

# FelicityESS

## Energy Storage System

**Eco, Smart, Sustainable**



[www.felicityess.com](http://www.felicityess.com)

Guangzhou · China

Version 2024-04-12





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# Introduction

FelicityESS is located in Guangzhou, China, with 16 years of experience from Felicity Group, focuses on mid-to-high-end energy storage markets in Europe, the US, Australia, and South Africa. As a high-tech company in photovoltaic energy storage, FelicityESS offers eco-friendly, smart, sustainable energy storage solutions aimed at delivering high value and quality clean energy to upscale households and business clients. It drives green, low-carbon development and fosters the Broad adoption of clean energy for environmental sustainability.

To meet diverse market and customer needs, FelicityESS has expanded its range to include advanced residential and commercial energy storage products such as off-grid and on-grid inverters, integrated storage systems, and EV charging stations. These additions not only enrich our lineup but also strengthen our core competitiveness in smart energy solutions. Our products offer flexible energy conversion, efficient storage solutions for homes and businesses, and support the growth in electric vehicle charging demand, highlighting our commitment to promoting clean energy vehicles. FelicityESS continues its dedication to R&D and innovation, striving to provide safer, more reliable, And eco-friendlier clean energy products and services globally.



R&D Team:  
**200+**



countries/regions:  
**100+**



Area:  
**40,000 sqm**



R&D Experience:  
**17+ years**



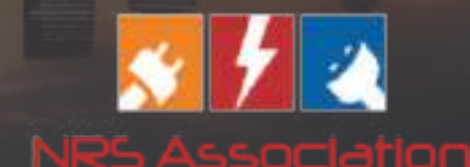
Worldwide Offices:  
**30+**



Patents:  
**100+**



**UN38.3**







**2007**

Company Establishment.

**2008-2010**

Formation of the company team and development of photovoltaic product series.

**2011**

First solar panel produced.

**2012-2014**

Opened offline shops, achieved \$500,000 sales in 2013.

**2016-2017**

Established first overseas branch in Nigeria.

**2018-2020**

Rapidly expanded its presence across Africa, establishing branches in key countries and essentially covering the entire continent.

**2021**

Expanded to Middle East & America, achieving \$400 million sales, branches in Senegal, Dubai, Uganda, Cote d'Ivoire, Panama, Lebanon.

**2022**

Selected as a famous Brand, business has expanded to countries such as Netherlands, Germany, company's operations now span across numerous European countries, establishing a widespread presence throughout the region.

**2023**

Selected as a leading brand for residential hybrid photovoltaic energy storage products, relocated to an independent, self-sufficient photovoltaic smart park.

**2024**

Felicity Solar Technology Co., Ltd. changed to Felicity Group, comprising Felicity Solar, Felicity ESS New Energy, and Felicity Green Energy subsidiaries.





## Europe

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 🌐 Web: www.felicityess.com  
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## South Africa

### Office in South Africa

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## Partnership Models

# Join Us

01

### Exclusive Distribution Rights

- Granting exclusive rights to distribute specific product lines or in designated areas.

02

### Non-exclusive Cooperation

- Offering flexible non-exclusive partnership opportunities, allowing the sale of non-competitive brands.

03

### Inventory Support

- Providing stock and logistical support based on the partnership level to ensure continuous product availability.

04

### Marketing and Sales Support

- Supplying marketing materials, product training, and sales strategy support to enhance distributor market performance.





### Hybrid Inverter

T-REX Series



### Battery Pack

LUX-S Series  
LUX-E Series  
LUX-X Series  
LUX-Y Series



### All-in-One Hybrid ESS

Apollo Series  
EV charger  
ZEUS Series



### Balcony ESS Solutions

X-RAY Series  
+  
LUX-S Series



### Commercial ESS Cabinet

FLS Series



### Fsolar Smart Energy Management Platform





# T - REX

Series



# T-REX Hybrid Inverter

T-REX-4.6/5KLP1G01



## Specification



## Product Features



Multi-way MPPT design



Lithium battery activation function



UPS grade on/off grid switching



6 pcs in parallel maximum

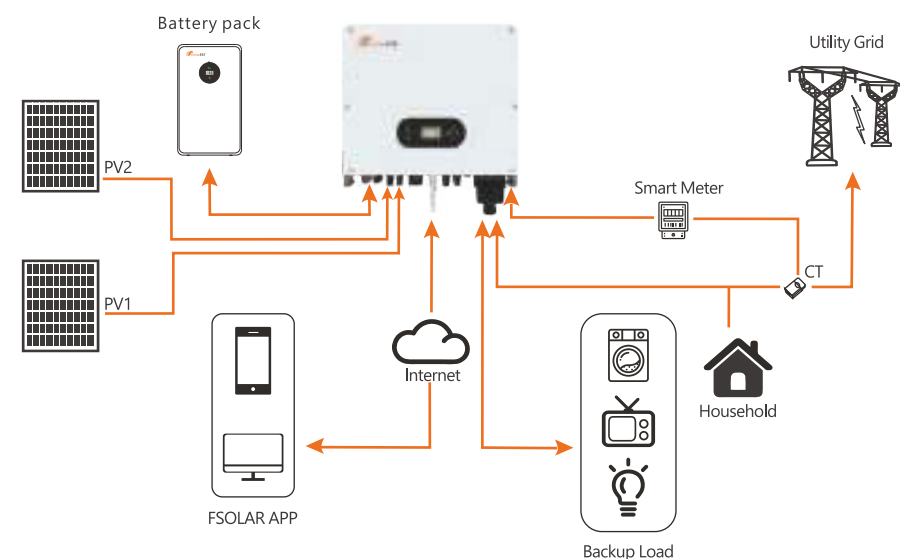


Realize remote monitoring and scheduling



Ip65 protection grade

## Connection diagram



Model	T-REX-4K6LP1G01	T-REX-5KLP1G01
<b>Battery Input Data</b>		
Battery Voltage Range	40V~60V	
Max. charging and discharging current	100A/100A	
Max. charging and discharging power	4600W	5000W
Battery type	Li-Ion /Lead-acid	
<b>DC Input Data(PV side)</b>		
Max.recommended PV power	6000W	6500W
Max.PV voltage	550V	
Start voltage	130V	
PV voltage range	90V-550V	
MPPT voltage range	100V-500V	
MPPT Voltage Range for Full Load	200V-500V	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	
<b>Grid Data</b>		
Nominal Input Voltage	230Vac	
Input Voltage Range	184-264.5Vac*	
Nominal grid frequency	50/60Hz	
Max. input current	40A	
Max. Charge Current	100A	
Max. AC output power	4600W	5000W
AC Output Rated Current	20A	21.7A
Max. Output current	25A	25A
Max. Continuous AC Passthrough	30A	
Power Factor	>0.99	
Displacement power factor	0.8leading...0.8lagging	
THDI	< 3%	
<b>AC Output Data(Back Up)</b>		
Rated output power	4600VA/4600W	5000VA/5000W
Max. Output current	30A	
Rated AC output voltage	230Vac	
Rated AC output frequency	50/60Hz	
<b>Efficiency</b>		
Max. efficiency	97.6%	
Euro efficiency	97.0%	
MPPT efficiency	99.9%	
<b>Protection</b>		
Output over current protection	Integrated	
Output over power protection	Integrated	
Output shorted protection	Integrated	
Anti-islanding protection	Integrated	
GFCI Protection	Integrated	
Insulation Resistor Detection	Integrated	
<b>General Data</b>		
Operating temperature range	-25°C~60°C,>45°C Derating	
Protection degree	IP65	
Relative humidity	100%	
Cooling concept	Nature	
Altitude	2000m	
Communication	RS232/RS485	
BMS Communication	CAN/RS485	
Monitor module	WiFi/GPRS	
Display	LCD+LED	
Installation Style	Wall-mounted	
Warranty[1]	10 years	
Grid Regulation	VDE-AR-N 4105; G99/1; EN50549-1; CEI -21; AS 4777.2; NRS 097-2-1;	
Safety Regulation	IEC 62109-1/2IEC 62040-1	
EMC	EN61000-6-1.EN61000-6-3	
Net Weight(KG)	32.4KG	
Gross Weight(KG)	39.1KG	
Product Dimension(MM)	530*493*228MM	
Package Dimension(MM)	632*570*315MM	

[1]Conditions apply, refer to FelicityESS Warranty Letter.

\*According to local grid-connected standards



# T-REX Hybrid Inverter

T-REX-10KLP3G01



## Specification



### Product Features



Multi-way MPPT design



Lithium battery activation function



UPS grade on/off grid switching



Support half-wave load, and unbalanced load

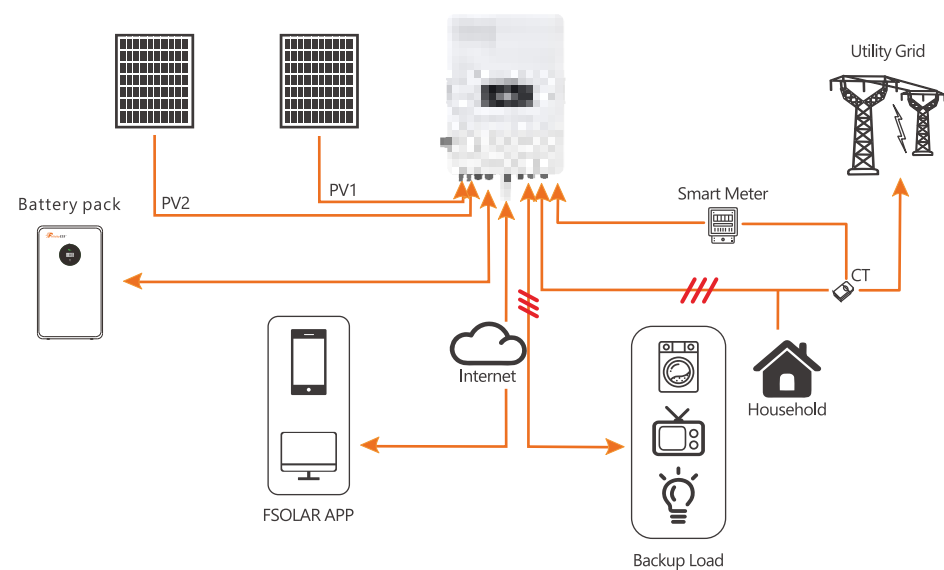


Equipped with remote real-time monitoring platform



Ip65 protection grade

### Connection diagram



Model	T-REX-10KLP3G01
<b>Battery Input Data</b>	
Battery Voltage Range	40V~60V
Max. charging and discharging current	200A/200A
Max. charging and discharging power	10000W
Battery type	Li-Ion /Lead-acid
<b>DC Input Data(PV side)</b>	
Max.recommended PV power	13000W
Max.PV voltage	900V
Start voltage	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
<b>Grid Data</b>	
Nominal Input Voltage	L1/L2/L3/N/PE, 230/400Vac
Input Voltage Range	184-264.5Vac*
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	0.8leading...0.8lagging
THDI	< 3%
<b>AC Output Data(Back Up)</b>	
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
<b>Efficiency</b>	
Max. efficiency	97.6%
Euro efficiency	97.0%
MPPT efficiency	99.9%
<b>Protection</b>	
Output over current protection	Integrated
Output over power protection	Integrated
Output shorted protection	Integrated
Anti-islanding protection	Integrated
GFCI Protection	Integrated
Insulation Resistor Detection	Integrated
<b>General Data</b>	
Operating temperature range	-25°C~60°C,>45°C Derating
Protection degree	IP65
Relative humidity	100%
Cooling concept	Smart cooling
Altitude	2000m
Communication	RS232/RS485
BMS Communication	CAN/RS485
Monitor module	WiFi/GPRS
Display	LCD+LED
Installation Style	Wall-mounted
Warranty[1]	10 years
Grid Regulation	VDE-AR-N 4105; G99/1; EN50549-1; CEI -21; AS 4777.2; NRS 097-2-1;
Safety Regulation	IEC 62109-1/2IEC 62040-1
EMC	EN61000-6-1.EN61000-6-3
Net Weight(KG)	38.9KG
Gross Weight(KG)	47.1KG
Product Dimension(MM)	655*475*266MM
Package Dimension(MM)	792*597*351MM

[1]Conditions apply, refer to FelicityESS Warranty Letter.

