



KOWINT ENERGY
Your Green Energy Manufacturer

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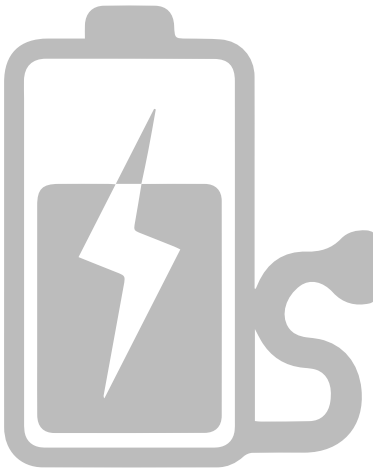
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2024.04.25.NO.2

Product
Specifications

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Household
Product Specifications



S40K

Modular ESS

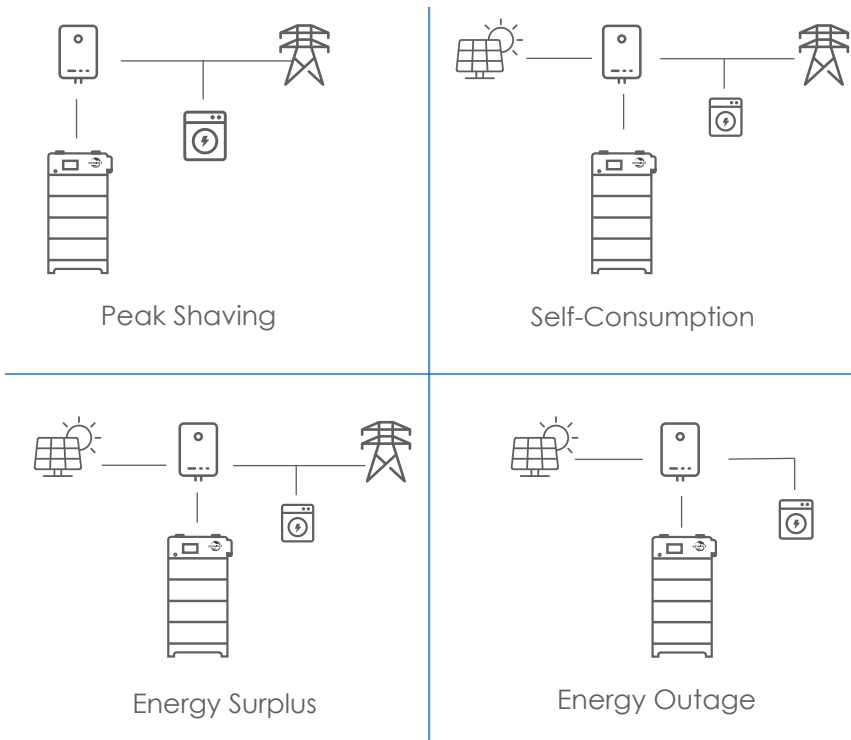
S40K Series is a low-voltage battery system acquired flexible modular design with no extra cables, which provides optimized safety, long life span and stable performance. They are perfect batteries for all applications. Each set contains up to 6 battery modules in parallel connection and achieves usable capacity between 10.24 to 30.72 kWh.

- ✓ Modular Design
- ✓ Easy Installation
- ✓ Extreme Safety
- ✓ Data Visualization
- ✓ Superb Load Capacity
- ✓ Excellent Scalability
- ✓ Good Controllability
- ✓ Cloud Service

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System Layout



Product Specifications

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- Residential Grid-tie Solar with Backup Power
- Self-Consumption
- Off-Grid Power Supply
- Energy Emergency and Outage

System Characteristics

BESS Compliances	IEC62619 / UN38.3 / MSDS/ UKCA/CE/UL1973
Installation Method	Stack Mounting
Installation Scene	Indoor or Outdoor
Enclosure	IP55
Warranty	10 Years

BESS Specifications

Battery Module Type	C-UM05-L01				
Main Control Module	CM300-S40K				
Module Amount	2	3	4	5	6
Nominal Energy	10.24kWh	15.36kWh	20.48kWh	25.6kWh	30.72kWh
Nominal Voltage	51.2 V				
Operating Voltage Range	43.2-58.4V				

General Parameters

Scalability	Maximum 31 Systems in Parallel				
Dimension (W*H*D)	645*1343*268 mm @4modules				
Max. Operating Current	190A	285A	300A	300A	300A
Module Amount	1+2	1+3	1+4	1+5	1+6
Net Weight (Approximate)	132.5kg	183.5kg	234.5kg	285.5kg	236.5kg
Operating Temperature	Discharging:-20°C ~ 50°C Charging:0°C ~ 50°C				
Storage Conditions	-20°C ~ 55°C/ (0°C ~ 35°C Recommended) Up to 95 %RH, non-condensing, Initial SoC: 50%				
Cooling	Natural Cooling				
Max. Altitude	2000m (6561ft)				
Cycle Life	6000 times @25 °C				
Communication Method	CAN、RS485、WiFi				



