DC Terminal Insulation Impedance Monitoring	Yes
DC Component Monitoring	Yes
Ground Fault Current Monitoring	Yes
Arc Fault Circuit Interrupter (AFCI)	Yes
Power Network Monitoring	Yes
Island Protection Monitoring	Yes
Earth Fault Detection	Yes
DC Input Switch	Yes
Overvoltage Load Drop Protection	Yes
Residual Current (RCD) Detection	Yes
Surge Protection Level	TYPE II(DC), TYPE II(AC)
Certification and Standards	
Grid Regulation	NRS 097-2-1, VDE4105, EN50549-1, AS 4777.2, GB / T 34120, GB / T 34133, GB / T 34129
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
General Data	
Net Weight(KG)	48.7KG
Gross Weight(KG)	60.2KG
Product Dimension(MM)	750x450x268MM
Package Dimension(MM)	889x566x397MM
Protection Degree	IP65
Communication with BMS	RS485/CAN
Monitor Module	WiFi/4G
Warranty	5 Years

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

Low-voltage Hybrid Solar Inverter

IVGM Series | IVGM20KLP3G1

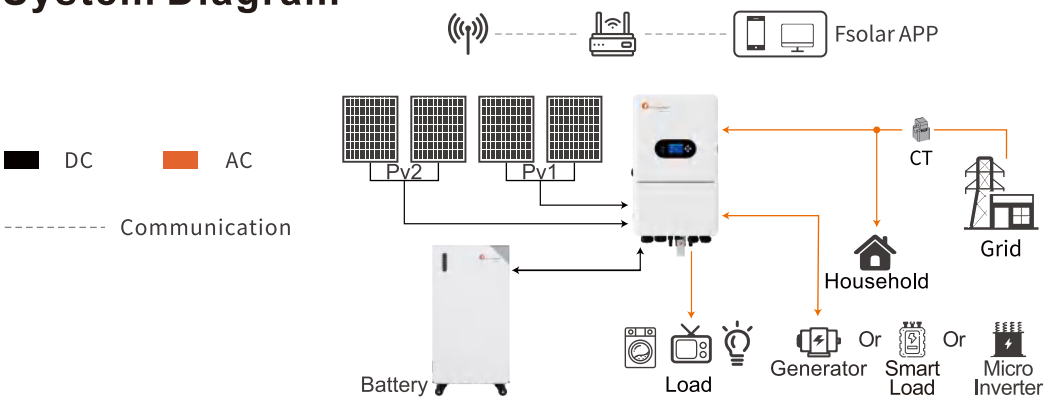
Three Phase



Features

- Supports WiFi monitoring and Fsolar smart cloud monitoring system.
- Supports 100% unbalanced three-phase output for flexible load connection.
- LCD touch screen for easy parameter and mode settings.
- Fit for outdoor installation with IP65 protection level.
- Uninterrupted power with EPS function.
- Customizable battery charge / discharge scheduling.
- Compatible with generator, microgrid, and smart load port.
- Time of Use function to save on electricity cost.
- Battery charge and discharge current up to 350A.
- 4-channel PV, 2-channel MPPT, 1.6 times overconfiguration capacity.
- Max.10 units in parallel.
- Auto restart while AC is recovering.

System Diagram



Specifications

Model	IVGM20KLP3G1
Battery Input Data	
Battery Type	Li-Ion / Lead-acid
Battery Voltage Range	40V~60V
Max. Charging/Discharging Current	350A
PV String Input Data	
Max. PV Input Power	32kW
Max. PV Input Voltage	800V
Start-up Voltage	160V
MPPT Voltage Rang	160V-650V
Rated DC Input Voltage	550V
Full Load DC Voltage Range	550V-800V
Max. Operating PV Input Current	36+36(A)
Max. Input Short-Circuit Current	54+54(A)
No. of MPP Trackers /No. of Strings MPP Tracker	2/2+2
AC Input/Output Data	
Rated AC Input/Output Active Power	20kW
Max. AC Input/Output Apparent Power	22kVA
Peak Power (Off-grid)	2 Times of Rated Power, 10s
Rated AC Input/Output Current	28.9A
Max. AC Input/Output Current	31.9A
Max. Continuous AC Passthrough (Grid to Load)	70A
Max. Output Overcurrent Protection	92A
Rated Input/Output Voltage/Range	220/380,230/400Vac(-20%~+15%)
AC Wiring Mode	3L+N+PE
Rated Input/Output Grid Frequency/Range	50/60 Hz(45~55Hz/55~65Hz)
Equipment Protection	
DC Polarity Reverse Connection Protection	Yes
AC Output Overcurrent Protection	Yes
AC Output Overvoltage Protection	Yes
AC Output Short Circuit Protection	Yes
Thermal Protection	Yes
DC Terminal Insulation Impedance Monitoring	Yes
DC Component Monitoring	Yes
Ground Fault Current Monitoring	Yes
Arc Fault Circuit Interrupter (AFCI)	Yes
Power Network Monitoring	Yes
Island Protection Monitoring	Yes
Earth Fault Detection	Yes
DC Input Switch	Yes
Overvoltage Load Drop Protection	Yes
Residual Current (RCD) Detection	Yes
Surge Protection Level	TYPE II(DC), TYPE II(AC)
Certification and Standards	
Grid Regulation	NRS 097-2-1, VDE4105, EN50549-1, AS 4777.2, GB / T 34120, GB / T 34133, GB / T 34129
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
General Data	
Net Weight(KG)	48.7KG
Gross Weight(KG)	60.2KG
Product Dimension(MM)	750x450x268MM
Package Dimension(MM)	889x566x397MM
Protection Degree	IP65
Communication with BMS	RS485/CAN
Monitor Module	WiFi/4G
Warranty	5 Years

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

High-voltage Hybrid Solar Inverter

IVGM Series | IVGM25~50KHP3G2

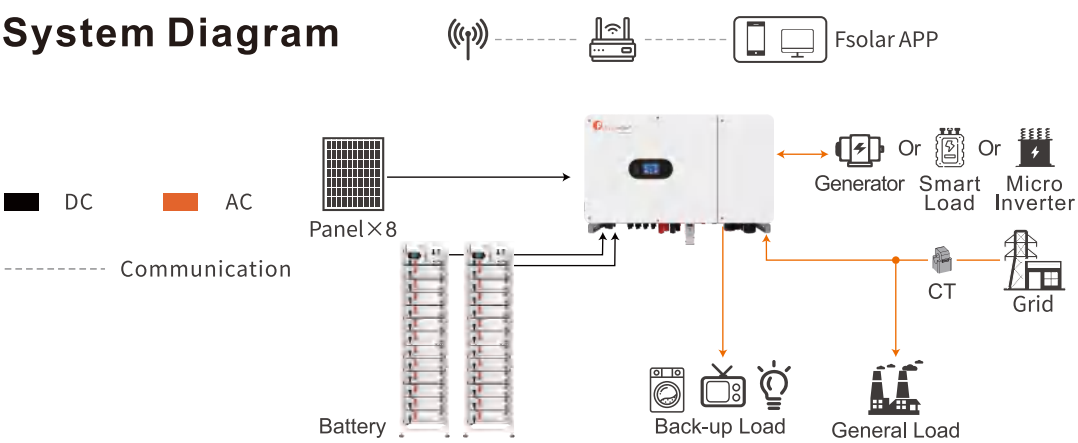
Three Phase



Features

- AI-powered forecasting, smart planning & personalized energy optimization.
- Supports WiFi monitoring and Fsolar smart cloud monitoring system.
- Customizable battery charge / discharge scheduling.
- Seamless power supply switching within 10ms.
- Configurable parameters and working mode via LCD touch screen.
- Programmable multiple operation modes: On grid, off grid and UPS.
- Programmable supply priority for battery or grid.
- 2 independent battery inputs, effectively reducing inter-cluster circulation.
- Multi-string PV input, 2 times over configuration capacity.
- Programmable generator port, support smart load and micro inverter access.
- IP65 protection level.
- 12 pcs in parallel maximum.
- Auto restart while AC is recovering.

