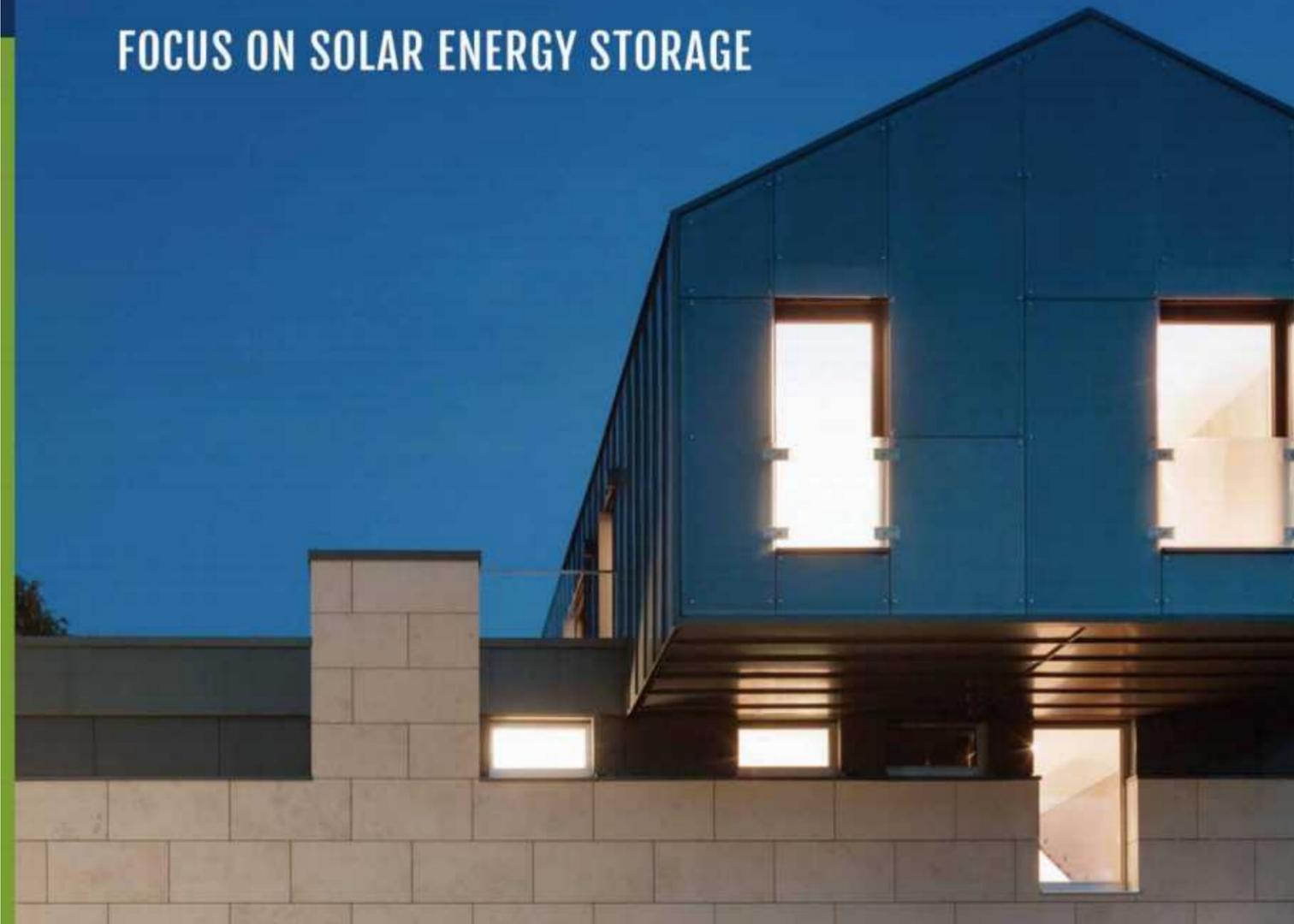




TWINSEL
Electronic Technology

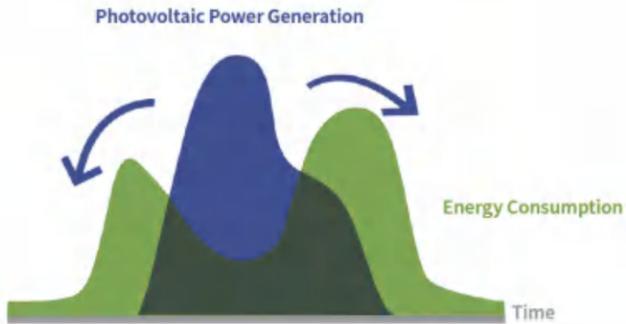
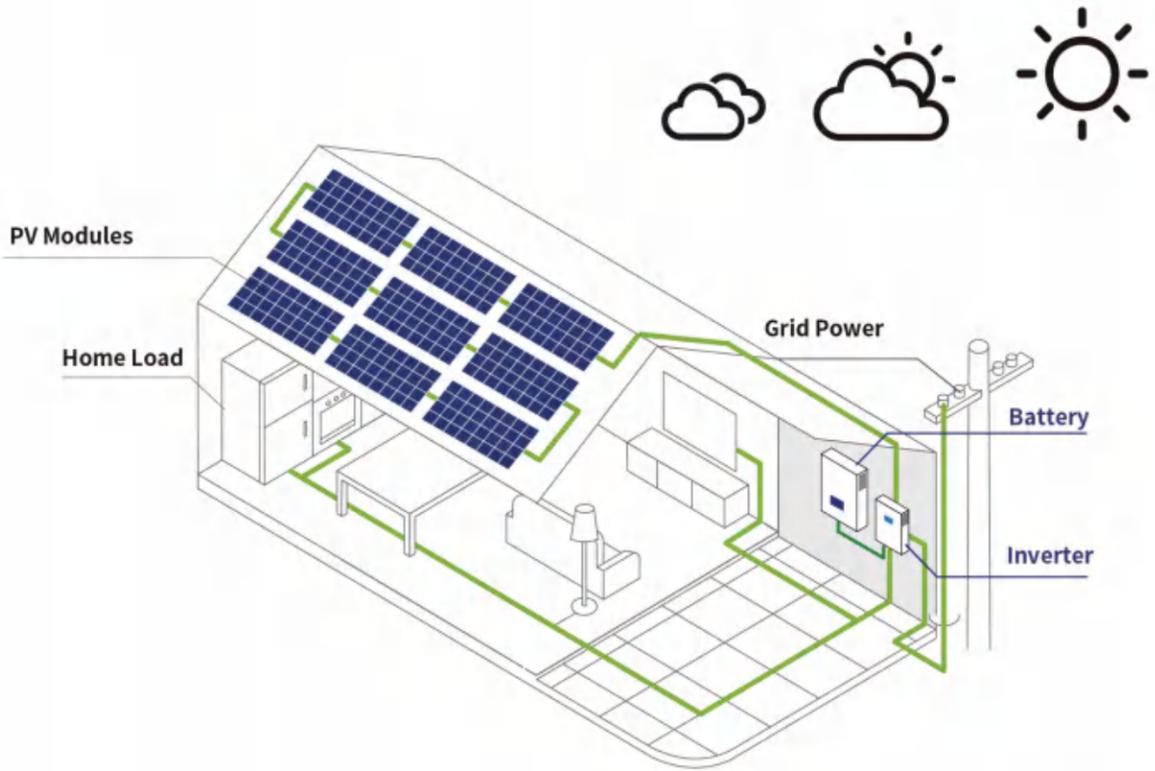
ALL ABOUT SOLUTIONS FOR ENERGY INDEPENDENCE

FOCUS ON SOLAR ENERGY STORAGE



Application Scenarios

Developed For More Families

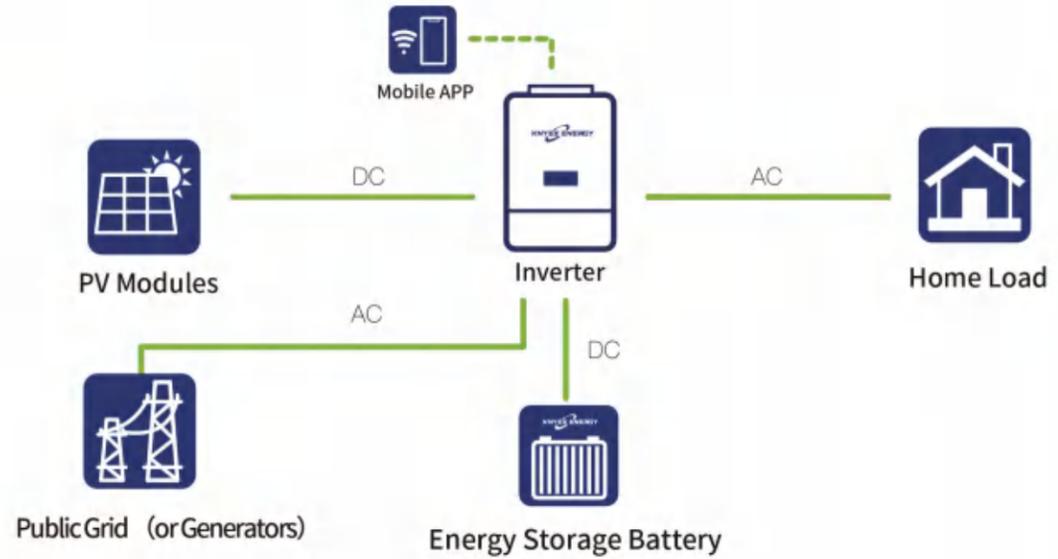


Photovoltaic energy is an unstable energy source, and the peak of power generation does not match the peak of daily electricity consumption.

So we need solar energy storage and control systems to regulate the distribution of residential electric energy and convert solar energy into stable AC energy for residential load use.

- 
Safety Promotion
- 
Easy to Install
- 
Uninterrupted
- 
Extensible
- 
Higher Efficient

System Connection



PV Modules

Solar modules convert light energy into direct current electricity through the photovoltaic, which is the energy source for the entire system.

Public Grid (AC input)

Grid power or generators can be used as an energy supplement to photovoltaic systems, charging batteries or powering loads when solar energy is lacking, and Some models support mixed loading of photovoltaic and grid power, or feed excess power back to the grid.

PV Energy Storage Inverter

The photovoltaic energy storage inverter is the energy conversion control center of the entire household photovoltaic system. Its most basic function is to convert unstable photovoltaic power into stable alternating current to supply to household loads, and store excess electrical energy in energy storage batteries.