Power Matrix

HV BESS

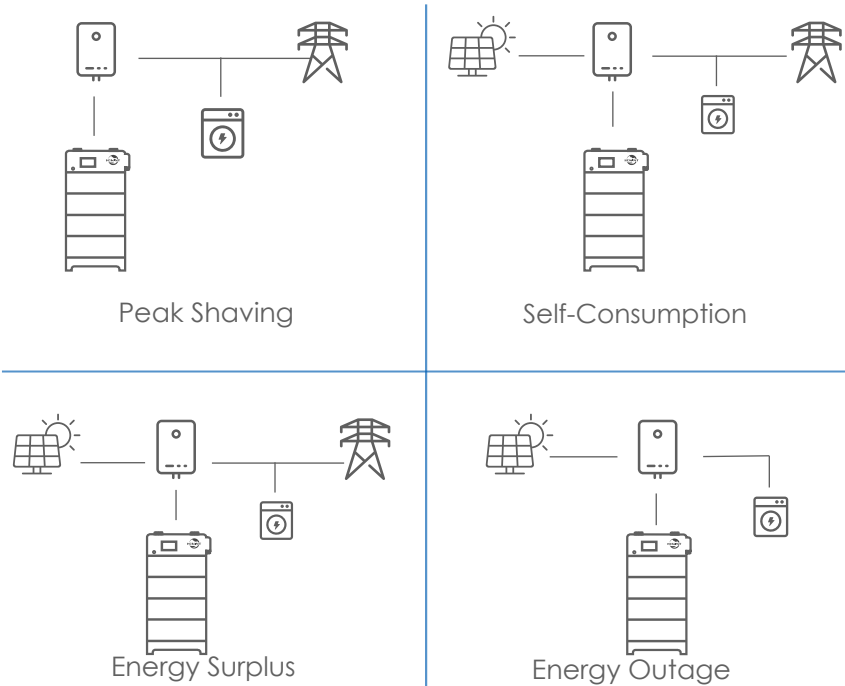
Unleash the power of the Power Matrix, a high-voltage battery storage system designed for simplicity. With stackable modules operating at up to 102.4V, create a robust system reaching 512V and 25.6 kWh. Easy to install, maintain, and replace, it's energy control made convenient. Experience efficiency, flexibility, and innovation.

- ✓ Modular Design
- ✓ Easy Installation
- ✓ Extreme Safety
- ✓ Data Visualization
- ✓ Versatile Application
- ✓ High Voltage Capability
- ✓ High Performance
- ✓ Cloud Service

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System Layout



Product Specifications

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System Characteristics

BESS Compliances	IEC62619 / UN38.3 / MSDS / UKCA/CE/UL1973/CE
Installation Method	Stack Mounting
Installation Scene	Indoor or Outdoor
Ingress Protection	IP55
Warranty	10 Years

BESS Specifications

Battery Module	1P32S				
Cell Capacity	50Ah				
Module Amount	2	3	4	5	6
Nominal Energy	10.24 kWh	15.36 kWh	20.48 kWh	25.6 kWh	30.72 kWh
Nominal Voltage	204.8 V	307.2 V	409.6 V	512 V	614.4 V
Nominal Power	9.83 kW	14.57 kW	19.66 kW	24.58 kW	29.18 kW
Operating Voltage Range	172.8-233.6 V	259.2-350.4 V	345.6-467.2 V	432-584 V	518.4-700.8 V
Max. Continuous Current	48 A				
Max. Current	≤ 75A @10 S				

General Parameters

Dimension (W*D*H)	820*269.5*996mm	820*269.5*1282mm	820*269.5*1568mm	820*269.5*1854 mm	820*269.5*1854 mm
Net Weight	151.5kg	211.5kg	271.5kg	331.5kg	391.5kg
Operating Temperature	-20°C ~ 50°C				
Operating Humidity	Up to 92 % non-condensing				
Altitude	2000m (6561ft)				
Cycle Life	6000 times @25 °C				
Communication Method	CAN、RS485、WiFi				

R5000

Rack-mount

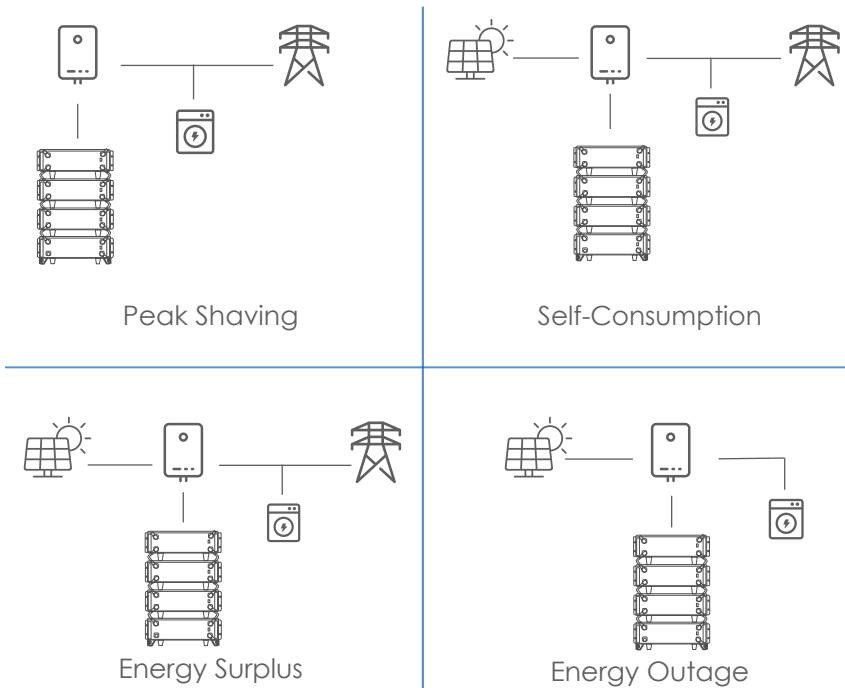
R5000 series home photovoltaic energy storage system is a new type of lithium iron phosphate battery, equipped with battery management system (BMS), which has long life span, optimized sizes with high energy density, flexibly applicated in residential and commercial scenarios.