\*According to local grid-connected standards

# T-REX Hybrid Inverter

T-REX-10KHP3G01



## Specification



## Product Features



WiFi for mobile monitoring



Max. charging/discharging current of 25A



AC couple to retrofit existing solar system

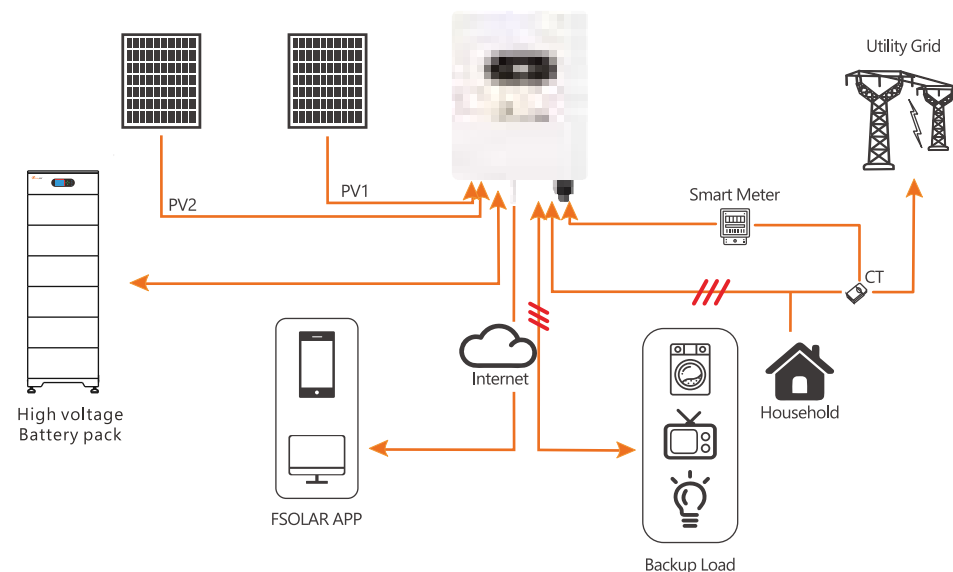


Support storing energy from diesel generator



Automatically and switching time within 20ms

## Connection diagram



Model	T-REX-10KHP3G01
<b>Battery Input Data</b>	
Battery Voltage Range	180V~580V
Max. charging and discharging current	25A
Max. charging and discharging power	10000W
Battery type	Li-Ion /Lead-acid
<b>DC Input Data(PV side)</b>	
Max.recommended PV power	13000W
Max.PV voltage	900V
Start voltage	160V
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
<b>Grid Data</b>	
Nominal Input Voltage	L1/L2/L3/N/PE, 230/400Vac
Input Voltage Range	184-264.5Vac*
Nominal grid frequency	50/60Hz
Max. input current	30A
Max. Charge Current	25A
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	0.8leading...0.8lagging
THDI	< 3%
<b>AC Output Data(Back Up)</b>	
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
<b>Efficiency</b>	
Max. efficiency	97.6%
Euro efficiency	97.0%
MPPT efficiency	99.9%
<b>Protection</b>	
Output over current protection	Integrated
Output over power protection	Integrated
Output shorted protection	Integrated
Anti-islanding protection	Integrated
GFCI Protection	Integrated
Insulation Resistor Detection	Integrated
<b>General Data</b>	
Operating temperature range	-25°C~60°C,>45°C Derating
Protection degree	IP65
Relative humidity	100%
Cooling concept	Nature
Altitude	2000m
Communication	RS232/RS485
BMS Communication	CAN/RS485
Monitor module	WiFi/GPRS
Display	LCD+LED
Installation Style	Wall-mounted
Warranty[1]	10 years
Grid Regulation	VDE-AR-N 4105; G99/1; EN50549-1; CEI -21; AS 4777.2; NRS 097-2-1;
Safety Regulation	IEC 62109-1/2IEC 62040-1
EMC	EN61000-6-1.EN61000-6-3
Net Weight(KG)	35.3KG
Gross Weight(KG)	39.7KG
Product Dimension(MM)	533*431*213MM
Package Dimension(MM)	635*533*315MM

[1]Conditions apply, refer to FelicityESS Warranty Letter.

\*According to local grid-connected standards



# T-REX Hybrid Inverter

T-REX-50KHP3G01



## Specification



## Product Features



3.5-inch LCD touch screen



Smart Cloud Monitoring System



2 independent battery inputs



Programmable generator port



Support multi Working mode

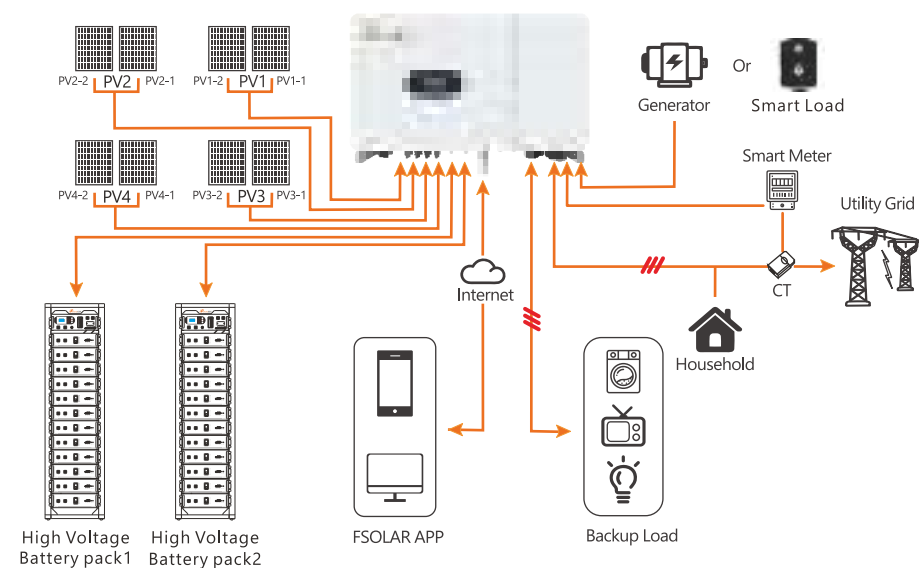


The maximum support is 12 parallel machines.



Ip65 protection grade

## Connection diagram



Model	T-REX-50KHP3G01
<b>Battery Input Data</b>	
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
<b>PV String Input Data</b>	
Max. DC Input Power	65 kW
Max. DC Input Voltage	1000Vd.c.
Min. DC Input Voltage	150Vd.c.
Start-up Voltage	250Vd.c.
Rated DC Input Voltage	600Vd.c.
MPPT Range	200~850Vd.c.
Full Load DC Voltage Range	450~850Vd.c.
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
<b>AC Output Data</b>	
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	3W+N+PE/3W+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)
<b>Efficiency</b>	
Max. efficiency	97.6%
Euro efficiency	97.0%
MPPT efficiency	99.9%
<b>Protection</b>	
PV Input Lightning Protection, PV String Input Reverse Polarity Protection, Battery Input Lightning Protection, Battery Input Reverse Polarity Protection, Insulation Resistor Detection, Residual Current Monitoring Unit, Output Over Current Protection, Output Shorted Protection, Output Over Voltage Protection, Anti-islanding Protection, AC Output Lightning Protection.	Integrated
<b>Certification and Standards</b>	
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
<b>General Data</b>	
Size ( W* H* D)	940*595*340mm
Protection Degree	IP65
Operating Temperature Range	-25 to 60 °C (> 50 °C derating)
Humidity	0 ~ 95 % (No condensation)
Cooling	Smart cooling
Altitude	3000 m (> 2000 m derating)
Communication with BMS	RS485,CAN
Monitor module	WiFi/GPRS
Installation Style	Wall-mounted
Warranty[1]	10 years

[1]Conditions apply, refer to FelicityESS Warranty Letter.

\*According to local grid-connected standards

LUX

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Series

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# LUX-S Battery Pack

## Built-in Controller








### LUX-S-1600LG01



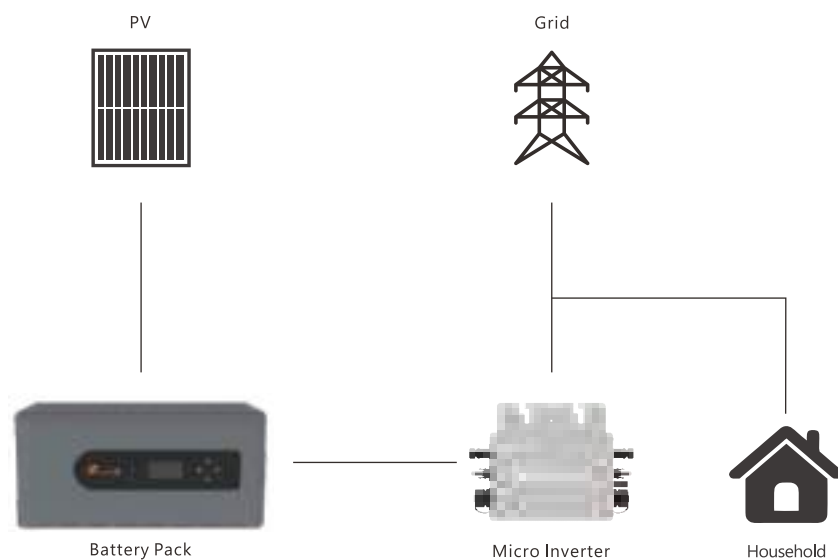
## Specification



### Product Features

-  Storing Excess Energy
-  Timing function supports
-  Fire Extinguishing Gel Inside
-  Stacking and wall mounting installation
-  Built-in WIFI/BLE
-  Power Controllable
-  IP65, natural cooling