Energy Storage Battery

Batteries are used to store energy, for example, photovoltaic energy generated during the day for use at night, or to provide emergency power to homes in the event of a grid failure.

Home Load (AC output)

For the electrical equipment of the whole family, please choose an inverter with appropriate specifications according to the operating power required.

RACK MODE STORAGE BATTERY

ZC-L 51100



- 2-15 units can be used in parallel
- Convenient to PLUG IN/OUT
- 6000 cycles life
- Precise Battery Management Technology



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

- High-density LiFePO4 battery, safer to use
- Possess industry-leading BMS technology
- Compatible with mainstream inverters
- DOD 80% ,extend battery life

Model	ZC-L 51100
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Basic Information

Nominal Voltage	51.2V DC
Voltage Range	44V-58.4V
Nominal Capacity	100Ah
Rated Capacity	5.12kWh
Communication Protocol	CAN / RS485 / RS232
Max. Number of Parallel Connections	15
Cycle Life	6000 cycles (@80% DoD)
Protection Mechanism	Temperature Protection/Over-current Protection/Short-circuit Protection Over-charge Protection/Over-discharge Protection/Low-voltage Protection

Charging Parameters

Recommended Charging Current	50A
Max. Charging Current	100A
Recommended Charging Voltage	58V
Max. Charging Voltage	58.4V

Discharging Parameters

Recommended Discharging Current	50A
Max. Discharging Current	100A
Recommended Battery Discharge Cut-off Voltage	44V
Battery Cut-off Voltage	43.2V
Battery Recovery Voltage	48V

General Parameters

Dimension	500*484*178mm
Gross/Net Weight	46kg/43.5kg
Shell Material	Sheet Metal
Protection Rating	IP20
Installation Method	Rack Mode
Cell Type	LiFePO4

Certification & Safety Standard

Safety Certification	CE
Transportation Safety Certification	UN38.3,Class9

Temperature Parameters

Discharging Temperature	-20~60°C
Charging Temperature	0~55°C
Storage Temperature	-20~45°C

WALL MOUNTED STORAGE BATTERY

ZC-W 51100



- 6000 cycles life
- Minimalist design, Exquisite appearance
- Reliable quality and low maintenance rate
- Precise Battery Management Technology
- High-density LiFePO4 battery, safer to use
- Wall-mounted installation, small size but large capacity
- Compatible with mainstream inverters
- DOD 80% , extend battery life



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model | ZC-W 51100

Basic Information

Nominal Voltage	51.2V DC
Voltage Range	44V-58.4V
Nominal Capacity	100Ah
Rated Capacity	5.12kWh
Communication Protocol	CAN / RS485 / RS232
Max. Number of Parallel Connections	35
Cycle Life	6000 cycles (@80% DoD)
Protection Mechanism	Temperature Protection/Over-current Protection/Short-circuit Protection Over-charge Protection/Over-discharge Protection/Low-voltage Protection

Charging Parameters

Recommended Charging Current	50A
Max. Charging Current	100A
Recommended Charging Voltage	58V
Max. Charging Voltage	58.4V

Discharging Parameters

Recommended Discharging Current	50A
Max. Discharging Current	100A
Recommended Battery Discharge Cut-off Voltage	44V
Battery Cut-off Voltage	43.2 V
Battery Recovery Voltage	48V

General Parameters

Dimension	580*480*160mm
Gross/Net Weight	56.5kg/50kg
Shell Material	Sheet metal
Protection Rating	IP20
Installation Method	Wall mounted
Cell Type	LiFePO4

Certification & Safety Standard

Safety Certification	CE
Transportation Safety Certification	UN38.3,Class9

Temperature Parameters

Discharging Temperature	-20~60°C
Charging Temperature	0~55°C
Storage Temperature	-20~45°C

FLOOR TYPE ENERGY STORAGE BATTERY

KNY 51100



- IP65 High level protection
- Convenient to PLUG IN/OUT
- 6000 cycles life
- Precise Battery Management Technology
- High-density LiFePO4 battery, safer to use
- Possess industry-leading BMS technology
- Compatible with mainstream inverters
- DOD 80% ,extend battery life



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model KNY 51100

Basic Information

Nominal Voltage	51.2V DC
Voltage Range	44V-58.4V
Nominal Capacity	100Ah
Rated Capacity	5.12kWh
Communication Protocol	CAN / RS485 / RS232
Max. Number of Parallel Connections	65
Cycle Life	6000 cycles (@80% DOD)
Protection Mechanism	Temperature Protection/Over-current Protection/Short-circuit Protection Over-charge Protection/Over-discharge Protection/Low-voltage Protection

Charging Parameters

Recommended Charging Current	50A
Max. Charging Current	100A
Recommended Charging Voltage	58V
Max. Charging Voltage	58.4V

Discharging Parameters

Recommended Discharging Current	50A
Max. Discharging Current	100A
Recommended Battery Discharge Cut-off Voltage	44V
Battery Cut-off Voltage	43.2V
Battery Recovery Voltage	48V

General Parameters

Dimension	600*480*189mm
Gross/Net Weight	55kg/52.6kg
Shell Material	Sheet Metal
Protection Rating	IP65
Installation Method	Wall-mounted + Floor type
Cell Type	LiFePO4