- ✓ Rack Design
- ✓ Flexible Deployment
- ✓ Extreme Safety
- ✓ Cost-effective
- ✓ Excellent Scalability
- ✓ Good Controllability
- ✓ Cloud Service

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System Layout



Product Specifications

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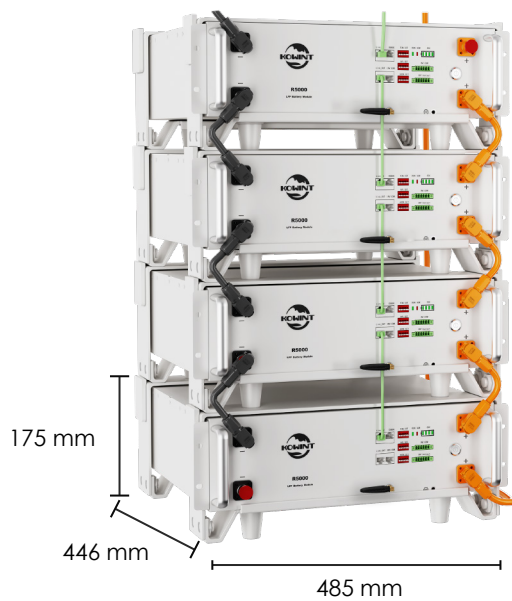
- Residential grid-tie Solar with Backup Power
- Self-Consumption
- Off-Grid Power Supply
- Energy Emergency and Outage

System Characteristics

BESS Certifications	UKCA, UL1973, CE, UN 38.3, IEC62619
Emission	FCC Part 15 Class B
Surge Protection	DC Type II
Warranty	10Years

Battery

Nominal Energy	5.12 kWh
Max. Continuous Charging/Discharging	95A
Nominal Capacity	100Ah
Nominal Voltage	51.2V
Recommend Charging Voltage	56.8V
Max. Charging Voltage	58.4V
Discharge Cut-off Voltage	43.2V
Cell Model	3.2V 100Ah
Combination Mode	1P16S
Initial Internal Resistance	<50mΩ
Standard Charging Current	50A
Standard Discharging Current	50A



Dimensions with the rack mounting kit, handles, wiring terminals



Dimensions without the rack mounting kit, handles, wiring terminals

General Parameters

Dimension (W*H*D)	440*132*420 mm (Standard 3U size)
Net Weight (Approximate)	45kg
Enclosure	IP20
Operating Temperature	Discharging -20°C~50°C Charging 0°C~50°C
Relative Humidity Range	Up to 95% RH, non-condensing
Max. Operating Altitude	2000m
Cooling	Natural cooling
Communication	CAN、RS485、WiFi

E-Box

All-in-one

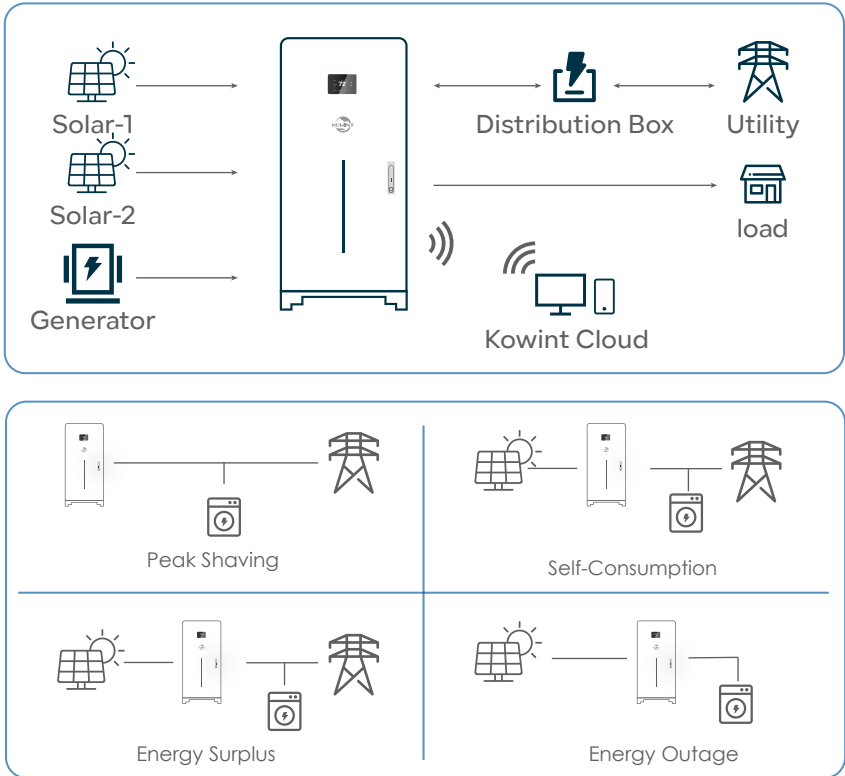
E-Box is an innovation integrated all-in-one energy storage system. It presents an unique modern exterior design and much more easier to install, operate and maintain, suitable for on grid & off grid. The core of the E-Box is a lithium iron phosphate battery system. And the sophisticated inverter, conveniently embedded in the upper section, has been optimized to integrate seamlessly with your power system. An intelligent cloud platform underpins the E-Box, enabling users to tailor system behavior and actively monitor operations, bringing about an unprecedented level of user control. Capacity options for US with 20kWh energy carrying a 12kW hybrid inverter and for EU with 10kWh energy carrying a 6kW hybrid inverter.