System Diagram



Specifications

Model	IVGM29K9HP3G2	IVGM30KHP3G2	IVGM40KHP3G2	IVGM50KHP3G2
Battery Input Data				
Battery Type	LFP (LiFePO4)			
Battery Voltage Range	160~800Vd.c.			
Max. Charging Current	50+50(A)			
Max. Discharging Current	50+50(A)			
Number of Battery Input	2			
PV String Input Data				
Max. DC Access Power	59.8kW	60kW	80kW	100kW
Max. DC Input Power	47.84kW	48kW	64kW	80kW
Max. DC Input Voltage	1000Vd.c.			
Min. DC Input Voltage	150Vd.c.			
Start-up Voltage	180Vd.c.			
Rated DC Input Voltage	600Vd.c.			
MPPT Range	150~850Vd.c.			
Full Load DC Voltage Range	443~850Vd.c.	444~850Vd.c.	444~850Vd.c.	550~850Vd.c.
PV Input Current	36+36+36(A)		36+36+36+36(A)	
Max. PV Isc	55+55+55(A)		55+55+55+55(A)	
No.of MPP Trackers	3		4	
No.of Strings Per MPP Tracker	2		2	
AC Output Data				
Rated AC Output Power	29.9kW	30kW	40kW	50kW
Max. AC Output Power	29.9kW	33kW	44kW	55kW
AC Output Rated Current	43.4A	43.5A	58A	72.5A
Max. AC Current	43.4A	47.9A	63.8A	79.7A
Max. Output Overcurrent Protection (A)	144(A)		192 (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)			
Safety and Standards				
Surge Protection Level	TYPE II(DC), TYPE II(AC)			
Over Voltage Category	OVCII (DC), OVC III (AC)			
Grid Regulation	NRS 097-2-1, VDE4105, EN50549-1, AS 4777.2, GB/T 34120, GB/T 34133, GB/T 34129			
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2			
Protection				
PV Input Lightning Protection	Integrated			
PV String Input Reverse Polarity Protection	Integrated			
Battery Input Lightning Protection	Integrated			
AC Output Lightning Protection	Integrated			
Battery Input Reverse Polarity Protection	Integrated			
Insulation Resistor Detection	Integrated			
Residual Current Monitoring Unit	Integrated			
Output Over Current Protection	Integrated			
Output Short-Circuit Protection	Integrated			
Output Over Voltage Protection	Integrated			
Anti-islanding Protection	Integrated			
General Data				
Net Weight	80KG		87.1KG	
Gross Weight	101KG		107.1KG	
Product Dimension	940*582*340MM			
Package Dimension	1114*774*469MM			
Protection Degree	IP65			
Operating Temperature Range	-40 to 60°C(> 50°C Derating)			
Humidity	0~ 95 % (No Condensation)			
Cooling	Smart Cooling			
Communication with BMS	RS485,CAN			
Monitor Module	WiFi/GPRS			
Installation Style	Wall-mounted			
Warranty	5 Years			

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

High-voltage Hybrid Solar Inverter

IVGM Series | IVGM125KHP3G1

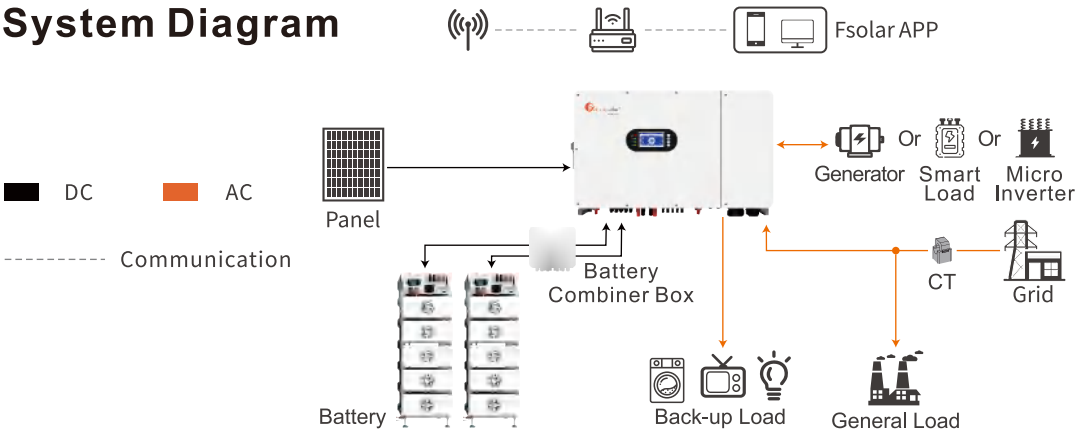
Three Phase



Features

- 0ms grid-to-off-grid transfer.
- Supports single-phase input, three-phase output.
- Active PID recovery function for long-term energy yield.
- Remote monitoring via Fsolar APP.
- Max. 12 units in parallel.
- 2× PV input oversizing.
- Dual independent batteries for stable high-power operation.
- Wide grid standard compatibility.
- IP66-rated protection.
- Generator / smart load / microinverter compatible.

