

**KEHUA**  
**TECH**

**MECC**



# Residential Energy Storage Product Catalog

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



## 30+ Years

30+ years R&D and manufacturing experience of power electronic technologies

## 21+GW

21GW+ PV installation worldwide

## 2.6GW /3.8GWh

2.6GW/3.8GWh ESS installation

## No.5

2020, KEHUA ranks No.5 in world PCS market share (by IHS Markit)

### Residential Energy Storage System

With Kehua Residential Energy Storage System, it is possible to effectively manage solar in your home day and night.

This energy storage system will give you a complete energy solution with multiple working modes which meet different application scenarios. It will bring independence and economy for energy use.

# Residential Energy

# Contents

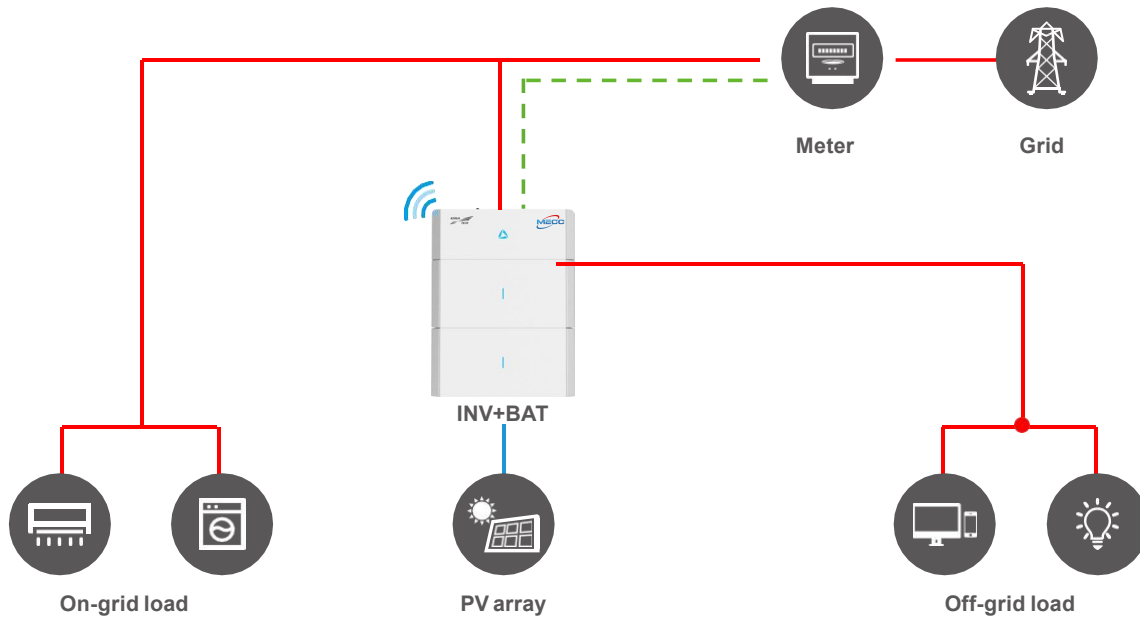
<b>About Kehua</b>	<b>01</b>
<b>Application Scenarios</b>	<b>03</b>
<b>Working Mode</b>	<b>07</b>
<b>Residential Energy Storage System</b>	<b>09</b>
iStoragE series	09
iStoragE2A series	11
iStoragE3 series	13
<b>Battery System</b>	<b>15</b>
iStoragE B5 series	15
<b>System Accessories</b>	<b>16</b>
Cloud Platform	16
APP	17