- ✓ All-in-one System
- ✓ IP54 Waterproof
- ✓ Easy Operation
- ✓ Extreme Safety
- ✓ High-Efficiency
- ✓ Data Visualization
- ✓ In/outdoor Installation
- ✓ Remote Monitoring

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System Layout



Product Specifications

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PV Input

Max PV Input Voltage (Vdc)	500
Nominal DC Input Voltage (Vdc)	360
DC Input Voltage Range (Vdc)	120~500
Start-up Voltage (Vdc)	100
MPPT Number	2
Strings per MPPT	1/1
Max DC Input Current (A)	16/16
Max PV Input Power (W)	9000

AC Parameters

Phase	Single phase
Nominal Voltage (Vac)	230
Input Voltage Range (Vac)	176~270
Frequency (Hz)	50/60
Max AC Current (A)	28.7
Rated AC Power (W)	6000

Battery Parameters

Nominal Energy (kWh)	10.24
Max Charging Voltage (Vdc)	58.4
Discharge Cut-off Voltage (Vdc)	43.2
Cycle Life	≥8000times @ 80% DOD
Warranty	10 years

General Parameters

Dimensions (W*D*H mm)	600*320*1360
Net Weight (KG) (Approximate)	185
Level of Protection	IP54
Operating Temperature	-20°C ~ +50°C
Relative Humidity Range (RH)	10% ~ 90%
Max Operating Altitude (m)	1000
Cooling	FAN + Free convection
Communication	RS485/Wi-Fi/CAN
Certifications for Battery	UKCA/UL1973/CE/UN 38.3/IEC62619
Certifications for Inverter	CE/TUV/SAA/IEC62166; 2014/IEC61683:1999

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2023-08-02

W5000

Wall-mount

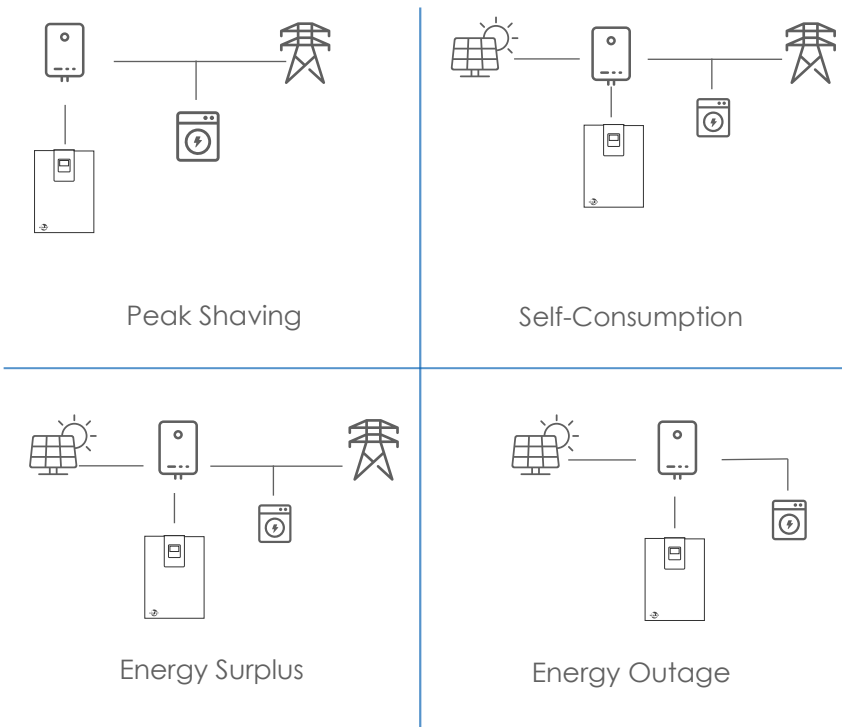
W5000 is a lithium iron phosphate battery system , which can be used to provide safe, reliable and stable energy for various equip-ment. Meanwhile, the module supports expansion on both capacity and power by multiple parallel uses. It supports CAN, RS485 & WiFi communication and can meet the requirements of mainstream energy storage invert-er communication protocols.

- ✓ Modern Design
- ✓ Compact Size
- ✓ Extreme Safety
- ✓ Data Visualization
- ✓ Indoor Installation
- ✓ Excellent Scalability
- ✓ Good Controllability
- ✓ Cloud Service

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System Layout



Product Specifications

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- Residential Grid-tie Solar with Backup Power
- Self-Consumption
- Off-Grid Power Supply
- Energy Emergency and Outage



W5000 Specifications

Battery Type	LiFePO4
Rated Energy	5.12kWh
Cell Capacity	100Ah
Rated Voltage	51.2V
Cell model	3.2V 100Ah
Combination Mode	16S1P
Discharge Cut-off Voltage	43.2V
Recommend Charging	56.8V
Max. Charging/Discharging Current	95A
Primary Overcurrent Protection (A)	98A@10S
Secondary Overcurrent Protection (A)	120A@2S
Communication	CAN、RS485、WiFi
Compitable Inverter Brand	SMA, Growatt, Solax, Solis, DEYE, Sofar, Voltronic, , Studer, etc.
Cycle life	≥6000 times@25°C
Dimension W*H*D	450*635*180 mm
Net Weight	53KG
Protection Degree	IP 20
Cooling	Natural cooling
Installation	Wall-mount In
Discharge Temperature	-20°C ~ 50°C
Charge Temperature	0°C ~ 50°C
Storage Conditions	-20°C ~ 55°C (0°C ~ 35°C Recommended) Up to 95 %RH, non-condensing, Initial SoC: 50%
Maximum Elevation	2000 m (6561 ft)

W15K

Wall-mount

Wall-mount Series is a lithium iron phosphate battery system , which can be used to provide safe, reliable and stable energy for various equipment. Meanwhile, the module supports expansion on both capacity and power by multiple parallel uses. It supports CAN, RS485 & Bluetooth communication and can meet the requirements of mainstream energy storage inverter communication protocols.