System Diagram



Specifications

Model	IVGM125KHP3G1
Battery Input Data	
Battery Type	LFP (LiFePO4)
Battery Voltage Range	160~950Vd.c.
Max. Charging / Discharging Current	120+120(A)
Number of Battery Input	2
PV String Input Data	
Max. DC Input Power	250kW
Max. DC Input Voltage	1000Vd.c.
Start-up Voltage	180Vd.c.
Rated DC Input Voltage	600Vd.c.
MPPT Range	150~950Vd.c.
Full Load DC Voltage Range	555~950Vd.c.
PV Input Current	10x45(A)
Max. PV Isc	10x68(A)
No.of MPP Trackers	10
No.of Strings Per MPP Tracker	2
AC Input/Output Data	
Rated AC Input/Output Power	125kW
Max. AC Input/Output Power	137kVA
Max. AC Input/Output Current	198.6A
Max. Output Overcurrent Protection (A)	270 A
Max. AC Bypass (grid to load)	270 A
Single Phase Peak Power (off-grid)	1.5 times of rated power, 10s
Rated AC Voltage	220/380,230/400 Vac (-20%~+15%)
AC Wiring Mode	3L+N+PE
Rated AC Frequency	50 /60 Hz (45~55 Hz/55~65 Hz)
Safety and Standards	
Surge Protection Level	TYPE II(DC), TYPE III(AC)
Over Voltage Category	OVC II(DC), OVC III(AC)
Grid Regulation	IEC 61727, IEC 62116, CEI 0-21, EN 50549, NRS 097, RD 140, UNE 217002, OVE-Richtlinie R25, G99, VDE-AR-N 4110
Safety EMC / Standard	IEC/EN 61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2
Protection	
PV Input Lightning Protection	Integrated
PV String Input Reverse Polarity Protection	Integrated
Battery Input Lightning Protection	Integrated
Battery Input Reverse Polarity Protection	Integrated
DC Component Detection	Integrated
Insulation Resistor Detection	Integrated
Residual Current Monitoring Unit	Integrated
Arc Fault Monitoring (optional)	Integrated
Output Over Current Protection	Integrated
Output Shorted Protection	Integrated
Output Over Voltage Protection	Integrated
Remaining Current (RCD) Monitoring	Integrated
Overheat Protection	Integrated
Anti-islanding Protection	Integrated
AC Output Lightning Protection	Integrated
General Data	
Protection Degree	IP66
Operating Temperature Range	-40 to 60 ℃ (> 45 ℃ derating)
Humidity	0~100 % (No condensation)
Cooling	Smart cooling
Altitude	4000 m
Inverter Topology	Non-isolated
Parallel Compatible	Up to 12 in parallel
LCD/LED Display	LCD+LED
Communication With BMS	RS485/CAN
Monitor Module	WIFI/Bluetooth/4G/LAN(optional)
Installation Style	Wall-mounted
Warranty	5 Years
Net Weight / Gross Weight (KG)	155.5KG / 198KG
Product Dimension(MM)	1271*810*364MM
Package Dimension(MM)	1410*960*646MM

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

LiFePO4 Battery

FLA Series | FLA12100~300PG2

Low-voltage



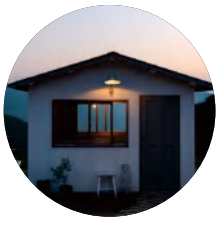
Features

- Build-in WiFi / Bluetooth for real-time monitoring.
- Multiple protection with built-in smart BMS and fuse.
- LiFePO4: higher safe performance and longer cycle life.
- Max.16 units in parallel.
- Compatible with leading inverter brands.

Scenarios



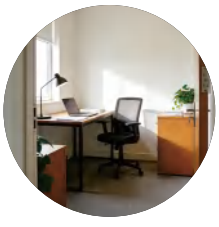
Houses



Off-grid Cabins



Small Stores



Small Offices



Small Farms

Specifications

Model	FLA12100PG2	FLA12200PG2	FLA12300PG2
Battery Type	LiFePO4		
Energy	1.28kWh	2.56kWh	3.75kWh
Nominal Voltage	12.8V	12.8V	12.8V
Operating Voltage	11.2-14.4V	11.2-14.4V	11.2-14.4V
Max.Continuous Charge/Discharge Current[1]	100A	120A	150A
Peak Charge/Discharge Current(15s)	150A	200A	200A
Max.Charge/Discharge Power	1,250W	1,500W	1,875W
Depth of Discharge(DOD)	⩾ 95%	⩾ 95%	⩾ 95%
Scalability	Up to 16 units in parallel(20.48kWh)	Up to 16 units in parallel(40.96kWh)	Up to 16 units in parallel(60kWh)
Max. Series Connections	4 Units		
Communication	CAN2.0/RS485/WIFI/Bluetooth		
Protection Level	IP21		
Cycle Life[2]	⩾ 6,000 Cycles		
Charging Temperature Range	0-55 °C		
Discharging Temperature Range	-20-55 °C		
Display	LED		
Installation	Floor-Mounted		
Protection	Built-in smart BMS, Fuse		
Warranty	7 Years		
Net Weight	10.3kg	15.5kg	26kg
Gross Weight	12.3kg	18.5kg	29kg
Product Dimension	295×201×199MM	329×248×199MM	379×241×286MM
Package Dimension	357×263×261MM	391×310×257MM	438×300×344MM

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

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

LiFePO4 Battery

FLA Series | FLA24100~300WG2

Low-voltage



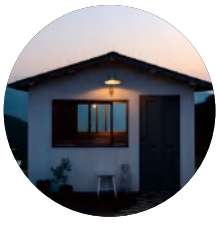
Features

- Build-in WiFi / Bluetooth for real-time monitoring.
- Flexible installation: wall-mounted / floor-mounted.
- LiFePO4: higher safe performance and longer cycle life.
- Max.15 units in parallel.
- Compatible with leading inverter brands.

Scenarios



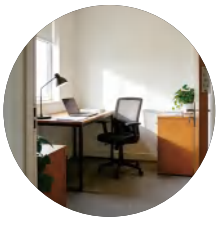
Houses



Off-grid Cabins



Small Stores



Small Offices



Small Farms

Specifications

Model	FLA24100WG2	FLA24200WG2	FLA24250WG2	FLA24300WG2
Battery Type	LiFePO4			
Nominal Energy	2.56kWh	5kWh	6.4kWh	7.5kWh
Nominal Voltage	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
Max. Continuous Charge/Discharge Current[1]	100A	150A	175A	175A
Peak Charge/Discharge Current(15s)	200A	200A	300A	300A
Max. Charge/Discharge Power	2,500W	3,840W	4,480W	4,480W
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)
Depth of Discharge(DOD)	⩾95%			
Communication	CAN2.0/RS485/WIFI/Bluetooth			
Protection Degree	IP21			
Cycle Life	⩾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, Fuse			
Warranty Period	7 Years			
Certification	UN38.3			
Product Weight	23KG	37KG	49.5KG	60KG
Package Weight	27KG	42KG	54.5KG	64KG
Product Dimension	325X400X180MM	445X433X194MM	400X402X275MM	400X475X269MM
Package Dimension	462X417X252MM	555X547X262MM	512X472X333MM	512X547X343MM

[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



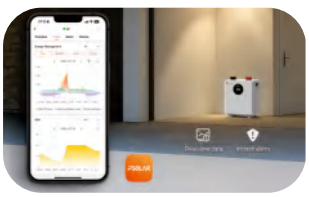
Longer Lasting
LiFePO4 Battery



Floor-mounted/
Wall-mounted Installations



Max.15 Pcs in Parallel



Real-time Monitoring

LiFePO4 Battery

FLA Series | FLA48100~48250

Low-voltage



(The battery's size varies according to its capacity.)

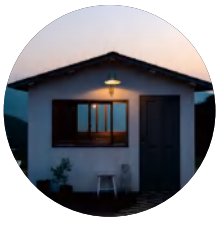
Features

- 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.