Certification & Safety Standard

Safety Certification	CE
Transportation Safety Certification	UN38.3,Class9

Temperature Parameters

Discharging Temperature	-20~60°C
Charging Temperature	0~55°C
Storage Temperature	-20~45°C

FLOOR TYPE ENERGY STORAGE BATTERY

KNY 51200



- 10kWh large capacity to meet more electricity needs
- Convenient to PLUG IN/OUT
- 6000 cycles life
- Precise Battery Management Technology
- High-density LiFePO4 battery, safer to use
- Possess industry-leading BMS technology
- Compatible with mainstream inverters
- DOD 80% , extend battery life



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model KNY 51200

Basic Information

Nominal Voltage	51.2V DC
Voltage Range	44V-58.4V
Nominal Capacity	200Ah
Rated Capacity	10.24kWh
Communication Protocol	CAN / RS485 / RS232
Max. Number of Parallel Connections	65
Cycle Life	6000 cycles (@80% DoD)
Protection Mechanism	Temperature Protection/Over-current Protection/Short-circuit Protection Over-charge Protection/Over-discharge Protection/Low-voltage Protection

Charging Parameters

Recommended Charging Current	100A
Max. Charging Current	200A
Recommended Charging Voltage	58V
Max. Charging Voltage	58.4V

Discharging Parameters

Recommended Discharging Current	100A
Max. Discharging Current	200A
Recommended Battery Discharge Cut-off Voltage	44V
Battery Cut-off Voltage	43.2V
Battery Recovery Voltage	48V

General Parameters

Dimension	800*580*220mm
Gross/Net Weight	120kg/101kg
Shell Material	Sheet Metal
Protection Rating	IP65
Installation Method	Floor type
Cell Type	LiFePO4

Certification & Safety Standard

Safety Certification	CE
Transportation Safety Certification	UN38.3,Class9

Temperature Parameters

Discharging Temperature	-20~60°C
Charging Temperature	0~55°C
Storage Temperature	-20~45°C

FLOOR TYPE ENERGY STORAGE BATTERY

KNY 51300



- 15kWh large capacity to meet more electricity needs
- Convenient to PLUG IN/OUT
- 6000 cycles life
- Precise Battery Management Technology
- High-density LiFePO4 battery, safer to use
- Possess industry-leading BMS technology
- Compatible with mainstream inverters
- DOD 80% , extend battery life



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model	KNY 51300
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Basic Information

Nominal Voltage	51.2V DC
Voltage Range	44V-58.4V
Nominal Capacity	300Ah
Rated Capacity	15.36kWh
Communication Protocol	CAN / RS485 / RS232
Max. Number of Parallel Connections	65
Cycle Life	6000 cycles (@80% DoD)
Protection Mechanism	Temperature Protection/Over-current Protection/Short-circuit Protection Over-charge Protection/Over-discharge Protection/Low-voltage Protection

Charging Parameters

Recommended Charging Current	100A
Max. Charging Current	200A
Recommended Charging Voltage	58V
Max. Charging Voltage	58.4V

Discharging Parameters

Recommended Discharging Current	100A
Max. Discharging Current	200A
Recommended Battery Discharge Cut-off Voltage	44V
Battery Cut-off Voltage	43.2V
Battery Recovery Voltage	48V

General Parameters

Dimension	800*580*255mm
Gross/Net Weight	150kg/131kg
Shell Material	Sheet Metal
Protection Rating	IP65
Installation Method	Floor type
Cell Type	LiFePO4

Certification & Safety Standard

Safety Certification	CE
Transportation Safety Certification	UN38.3,Class9

Temperature Parameters

Discharging Temperature	-20~60°C
Charging Temperature	0~55°C
Storage Temperature	-20~45°C

STACKED ENERGY STORAGE SYSTEM

ZC-S 51100



- All-in-one installation, plug and play any time
- High-density LiFePO4 battery, 6000 cycles life
- 2-5 units can be used in parallel
- High energy conversion rate
- DOD 80%, extend battery life

- Precise Battery Management Technology
- Wheel design, easy to move
- Noise less than 60 decibels
- 3-stage timing charging and discharging
- Quick and easy installation



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model ZC-S 51100

Basic Information

Single Module Capacity	5.12kWh			
Module Number	1	2	3	4
Rated Capacity	5.12kWh	10.24kWh	15.36kWh	20.48kWh
Nominal Voltage	51.2V			
Working Voltage	44V-58.4V			
Nominal Discharge Current	100A	200A	300A	400A
Nominal Charging Current	50A	100A	150A	200A
Cycle Life	6000 cycles (@80% DoD)			
Humidity	20%-60%			
Installation Method	Stacked mode			
Protection Rating	IP20			
Communication Protocol	CAN/RS485/RS232 (WIFI optional)			
Dimension(Battery+inverter+base)	440*600*500mm	440*600*700mm	440*600*900mm	440*600*1100mm
Gross/Net Weight (Battery Part)	53.5kg/49kg	107kg/98kg	160.5kg/147kg	214kg/196kg
Cell Type	LFP			
Battery Rated Input Voltage	48Vdc			
Hybrid Max. Charging Current	80A			
Battery Pack Voltage Range	40Vdc-60Vdc			

Model KNY5000 (inverter)

Basic Information

Max. PV Open Circuit Voltage	500Vdc
PV Working Voltage Range	120V-500Vdc
MPPT Voltage Range	120V-450Vdc
Max. PV Input Current	22A
Max. PV Input Power	5500W
Max. PV Charging Current	80A
Gross/Net Weight (Inverter Part)	19.5kg/16.5kg