- ✓ Modern Design
- ✓ Compact Size
- ✓ Extreme Safety
- ✓ High protection level IP55
- ✓ Excellent Scalability
- ✓ Good Controllability
- ✓ Cloud Service

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Product Specifications

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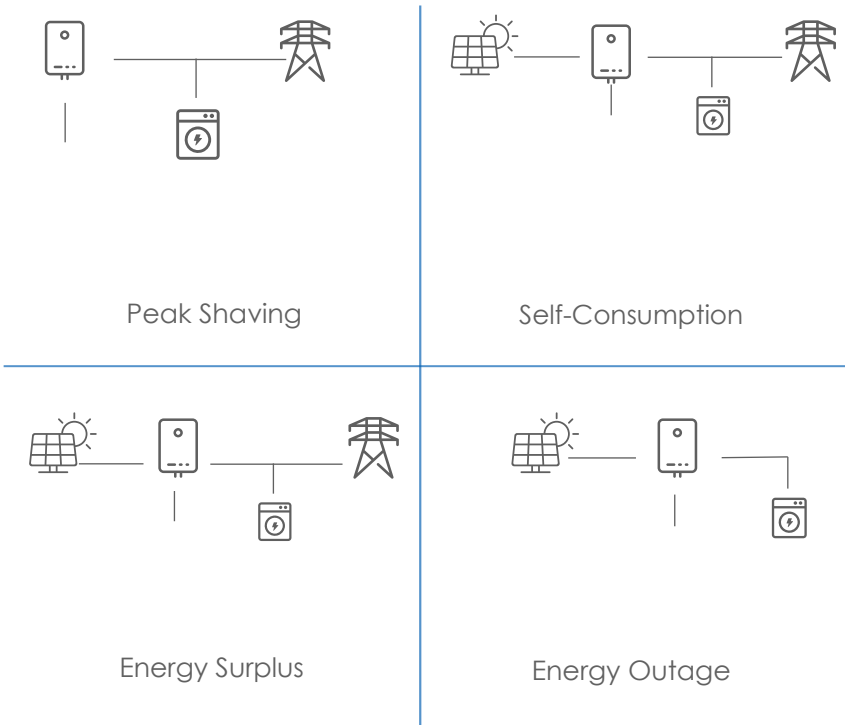
- Residential Grid-tie Solar with Backup Power
- Self-Consumption
- Off-Grid Power Supply
- Energy Emergency and Outage



W15K Specifications

	W15K
Battery Type	LiFePO4
Rated Energy	14.3kWh
Cell Capacity	280Ah
Rated Voltage	51.2V
Cell model	3.2V 280Ah
Combination Mode	16S1P
Discharge Cut-off Voltage	43.2V
Recommend Charging	56.8V
Max. Charging/Discharging Current	200A
Primary Overcurrent Protection (A)	280A@10S
Secondary Overcurrent Protection (A)	350A@30mS
Communication	CAN、RS485、Bluetooth
Compitable Inverter Brand	SMA, Growatt, Solis,DEYE, Sofar, Voltronic, , Studer, etc.
Cycle life	≥6000 times@25°C
Dimension W*H*D	550*860*175 mm
Net Weight	110KG
Protection Degree	IP 55
Cooling	Natural cooling
Installation	Wall-mount In
Discharge Temperature	-20°C ~ 50°C
Charge Temperature	0°C ~ 50°C
Storage Conditions	-20°C ~ 55°C (0°C ~ 35°C Recommended) Up to 95 %RH, non-condensing, Initial SoC: 50%
Maximum Elevation	2000 m (6561 ft)

System Layout



KSL12 Inverter

KSL 12U02

Multiple input & output- Split Phase
208/240Vac or Single Phase 230Vac
IP65 waterproof/dustproof prevent
various corrosion.

Wi-Fi for remote monitoring (Kowint
cloud monitoring)

Extra input acceptable/generator input
compatible

Extra CT sensor guarantee 100%
self-consumption

RS485/CAN communication for BMS

In-built AC coupling capability.