Scenarios



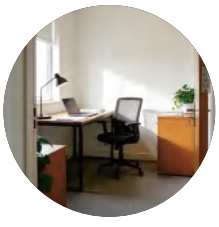
Houses



Off-grid Cabins



Small Stores



Small Offices



Small Farms

Specifications

Model	FLA48100	FLA48200	FLA48250
Battery Type	LiFePO4		
Nominal Energy	5.12kWh	10kWh	12.5kWh
Nominal Voltage	51.2V	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	200A
Maximum Charge/Discharge Power(15s)	7,500W	7,500W	10,000W
Scalability	Max. 15 pcs in Parallel(76.8kWh)	Max. 15 pcs in Parallel(150kWh)	Max. 15 pcs in Parallel(187kWh)
Depth of Discharge(DOD)	⩾95%		
Communication	CAN2.0/RS485/WIFI/Bluetooth		
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、IEC 62619	UN38.3、CE-EMC、IEC 62619、CB	UN38.3、CE-EMC、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

FLA Series | FLA48300TG2

Low-voltage



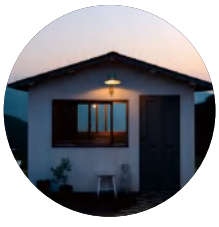
Features

- LiFePO4: higher safe performance and longer cycle life.
- Enhanced safety with aerosol fire extinguishing system.
- Multiple protection with built-in smart BMS, breaker and fuse.
- Built-in WiFi / bluetooth for real-time monitoring.
- Scalable expansion up to 15 pcs in parallel.
- Compatible with leading inverter brands
- External battery fuse design for easy replacement.

Scenarios



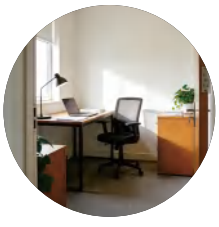
Houses



Off-grid Cabins



Small Stores



Small Offices



Small Farms

Specifications

Model	FLA48300TG2
Battery Type	LiFePO4
Nominal Energy	15kWh
Nominal Voltage	51.2V
Operating Voltage	44.8-57.6V
Recommend Charge/Discharge Current	80A
Max. Continuous Charge/Discharge Current[1]	160A
Peak Charge/Discharge Current(15s)	230A
Max. Charge/Discharge Power	8,000W
Peak Charge/Discharge Power(15s)	11,500W
Scalability	Max. 15 pcs in Parallel(225kWh)
Depth of Discharge(DOD)	⩾95%
Communication	CAN2.0/RS485/WIFI/Bluetooth
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	Floor-Mounted
Protection	Built-in Smart BMS, Breaker, Fuse
Warranty Period	7 Years
Product Weight	118.5KG
Package Weight	140.5KG
Product Dimension	435X880X247MM
Package Dimension	960X555X450MM
[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



External Battery Fuse Design



Support 15 Pcs in Parallel

LiFePO4 Battery

FLA Series | FLA48350/500TG2

Low-voltage



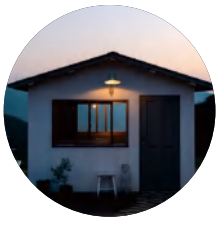
Features

- LiFePO4: higher safe performance and longer cycle life.
- Enhanced safety with aerosol fire extinguishing system.
- Multiple protection with built-in smart BMS, breaker and fuse.
- Built-in WiFi / bluetooth for real-time monitoring.
- Scalable expansion up to 15 pcs in parallel.
- Compatible with leading inverter brands
- External battery fuse design for easy replacement.

Scenarios



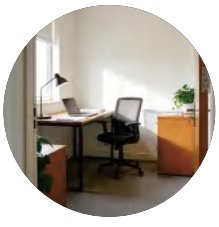
Houses



Off-grid Cabins



Small Stores



Small Offices



Small Farms

Specifications

Model	FLA48350TG2	FLA48500TG2
Battery Type	LiFePO4	
Nominal Energy	17.5kWh	25kWh
Nominal Voltage	51.2V	
Operating Voltage	44.8-57.6V	
Max. Continuous Charge/Discharge Current[1]	175A	250A
Peak Charge/Discharge Current(15s)	300A	500A
Max. Charge/Discharge Power	8,750W	12,500W
Scalability	Max. 15 pcs in Parallel(262.5kWh)	Max. 15 pcs in Parallel(375kWh)
Depth of Discharge(DOD)	⩾95%	
Communication	CAN2.0/RS485/WIFI/Bluetooth	
Protection Degree	IP21	
Cycle Life	⩾ 8000 Cycles (25°C±2°C,0.5C/0.5C,90%DOD,70%EOL)	⩾ 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	Floor-Mounted	
Protection	Built-in Smart BMS, Breaker, Fuse	
Warranty Period	7 Years	
Certification	UN38.3	
Product Weight	121.5KG	186.5KG
Package Weight	143.5KG	219.5KG
Product Dimension	435X880X247MM	570X250X980MM
Package Dimension	960X555X450MM	1135X690X465MM

[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 15 Pcs in Parallel



Wide Inverter Compatibility

LiFePO4 Battery

FLH Series | FLH48100UG2

High-voltage



Features

- Supports WiFi monitoring and Fsolar smart cloud monitoring system.
- Enhanced safety with aerosol fire extinguishing system.
- Automatically identifies virtual addresses without DIP switch settings.
- Quickly identify faulty battery module on LCD screen.
- Rack-mounted design, available in multiple layerswith integrated grounding.
- CCS Technology for better system performance.
- Per cluster: 16 battery packs in series (81.92 kWh).
- System max: Up to 16 clusters in parallel (1.3 MWh).

Scenarios



Small and Mid-sized Factories



Community Hospitals



Neighborhood Supermarkets



Farms



Hotels

Specifications

Model		FLH48100UG2			
Battery Type		LiFePO4			
Nominal Energy		5.12kWh			
Nominal Voltage		51.2V			
Nominal Capacity		100Ah			
Number of Battery Modules		5(Min)	8	12	16(Max)[1]
System Nominal Voltage		256V	409.6V	614.4V	819.2V
System Operating Voltage		232~288V	371.2~460.8V	556.8~691.2V	742.4~921.6V
System Energy		25.6kWh	40.96kWh	61.44kWh	81.92kWh
System Usable Energy		23.04kWh	36.86kWh	55.3kWh	73.73kWh
Rated DC Power		25.6kW	40.96kW	61.44kW	81.92kW
Recommend Charge/Discharge Current		50A			
Max. Continuous Charge/Discharge Current[2]		100A			
Depth of Discharge(DOD)		90%			
Display Type		LED+LCD(Touch)			
IP Rating of Enclosure		IP21			
Working Temperature Range		Charge:0℃~+55℃			
		Discharge:-20℃~+55℃			
Storge Temperature Range		0℃~+35℃			
Humidity		5%~95%			
Altitude		⩽3000M			
Cycle Life[3]		⩾ 6000 Cycles			
Installation		Rack-Mounting			
Protection		Built-in Smart BMS, Breaker, Fuse			
Communication Port		CAN2.0/RS485/WIFI/Bluetooth			
Warranty Period[4]		10 Years			
Certification		CE/ IEC 62619/UN38.3			
Control Module FLH48100UCG2	Product Dimension	482.6x565x150MM			
	Package Dimension	687x562x269MM			
	Product Weight Approximate	17.5KG			
	Package Weight Approximate	24.7KG			
Battery Module FLH48100UMG2	Product Dimension	482.6x565x133MM			
	Package Dimension	687x562x250MM			
	Product Weight Approximate	42.5KG			
	Package Weight Approximate	46KG			
	Battery Designation[5]	IFpP/54/150/120/[(1P16S)NS]M/-20+50/90			
Rack FLH48100R13G2	Product Dimension	590×532×2087.5MM (13th Floor)			
	Package Dimension	657×138×2167MM			
	Product Weight Approximate	49KG			
	Package Weight Approximate	57KG			
Rack FLH48100R9G2	Product Dimension	590×532×1515.5MM (9th Floor)			
	Package Dimension	657×138×1595MM			
	Product Weight Approximate	37.7KG			
	Package Weight Approximate	43.2KG			

[1] Currently, The Battery Supports a Maximum of 16 BMUs. For the Entire Energy Storage System, Confirm the Inverter's Maximum Supported Voltage Range to Determine the Maximum Number of BMUs that Can Be Installed

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

[3] Test Conditions: 0.5C Charging/Discharging @25±2°C, EOL70%.