### Connection diagram



Model	LUX-S-1600LG01
<b>INPUT DATA</b>	
Commonly Used Module Power	210 to 670W+ (2 Pieces)
Maximum Input Voltage	95Vdc
MPPT Voltage Range	16-60Vdc
Start-up Voltage	22V
Maximum Input Current	2x30A
Maximum Input Short Circuit Current	2x35A
Number of MPPTs	2
Number of Inputs per MPPT	1
<b>OUTPUT DATA</b>	
Output Voltage Range	28-36Vdc
Maximum Output Current	2x25A
<b>BATTERY DATA</b>	
Capacity	1600Wh
Battery Type	LiFePO4
Nominal Voltage	32Vdc
Operating Voltage	28-36Vdc
Depth of Discharge(DOD)	≥95%
Charging Temperature Range	0 to 55°C
Discharging Temperature Range	-20 to 55°C
Maximum Charge Current	50A
Maximum Discharge Current	50A
<b>MECHANICAL DATA</b>	
Noise(dB)	<35dB (1 meter)
Protection Level	Ip65
Cooling	Natural convection – No fans
Humidity	0-95% ( no condensation)
Altitude	Up to 2,500 meters
Installation	Wall-Mounted
Net Weight	23kg
Gross Weight	26kg
Product Dimension(WxHxD)	325x440x199mm
Package Dimension(WxHxD)	537x387x272mm
<b>FEATURES</b>	
Display	LCD+LED
Communication	WIFI/Bluetooth
Monitoring	Fsolar APP
Protection	Bulti-in Smart BMS,Breaker,Fuse
Bypass Setting	When the battery is fully charged to 100%, user can choose whether to bypass (enabled by default) the PV energy directly to the micro inverter(user forbid discharge period).
Output Timer Setting	Timing function supports user setting to Output time through APP or LCD Display.
Charging Low Temperature	When the cell temperature is lower than the allowable charging temperature, user can choose whether to turn on the forced discharge function (prohibited by default), so that the cell temperature rises to meet the charging temperature limit.
Limited Warranty2	> 60% capacity, up to 5 years or 6,000 cycles
1 External 2-in-1 PV cable. 2 Whichever occurs frst. Restrictions apply.	

LUX

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S  
E

Series

X

Y



# LUX-E Battery Pack

LUX-E-48100LG01



## Specification



Model	LUX-E-48100LG01
Battery Type	LiFePO4
Nominal Energy	5.12kWh
Nominal Capacity	100Ah
Nominal Voltage	51.2V
Operating Voltage	44.8~57.6V
Recommend 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 Level	IP65
Working Temperature Range	Charge: 0°C~55°C
Working Temperature Range	Discharge:-20°C~55°C
Storage Temperature Range	0°C- +35°C
Humidity	5%~95%
Altitude	≤ 2000m
Communication	RS485 / CAN
Cycle Life[2]	≥ 6000 Cycles
Installation	Wall-Mounted / Floor-Mounted
Protection	Built-in smart BMS, Breaker
Warranty Period[3]	10 Years
Product Weight Approximate	48.5 kg
Package Weight Approximate	64.5 kg
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.

[3] Conditions apply, refer to FelicityESS Warranty Letter.

## Product Features



LiFePO4:  
Higher safe performance  
and longer cycle life



Multiple Protection:  
Built-in smart  
BMS and Breaker



Flexible Installation:  
Wall-Mounted or  
Floor-Mounted



Wide Compatibility:  
Compatible with leading  
inverter brands



High Scalability



Long Warranty:  
10 Years

# LUX-E Battery Pack

LUX-E-48100/48200/48230/48250LG03



## Specification



Model	LUX-E-48100LG03	LUX-E-48200LG03	LUX-E-48230LG03	LUX-E-48250LG03
Battery Type	LiFePO4			
Nominal Energy	5.12kWh	10.5kWh	11.8kWh	12.5kWh
Nominal Capacity	100Ah	205Ah	230Ah	250Ah
Nominal Voltage	51.2v			
Operating Voltage	44.8~57.6V			
Recommend Charge/Discharge current	50A	100A	100A	100A
Max. continuous charge/Discharge current[1]	100A	150A	150A	150A
Peak Charge/Discharge current(15s)	150A	200A	200A	200A
Scalability	Max. 15(76.8kWh)	Max. 15(157.4kWh)	Max. 15(176.6kWh)	Max. 15(187kWh)
Depth of discharge(DOD)	≥95%			
Display type	LCD			
Protection Level	IP21			
Working Temperature Range	Charge:0~+55°C Discharge:-20C~+55°C			
Storage Temperature Range	0°C~+35°C			
Humidity	5%~95%			
Altitude	≤2000m			
Communication	RS485 / CAN			
Cycle Life[2]	≥6000 Cycles			
Installation	Wall-Mounting / Floor-Mounting			
Protection	Built-in smart BMS, Breaker, Fuse			
Warranty Period[3]	10 Year			
Product Weight Approximate	55kg	90kg	92kg	92kg
Package Weight Approximate	75kg	108kg	110kg	110kg
Product Dimension	775×425×209mm	783×450×274mm	783×450×274mm	783×450×274mm
Package Dimension	892×545×385mm	900×570×450mm	900×570×450mm	900×570×450mm

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

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

[3] Conditions apply, refer to FelicityESS Warranty Letter.

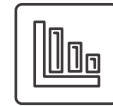
## Product Features



LiFePO4:  
Higher safe  
performance and  
longer cycle life



Multiple Protection:  
Built-in smart  
BMS and Breaker



Flexible Installation:  
Wall-Mounted  
or Floor-Mounted



Wide Compatibility:  
Compatible with  
leading inverter  
brands



High Scalability



Long Warranty:  
10 Years



Built-in WIFI:  
Remote monitoring  
of battery pack data



Fire  
Extinguishing  
Gel Inside



LUX

Series

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X

S

E

Y

# LUX-X Battery Pack

LUX-X-48050LG01



## Specification



### Product Features



Flexible: Modular design, easy to expand, Max. 4pcs in parallel



Wide temperature range: -20°C to 55°C



Safer: Cobalt Free Lithium Iron Phosphate (LFP) Battery, safety and long lifespan



Quick Installation: Flat and stackable design, support wall-mounted & floor-mounted wiring, rapid and easy installation



Reliable: Support high discharge power. Ip65, natural cooling



Fire Extinguishing Gel Inside

Model	LUX-X-48050LG01-1	LUX-X-48050LG01-2	LUX-X-48050LG01-3	LUX-X-48050LG01-4
Battery Type	LiFePO4			
Module Energy	2.56kWh			
Module Nominal Voltage	51.2V			
Module Capacity	50Ah			
Number of Battery Modules	1	2	3	4
System Energy	2.56kWh	5.12kWh	7.68kWh	10.24kWh
System Nominal Voltage	51.2V			
System Operating Voltage	44.8~57.6V			
Scalability	Max. 4 pcs in Parallel			
Recommend Charge/Discharge current	25A	40A	40A	40A
Max. continuous charge/discharge current[1]	50A	80A	80A	80A
Peak Charge/Discharge current(15S)	100A	100A	100A	100A
Depth of discharge(DOD)	≥ 95%			
Display type	Control Module: LCD/Battery Module: LED*4			
Protection Level	IP65			
Operating Temperature Range	Charge:0~+55°C/Discharge:-20°C~+55°C			
Storage Temperature Range	0°C~+35°C			
Humidity	5%~95%			
Altitude	≤2000m			
Cycle Life[2]	≥ 6000 Cycles			
Installation	Stacking-Mounting / Floor-Mounting			
Protection	Built-in smart BMS, Breaker			
Communication Port	RS485 / CAN			
Warranty Period[3]	10 Year			
Control Module (with battery) LUX-X-48050LCG01	Product Dimension(W*H*D)	530*350*176mm(with base:262)		
	Product Weight Approximate	30Kg(with base: 37)		
	Package Dimension(W*H*D, with base)	612*452*330mm		
Battery Module LUX-X-48050LM01	Package Weight Approximate (with base)	41Kg		
	Product Dimension(W*H*D)	530*350*176mm		
	Product Weight Approximate	30Kg		
	Package Dimension(W*H*D)	612*452*245mm		
	Package Weight Approximate	34Kg		

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

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

[3] Conditions apply, refer to FelicityESS Warranty Letter



# LUX-X Battery Pack

LUX-X-48100LG01



## Specification



### Product Features



**LiFePO4:**  
Higher safe performance  
and longer cycle life



**Multiple Protection:**  
Built-in smart BMS,  
Breaker and Fuse



**Flexible Installation:**  
Movable type  
Floor-Mounted



**Wide Compatibility:**  
Compatible with leading  
inverter brands



**High Scalability**



**Modular design for easy  
installation and increased  
capacity**



**Fire  
Extinguishing  
Gel Inside**

Model		LUX-X-48100LG01							
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~+55°C/Discharge:-20°C~+55°C								
Storage Temperature Range	0°C~+35°C								
Humidity	5%~95%								
Altitude	≤2000m								
Communication	RS485 / CAN								
Cycle Life[2]	≥ 6000 Cycles								
Installation	Wall-Mounted / Floor-Mounted								
Protection	Built-in smart BMS, Breaker, Fuse								
Warranty Period[3]	10 Year								
Control Module LUX-X-48100LGG01	Product Weight Approximate	46 kg							
	Package Weight Approximate (with base)	60 kg							
	Product Dimension	600x450x180 mm							
	Package Dimension(with base)	712x562x333 mm							
Battery Module LUX-X-48100LMG01	Product Weight Approximate	46 kg							
	Package Weight Approximate	50 kg							
	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.

[3] Conditions apply, refer to FelicityESS Warranty Letter



# LUX-X Battery Pack

LUX-X-96050HG01



## Specification



### Product Features



Inverter Interface Protection



Multiple Protection:  
Built-in smart BMS,  
Breaker and Fuse



LiFePO4: Higher  
safe performance  
and longer cycle life



Fire  
Extinguishing  
Gel Inside



Flexible Installation:  
Stack-Mounted



Wide Compatibility:  
Compatible with  
leading inverter  
brands



High Scalability



Long Warranty:  
10 Years

Model		LUX-X-96050HG01					
Battery Type	LiFePO4						
Module Energy	5.12kWh						
Module Nominal Voltage	102.4V						
Module Capacity	50Ah						
Number of Battery Modules	1	2	3	4	5	6	
System Energy	5.12kWh	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh	
System Nominal Voltage	102.4V	204.8V	307.2V	409.6V	512V	614.4V	
System Operating Voltage	96-115.2V	192-230.4V	288-345.6V	384-460.8V	480-576V	576-691.2V	
Scalability[4]	Max. 4 PCS in Parallel(122.88kWh)						
Recommend Charge/Discharge current	25A	25A	25A	25A	25A	25A	
Max. continuous charge/discharge current[1]	50A	50A	50A	50A	50A	50A	
Peak Charge/Discharge current(15S)	60A	60A	60A	60A	60A	60A	
Depth of discharge(DOD)	≥ 95%						
Display type	LED+LCD(Touch)						
Protection Level	IP65						
Operating Temperature Range	Charge:0~+55°C/Discharge:-20°C~+55°C						
Storage Temperature Range	0°C~+35°C						
Humidity	5%~95%						
Altitude	≤2000m						
Cycle Life[2]	≥ 6000 Cycles						
Installation	Stacking-Mounting / Floor-Mounting						
Protection	Built-in smart BMS, Breaker						
Communication Port	RS485 / CAN						
Warranty Period	10 Year						
Control Module LUX-X-96050HCG01	Net Weight	12 kg					
	Gross Weight(with base)	24.5 kg					
	Product Dimension	600x385x200 mm					
	Package Dimension(with base)	712x497x352 mm					
Battery Module LUX-X-96050HMG01	Battery Designation	IFpP24/141/161/[(1P32S)nS]E/-20+60/90					
	Net Weight	51 kg					
	Gross Weight	54 kg					
	Product Dimension	600x385x260 mm					
Package Dimension	712x497x378 mm						

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

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

[3] Conditions apply, refer to FelicityESS Warranty Letter

[4] Future models will be designed to allow for parallel connectivity.