Current and voltage adjustable

Up to 6 units parrell operation

✓ Compact Size

✓ Extreme Safety

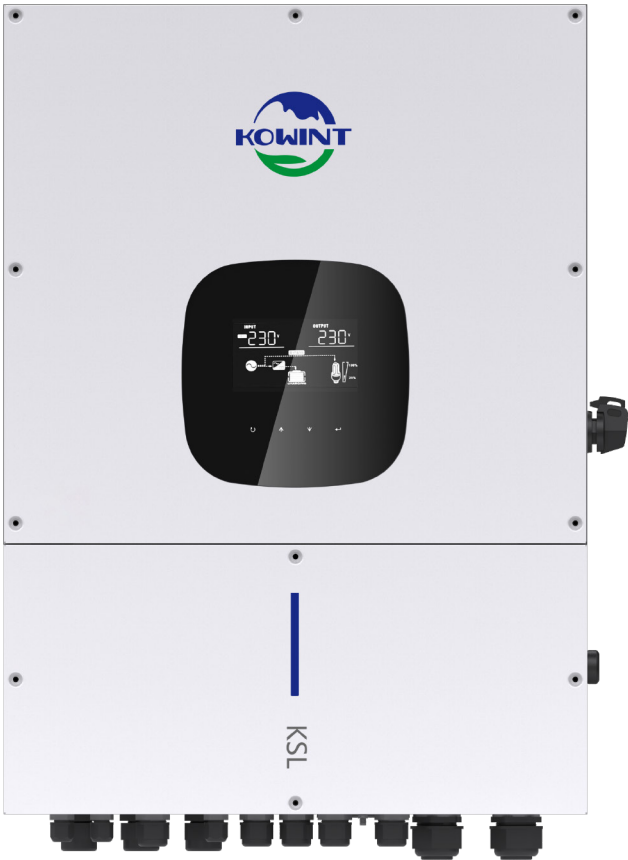
✓ Data Visualization

✓ Excellent Scalability

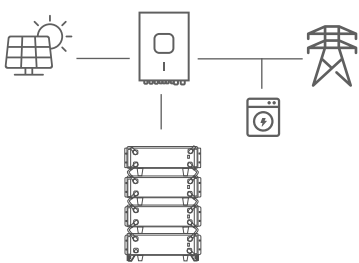
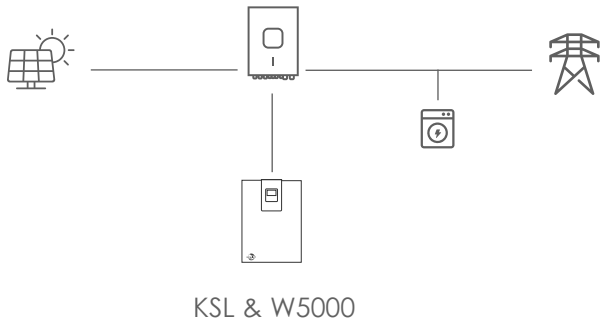
✓ Good Controllability

✓ Cloud Service

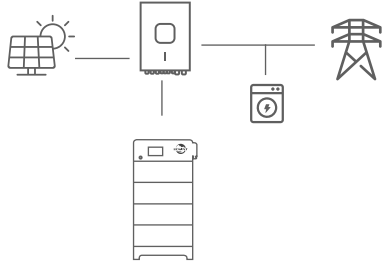
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One-stop solution



KSL & R5000



KSL & S40K

Product Specifications

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Model	KSL 12U02
Phase	120/240V Split phase, 120V/208V Split phase
Maximum PV Input Power	12000W
Rated Output Power	10000VA / 10000W
Maximum Charging Power	10000W

Grid-tie Operation

PV INPUT (DC)	
Maximum DC Voltage	600 VDC
Start-up Voltage / Initial Feeding Voltage	125 VDC / 160 VDC
MPPT Voltage Range	120 VDC -550 VDC
Number of MPPT Trackers / Maximum Input Current	2 / 18A

GRID OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N) 208 VAC (P-P) 240 VAC (P-P)
Output Voltage Range	105.5 VAC -132 VAC (per phase)
Nominal Output Current	41.5A per phase
Power Factor	0.9 lag to 0.9 lead

EFFICIENCY	
Maximum Conversion Efficiency (DC / AC)	96%

Off-Grid Operation

AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	85 VAC (per phase) / 90 VAC (per phase)
Acceptable Input Voltage Range	85-140 VAC (per phase)
Frequency Range	50 Hz / 60 Hz (Auto sensing)
Maximum AC Input Current	40A per phase

PV INPUT (DC)	
Maximum DC Voltage	600 VDC
MPPT Voltage Range	120 VDC ~550VDC
Number of MPPT Trackers / Maximum Input Current	2/ 18A

BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N) 208VAC (P-P) 240VAC (P-P)
Output Waveform	Pure sine wave
Efficiency (DC to AC)	91%

Hybrid operation

PV INPUT (DC)	
Maximum DC Voltage	600VDC
Start-up Voltage / Initial Feeding Voltage	125VDC /160VDC
MPPT Voltage Range	120VDC-550VDC
Number of MPPT Trackers / Maximum Input Current	2/ 18A

GRID OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N) 208VAC (P-P) 240VAC (P-P)
Output Voltage Range	105.5 VAC-132 VAC (per phase)
Nominal Output Current	41.5 A per phase

AC INPUT	
AC Start-up Voltage / Auto Restart Voltage	85 VAC (per phase) 90 VAC (per phase)
Acceptable Input Voltage Range	85-140 VAC (per phase)
Maximum AC Input Current	40 A per phase

BATTERY MODE OUTPUT (AC)	
Nominal Output Voltage	120 VAC (P-N) 208VAC (P-P) 240VAC (P-P)
Efficiency (DC to AC)	91%

BATTERY & CHARGER	
Nominal DC Voltage	40-62 VDC
Maximum Solar Charging Current	200A
Maximum AC Charging Current	200A
Maximum Charging Current	200A