AC Parameters (Grid-connected Side)

Max. Charging Current	60A
Rated Input Voltage	220V/230Vac
Input Voltage Range	170Vac-280Vac
Frequency	50Hz/60Hz
Charging Efficiency (bypass and inverter)	>95%
Switching Time	10ms
Max. Bypass Overload Current	40A

AC Output (Grid-connected Side)

Output Voltage Waveform	Pure Sine Wave
Rated Output Voltage	230VAC±5%
Rated Output Power	5000W
Peak Power	10000VA

HOUSEHOLD PHOTOVOLTAIC ENERGY STORAGE MACHINE

KNY5000S/KNY11000S



- APP Real-time monitoring
- System Security
- Multiple Power Supply Modes
- Can be expanded according to the needs of use flexible expansion
- Voltage Adjustable



Stable Power Supply



Precise Management



High Utilization



Long Product Life

Model	51100KNY	51300KNY
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MODEL	KNY5000S	KNY11000S
Rated power	5000VA/5000W	11000VA/11000W

INPUT	
Input Voltage	230VAC
Voltage range	170-280VAC(UPS mode) 90-280VAC(Inverter mode)
Frequency Range	50HZ/60HZ(auto adapt)

OUTPUT	
Output Voltage	230VAC+5%(inverter mode)
Peak Power	10000VA
Conversion Efficiency	94%
Output Frequency	50/60HZ+0.1%(inverter mode)
Switching Time	10MS (computer equipment), 30MS (household appliances)
Output Waveform	Sine wave

PHYSICAL PARAMETERS		
Inverter Size	610*370*170	690*550*250
Inverter weight	17.8kg	34.8kg

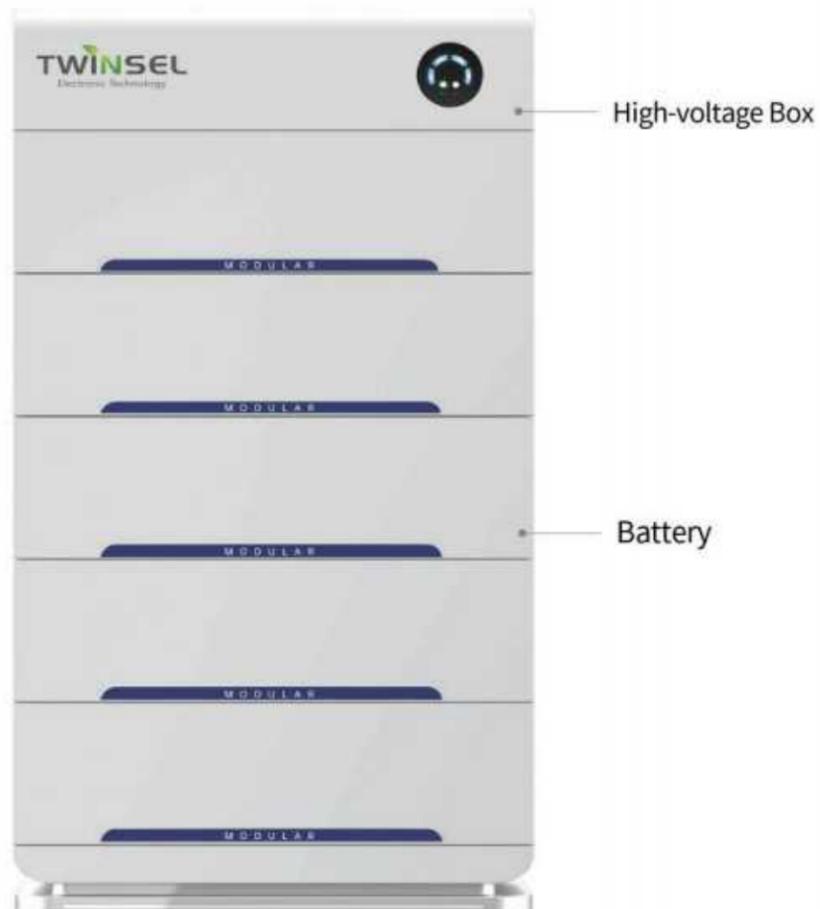
CHARGE		
Solar Charging Method	MTTP	
PV Maximum Input Power	5000W	2*5500W
MPPT Input VoltageRange	60-500VDC	90-500VDC
Maximum PV ChargingCurrent	100A	150A
Maximum AC chargingcurrent	80A	150A
Maximum Chargingcurrent	100A	150A

BATTERY		
Battery Model	51100KNY	51300KNY
Battery Capacity	5120Wh(5.12kWh)	15360Wh(15.36kWh)
Battery Voltage	51.2VDC	51.2VDC
Battery Type	LIFEPO4	
Full Charge Voltage(FC)	58.4V	
Full Discharge Voltage(FD)	44	
Max Continuous Discharge Current	100A	200A
Protection	BMS Circuit breaker	
Recommended Charging Current	50A(0.5C)	100A(0.5C)
Max Charging Current	100A	200A

PHYSICAL PARAMETERS		
Battery Size	610*490*170	690*650*250
Battery weight	48.7KG	137KG