# y Storage System



# Application scenarios

## Newly installed system



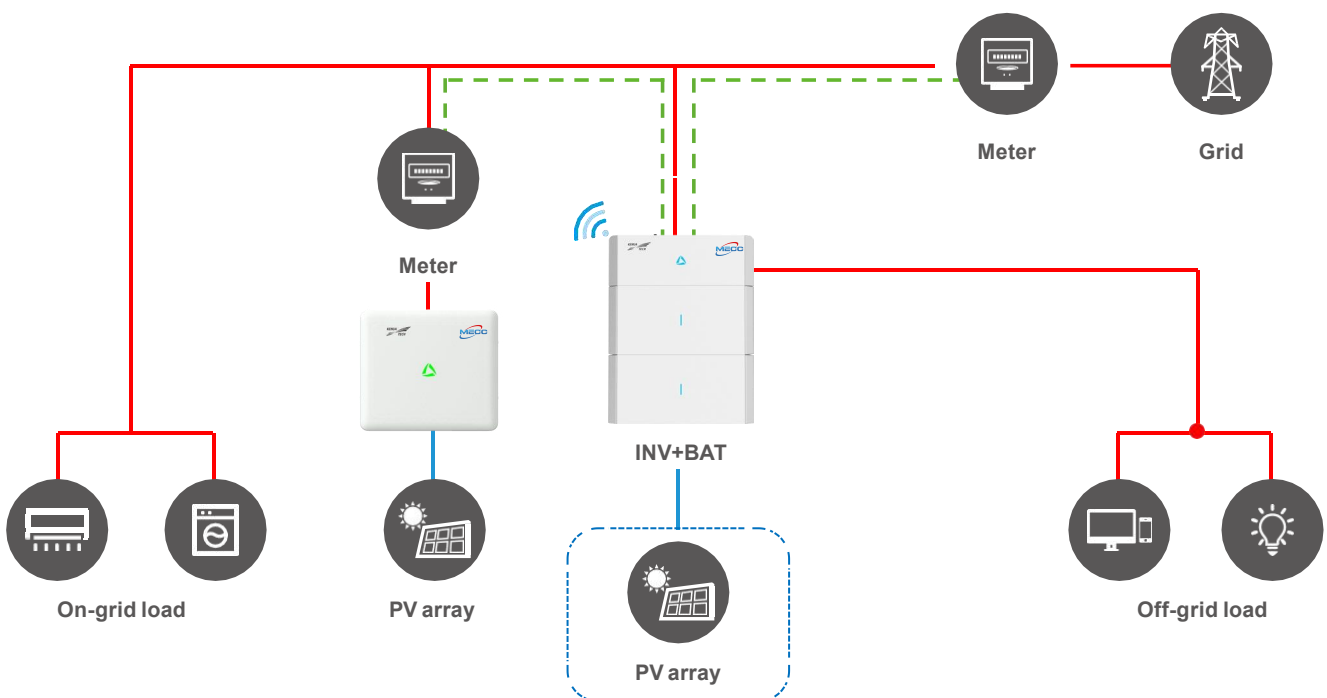
In areas with high electricity prices, customers can build a new home energy management system with Kehua PV+ESS solution, which can realize the maximum self-use of solar energy and reduce electricity bills. At the same time, this solution is also very suitable for areas with limited power supply and peak-to-valley adjustment of power.





## AC retrofit system

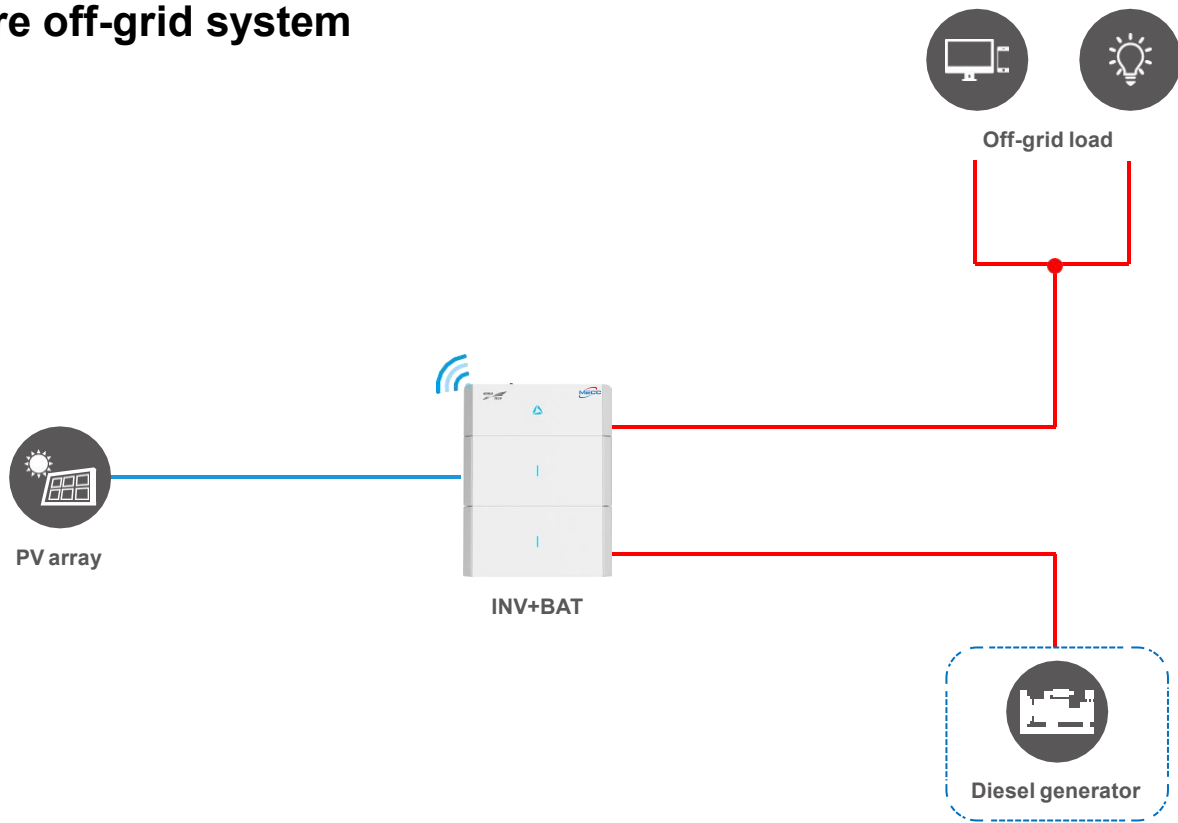
For households that have installed PV on-grid inverters, Kehua's energy storage products are selected to construct an energy storage system, and combined with meter communication, electricity costs can be effectively reduced by increasing the rate of self-generation and self-consumption, so that customers can obtain better investment returns.