LUX

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S

E

X

Series

Y



# LUX-Y Battery Pack

LUX-Y-48280/48300LG01



## Specification



Model	LUX-Y-48280LG01	LUX-Y-48300LG01
Battery Type	LiFePO4	
Nominal Energy	14.3kWh	15kWh
Nominal Capacity	280Ah	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(215kWh)	Max.15(225kWh)
Depth of Discharge(DOD)	≥95%	
Display type	LCD	
Protection Level	IP21	
Working Temperature Range	Charge: 0°C~+55°C	
	Discharge:-20°C~+55 °C	
Storage Temperature Range	0°C~+35°C	
Humidity	5%-95%	
Altitude	≤2000m	
Communication	RS485 / CAN	
Cycle Life[2]	≥ 6000 Cycles	
Installation	Wall-Mounted / Floor-Mounted	
Protection	Built-in smart BMS, Breaker, Fuse	
Warranty Period[3]	10Years	
Product Weight Approximate	135kg	
Package Weight Approximate	160kg	
Product Dimension	480x1100x300mm	
Package Dimension	1150x635x498mm	

[1] Max.continuous charge/Discharge current is affected by temperature and SOC.

[2] Test conditions: 0.5C Charging/Discharging @25°C, 80% DOD, 60%EOL.

[3] Conditions apply, refer to FelicityESS Warranty Letter.

## Product Features



Higher safe performance and longer cycle life



Multiple Protection: Built-in smart BMS, Breaker and Fuse



Flexible Installation: Wall-Mounted or Floor-Mounted



Fire Extinguishing Gel Inside



Wide Compatibility: Compatible with leading inverter brands



High Scalability



Built-in WIFI: Remote monitor of the battery pack data



Long Warranty: 10 Years

# LUX-Y Battery Pack

LUX-Y-48100HG01



## Specification



### Product Features



Inverter interface protection: Over voltage, Over current, External Short Circuit



Battery Protection: Internal Short Circuit, Over voltage, over current, over temp



LiFePO4: Higher safe performance and longer cycle life



Fire Extinguishing Gel Inside



Flexible Installation: Stack-Mounted



Wide Compatibility: Compatible with leading inverter brands



High Scalability



Long Warranty: 10 Years

Model		LUX-Y-48100HG01		
Battery Type	LiFePO4			
Module Energy	5.12KWh			
Single Module Nominal Voltage	51.2V			
Module Capacity	100AH			
Number of Battery Modules (Optional)	4(Min)	8	12	
System 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	
Scalability[4]	Max. 16 PCS in Parallel(983.04kwh)			
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)			
Protection Level	IP21			
Operating Temperature Range	Charge:0~+55°C/Discharge:-20°C~+55°C			
Storage Temperature Range	0°C~+35°C			
Humidity	5%~95%			
Altitude	≤2000m			
Cycle Life[2]	≥ 6000 Cycles			
Installation	Rack-Mounting			
Protection	Built-in smart BMS, Breaker			
Communication Port	RS485 / CAN			
Warranty Period[3]	10 Year			
Control Module LUX-Y-48100HCG01	Product Dimension	482.6x565x150mm		
	Package Dimension	687x562x269mm		
	Product Weight Approximate	10.3kg		
	Package Weight Approximate	16.7kg		
Battery Module LUX-Y-48100HMG01	Product Dimension	482.6x565x131mm		
	Package Dimension	687x562x250mm		
	Product Weight Approximate	41.3kg		
	Package Weight Approximate	45kg		
Rack LUX-Y-48100HR13G01	Product Dimension	560x590x2077.5mm (13th floor)		
	Package Dimension	678x708x2200mm		
	Product Weight Approximate	68.5kg		
	Package Weight Approximate	108.5kg		
Rack LUX-Y-48100HR9G01	Product Dimension	560x590x1532.5mm (9th floor)		
	Package Dimension	678x708x1655mm		
	Product Weight Approximate	51kg		
	Package Weight Approximate	80.5kg(Approx)		

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

[2] Test conditions: 0.5C Charging/Discharging @25°C, 80% DOD.

[3] Conditions apply, refer to FelicityESS Warranty Letter.

[4] Future models will be designed to allow for parallel connectivity.

# Apollo

# Series



# Apollo All-in-One Hybrid ESS

Apollo-4.6/5KLP1G01-MX



## Specification



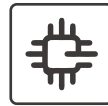
### Product Features



Flexible Storage Capacity



Programmable supply priority for battery or grid



100% output in off-grid mode



All in one design



Smart settable three stages MPPT charging



Real-time Remote Control via APP and website

Model	Apollo-4K6LP1G01-M1	Apollo-4K6LP1G01-M2	Apollo-5KLP1G01-M1	Apollo-5KLP1G01-M2
<b>System Specification</b>				
Nominal Output Power	4600VA/4600W		5000VA/5000W	
AC Output Frequency and Voltage	50/60Hz;L/N/PE 220/230Va.c			
Grid Type	Single Phase			
Energy Range (kWh)	5.12	10.24	5.12	10.24
Max. Charging/Discharging Current (A)	100			
Battery Operating Voltage (V)	44.8-57.6			
Battery Type	LiFePO4			
IP Rating of Enclosure	IP21			
System Certification	VDE-AR-N 4105; G99/1; EN50549-1; CEI 0-21; AS 4777.2			
Warranty Period[1]	10 years			
<b>Inverter Technical Specification</b>				
Max. PV Input Power(W)	6000		6500	
Max. PV Input Current(A)	15/15			
Rated PV Input Voltage (Vdc)	90~550			
Start Up DC Voltage (Vdc)	130			
MPPT Voltage Range(Vdc)	100~500			
Max. PV Short-circuit Current (A)	18/18			
No. of MPP Tracker	2/1			
Peak Power (off grid)	2 time of rated power, 0.2s			
Power Factor	0.8leading to 0.8lagging			
DC injection current (mA)	THD<3% (Linear load<2%)			
Display	LCD+LED			
Operating Temperature Range (°C)	-20°C~55°C, >45°C Derating			
Relative Humidity	15% ~ 85% (No Condensing)			
Dimension(Wx Dx H,mm)	600x450x640			
Weight Appr.(kg)	60			
Communication with BMS	CAN/RS485			
Grid Regulation	VDE-AR-N 4105; G99/1; CE:EN50549-1, NRS 097-2-1; CEI 0-21;AS 4777.2			
Safety Regulation	IEC 62109-1/2, IEC 62040-1			
EMC	EN61000-6-1, EN61000-6-3			
Max. efficiency	97.6%			
Euro efficiency	97.0%			
MPPT efficiency	99.9%			
<b>Battery Technical Specification</b>				
Nominal Voltage (V)	51.2			
Battery Module Energy (kWh)	5.12	10.24	5.12	10.24
Scalability	Max.8pcs,Max. capacity of 40.96kWh			
Battery Module Dimension (WxDxHmm)	600*450*180	600*450*360	600*450*180	600*450*360
Battery Base Dimension (WxDxHmm)	590*440*120			
Battery Module Weight Appr.(kg)	46	92	46	92
Charging Temperature Range	0-55°C			
Discharging Temperature Range	-20-55°C			
Cycle Life	≥6,000 Cycles(Test conditions: 0.2C Charging/ Discharging @25°C, 80% DOD.)			
Battery Module Certification	UN38.3.CE			
AC Output Voltage	230Va.c			
AC Output Frequency	50/60Hz			
AC Output Rated Current	20Aa.c		21.7Aa.c	
Max. AC Output Current	40Aa.c			
AC Output Rated Active Power	4600W*		5000W*	
AC Output Rated Apparent Power	4600VA*		5000VA*	
AC Output Power Factor	0.8 Leading To 0.8 Lagging			

[1] Conditions apply, refer to FelicityESS Warranty Letter.

# Apollo All-in-One Hybrid ESS

Apollo-10KHP3G01-MX



## Specification



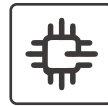
### Product Features



Higher efficiency energy density



Programmable supply priority for battery or grid



100% output in off-grid mode



Flexible Storage Capacity



Smart settable three stages MPPT charging



Real-time Remote Control

Model	Apollo-10KHP3G01-M2	Apollo-10KHP3G01-M3	Apollo-10KHP3G01-M4	Apollo-10KHP3G01-M5	Apollo-10KHP3G01-M6
<b>System Specification</b>					
Nominal Output Power	10000VA/10000W				
AC Output Frequency and Voltage	50/60Hz;L1/L2/L3/N/PE, 230Vac/400Vac				
Grid Type	Three Phase				
Energy Range (kWh)	10.24	15.36	20.48	25.6	30.72
Max. Charging/Discharging Current (A)	25				
Battery Operating Voltage (V)	204.8	307.2	409.6	512	614.4
System output Power(W)[1]	5120	7680	10000	10000	10000
Battery Type	LiFePO4				
IP Rating of Enclosure	IP65				
System Certification	PPDS:2021,VDE-AR-N 4105,EN 50549-1,IEC 62109-1/-2,CE-EMC				
Warranty Period[2]	10 Years				
<b>Inverter Technical Specification</b>					
Max. PV Input Power(W)	13000				
Max. PV Input Current(A)	15/15				
Rated PV Input Voltage (Vdc)	160~900				
Start Up DC Voltage (Vdc)	160				
MPPT Voltage Range (Vdc)	200~850				
MPPT Voltage Range for Full Load(Vdc)	450~850				
Max. PV Short-circuit Current (A)	18/18				
No. of MPP Tracker	2/1				
Power Factor	0.8 leading to 0.8 lagging				
DC injection current (mA)	THD<3% (Linear load<1.5%)				
Display	LCD+LED				
Operating Temperature Range (°C)	-20°C~55°C, >45°C Derating				
Relative Humidity	15% ~ 85% (No Condensing)				
Dimension(Wx Dx H,mm)	533x431x213				
Weight Appr.(kg)	35.3				
Communication with BMS	CAN/RS485				
Grid Regulation	PPDS:2021, VDE-AR-N 4105, EN 50549-1, G99/1, CEI 0-21, AS 4777.2, NRS 097-2-1				
Safety Regulation	IEC 62109-1/2, IEC 62040-1				
EMC	EN61000-6-1, EN61000-6-3				
Max. efficiency	97.6%				
Euro efficiency	97.0%				
MPPT efficiency	99.9%				
<b>Battery Technical Specification</b>					
Number of batteries	2	3	4	5	6
Nominal Voltage(V)	204.8	307.2	409.6	512	614.4
Battery Module Energy(kWh)	10.24	15.36	20.48	25.6	30.72
Scalability(kWh)	Max. 6 PCS in parallel(30.72kWh)				
Battery Module Dimension(mm)	600x385x520	600x385x780	600x385x1300	600x385x1040	600x385x1560
Battery Module Weight Appr.(kg)	102	153	204	255	306
Charging Temperature Range	0~55°C				
Discharging Temperature Range	-20~55°C				
Cycle Life[3]	6000 Cycles				
Battery Module Certification	CB, UN 38.3, MSDS				
[1] If you want the machine to be fully loaded, you must connect at least 4 battery Module in series.					
[2] Conditions apply, refer to FelicityESS Warranty policy.					
[3] Test conditions: 0.2C Charging/Discharging @25°C, 80% DOD.					