[4] Refer to Felicitysolar's Warranty Policy for applicable conditions.

[5] "N"Means the Number of Battery Packs Connected Series and Should not Exceed 16.(N⩽16)

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

LiFePO4 Battery

FLH Series | FLH48314UG1

High-voltage



Features

- Remote monitoring via Fsolar APP.
- Peace of mind with fire protection module.
- Pack-level air cooling, high-efficiency thermal management.
- Max. 16 pcs (257kWh) in series, max. 16 clusters (4,1MWh) in parallel.
- ≥ 8000 cycles life.
- User-friendly touchscreen.

Scenarios



Small and Mid-sized Factories



Community Hospitals



Neighborhood Supermarkets



Farms



Hotels

Specifications

Model		FLH48314UG1MN[1]			
Battery Type		LiFePO4			
Nominal Energy		16.07kWh			
Nominal Voltage		51.2V			
Nominal Capacity		314Ah			
Number of Battery Modules		5(Min)	8	12	16(Max)[2]
System Nominal Voltage		256V	409.6V	614.4V	819.2V
System Operating Voltage		232~288V	371.2~460.8V	556.8~691.2V	742.4~921.6V
System Rated Energy		80.38kWh	128.61kWh	192.92kWh	257.22kWh
Rated Usabled Power		72.34kWh	115.74kWh	173.62kWh	231.49kWh
Recommend Charge/Discharge Current		157A			
Max. Continuous Charge/Discharge Current[3]		240A			
Depth of Discharge(DOD)		90%			
Display Type		LED+LCD (Touch)			
IP Rating of Enclosure		IP20			
Working Temperature Range		Charge:0℃~+55℃			
		Discharge:-20℃~+55℃			
Storge Temperature Range		0℃~+35℃			
Humidity		5%~95%			
Altitude		≤3,000m			
Cycle Life[4]		≥ 8,000 Cycles			
Installation		Module Stacking			
Protection		Built-in Smart BMS, MCCB with shunt trip function, Fuse			
Communication Port		RS485 / CAN / Enthernet / WiFi(2.4G)[5]			
Warranty Period[6]		10 Years			
Certification		CE/ IEC 62619/IEC62040/UN38.3			
Control Module FLH48314UCG1	Product Dimension	780x525.4x180mm			
	Package Dimension	890x602x333mm			
	Product Weight Approximate	31.5±3%kg			
	Package Weight Approximate	42.8±3%kg			
Battery Module FLH48314UMG1	Product Dimension	819.5x525.4x260mm			
	Package Dimension	925x560x405mm			
	Product Weight Approximate	123±3%kg			
	Package Weight Approximate	144.5±3%kg			
	Battery Designation	IFpP74/176/120/[1P16S]E/-20+50/90			
FLH48314UG1 Accessory Kit	Package Dimension Approximate	867x602x318mm			
	Package Weight Approximate	52±3%kg			

[1] N=5,6,7,8,9,10,11,12,13,14 or 16. N is the quantity of battery module connected series and should not exceed 16.(5≤N≤16)

[2] Currently, the battery supports a maximum of 16 battery modules. For the entire energy storage system, confirm the inverter's maximum supported voltage range to determine the maximum number of battery modules that can be installed.

[3] Max. continuous charge/discharge current is affected by temperature and SOC.

[4] Test conditions: 0.5C Charging/Discharging@25±2°C,EOL70%.

[5] A 10M/100M Ethernet port (RJ45) is provided for connecting the system to your local network via a router or switch. This connection enables core functions: software upgrades, remote monitoring & diagnostics, and cloud data synchronization. Advanced cloud-based services are in development. Availability and activation will be announced by the supplier. Contact them for future software updates to enable these features.

[6] Refer to Felicitysolar's warranty policy for applicable conditions.

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



5KVA 51.2V

Household Energy Storage system

LFP Battery-Inverter Integrated System

Features

- Wide PV voltage input range (90VDC-450VDC).
- Maximum PV input current increases to 25A.
- Battery charging current up to 100A.
- Pure sine wave output.
- Built-in MPPT solar charge controller.
- Compatible to mains voltage or generator power.
- Auto restart while AC is recovering.
- Overload /Over temperature/ short circuit protection.
- Supports parallel connection of one to four battery packs (AI100-B5) for expansion.
- External WIFI for mobile monitoring (requires APP).
- Support parameters setting via LCD screen (input voltage/ charging current/charge mode).



AI100-5048 ESS

Model	AI100-5048 ESS

Inverter Parameters	AI100-5048
Rated Output Power	5000VA
	5000W
Nominal DC Input Voltage	48V
Nominal Input Voltage	230Vac
Nominal Input Frequency	50Hz/60Hz(Auto detection)
Parallel Capability	Yes, up to 12 units
PCS (In Progress)	CE-EMC、CE-LVD
Utility Charge Mode Specifications	
Nominal Input Voltage	230Vac
Nominal Output Voltage	230Vac
Input Voltage Range	90~280Vac
Max. Charge Current	100A
Solar Charging &Grid Charging	
Max. PV Open Circuit Voltage	500V
Max. Input Power	6000W
Max. Solar Charging Current	100A
Max. Charging Current(PV+Grid)	100A
Max. Input Current	25A
General Specifications	
Protection Level	IP20
Net Weight (KG)	17.8KG
Product Size(D*W*H)	710x350x180MM
Package Dimension(D*W*H)	792x507x278MM
battery Parameters	**AI100-B5**
Capacity	5.12kWh
Battery Type	LiFePO4
Nominal Voltage	51.2V
Operating Voltage	44.8-57.6V
Recommend Charge/Discharge Current [1]	⩽100A
Recommend Charge/Discharge Power [1]	⩽5,000W
Maximum Charge/Discharge Current (15s)	150A
Maximum Charge/Discharge Power (15s)	7,500W
Depth of Discharge (DOD)	⩾95%
Scalability	Max. 15 pcs in Parallel(76.8kWh)
Communication	RS485/CAN
Protection Level	IP21
Cycle Life [2]	⩾6,000 Cycles
Display	LED
Installation	Wall-Mounted/Floor-Mounted
Protection	Built-in smart BMS, Breaker, Fuse
Warranty	5 Years
Certification	UN38.3
Net Weight	45KG
Gross Weight	49.5KG
Product Dimension	660X420X180MM
Package Dimension	822X522X278MM

[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.