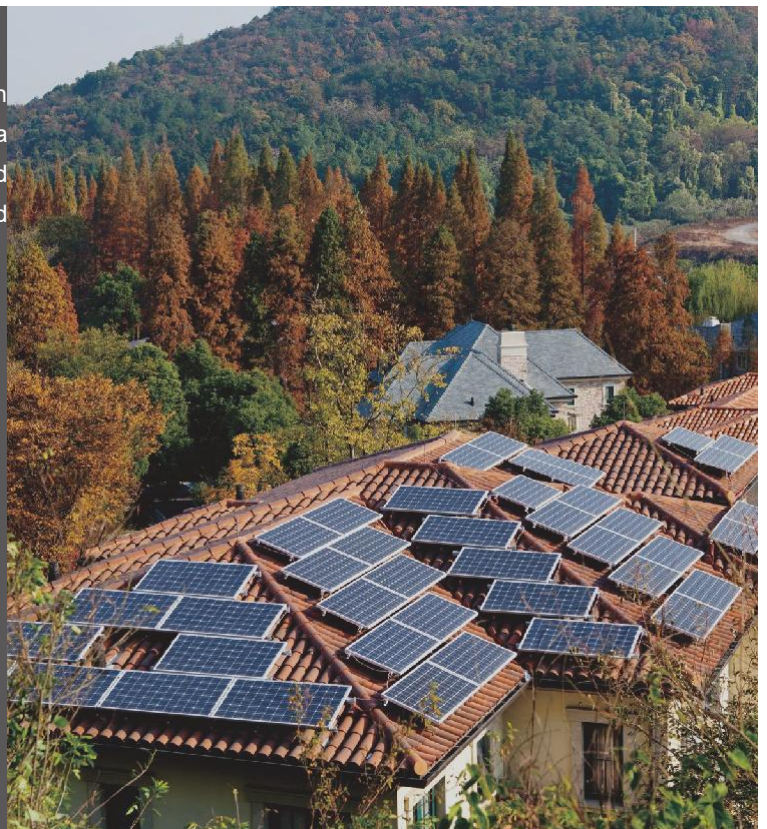


# Application Scenarios

## Pure off-grid system



In some areas without power grid, such as ocean islands or remote areas, Kehua Energy Storage System can be combined with generators to form a complete off-grid system to ensure energy independence.







# Working Mode

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## Self-consumption mode

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Realizing the maximum self-use of solar energy.

## Backup mode

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Providing blackout protection as an energy backup unit.

## Time of use mode

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Realizing the maximum energy utilization rate and users' income with flexible electricity consumption strategies at different times.