General	
Dimension, W*D* H (mm)	515*215. 5*715
Net Weight	45 kg
Parallel Function	Yes, 6 units.
Communication Port	RS232 RS485 . WI-Fi USB
Protection Degree	IP 65
Operating Temperature	-25 " C to 60 " C (45 " C derating)
Certificate	UL1741SA / CEC

KSH

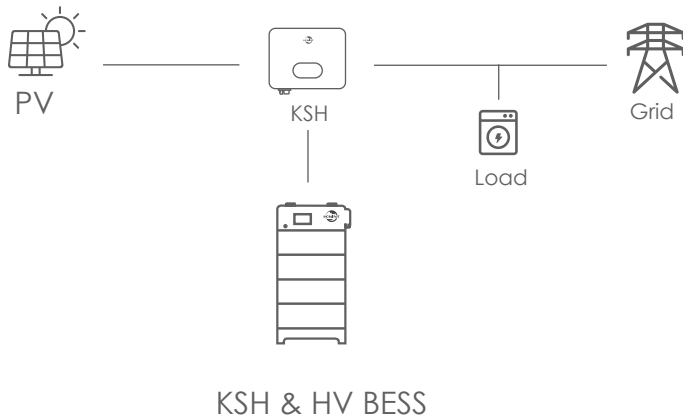
5/6/8/10A/10E

Inverter

- Adapts to high-intensity PV modules at 18A.
- Parallel connections possible for up to 10 units.
- Fully supports unbalanced loads.
- Remote adjustments and upgrades for firmware & mode.
- Rapid UPS-level shift in <10ms.
- VPP / FFR function available



System Layout



Product Specifications

	KSH5E	KSH6E	KSH8E	KSH10AE	KSH10E
PV Input Data					
Recommended Max. PV Power (Wp)	7500	9000	12000	15000	15000
Max. PV Input Voltage (V)			1000		
MPPT Voltage Range (V)			160 ~ 950		
Rated PV Input voltage (V)			600		
Start-up Voltage (V)			180		
No. of MPP Trackers			2		
No. of Input Strings per Tracker			1		
Max. Input Current per MPPT (A)			36 (18 / 18)		
Max. Short-circuit Current per MPPT (A)			46 (23 / 23)		
DC Switch			Integrated		
AC Output Data					
Maximum Apparent Power (VA)	5500	6600	8800	10000	11000
Rated AC Power (W)	5000	6000	8000	10000	10000
Maximum AC Current (A)	7.6	9.1	12.2	14.4	15.2
Rated AC Current (A)	7.2	8.7	11.5	14.4	14.4
Rated AC Voltage / Range (V)			3/N / PE, 220 /380, 230 / 400; ±20%		
Grid Frequency / Range (Hz)			50 / 60; ±5		
Adjustable Power Factor (cosφ)			0.8 leading ~ 0.8 lagging		
Output THDi (@Rated Output)			<3%		
AC Input Data					
Max. apparent AC Power (VA)	10000	12000	16000	20000	20000
Max. AC Current (A)	15.2	18.2	24.4	28.8	30.4
Rated AC Voltage / Range (V)			3/ N / PE,220 /380,230 / 400; ±20%		
Grid Frequency / Range (Hz)			50 / 60; ±5		
Battery Data					
Battery Type			Lithium		
Battery Voltage Range (V)			160 ~ 700		
Max. Charging / Discharging Current (A)			30 / 30		
Communication Interface			CAN		
EPS Output Data (With Battery)					
EPS Rated Power (W)	5000	6000	8000	10000	10000
EPS Rated Voltage (V)			3 / N / PE, 220 / 380, 230 / 400		
EPS Rated Frequency (Hz)			50 / 60		
EPS Rated Current (A)	7.6	9.1	12.2	14.4	15.2
Output THDi (@Rated Output)			<3%		
Automatic Switch Time (ms)			10		
Peak Apparent Power, Duration (VA, s)	7500, 60	9000, 60	12000, 60	15000, 60	15000, 60
Efficiency					
Max. Efficiency	98.00%	98.00%	98.00%	98.00%	98.00%
Euro Efficiency	97.70%	97.70%	97.70%	97.70%	97.70%
Max. Battery Charge / Discharge Efficiency	97.60%	97.60%	97.60%	97.60%	97.60%
Protection					
DC Insulation Monitoring			Integrated		
Input Reverse Polarity Protection			Integrated		
Anti-island Protection			Integrated		
Residual Current Monitoring			Integrated		
Over-heat Protection			Integrated		
AC Overcurrent Protection			Integrated		
AC Short-circuit Protection			Integrated		
AC Overvoltage Protection			Integrated		
DC Surge Protection			Integrated (Type II)		
AC Surge Protection			Integrated (Type II)		
General Data					
Size (Width * Height * Depth) (mm)			520 * 412 * 188		
Weight (kg)			27		
User Interface			LED + OLED		
Communication			RS485 and USB or Wifi or 4G (Optional)		
Operating Temperature Range (°C)			-25~ +60		
Relative Humidity			0~100%		
Operating Altitude (m)			<2000		
Standby Self Consumption (W)			<15		
Topology			Transformerless		
Cooling			Natural		
Enclosure			IP65		
Noise (dB)			<35		
Warranty (years)			5		
Certifications & Standards					
Grid Regulation	VDE 4105, EN 50549-1, VDE 0126, CEI 0-21, EN 50549-GR, EN 50549-PL, TOR Erzeuger, EN50549-CZ, AS4777, UNE217002				
Safety Regulation	IEC 62109-1, IEC 62109-2				
EMC	IEC 61000-6-1, IEC 61000-6-3				

KSL-E

3/3.68/4/4.6
5/6/8K

Inverter

Supports diverse battery kinds.