HIGH VOLTAGE STORAGE SYSTEM

KNY-HV10250



- High-voltage inverter to meet more electricity demand
- Large-capacity battery, smaller size but longer life
- High-density LiFePO4 battery, 5000 cycles life
- High energy conversion rate
- Reliable quality and low maintenance rate
- Precise battery management technology
- Modular design for easy maintenance
- Quick and easy installation



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model KNY-HV10250

Basic information

Number of Batteries	2	3	4	5
Nominal Battery Energy	10.24kWh	15.36kWh	20.48kWh	25.60kWh
Nominal Capacity	50Ah	50Ah	50Ah	50Ah
Nominal Voltage (Single Battery)	102.4V	102.4V	102.4V	102.4V
Nominal Voltage	204.8V	307.2V	409.6V	512V
Max Continuous Discharge Power	10.24kW	15.36kW	20.48kW	25.60kW
Max Continuous Charge Power	5.12kW	7.68kW	10.24kW	12.80kW
Dimension[W*D*H](mm)	765*420*646	765*420*826	765*420*1006	765*420*1186
Gross/Net Weight	150.4/147.4kg	207.2/204.2kg	264/261kg	320.8/317.8kg
High-voltage Box Net Weight	15.8kg	15.8kg	15.8kg	15.8kg
Battery Net Weight	113.6kg	170.4kg	226.8kg	283.2kg
Base Net Weight	18kg	18kg	18kg	18kg

Other parameters

Charging Temp. Range	0~50°C
Discharging Temp. Range	-10~55°C
Communication Protocol	CAN
Cycle Life	6000 Cycles (@80% DOD)
Protection Level	IP65
Color	White
Alarms	Overcharge/Overdischarge/Overcurrent/Overtemperature/Short Circuit
Advantages	Can be used in both grid and off-grid setups,compact design,modular expansion
Certification	UN38.3,Class9 / CE

HIGH VOLTAGE STORAGE SYSTEM

KNY-HV102100



- High-voltage inverter to meet more electricity demand
- Large-capacity battery, smaller size but longer life
- High-density LiFePO4 battery, 5000 cycles life
- High energy conversion rate
- Reliable quality and low maintenance rate
- Precise battery management technology
- Modular design for easy maintenance
- Quick and easy installation



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

Model KNY-HV102100

Basic information

	2	3	4	5	6
Number of batteries	2	3	4	5	6
Nominal Battery Energy	20.48kWh	30.72kWh	40.96kWh	51.20kWh	61.44kWh
Nominal Capacity	100Ah	100Ah	100Ah	100Ah	100Ah
Nominal Voltage (Single Battery)	102.4V	102.4V	102.4V	102.4V	102.4V
Nominal Voltage	204.8V	307.2V	409.6V	512V	614.4V
Max Continuous Discharge Power	20.48kW	30.72kW	40.96kW	51.20kW	61.44kW
Max Continuous Charge Power	20.48kW	30.72kW	40.96kW	51.20kW	61.44kW
Dimension[W*D*H](mm)	800*540*646	800*540*826	800*540*1006	800*540*1186	800*540*1366
Net Weight	226kg	316kg	406kg	496kg	586kg
High-voltage Box Net Weight	20.5kg	20.5kg	20.5kg	20.5kg	20.5kg
Battery Net Weight	180kg	270kg	360kg	450kg	540kg
Base Net Weight	25.5kg	25.5kg	25.5kg	25.5kg	25.5kg

Other specifications

Charging Temp. Range	0~50°C
Discharging Temp. Range	-10~55°C
Communication Protocol	CAN
Cycle Life	6000 Cycles (@80% DOD)
Protection Level	IP65
Color	White
Alarms	Overcharge/Overdischarge/Overcurrent/Overtemperature/Short Circuit
Advantages	Can be used in both grid and off-grid setups,compact design,modular expansion
Certification	UN38.3,Class9 / CE

12V PORTABLE STORAGE BATTERY

KNY12100 / KNY12200



- Portable Handle, for easy movement
- Convenient to PLUG IN/OUT
- 3000 cycles life
- Precise Battery Management Technology



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

- High-density LiFePO4 battery, safer to use
- Possess industry-leading BMS technology
- Compatible with mainstream inverters
- DoD 80% ,extend battery life

Model	KNY 12100	KNY 12200
Basic Information		
Nominal Voltage	12.8Vdc	
Voltage Range	11V-14.6V	
Nominal Capacity	100Ah	200Ah
Rated Capacity	1.28kWh	2.56kWh
Cycle Life	3000(@80% DoD)	
Charging Parameters		
Recommended Charging Current	50A	100A
Max. Charging Current	100A	200A
Recommended Charging Voltage	12.8V	
Max. Charging Voltage	14.6V	
Discharging Parameters		
Recommended Discharging Current	50A	100A
Max. Discharging Current	100A	200A
Physical Parameters		
Dimensions	295*203*230mm	522*245*225mm
Net Weight	10kg	20kg
Shell Material	Plastic	
Protection Rating	IP20	
Installation Method	Portable	
Cell Type	LiFePO4	
Certification & Safety Standard		
Safety Certification	CE	
Transportation Safety certification	UN38.3,Class9	
Temperature Parameters		
Discharging Temperature	-20~60°C	
Charging Temperature	0~55°C	
Storage Temperature	-20~45°C	