## Energy scheduling mode

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Getting profit through programable charging and discharging time according price difference between peak and off-peak time.

## External control mode

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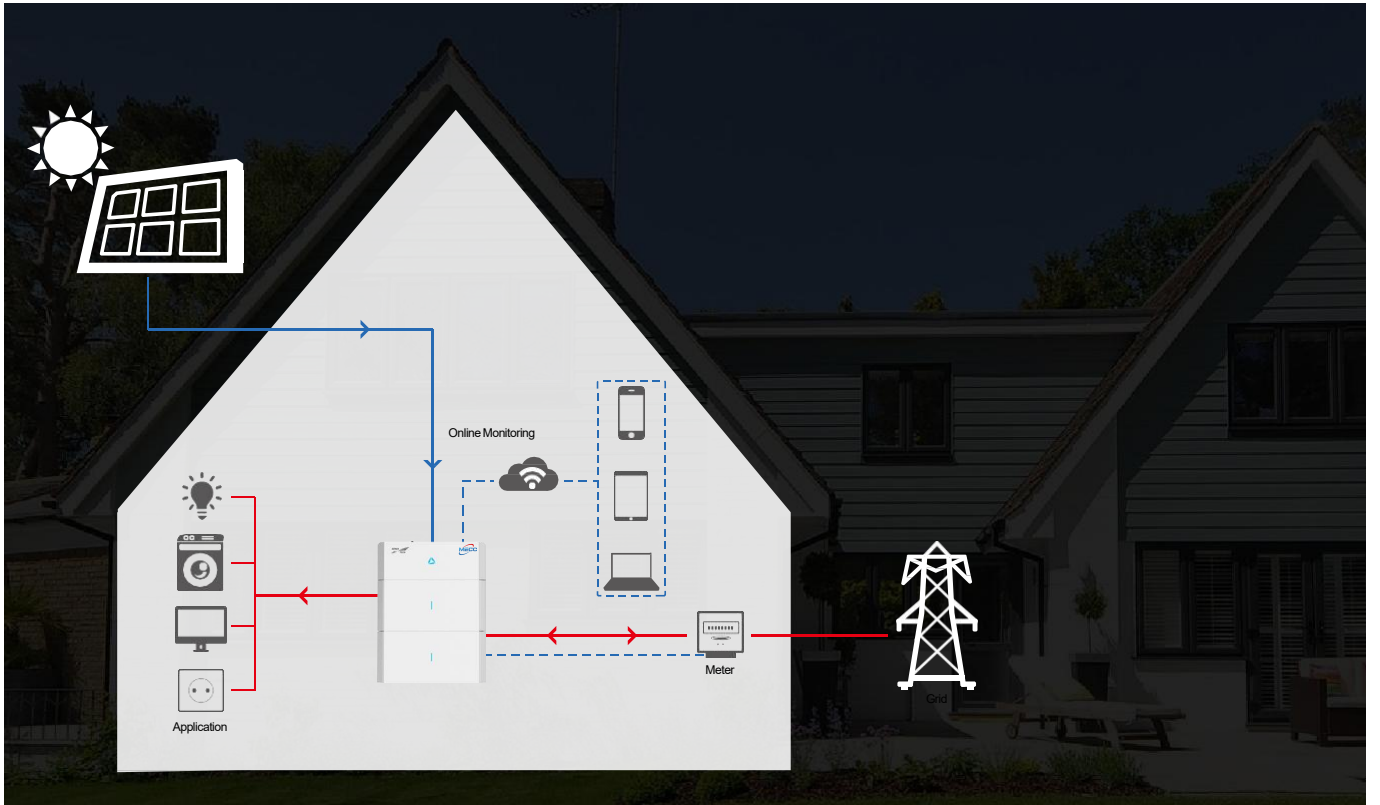
Remote inverter control, realize full fleet control and operation (such as VPP).

## Off-grid mode

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Operating in a complete off-grid mode when no grid power is available.