Portable Power Station

HOPE Series | HOPE1000

Low-voltage



Features

- 3-in-1 Design: inverter, LFP battery, and MPPT controller in one unit.
- Long-term investment: achieve energy freedom and enjoy brighter life.
- Portable and Light: only 8.7kg, easy to carry and use anywhere.
- Long Battery Life: 8,000 cycles for lasting performance.
- Extended Runtime: powers small to medium devices for 2–3 days with 1kWh capacity.
- Plug & Play: just connect your devices and use instantly.
- Effective Heat Dissipation: equipped with ventilation holes.
- Dual Charging Options: charge via grid power or solar PV.
- Quiet and Eco-friendly: clean power without noise or pollution.

Scenarios


Small Households


Camping


Small Stores

Specifications

Model	HOPE1000
Rated Power	250W
Rated Battery Capacity	1kWh
AC Input Voltage	150-264Vac
AC Input Frequency	45~55Hz
AC Charging Power	250W
AC Output Voltage	230Vac±10%
Operating Frequency	50Hz
PV Input Voltage	12-36V
Max. PV Input Power	200W
Battery	LiFePO4
Battery Capacity	314Ah
Shelf Time	2 years(Fully-charged)
Weight	8.7kg
Dimension	210x130x288mm
Operating Temperature	0-45°C
Operating Altitude	<2000m
Humidity	95%
IP Level	IP20
Certifcatlon	UN38.3
Protection	Overcharge and overdischarge protection Overcurrent protection Overload protection Short circuit protection Fault protection

*Disclaimer: This product is currently in pilot production. Final specifications, design, and features may differ from those presented here.
*Refer to Felicitysolar's Warranty Policy for applicable conditions.

Product Display



3-in-1 Design



Easy to Carry and Use Anywhere



Dual Charging via Grid Power or PV



AC Bypass Mode

MPPT Solar Charge Controller

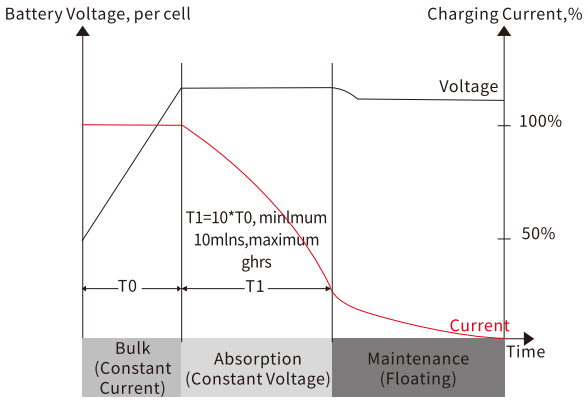
SCCM-III Series | SCCM3024~12048-III



Features

- Support parallel operation via CAN communication.
- Communicate with battery packs via RS485 communication.
- Built-in WiFi enabling remote monitoring through the app.
- Maximum efficiency up to 98%.
- Enhanced battery performance with three-stage charging.
- Efficiency increasing 25%~30% with intelligent maximum powerpoint tracking technology.

Specifications

Model	SCCM3024-III	SCCM4524-III	SCCM4548-III	SCCM6048-III	SCCM8048-III	SCCM10048-III	SCCM12048-III
Electrical Specifications							
PV Start-up Voltage	20V						
Maximum Charge Curent	30Amps	45Amps	45Amps	60Amps	80Amps	100Amps	120Amps
Nominal System Voltage	12,24V (Auto Detection)		12V, 24V, 48V (Auto Detection)				
Maximum Solar Input Voltage	95V		145V			165V	
MPPT Voltage Range	12VDC/24VDC		12Vdc/24Vdc/48Vdc			12Vdc/24Vdc/48Vdc	
	18-80VDC/35-80VDC		18-125Vdc/35-125Vdc 65-125Vdc			18-145Vdc/35-145Vdc 65-145Vdc	
Maximum Input Power	12V - 420W	12V - 625W	12V - 625W	12V - 825W	12V - 1100W	12V - 1375W	12V - 1650W
	24V - 830W	24V - 1250W	24V - 1250W	24V - 1650W	24V -2200W	24V - 2750W	24V - 3300W
	/	/	48V - 2500W	48V - 3300W	48V - 4400W	48V - 5500W	48V - 6600W
Battery Charging							
Charging Algorithm	3-Step						
Charging Stages	Bulk, Absorption, Float						
Temperature Compensation Coefficient	-5 mV /°C / cell (25°Cref.)						
Temperature Compensation Range	0 °C to +50 °C						
Charging Curve							
Mechanical and Environment							
Product Size (WxHxD, mm)	200.2x137.2x65	221x151.4x80.5	276.4x184.4x100	276.4x184.4x100	289.4x198.4x103.6	329x219x118.5	329x219x118.5
Product Weight(KG)	1 KG	1.5 KG	3.3 KG	3.3 KG	3.5 KG	5.2 KG	5.2 KG
Inner Box Size (W x H x D, mm)	240x170x102	265x188x116	308x212x125	308x212x125	322x238x140	370x250x156	370x250x156
Inner Box Weight (KG)	1.3 KG	1.9 KG	3.7 KG	3.7 KG	4 KG	5.9 KG	5.9 KG
Outer Carton Size (W x H x D, mm)	495x355x222	546x392x250	635x440x268	635x440x268	663x492x298	758x518x172	758x518x172
Outer Carton Weight (KG)	11.3(8PCS)	16.4(8PCS)	31(8PCS)	31(8PCS)	33.3(8PCS)	25.3(4PCS)	25.3(4PCS)
Ambient Temperature Range	0 °C to +55 °C						
Storage Temperature	-25 °C to +75 °C						
Humidity	0%-90%RH(No Condensing)						
Enclosure	IP20(Indoor & Vented)						

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



48V

MPPT Solar Charge Controller

SCCM Series

Features

Remote Monitoring via FSolar APP

Max. charging current up to 150A

Compatible with LFP, Lead-acid, AGM, and GEL Batteries

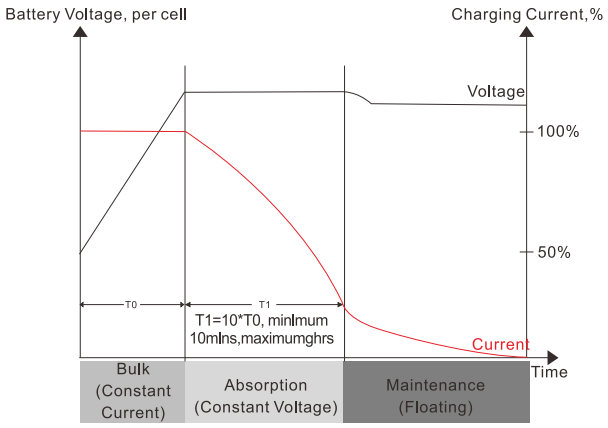
Battery and Controller Communication via RS485/CAN



SCCM15048

Max. 8 Units in Parallel

IP54-rate Protection

Model	SCCM15048
Electrical Specifications	
Maximum Charge Current	150Amps
Nominal System Voltage	48V
Maximum Solar Input Voltage	500V
PV Start-up Voltage	120V
MPPT Voltage Range	150-450Vdc
PV Limiting Current	30A
Maximum Input Power	9000W
Transient Surge Protection	2* rated power for 5s
Protections	Solar high voltage disconnect Solar high voltage reconnect Battery high voltage disconnect Battery high voltage reconnect High temperature disconnect High temperature reconnect
Battery Charging	
Charging Algorithm	3-Step
Charging Stages	Bulk, Absorption, Float
Charging Curve	
Mechanical and Environment	
Product Size (WxHxD, mm)	422x370x140
Product Weight (KG)	9.7 KG
Outter Carton Size (W x H x D,mm)	485x464x198
Outter Carton Weight (KG)	12 (1PCS)
Warranty Period	2 Years
Ambient Temperature Range	0 °C to +55 °C
Storage Temperature	-25 °C to +75 °C
Humidity	0%-90%RH(No Condensing)
Enclosure	IP54

Lead-acid Battery

G12V100AH~200AH



Features

- Lower self-discharge rate, extending battery life.
- Even electrolyte distribution, preventing stratification.
- Deeper discharge, maximizing lifespan.
- Lower charging current (1/3 of AGM), reducing energy use and heat.