24V PORTABLE STORAGE BATTERY

KNY24100 / KNY24200



- Portable Handle, for easy movement
- Convenient to PLUG IN/OUT
- 3000 cycles life
- Precise Battery Management Technology



Stable Power Supply



Precise Management



High Utilization



Long Life Cycle

- High-density LiFePO4 battery, safer to use
- Possess industry-leading BMS technology
- Compatible with mainstream inverters
- DoD 80% ,extend battery life

Model	KNY 24100	KNY 24200
Basic Information		
Nominal Voltage	25.6Vdc	
Voltage Range	22V-29.2V	
Nominal Capacity	100Ah	200Ah
Rated Capacity	2.56kWh	5.12kWh
Cycle Life	3000(@80% DoD)	
Charging Parameters		
Recommended Charging Current	50A	100A
Max. Charging Current	100A	200A
Recommended Charging Voltage	25.6V	
Max. Charging Voltage	29.2V	
Discharging Parameters		
Recommended Discharging Current	50A	100A
Max. Discharging Current	100A	200A
Physical Parameters		
Dimensions	395*255*165mm	500*360*178mm
Net Weight	21.6kg	42.3kg
Shell Material	Sheet Metal	
Protection Rating	IP20	
Installation Method	Portable	
Cell Type	LiFePO4	
Certification & Safety Standard		
Safety Certification	CE	
Transportation Safety Certification	UN38.3,Class9	
Temperature Parameters		
Discharging Temperature	-20~60°C	
Charging Temperature	0~55°C	
Storage Temperature	-20~45°C	

HIGH FREQUENCY SOLAR CHARGE INVERTER

3000W~11000W



- Battery Auto-start
- PF1.0, High Efficiency
- Support Working without Battery: Reduce solar system Cost
- High Precision of Output Voltage, ±5%,
- Communication Option: External WiFi, Supervise at Any Time
- Intelligent Supply Mode
- Compact in Size
- Voltage Adjustable
- Noise less than 50 decibels
- Output pure sine wave



Stable Power Supply



Precise Management



High Utilization



Long Product Life

Relevant Models:	KNY 3024M KNY 3024EMH KNY 3024JM	KNY 3624JM	KNY 5548JM KNY 5548JMHG	KNY 6248JM KNY 6248JMHG	KNY 8048MH	KNY 11048MH
Rated Power	3000W	3600W	5500W	6200W	8000W	11000W

Output

Output Voltage	220/230/240VAC+5%					
Output Frequency	50/60Hz+0.1%					
Output Wave	Pure Sine Wave					
Transfer Time(Adjustable)	10ms for Computer Equipment, 20ms for Household Equipment					
Peak Power	6000VA	7200VA	10000VA	12400VA	16000VA	22000VA
Overload Ability	(Battery Mode 2ls@105%~150% Load, 11s@150%~200% Load, 400ms@>200% Load)					
Rated Voltage	24Vdc			48Vdc		

Input Voltage

Input Formation	L+N+PE					
AC Input	220/230/240VAC					
Input Voltage Range	90-280VAC+3V(Normal Mode) 170-280VAC+3V(UPS Mode)					
Frequency	50/60Hz(Adaptive)					

Battery

Constant Charging Voltage (Adjustable)	28.2 Vdc			56.4Vdc		
Float Charging Voltage (Adjustable)	27Vdc			54Vdc		
PV Charging Method	MPPT			MPPT*2		

Charger

Max PVInput	4200W	4200W	5500W	6200W	2×5500W	
MPPT Tracking Range	120~500VDC				90~500VDC	
Best VMP Working Range	300~400VDC					
MAX PVInput Voltage	500VDC					
MAX PV Input Current	18A			18A/18A		
MAX PV Charge Current	100A					
MAX AC Charge Current	60A	60A	60A	80A	120A	150A
MAX Charge Current	100A			150A		

Other Dimension

L*W*H(mm)	495*312*146				570*500*148	
LCD	Can display operating mode/load/input/output					
RS232	5PIN/Pitch2.54mm, Baud Rate2400					
Expansion Slot Communication Interface	Lithium Battery BMS Communication Card,WIFI 2x5PIN/Pitch2.54mm					
Operating Temperature	-10°C~50°C					
Storage Temperature	-15°C~60°C					
Ork Altitude	No more than 1000m, if 1000m<,Rate power will lower, MAX 4000m, Refer to IEC62040					
Operating Environment Humidity	20%~95% Non Condensing					
Noise	< 50db					
Standards and Certifications	EN-IEC 60335-1,EN-IEC 60335-2-29,IEC 62109-1					

HYBRID INVERTER (Single-phase 5-6kw)

LH5K-SL / LH6K-SL



- Support 1.5 times PV over-allocation
- 2 MPPT , meet more electricity demand
- <10ms seamless switching
- Surge Protection, no fear of instantaneous voltage
- 3-stage timing charging and discharging function
- Voltage total harmonic distortion is less than 3%
- Support up to 6 units in parallel
- Real-time monitoring and remote upgrade
- MAX charge and discharge current: 120A
- Maximum efficiency 97.6%
- Noise less than 25 decibels
- Standby consumption is less than 10w



Stable Power Supply



Precise Management



High Utilization



Long Product Life

Model	LH5K-SL	LH6K-SL
Basic Information		
Max.Input Power	7.5kW	9.0kW
Full Load MPPT Voltage Range	150-500V	170-500V
MPPT Voltage Range		80-500V
Max.Input Voltage		550V
Recommended DC Input Voltage		360V
Starting Voltage		100V
Max.Input Current		18.5A*2
Max.Short Circuit Current		26A*2
MPPT/Number of DC Terminals		2/2
Gross/Net Weight		23.5kg/20.2kg

Battery Parameters		
Max. Charge/Discharge Power		4.8kW
Max. Charge/Discharge Current		120A
Battery Rated Voltage		51.2V
Battery Voltage Range		40-60V
Compatible Battery Type		Lithium Battery, Lead-acid Battery, etc.