# X - RAY

Series



# X-RAY Micro Inverter

X-RAY-WVC800W



## Specification



## Product Features



The maximum output power can reach 800W



Peak efficiency 92.70%.  
The CEC weighted efficiency is 92.50%



Static MPPT efficiency 99.80%. The efficiency of dynamic MPPT on cloudy days is 99.76%



Power factor (adjustable)  
0.8 lead...0.8 lag



External antenna for stronger communication with WiFi sources



High reliability: NEMA 3R (IP65) enclosure. 6000V surge protection

Model	X-RAY-WVC800W
<b>DC Input</b>	
Maximum Input Power	Max 2× 500W
Mppt Voltage Range (Module Open Circuit Voltage)	30-60V
Starting Voltage	22V d.c.
Working Voltage Range	22-60V d.c.
Maximum Input Voltage	60V
Maximum Input Current	2×18A
Maximum Input Short Circuit Current	2×20A
Maximum Feedback Current Of The Array	0A
<b>AC Output</b>	
Maximum Output Power	800VA
Rated Output Current	@120V 6.6A @230V 3.5A
Nominal Output Voltage Range	@120V a.c. (Application area: such as Japan, North America, etc.) @230V a.c. (Application area: such as Europe)
Nominal Frequency Range	50Hz/60Hz
Power Factor	> 0.99 default 0.95 leading...0.95 lagging
Harmonic Distortion Of Output Current	<3%
Maximum Number Of Connections Per Branch	@120V 6 PCs @230V 12Pcs
<b>Efficiency, Safety and Protection</b>	
Peak Microinverter Efficiency	92.70%
CEC weighted efficiency	92.50%
Nominal MPPT Efficiency	99.80%
Night power consumption (mW)	0
<b>Mechanical Data</b>	
Ambient temperature range	-20 to +50°C
Storage temperature range	-20 to +50°C
Dimensions (L×W×H)	283×200×41.6mm
Weight	1.46kg
Waterproof level	Outdoor Nema 3r (IP65)
Cooling method	Natural Convection (no Fans)
Degree of pollution	PD3
<b>Feature</b>	
Power Delivery Mode	Reverse transmission, load priority
Communication method	WiFi
Rated transmit power	802.11b: +17dBm ± 1.5dBm (@11Mbps) 802.11g: +15dBm ± 1.5dBm (@54Mbps) 802.11n: +14dBm ± 1.5dBm (@HT20, MCS7)
Surveillance system	Smart Life
Warranty	5 years
Electrical Standard	EN 50549-1:2019, EN 50549-2:2019 EN 61000-6-1:2007, EN 61000-6-3:2007 + A1:2011 + AC2012 IEC/EN 62109-1:2010, IEC/EN 62109-2:2011
Bluetooth	2402-2480MHz Bluetooth EIRP Power (Max.) 7.89dBm
Wifi 2.4G	2412-2472MHz Wifi 2.4G EIRP Power (Max.) 18.08dBm
*Note: Voltage and frequency ranges may exceed nominal values if required by the utility company.	
<b>Package</b>	
Standard 3m AC grid-connected cable	FCL (5units) 12.3Kg 450×400×260mm

# ZEUS

# Series

# ZEUS EV charger

## ZEUS-A7-ST/ZEUS-A11-ST



## Specification



### Introduction

**Multi-scene applicable column, wall hanging can be installed**

Garage charging/underground garage charging/outdoor charging, etc No fear of wind and rain, charge as you like

**Greatly improved charging efficiency**

The 7KW device is compatible with all power modules below 7KW. Charging is more stable and efficient.

**Eight Protection Functions Ensure Safe and Reliable Charging**

- |  |                         |  |                            |
|--|-------------------------|--|----------------------------|
|  | Overcurrent Protection  |  | Short Circuit Protection   |
|  | Leakage Protection      |  | Lightning Protection       |
|  | Undervoltage Protection |  | Overvoltage Protection     |
|  | Waterproof Protection   |  | Flame Retardant Protection |



Model	ZEUS-A11-ST	ZEUS-A7-ST
Rated voltage	AC400V (50/60Hz)	AC230V (50/60Hz)
Rated Ampere	16A	32A
Rated power	11kW	7kW
Wire	Three phase (3P+N+PE)	Single phase (P+N+PE)
Ingress Protection	Ip65	
Installation Options	Column / Wall mounted	
Colour	White	
Weight	5kg	
Dimension (MM)	190*110*320MM	
Operating temperature	-40°C to 60°C	-40°C to 60°C/50°C to 60°C(16A)
Humidity	5-95%humidity	
Altitude	≤2.0m	
Charging Cable Length	3.5M	
Environmental requirements	Meet ROHS2.0 requirements	

\*Conditions apply, refer to FelicityESS Warranty Letter.

### Status Indicator Light

Green breathing lamp Online Idle	Green all bright Online prepare	Yellow breathing lamp reserved	Yellow breathing lamp Charging suspension	Red all bright Disable	White water lamp Upgrading

Purple breathing lamp Offline Idle	Purple all bright Offline prepare

Green flashing End of charging	Red flashing Error

Green water lamp In the Charging The higher the charging current, the faster the rhythm of the status indicator	
---	--

Green water lamp In the Charging The higher the charging current, the faster the rhythm of the status indicator	
---	--