Easy mobile setup and upkeep with top efficiency of ≥97.5%.

Space-efficient design with compact size.

Built-in protection against backflow.

Guard against reverse battery connection.

Terminal for managing household energy.

Electricity programming and demand adjustment.

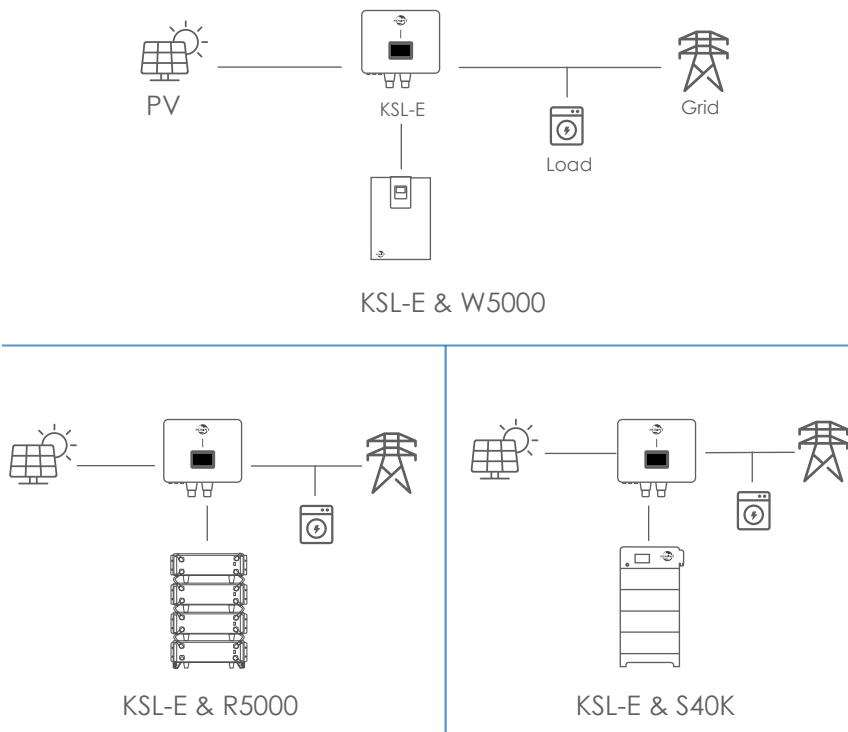
Distributed VPP coordination.

- ✓ Compact Size
- ✓ Extreme Safety
- ✓ Data Visualization
- ✓ Excellent Scalability
- ✓ Good Controllability
- ✓ Cloud Service

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System Layout



Product Specifications

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	KSL3E	KSL3.68E	KSL4E	KSL4.6E	KSL5E	KSL6E	KSL8E
PV Input Data							
Max. Input power (kW)	4.5	5.4	6	6.9	7.5	9	12
Start-up voltage (V)	100						
Max. PV input voltage(V)	550						
MPPT range/nominal (V)	80~500/360						
Max.input current of single MPPT(A)	16/16	16/16	16/16	16/16	16/16	16/16	16/32
MPPT tracker quantity	2	2	2	2	2	2	2
MPPT quantity/ The number of input strings supported by each mppt	1/1	1/1	1/1	1/1	1/1	1/1	1/2
AC Output Data							
Rated power (kW)	3	3.68	4	4.6	5	6	8
Rated AC current output to grid (A)	13	16	17.4	20	21.7	26	35
Nominal voltage/range(V)	230/176~270						
Frequency (Hz)	50/60						
Power factor	1 (0.8 leading-0.8 lagging)						
THDi	<3%						
AC grid type	L+N+PE						
Battery Data							
Battery voltage range(V)	40~58						
Max. charging voltage(V)	58						
Max. charge/discharge current(A)	60/60	72/72	80/80	92/92	100/100	120/120	160/160
Battery type	Lithium /Lead-acid						
Communication interface	CAN						
EPS Output							
Rated power (kW)	3	3.68	4	4.6	5	6	8
Rated voltage(V)	230						
Rated AC current output to grid (A)	13	16	17.4	20	21.7	26	35
Rated frequency(Hz)	50/60						
Automatic switchover time(ms)	<10						
THDu	<2%						
Overload capacity	100%, 60s/120%, 30s/150%, 10s						
General Data							
Battery Charge/Discharge Efficiency	96%						
Max. Efficiency	98%						
Europe Efficiency	97%						
Mppt Efficiency	99.9%						
Ingress Protection	IP65						
Noise Emission (dB)	<35						
Operation Temperature (*c)	-25~60						
Cooling	Natural						
Relative Humidity	0~95% (non-condensing)						
Operating Altitude	0-2000m (no derating below 2000m)						
Dimensions(W*D*H)	454.5*200*467mm 8*7.8*18.3in					467*200*484mm 18.3*7.8*19in	
Weight	18kg / 40lb					20kg / 44lb	
Topology	Non-isolated						
Self-consumption At Night (W)	<20						
Display & Communication							
Display	Optional (colorful touch screen /no screen)						
Interface	RS485/Wifi/4G/CAN/DRM						
Certifications							
Certifications	EMC, EN50549-1, IEC 62109-1/IEC 62109-2, EN62109-1/EN62109-2, CE, NRS, G99						