On-grid Output Parameters		
Max. Continuous Current	23.0A	28.0A
Max. Continuous Power	5.0kVA	6.0kVA
Rated Grid Current	22.8/21.8A	27.3/26.1A
Rated Grid Voltage	198V to 242V @ 220V / 207V to 253V @ 230V	
Rated Grid Frequency		50/60Hz
Power Factor		0.999(+/-0.8)
Voltage Total Harmonic Distortion		<3%

Off-grid Output Parameters		
Max. Continuous Current	23.0A	28.0A
Max. Continuous Power	5.0kVA	6.0kVA
Max. Peak Current(10 min)	34.1/32.7A	41.0/39.2A
Max. Peak Power(10 min)	7.5kVA	9.0kVA
Rated AC Current	22.8/21.8A	27.3/26.1A
Rated AC Power L-N		220/230V
Rated AC Frequency		50/60Hz
Switching Time		<10ms
Voltage Total Harmonic Distortion		<3%

HYBRID INVERTER (Three-phase 12-30kW)

LH12K-TH - LH30K-TH



- Voltage range 150-850V
- The maximum current for one string is 40A
- 100% unbalanced load
- <10ms seamless switching to protect appliances
- Support 1.5 times PV over-allocation
- Starting voltage 160V
- Maximum efficiency 98%
- Noise less than 30 decibels
- Standby consumption is less than 5w
- Protection class IP65



Stable Power Supply



Precise Management



High Utilization



Long Product Life

Model	LH12K-TH	LH15K-TH	LH17K-TH	LH20K-TH	LH25K-TH	LH30K-TH
PV Input						
Max. DC Input Power (kW)	18	22.5	25.5	30	37.5	45
Max. PV Voltage (V)	1000					
Rated DC Input Voltage (V)	620					
DC Input Voltage Range (V)	150-1000					
MPPT Voltage Range (V)	150-850					
Full MPPT Range(V)	500-850					
Start-up Voltage (V)	160					
Max. DC Input Current (A)	20x2	20+32	32x2	40x2		
Max. Short Current(A)	30x2	30+48	48x2	60x2		
No. of MPPT Tracker / Strings	2/2	2/3	2/4	2/4		
Battery Port						
Battery Nominal Voltage (V)	450	500	400	500	500	550
Battery Voltage Range (V)	150-800					
Max. Charge/Discharge Current (A)	30	50	50	50	60	60
Max. Charge/Discharge Power (kW)	12	15	17	20	25	30
Charging Curve	3 Stages					
Compatible Battery Type	Li-ion/Sodium-ion battery					
AC Grid						
Nominal AC Output Power (kW)	12	15	17	20	25	30
Max. AC Input/Output Power (kVA)	18 / 13.2	22.5 / 16.5	25.5 / 18.7	30 / 22	37.5 / 27.5	45 / 33
Max. AC Output Current (A)	21.5	27	30	32	40	48
Nominal AC Voltage (V)	230/400					
Nominal AC Frequency (Hz)	50/60					
Power Factor	1 (-0.8-0.8) adjustable					
Current THD (%)	<3%					
AC Load Output (Back-up)						
Nominal Output Power (VA)	12000	15000	17000	20000	25000	30000
Nominal Output Voltage (V)	230/400					
Nominal Output Frequency (Hz)	50/60					
Nominal Output Current (A)	17-4	21-8	24-7	29	36.3	43.5
Peak Output Power	13200VA, 60s	16500VA, 60s	18700VA, 60s	22000VA, 60s	27500VA, 60s	33000VA, 60s
THDV (with linear load)	<3%					
Switching Time (ms)	<10					
Efficiency						
Europe Efficiency	97.50%		97.80%		98.00%	98.10%
Max. Efficiency	98.30%				98.50%	
Battery Charge/Discharge Efficiency	98.00%					
Protection						
Reverse Polarity Protection	Yes					
Over Current / Voltage Protection	Yes					
Anti-islanding Protection	Yes					
AC Short-circuit Protection	Yes					
Leakage Current Detection	Yes					
Ground Fault Monitoring	Yes					
Grid Monitoring	Yes					
Enclosure Protect Level	IP65					
General Data						
Dimensions (W x H x D, mm)	370x497x192/558x535x260			558 x 535 x 260 mm		
Weight (kg)	20.8/29kg		29kg	36kg		
Topology	Transformerless					
Cooling Concept	Intelligent Fan					
Relative Humidity	0-100%					
Operating Temperature Range (°C)	-25 to 60 °C					
Operating Altitude (m)	<4000					
Noise Emission (dB)	<30				<40	
Standby Consumption (W)	<5					
Display & Communication Interfaces	LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G					
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2					
EMC	EN61000-6-2, EN61000-6-3					