# Residential Energy Storage System

## iStorageE Series 3600~6000



### Product Features

#### Independent



- Built-in EMS function with multi-mode operation
- Real uninterruptible power supply, switching time <10ms
- Stronger back up power up to 7800W

#### Safe



- Physical and electrical dual isolation
- Modular fire protection integration
- AFCI function integration (optional)

#### Simple



- All-in-one design
- Modular installation & Quick plug connector
- Multiple battery expansion & Multiple system expansion

#### Smart



- Multi-point real-time monitoring, adaptive SOC management
- PACK-level battery management, active balance of charging and discharging
- Intelligent energy management with weather forecast function



# System Specification

Items	iStorageE 3600 Series	iStorageE 5000 Series	iStorageE 6000 Series
<b>System components</b>			
Inverter model	iStorageE 3600	iStorageE 5000	iStorageE 6000
Number of Inverter		1	
Battery system model		iStorageE B5-S1	
Number of battery module	1~8	2~8	2~8
<b>General</b>			
Battery type		LFP	
System capacity	5~40kWh	10~40kWh	10~40kWh
Rated system power	3.6kW	5kW	6kW
Dimension (W*H*D)	800*660*240mm (one battery module, with bracket) 800*280*232mm (inverter), 800*320*200mm (battery module)		
Weight	18kg (inverter), 55kg (battery module)		
Ingress protection	IP65 (outdoor/indoor)		
Surge protection	DC Type II & AC Type II		
Noise level	<25dB		
Cooling type	Natural cooling		
Altitude	2000m		
Operating temperature	-25°C~60°C (inverter), -20°C~50°C (battery module)		
Recommended operating temperature	15°C~30°C		
Storage temperature	-20°C~45°C		
Operating humidity	0~100%RH		
Display	LED & APP		
Installation method	Floor and Wall-mounted		
Communication interface	Portal-WiFi, Meter-RS485, DRM		
Certification	IEC62109-1/-2, EN61000-6-2/-3, EN62109-1/-2, AS4777.2, VDE4105, VDE 0124-100, EN50549-1, CEI 0-21, G98, G99, UTC C15-712-3, VDE0126-1-1:2006+A1, VFR 2019		

# Inverter Specification

Items	iStorageE 3600	iStorageE 5000	iStorageE 6000
<b>DC Input (PV)</b>			
Recommended Max. PV input power		9.0kWp	
Max. PV input voltage		580Vdc	
Max. PV input current		15A/15A	
Max. short current		18.75A/18.75A	
No. of MPPTs		2	
No. of PV strings per MPPT		1/1	
MPPT voltage range		100~550Vdc	
Starting voltage		100Vdc	
DC (PV) switch		Yes	
<b>DC Input (Battery)</b>			
Battery voltage range		360~500Vdc	
Max. charge/discharge current		16.7A/21.7A	
<b>AC Input and Output (On-grid)</b>			
Rated AC output power	3.6kW	5.0kW	6.0kW
Rated AC output voltage		220/230/240Vac	
Grid voltage range		180~280Vac	
Max. output current	15.6A	21.7A	26.2A
Max. input current	31.2A	43.4A	52.4A
Rated grid frequency		50/60Hz	
Grid frequency range		45~55/55~65Hz	
Power factor		>0.99 (rated power)	
Adjustable power factor		0.8 (leading)~0.8 (lagging)	
THDi		<3 (rated power)	
<b>AC Input (Back-up)</b>			
Rated AC output voltage		220/230/240Vac	
Rated output frequency		50/60Hz	
Rated output power	3.6kW	5.0kW	6.0kW
Peak output power	4.68kW, 60s 5.4kW, 30s	6.5kW, 60s 7.5kW, 30s	7.8kW, 60s
Switch time		<10ms	
<b>Efficiency</b>			
Max. efficiency		97.70%	
European efficiency		97.10%	

\*Specifications are subject to change without prior notice.



# Residential Energy Storage System

## iStoragE2A Series 12K



### Product Features

#### Independent



- Built-in EMS function with multi-mode operation
- Real uninterruptible power supply, switching time <20ms
- Stronger back up power up to 24kW

#### Safe



- Physical and electrical dual isolation
- Modular fire protection integration
- AFCI & RSD function integration

#### Simple



- All-in-one design
- Modular installation & Quick plug connector (battery module)
- Multiple battery expansion & Multiple system expansion

#### Smart



- Multi-point real-time monitoring, adaptive SOC management
- PACK-level battery management, active balance of charging and discharging
- Intelligent energy management with weather forecast function