Residential  
&  
Commercial

ESS

Solutions



2.5kWh, AC-output 800W

System Highlights



Space-efficient



Easy installation



Renewable integration



Scalable



Smart management



Safety features

1.6kWh, AC-output 800W

System Highlights



Compact Design



Low Maintenance



Versatile Applications



Noise Reduction



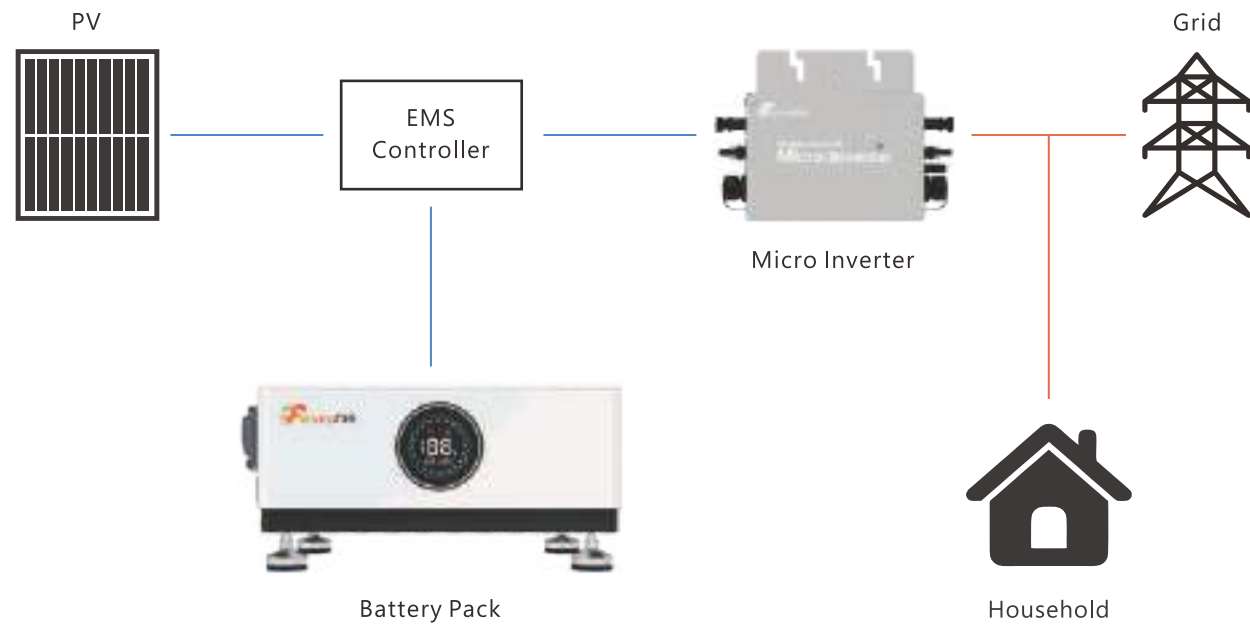
Grid Independence



Increased Energy Security

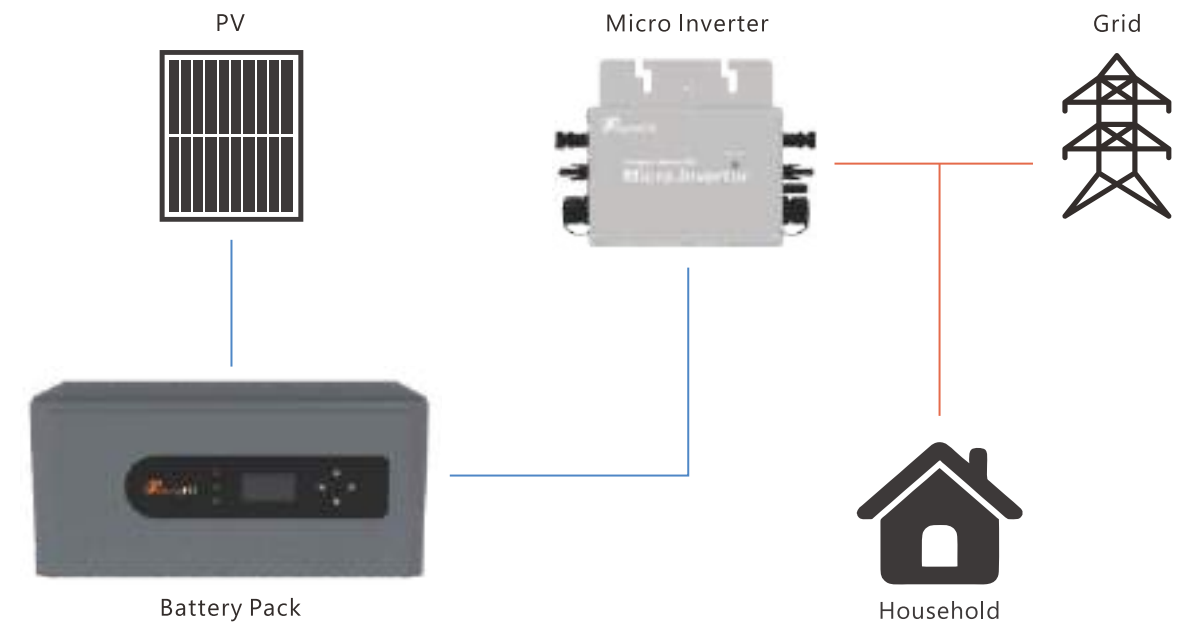
Connection Diagram

■ DC ■ AC



Connection Diagram

■ DC ■ AC



**5kW, Low Voltage, Single Phase System**

**Advantages**



Cost-Effective Installation and Maintenance



Energy Efficiency



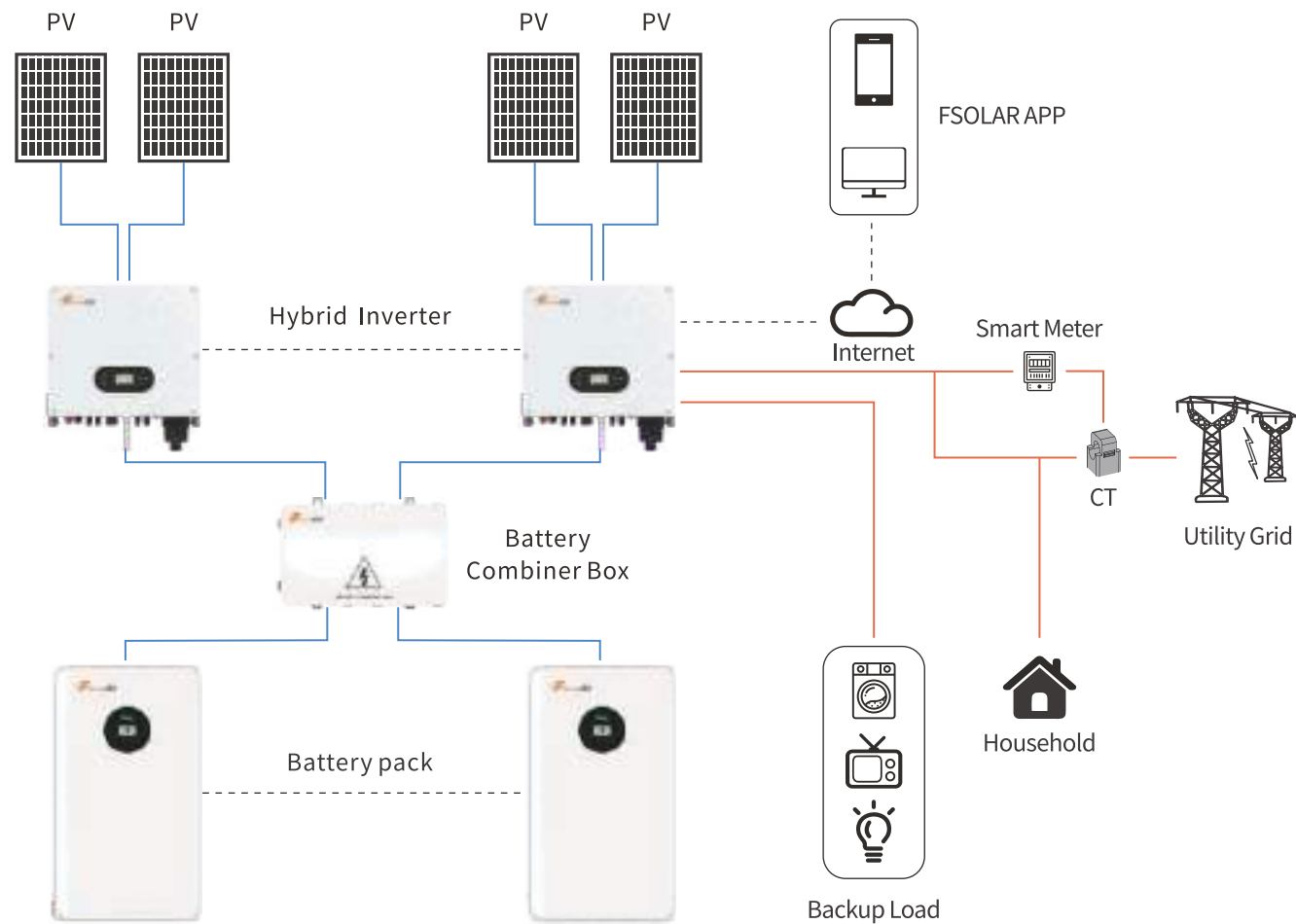
Simplified System Design and Compatibility