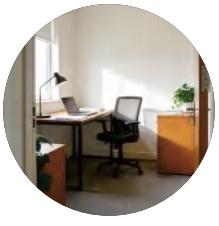
Scenarios



Off-grid Cabins



Small Stores



Small Offices

Specifications

Model	G12V100AH	G12V150AH	G12V200AH
Cells Per Unit	6		
Voltage Per Unit	12		
Capacity	100Ah@10hr-rate to 1.80V per cell @25°C	150Ah@10hr-rate to 1.80V per cell @25°C	200Ah@10hr-rate to 1.80V per cell @25°C
Weight	31.5KG	42.5KG	60KG
Max. Discharge Current	1000A(5 sec)	1500A(5 sec)	2000A(5 sec)
Internal Resistance	Approx. 5.0mΩ	Approx. 4.2mΩ	Approx. 4.0mΩ
Operating Temperature Range	Discharge: -20°C~60°C Charge: 0°C~50C Storage: -20°C~60°C		
Normal Operating Temperature Range	25°C±5°C		
Float Charging Voltage	13.6 to 13.8V DC/Unit Average at 25°C		
Recommended Maximum Charging	30A	45A	60A
Equalization and Cycle Service	14.4 to 14.6V DC/Unit Average at 25°C		
Self Discharge	GEL Batteries Can be Stored for More than 6 Months at 25°C. Self-discharge Ratio Less than 3% Per Month at 25°C. Please Charge Batteries Before Using.		
Size(MM)	330(L)x171(W)x218(H)	484(L)x241(W)x170(H)	522(L)x219(W)x240(H)
Certification	UN38.3		

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

Capacity Factors With Different Temperature

Temperature	-20°C	-10°C	0°C	5°C	10°C	20°C	25°C	30°C	40°C	45°C
Capacity Factor	46%	66%	76%	83%	90%	98%	100%	103%	107%	109%

Discharge Current VS. Discharge Voltage

Final Discharge Voltage V/cell	1.75V	1.70V	1.60V
Discharge Current (A)	(A)≤0.2C	0.2C< (A) <1.0C	(A) ≥1.0C

Charge the Batteries at Least Once Every Five Months, If They are Stored at 25°C.

Charging Method

Constant Voltage	-0.2Cx2h+14.4-14.7Vx24h,Max. Current O.3C
Constant Current	-0.2Cx2h+0.1Cx7h+0.05Cx4h
Fast	-0.2Cx2h+0.3Cx3h

Bolt	M5	M6	M8
Terminal	F3 F4 F13 F18 T25 T26	F8 F11 F12-1 F15	F5 F9 F10 F12 F14 F16
Torque	6~7N-m	8~10N-m	10~12N-m

Maintenance & Cautions

Cycle service

※ Avoid battery over discharge, especially battery sereis connection use.

※ Charged with recommend voltage, ensure battery can be full recharged. In general, recharge capacity should be 1.1-1.15 times discharge capacity.

※ Effect of temperature on cycle charge voltage: -4mV/°C/Cell.

※ There are a number of factors that will affect the length of cyclic service. The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged. Generally specking, the most important factors is depth of discharge.

Monocrystalline Solar Panels

1-72HTBD-580M



Features

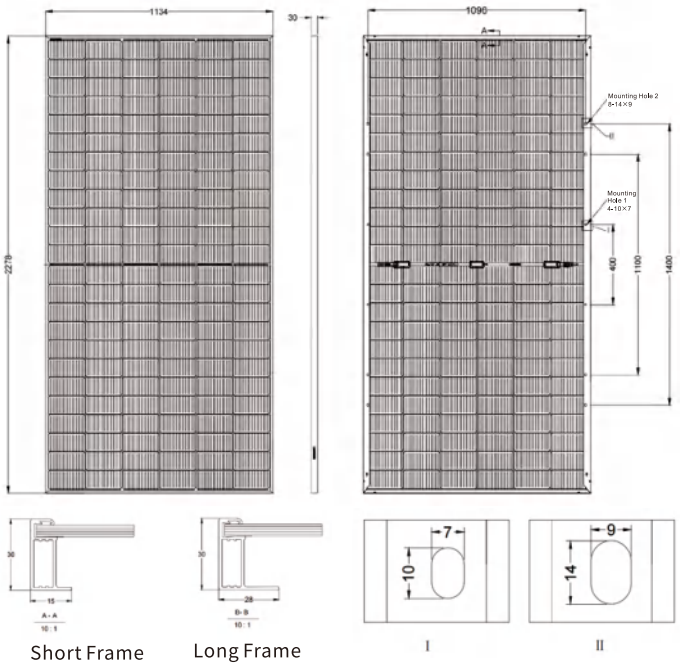
- Conversion efficiency up to 23.2%.
- Strong anti-degradation:only 1% power loss in the first year, just 0.4% per year after.
- High energy output in real conditions:better temp coefficient, low-light performance, and bifacial efficiency.

Specifications

Model	1-72HTBD-580M
Rated Maximum Power (Pmax)	580W
Open Circuit Voltage (Voc)	51.47V
Maximum Power Voltage (Vmp)	42.59V
Short Circuit Current (Isc)	14.37A
Maximum Power Current (Imp)	13.62A
Frame	anodized aluminium alloy
Front Glass	heat strengthened coated glass (0.08in / 2.0mm)
Back Glass	heat strengthened glass (0.08in / 2.0mm)
Output Cables	TüV 1×4mm², (+)300mm, (-)200mm (support customization)
Temperature Coefficent of Isc (a_Isc)	+0.045% / ℃
Temperature Coefficent of Voc (β_Voc)	-0.25% / ℃
Temperature Coefficent of Pmax (y_Pmp)	-0.29% / ℃
Protection Level	Class II
Weight	68.34 lbs / 31.0 kg
Dimensions	89.68× 44.65× 1.18in / 2278×1134×30mm
Operating Conditions	
Maximum System Voltage	DC1500V (IEC)
Operating Temperature	113 ± 3.6°F / 45±2°C
Maximum Series Fuse	30A
Maximum Static Load,Front	5400Pa
Maximum Static Load,Back	2400Pa
Certifications	CE,IEC 61215(2021)/IEC 61730(2023),PID
STC	Irradiance 1000W/m², cell temperature 77°F / 25°C, spectrum AM1.5