## System Specification

Items	iStorageE2A 12K Series
<b>System components</b>	
Inverter model	iStorageE2A 12K
Number of Inverter	1
Battery system model	iStorageE B5L-S1
Number of battery module	4
<b>General</b>	
Battery type	LFP
System capacity	20kWh
Rated system power	12kW
Peak system power	24kW, 10s
Dimension (W*H*D)	800*2045*240mm (four battery modules, with bracket) 800*450*200mm (inverter) 800*380*200mm (battery module)
Weight	30kg (inverter), 55kg (battery module)
Ingress protection	IP65 (outdoor/indoor)
Surge protection	DC Type II & AC Type II
Noise level	<40dB
Cooling type	Natural cooling
Altitude	2000m
Operating temperature	-20~50°C
Recommended operating temperature	15~30°C
Storage temperature	-10~45°C
Operating humidity	0~100%RH
Display	LED+APP
Installation method	Floor or Wall-mounted
Communication Interface	Portal-WiFi/4G, Meter-RS485, EMS-RS485 (sunspec)
Certification	UL9540, FCC Part 15 Class B, UL1699B, UL1998, CEC, UL1741 SA, IEEE1547, IEEE1547.1, California Rule 21, HECO Rule 14H

## Inverter Specification

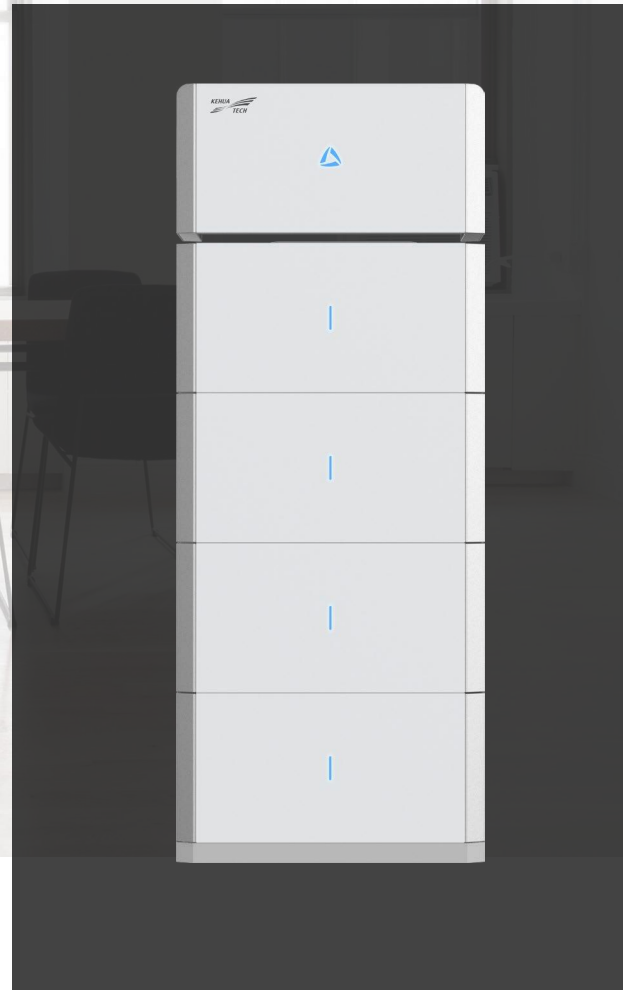
Items	iStorageE2A 12K
<b>DC Input (PV)</b>	
Recommended Max. PV input power	18kWp
Max. PV input voltage	500Vdc
Max. PV input current	15A/15A/15A/15A
Max. short current	18.75A/18.75A/18.75A/18.75A
No. of MPPTs	4
No. of PV strings per MPPT	1/1/1/1
MPPT voltage range	100~500Vdc
Starting voltage	125Vdc
DC (PV) switch	Yes
<b>DC Input (BAT)</b>	
Battery voltage range	360~500Vdc
<b>AC Input and Output (On-grid)</b>	
Rated AC output power	12kW
Rated AC output voltage	240Vac
Grid voltage range	211.2-264Vac
Max. input current	50A
Max. output current	50A
Rated grid frequency	60Hz
Grid frequency range	55~65Hz
Power factor	>0.99 (rated power)
Adjustable power factor	0.85 (leading)~0.85 (lagging)
THDi	<3 (rated power)
Over current protection device	100A breaker
Maximum supply fault current	5kA
<b>AC Input (Generator)</b>	
Rated AC output power	12kW
Over current protection device	63A breaker
Maximum supply fault current	5kA
<b>AC Output (Back-up)</b>	
Rated AC output voltage	240Vac/120Vac 2W/N/PE, Split Phase
Rated output frequency	60Hz
Rated output power	12kW
Peak output power	24kW, 10s
Peak output current	100A, 10s
Switch time	<20ms (without parallel), <300ms (parallel)
Over current protection device	63A breaker
Maximum supply fault current	5kA
Support the unbalance load	Yes

\*Specifications are subject to change without prior notice.