Ideal for Residential or Small-Scale Commercial Use

**Connection Diagram**

■ DC ■ AC - - - - Communication



**10kW, Low Voltage, Three Phase System**

**Advantages**



Enhanced Power Supply



Improved Efficiency



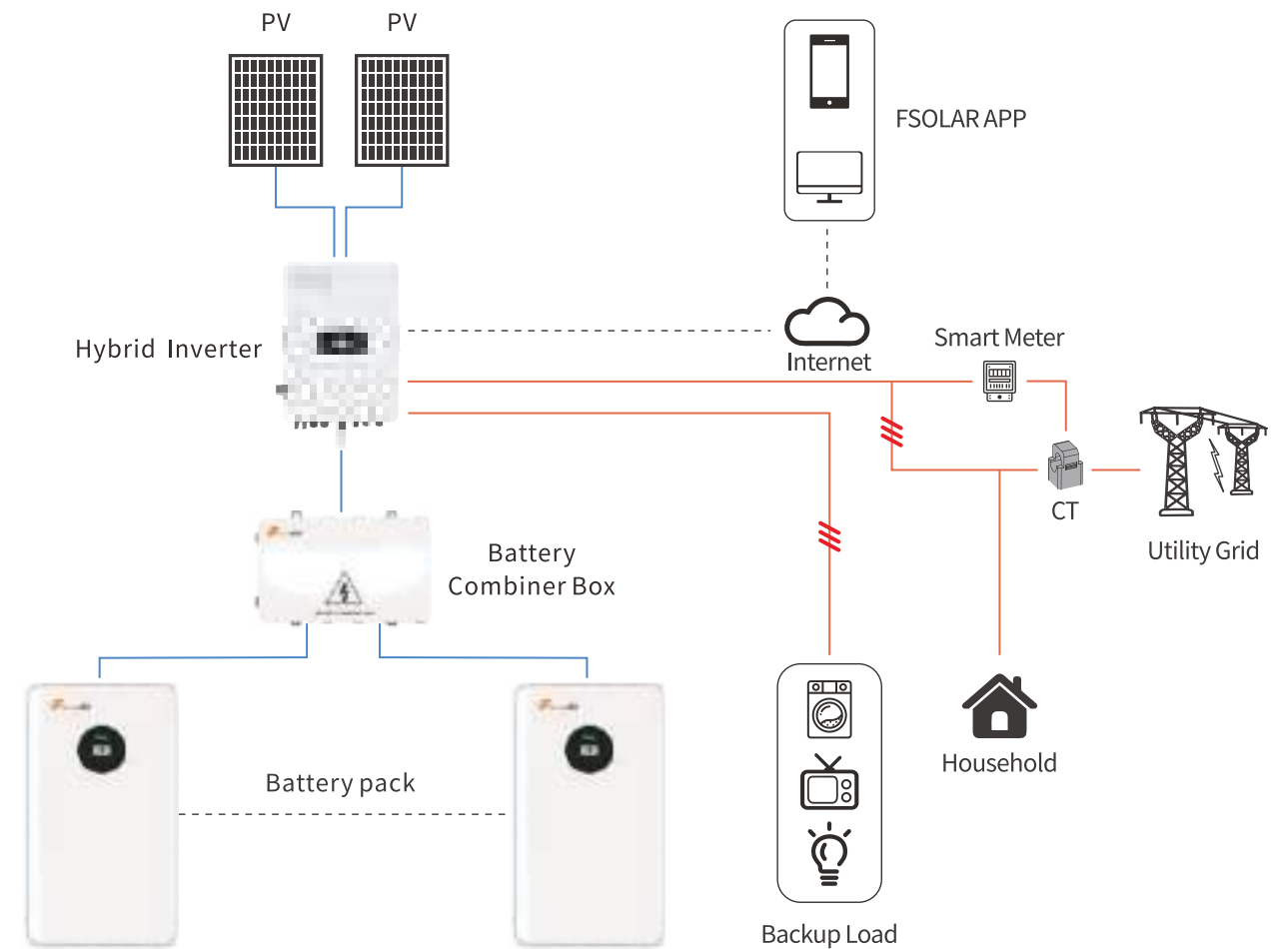
Better for High-Demand Applications



Reduced Conductor Size

**Connection Diagram**

■ DC ■ AC - - - - Communication



10kW, High Voltage, Three Phase System

Advantages



Reduced Transmission Losses



Increased Efficiency for Heavy Machinery



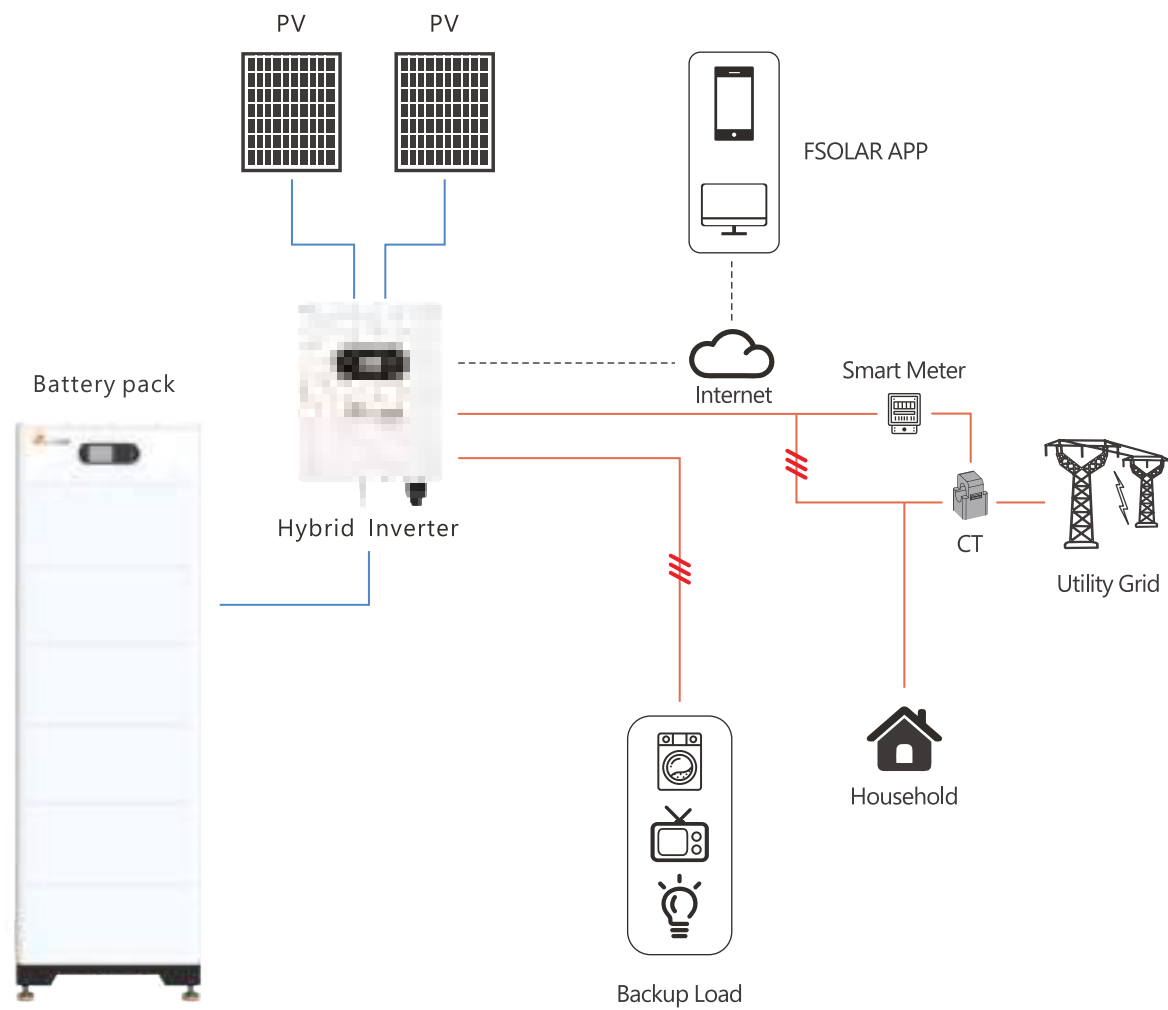
Lower Operating Costs



Enhanced Safety Features

Connection Diagram

■ DC ■ AC - - - - Communication



50kW, High Voltage, Three Phase System

Smart Loads Application Scenarios



Home Energy Management Systems: Optimizing energy use in smart homes for efficiency and cost savings.



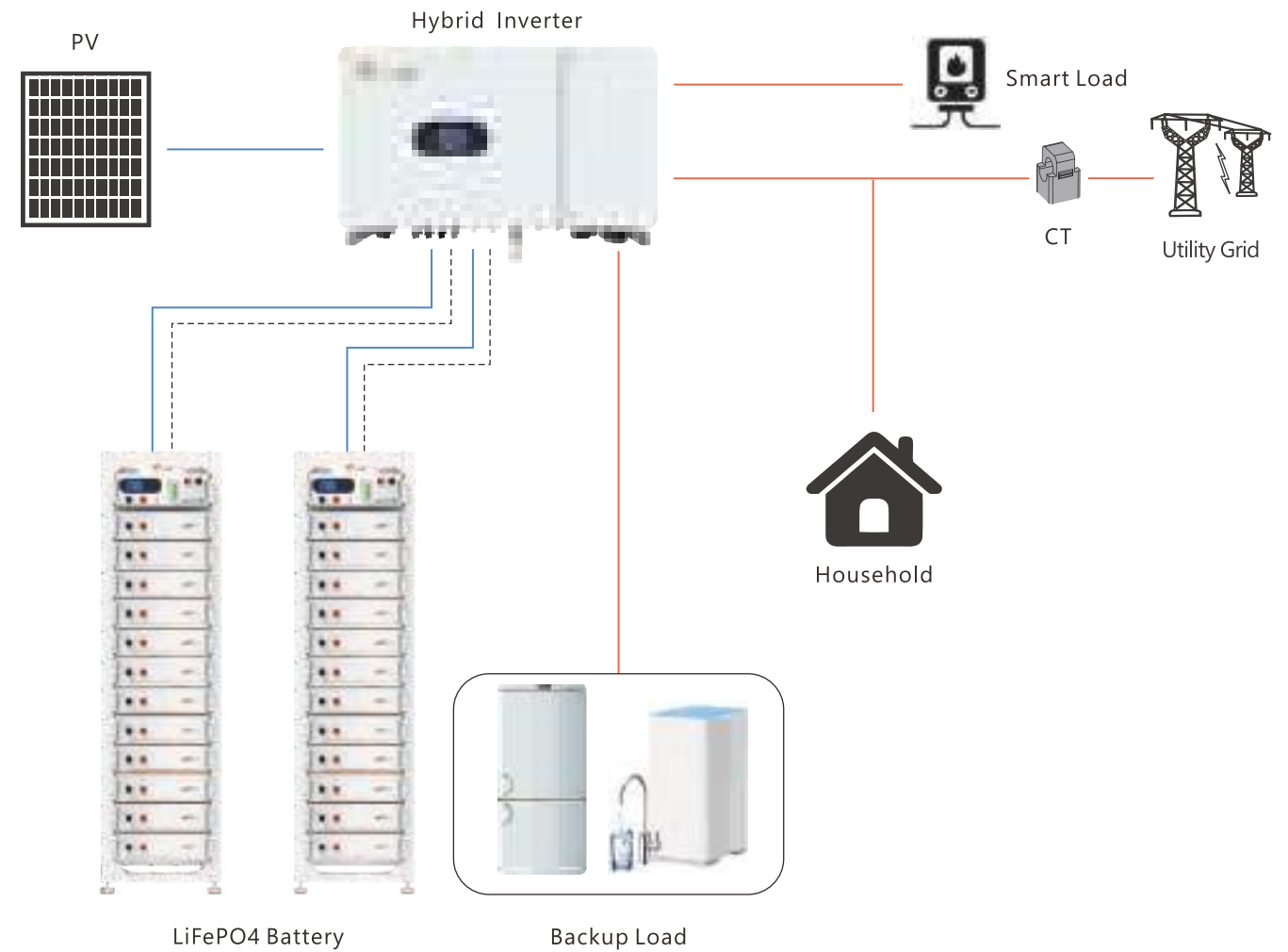
Demand Response: Automatically adjusting power consumption in industrial and commercial buildings during peak demand periods.



Intelligent Lighting Systems: Utilizing adaptive lighting based on occupancy and daylight to reduce energy use.




Connection Diagram

■ DC ■ AC - - - - Communication



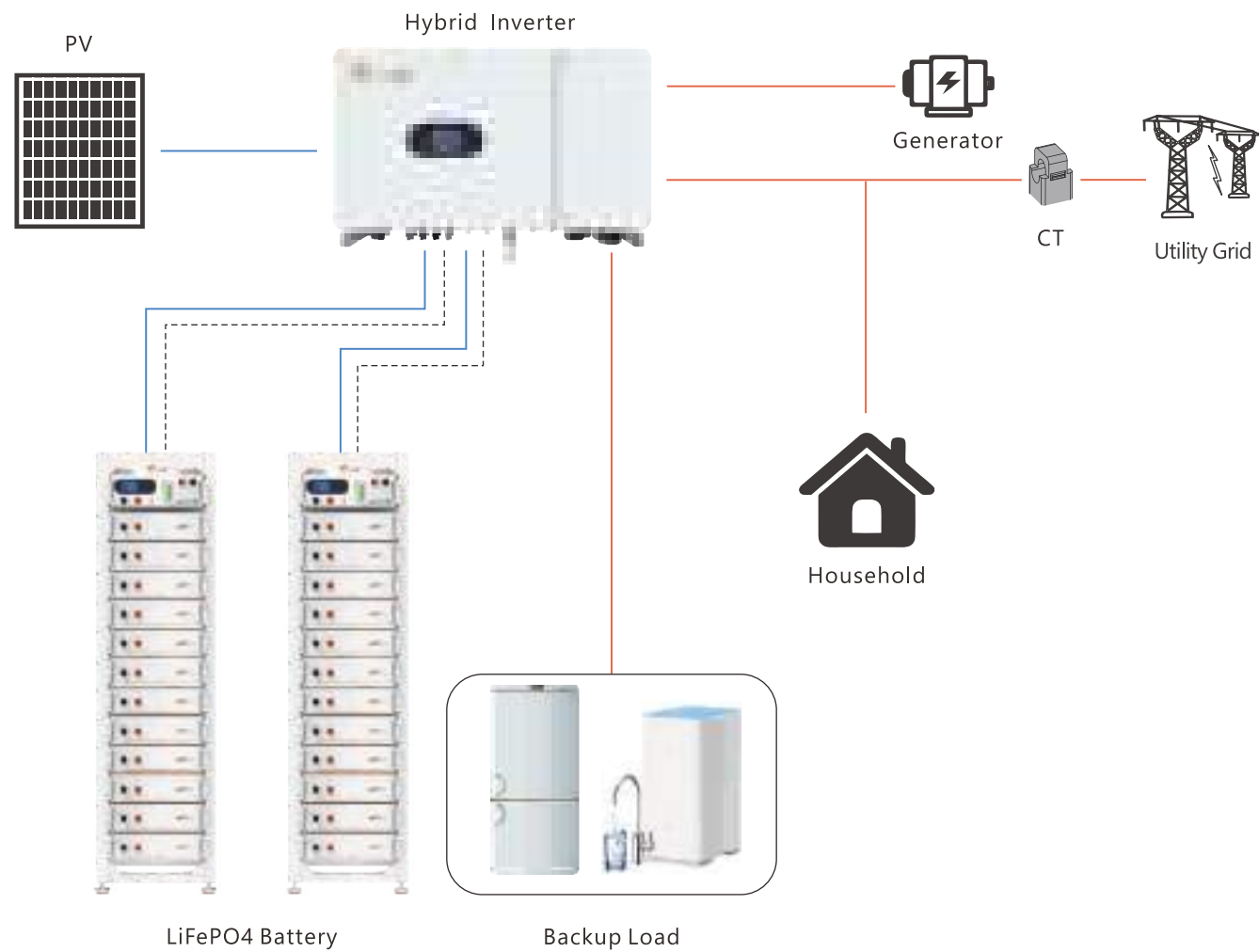
50kW, High Voltage, Three Phase System

Generator Application Scenarios

-  Standby Power for Critical Infrastructure: Ensuring continuous operation of hospitals, data centers, and emergency services during power outages.
-  Power for Remote Locations: Providing electricity for off-grid sites, including rural communities and isolated research stations.
-  Supplemental Power during Peak Loads: Offering additional power to supplement the grid during periods of high electricity demand.