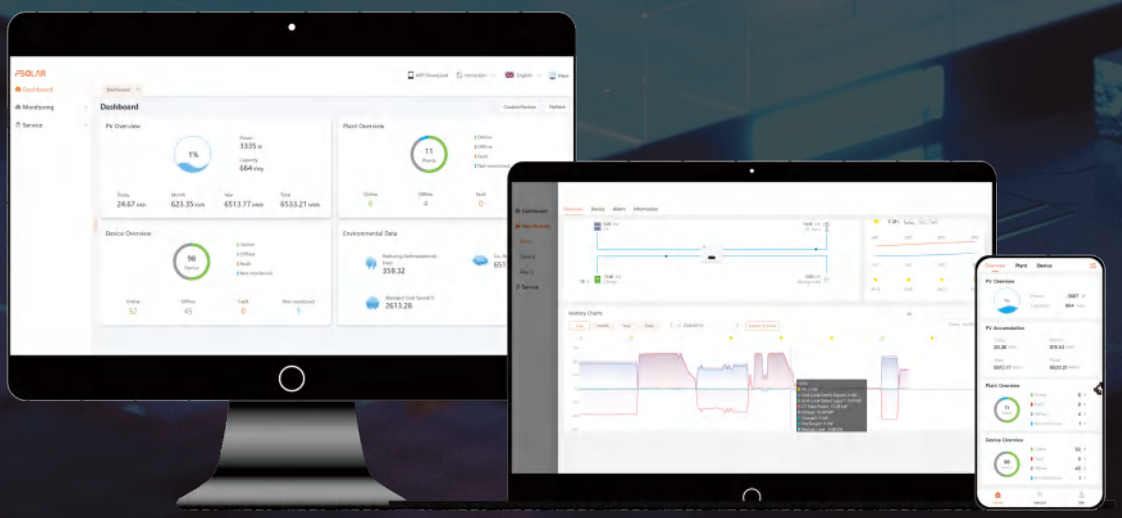
*Standard Test Conditions: irradiance of 1000W/m², cell temperature at 77°F / 25°C, and AM1.5 solar spectrum
*Refer to Felicitysolar's Warranty Policy for applicable conditions.

Solar Panel Dimensions



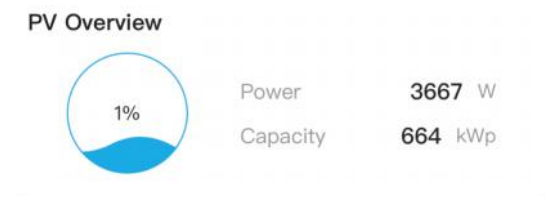
FSOLAR Smart Energy Management Platform

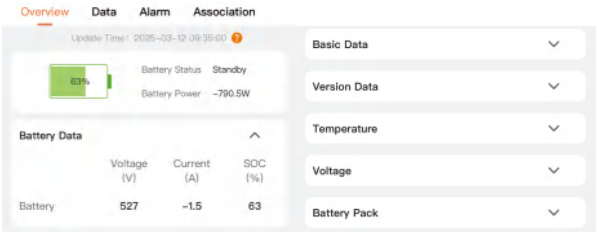
The FSOLAR smart energy management platform is designed to provide comprehensive monitoring, analysis, and management of your energy systems. It allows you to maximize energy efficiency, optimize usage, and enhance system performance.



1. Real-time Data Insight

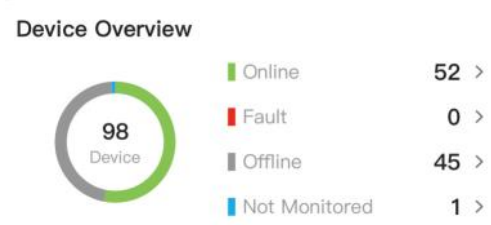
- Track daily, monthly, yearly and cumulative energy generation of all systems and individual units.
- Access battery pack details, including current, voltage, SOC, etc.





2. System and Device Status Monitoring

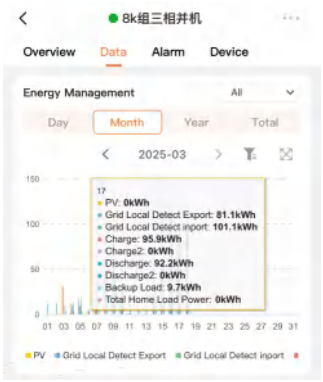
- Real-time devices status: online, offline, faulty, or unmonitored.
- Easily identify the current health and operational status of your system.





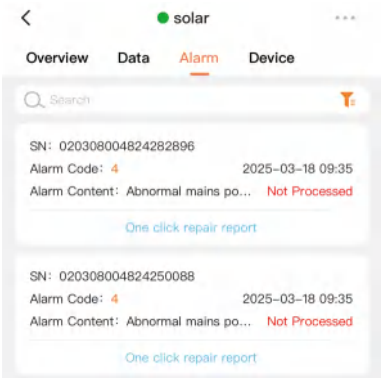
3. Historical Data Analysis

- Use data insights to optimize energy usage and improve efficiency.
- Export historical data for further analysis and record-keeping.



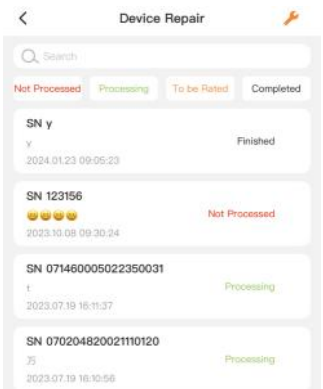
4. Immediate Alerts for Abnormal Situations

- Receive instant alerts for system malfunctions or abnormal conditions.
- Take immediate actions to prevent potential losses and downtime.



5. After-Sales Support

- Submit a request, and our support team will reply within 12 hours, offer solution within 24 hours.
- Local service points deployment for fast on-site inspection and repair services.



6. Open API

- Comprehensive Data Access: battery SOC, temp, device status, etc.
- Real-Time Monitoring & Alerts: empower third-party devices tobuild dynamic dashboards for live insights and configure automated alert.

APP Download

Download on App Store

GET IT ON Google Play

USER CASES

Residential Solar Energy Storage System



Guinea

House 24kW+52.5kWh



Yemen

House 24kW+30kWh



Senegal

Office Building 40kW+125kWh



Saudi Arabia

House 15kW+45kWh

USER CASES

Small to Medium C&I Solar Energy Storage System



Mali Paper Mills

150kW+184.32kWh



Iraq Warehouse

100kW+245.76kWh



Nigeria Small-size Factory

50kW+122.88kWh



Thailand

Entertainment Center

300kW+720kWh

SUPERIORITY

WHY CHOOSE US

Product Reliability

Regional Compatibility: adapted to different grid voltages across regions.

Functions: smart management, easy for after-sales servicing, simplified system setup.

Performance: high stability, safety, durability, and strong environmental adaptability.

Standardized Manufacturing

Smart Production: high-efficiency production lines with automated equipments.

Standardized Testing – strict testing procedures for product reliability.

Quality Management – comprehensive quality control guarantees high-standard products.

Pricing Policy

Stable Pricing – consistent pricing to support long-term cooperation.

Price Protection – safeguarding partner interests in the market.

Regional Protection – ensuring fair market competition within designated areas.

Local Service

Service Centers – fast, efficient, and professional after-sales support.

Offline Stores – face-to-face consultation and system recommendations.

Warehouses – sufficient inventory for fast and convenient delivery.