# Residential Energy Storage System

## iStoragE3 Series 8K~12K



### Product Features



#### Independent

- Built-in EMS function with multi-mode operation
- Real uninterruptible power supply, switching time <10ms
- Stronger back up power up to 20kW



#### Safe

- Physical and electrical dual isolation
- Modular fire protection integration
- AFCI function integration (optional)



#### Simple

- All-in-one design
- Modular installation & Quick plug connector
- Multiple battery expansion & Multiple system expansion



#### Smart

- Multi-point real-time monitoring, adaptive SOC management
- PACK-level battery management, active balance of charging and discharging
- Intelligent energy management with weather forecast function



# System Specification

Items	iStorageE3 8K Series	iStorageE3 10K Series	iStorageE3 12K Series
<b>System components</b>			
Inverter model	iStorageE3 8K	iStorageE3 10K	iStorageE3 12K
Number of Inverter		1	
Battery system model		iStorageE B5-S2	
Number of battery module	2~8	2~8	3~8
<b>General</b>			
Battery type		LFP	
System capacity		10~40kWh	15~40kWh
Rated system power (with solar)	8kW	10kW	12kW
Peak system power (with solar)	16kW,60s	20kW,60s	20kW,60s
Dimension (W*H*D)		800*1235*240mm (two battery modules, with bracket) 800*400*200mm (inverter) 800*380*200mm (battery modules)	800*1615*240mm (three battery modules, with bracket) 800*400*200mm (inverter) 800*380*200mm (battery modules)
Weight		30kg (inverter), 55kg (battery module)	
Ingress protection		IP65 (outdoor/indoor)	
Surge protection		DC Type II & AC Type II	
Noise level		<30dB	
Cooling type		Natural cooling	
Altitude		2000m	
Operating temperature		-20~50°C	
Recommended operating temperature		15~30°C	
Storage temperature		-10~45°C	
Operating humidity		0~100%RH	
Display		LED+APP	
Installation method		Floor or Wall-mounted	
Communication Interface		Portal-WiFi/4G, Meter-RS485, EMS-RS485 (sunspec)	
Certification		VDE AR-N-4105, VDE 2510-50, IEC/EN 62109-1, IEC/EN 62109-2, CEI 0-21, EN61000, VDE 0126-1-1, VDE V0124-100, EN 50549-1 (NCRFG)	

# Inverter Specification

Items	iStorageE3 8K	iStorageE3 10K	iStorageE3 12K
<b>DC Input (PV)</b>			
Recommended Max. PV input power		18kWp	
Max. PV input voltage		1000Vdc	
Max. PV input current		27A/16A	
Max. short current		34A/20A	
No. of MPPTs		2	
No. of PV strings per MPPT		2/1	
MPPT voltage range		150~900Vdc	
Starting voltage		180Vdc	
DC (PV) switch		Yes	
<b>DC Input (Battery)</b>			
Battery voltage range		630~900Vdc	
<b>AC Input and Output (On-grid)</b>			
Rated AC output power	8kW	10kW	12kW
Rated AC output voltage		380/400Vac	
Grid voltage range		323-418Vac/340-440Vac	
Max. output current	12.2A	15.2A	18.2A
Max. input current		26A	
Rated grid frequency		50Hz/60Hz	
Grid frequency range		45~55Hz/55~65Hz	
Power factor		>0.99 (rated power)	
Adjustable power factor		0.8 (leading)~0.8 (lagging)	
THDi		<3 (rated power)	
<b>AC Output (Back-up)</b>			
Rated AC output voltage		380/400Vac, 3W/N/PE	
Rated output frequency		50/60Hz	
Peak output power		20kW,60s	
Max. output current		30.4A	
Switch time		<10ms (without parallel), <300ms (parallel)	
Support the unbalance load		Yes	

\*Specifications are subject to change without prior notice.