Connection Diagram

■ DC ■ AC - - - - Communication



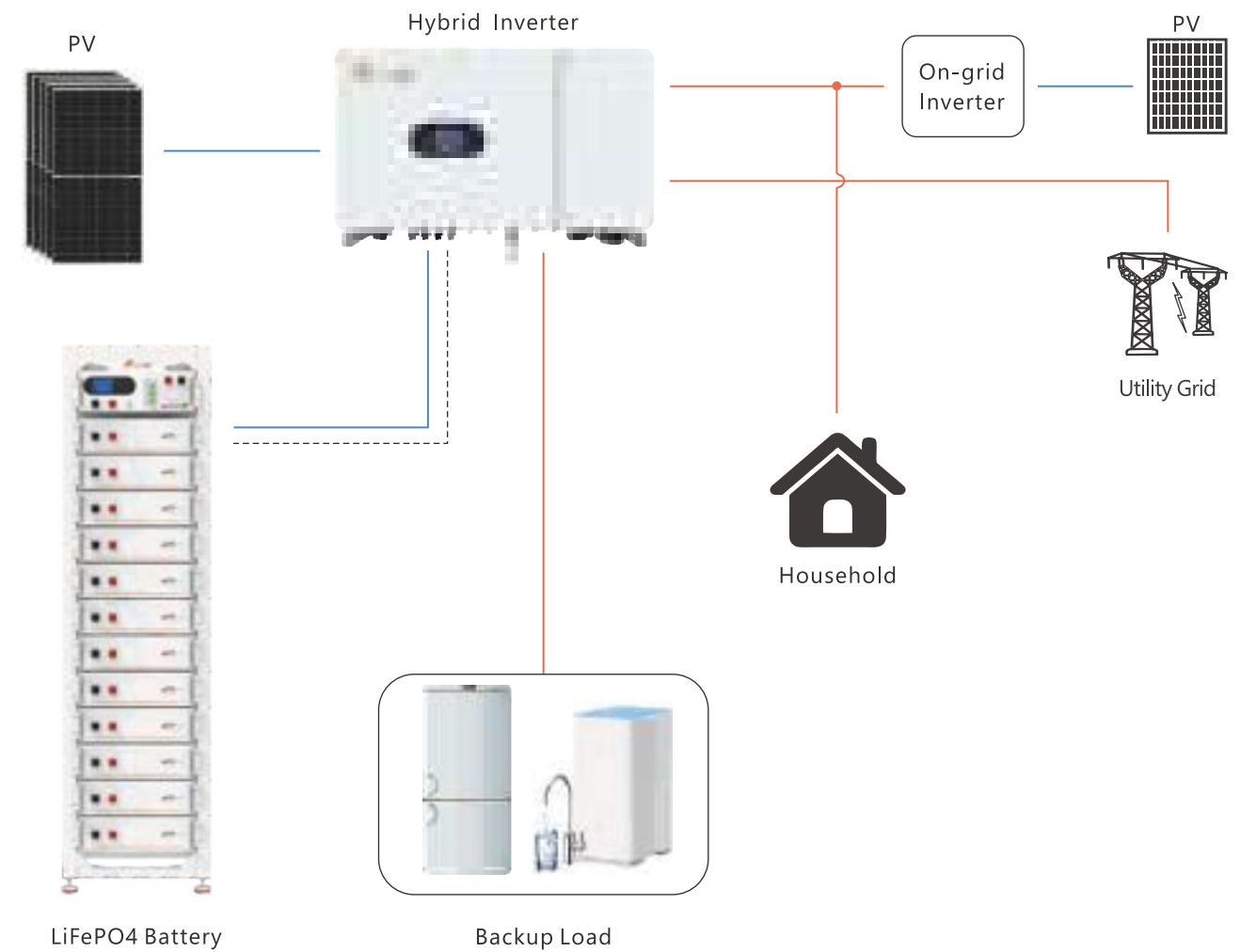
50kW, High Voltage, Three Phase System

Microgrid Application Scenarios

-  Islanded Communities: Supplying reliable power to remote or island communities with limited access to the main grid.
-  Renewable Energy Integration: Facilitating the incorporation of renewable sources like solar and wind into local energy systems.
-  Campus and Bases: Providing energy security and sustainability for educational campuses through localized grid control.

Connection Diagram

■ DC ■ AC - - - - Communication



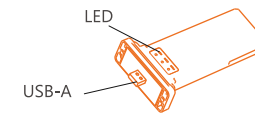


Smart WiFi-S WiFi Module for Solar Inverter, WiFi module can enable wireless communication between off-grid inverters and monitoring platform. Simply but this module connected to an inverter with communication cable, and installed APP from Google Play or Apple stores, it can not only monitor the inverters' parameters of the inverters through your mobile phone.




## Specification

Model	Wifi Module
<b>General Data</b>	
Product size (width/height/thickness) MM	122.5*68.5*27.2MM
Packaging Size (width/height/thickness) MM	155*8035MM
Net Weight(g)	74.1g
Gross Weight(g)	128.4g
<b>WiFi Performance</b>	
Wireless Standards	802.11b/g/n
Working Frequency	802.11b/g/n
Output Power	802.11b:18±2dBm
	802.11g: 16±2dBm
	802.11n:15±2dBm
Receive Sensitivity	CCK,1 Mbps:-96+2dBm
	CCK,11 Mbps: -85dBm
	6 Mbps (1/2 BPSK): -88dBm
	54 Mbps (3/4 64-QAM):-70dBm
	HT20(MCS7):-73±2dBm HT40(MCS7): -70±2dBm
<b>Electrical Parameters</b>	
Operating Voltage	12V
Maximum Current	500mA
<b>Working Environment</b>	
Protection Level	IP65
Operating Temperature	-40°C -- +85°C
Storage Temperature	40°C -- +125°C, < 90%RH
<b>Application Parameters</b>	
Communication with Server	MQTT
Supported Network	2.4G
User Configuration Interface	FSolar APP or Website
Data Upload Cycle	10 minutes
Server Domain Name	<a href="https://shine.felicitysolar.com">https://shine.felicitysolar.com</a>

## Instructions

Model	IOTH2401	IOTH2402
NAME	Smart WiFi-S	Smart WiFi-M
WiFi NET WORK	2.4G WiFi	2.4G WiFi
PICTURE		
LED status:	802.11b/g/n	
PWR	ON,Normalpower supply	
COM	ON,Normalpower supply	
NET	ON,Normal communication with the data server	

\*Conditions apply, refer to FelicityESS Warranty Letter.

-  Allow to access historic data in centralized data center
-  Data transmission to data center
-  Access inverter for remote monitoring and controlling via APP





Commercial  
&  
Industrial

ESS

Solutions

# C&I ESS Cabinet

## Liquid Cooling System 0.5P

FLS-ES232LC-S



## Specification



## Application Scenario



Industrial and commercial energy storage



Distributed energy



5G Base Station









Micro-grid



Battery change station

## Features

-  **Integrated:** All in one design
-  **High Safety:** no parallel, no circulating currents, three fire prevention
-  **Long Life:** cycle life  $\geq 6000$
-  **Easy Manage:** ready to work, auto switch on grid / off grid mode
-  **High Efficiency:** battery 94%, system 87%
-  **Easy Management:** self diagnosis and fault location

Model	FLS-ES232LC-S
<b>DC</b>	
Cell	LFP 280Ah
Voltage	650~949V
Pack Capacity /Arrangement	46.6KWH / 1P52S
Protection	Circuit Braker and fuse
Enclosure Protection	IP67
System Capacity /Arrangement	232.9KWH/1P260S
Nominal Current	140A
Charge/Discharge Rate	$\leq 0.5C_p$
DC Efficiency	94%
<b>AC (On Grid)</b>	
Nominal Output Power	100KW
Nominal Input Voltage	AC340V~460V
Power Factor	-0.99~0.99
Nominal Output Current	145A
Nominal Grid Frequency	50Hz/60Hz
Wiring	3P+N+PE (Non isolated)
<b>AC (Off Grid)</b>	
Nominal Output Power	100KW
Nominal Input Voltage	AC400V $\pm 3\%$
THD	Linear Load $\leq 3\%$
Nominal Output Current	145A
Nominal Grid Frequency	50Hz/60Hz
Output Wiring	3P+N+PE (Non isolated)
<b>System</b>	
Overall System Efficiency	87%&0.5P (STD)
Communication	LAN, ModbusTCP
Fire Prevention	Pack level FK5112+pack level Aerosol + water
DOD	5~95%
Charging/Discharging Rate	$\leq 0.5C_p$
Cooling Power	2.2kW/5.0kW@W18/L35
Cooling	Liquid cooling
Operation Temperature	-20°C~50°C(>45°C derating)
Cabinet Enclosure Protection for Cabinet	IP54
Relative Humidity Range	5~95%RH (no condensing)
Noise	<75dB
Weight	3000KG
Max. Operation Altitude	$\leq 2000M$
Size (MM)	1600Lx1400Dx2200H

\*Conditions apply, refer to FelicityESS Warranty Letter.



# C&I ESS Cabinet

Air Cooling System 0.5Cp

FLS-MES215AF-S



## Specification



## Application Scenario



Industrial and commercial energy storage



Distributed energy



Car showroom



Micro-grid



Battery change station

## Features

- Integrated:**  
All in one design
- Long Life:**  
cycle life  $\geq 6000$
- High Efficiency:**  
battery 94%, system 87%
- Easy Expand:**  
with module design
- High Safety:**  
no parallel, no circulating currents, three fire prevention
- Easy Management:**  
ready to work, auto switch on grid / off grid mode
- Easy Maintenance:**  
self diagnosis and fault location
- Multi Branch:**  
support load, battery and PV.

Model	FLS-MES215AF-S
<b>DC</b>	
Cell	LFP 280Ah
Number of MPPT	2
MPPT Operating Voltage/Full Load Voltage	250~ 850/450 ~850
Protection	Circuit Breaker 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	$\leq 0.5Cp$
DC Efficiency	94%
<b>AC (On Grid)</b>	
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
<b>AC (Off Grid)</b>	
Nominal Output Power	100KW
Nominal Input Voltage	AC400V
THD	Linear $\leq 1\%$ /Nonlinear $\leq 5\%$
Nominal Output Current	144A
Nominal Grid Frequency	50Hz/60Hz
Output Wiring	3P+N+PE (Isolated transformer, STS inside)
<b>System</b>	
Overall System Efficiency	87%&0.5P (STD)
Communication	RS485, CAN, TCP/IP
Fire Prevention	FK5112
DOD	5~95%
Charging/Discharging Rate	$\leq 0.5Cp$
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
Relative Humidity Range	5~95%RH (no condensing)
Noise	<75dB
Weight	3900KG
Max. Operation Altitude	$\leq 3000M$
Size (MM)	2450L*1550D*2400H

\*Conditions apply, refer to FelicityESS Warranty Letter.





Series

Accessory

# Battery Combiner Box

BTCB0606-120/200

BTCB0303-120/200



## Specification



Model	BTCB0606-120	BTCB0606-200	BTCB0303-120	BTCB00303-200
Maximum 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	516*300*136MM	516*300*136MM	516*300*136MM
Package Dimension(MM)	592*392*218MM	592*392*218MM	592*392*218MM	592*392*218MM

\*Conditions apply, refer to FelicityESS Warranty Letter.

## Product Features



Convenient circuit wiring.



Flow expansion capacity of circuit increased.



Higher current can be withstood.

## Introduction

The combiner box is a power collection and protection device in the solar power generation system, which brings together the DC energy of multiple panels and transmits the power to the inverter through the output interface. The bus box not only serves as a gathering function, but also monitors and protects each solar panel to ensure the safe and efficient operation of the system.

## Connection diagram