# Battery System

## iStoragE B5 Series

### Product Features



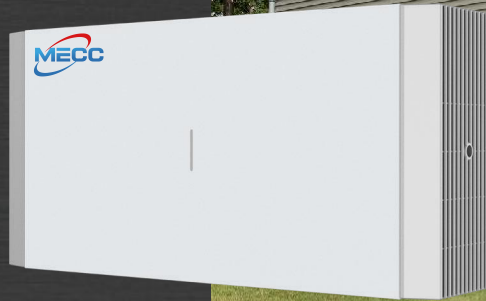
Safe and reliable



Intelligent and flexible



Easy O&M



Items	iStoragE B5L-S1	iStoragE B5-S1	iStoragE B5-S2
<b>General</b>			
Battery type		LFP	
Energy capacity		5kWh	
Scalability		8	
Scalable capacity range		5~40kWh	
DOD		100%	
Rated power	2.5kW	4kW	4kW
Rated voltage		380Vdc	650Vdc
Voltage range		360~500Vdc	630~900Vdc
Maximum charge current	6.94A	11.11A	6.25A
Maximum discharge current	6.94A 8.3A, 10s	11.11A 13.33A, 10s	6.25A 7.5A, 10s
Dimensions		380*800*200mm	
Weight		55kg	
Operating temperature		-20~50°C	
Recommended operating temperature		15~30°C	
Storage temperature		-10~45°C	
Humidity		0~100%RH	
Altitude		2000m	
Cooling type		Natural cooling	
Display		LED	
Communication interface		RS485, CAN	
Topology		Isolated	
Connection method		Floor or Wall mounted	
Certification	UL1973, UN38.3, UL1741, UL1998, FCC	UL1973, IEC 62619, IEC 60730, UN38.3, UL1998	

\* Specifications are subject to change without prior notice.



# System Accessories

## Wifi Logger



### Product Features

#### Smart and flexible

- Support WiFi configuration and baud rate configuration
- Unobstructed communication distance up to 100m

#### Simple and efficient

- Plug and play, quick installation
- Upgrade the data collector and inverter by cloud platform and APP

#### Safe and reliable

- Password and encrypted transmission for data protection
- IP65 protection, wide operating temperature range

## System Specification

Items	KC762	KC761B
Type	Wifi logger	4G logger
<b>Communication Mode</b>		
RS485 communication	Support 4800/9600/115200bps communication distance ≤100m	
WLAN communication	IEEE802.11b/g/n 2.412GHz~2.484GHz	LTE-FDD B1/B3/B5/B7/B8/B20/B28 LTE-TDD B38/B40/B41 GSM 850MHz/900MHz/1800MHz/1900MHz
<b>Power Supply</b>		
DC input voltage	5~15VDC, 1A @15V	
Power consumption	≤5w	
<b>General</b>		
Max. number of devices	≤10	
Display	LED	
Operating temperature	-30~70°C	
Relative air humidity	0%~100%	
Elevation	≤4000m	
Protection class	IP65	
Dimensions (W×H×D)	48×130.5×31.4mm	
Mounting type	plug and play	
Certification	CE, FCC	CE

- Specification indexes may be subject to changes without further notice.



# System Accessories

## Cloud Platform



### Product Features

#### Security of assets

- 7x24 hours uninterrupted monitoring, ensure the safety

#### Intelligent and flexible

- Compatible with multiple communication interfaces and protocols to meet the needs of multiple scenarios
- Push alarms and faults in time to improve work efficiency

#### Efficient O&M

- Quickly locate abnormal strings and faulty devices to improve the efficiency of operation and maintenance

#### Assisting decision-making

- Equipment type, personnel cost, financing risk assessment

## Function List

Key Function	Monitoring System	Production Management System
KPI of power station		●
Compare report management		●
PR analysis		●
Configuration management		●
String intelligent analysis.		●
Power station asset management.		●
Remote expert diagnosis		●
Defect management		●
Checking management		●
Sub-station asset management		●
Inverter monitoring	●	
Combiner box	●	
Strings monitoring	●	
Weather station monitoring	●	

\* Specifications are subject to change without prior notice.

# System Accessories

## APP-WiseSolar Plus

With Kehua WiseSolar, customers can manage and control their energy consumption and production. Available via smartphone or tablet, the APP allows customers to monitor, analyze and control their Kehua iStorageE system from anywhere in the world.

