

X8KS

Mobile Energy Storage System



Ideal for microgrids, load shifting, renewable energy consumption, energy buffers, off-grid power supply, backup power applications, etc.

All-in-one

Mobile battery system, PCS, DC-DC converter, transformer, STS, liquid cooling system, fire extinguishing system, distribution system, and EMS.



High Safety Standard

Using high-safety performance lithium iron phosphate batteries. Meets standards such as NFPA855, EN50549 and UL.



Flexible Configuration

Adjustable configurations to achieve optimal cost-effectiveness. Up to 2 cabinets for parallel use.



Plug and Play

The system is pre-installed. Just make simple settings to use.



Excellent Adaptability

Higher protection design and excellent heat dissipation technology enable it to operate stably in harsh environments. The compact spatial layout effectively reduces the footprint.



Intelligent Management

Integrated EMS & 4G LTE modem, supporting remote monitoring of devices through web and app.



System Composition



From **5 kW / 10 kWh**
to **20 kW / 60 kWh**



Specifications

Model	X8KS-U	X8KS-E
AC Output (Discharging)		
Rated Power	8 kW	8 kW (5 kW/10kW Optional)
Rated Voltage / Frequency	120 / 240 V (Split-phase) / 60 Hz	220 / 230 / 240 VAC 50 / 60 Hz
Rated Current	33.4 A	34.8 A
Three-Phase	Optional (480 V)	Optional (380 V / 400 V / 415 V)
Apparent Power	8.8 kVA	8.8 kVA
AC Connection	L1 / L2 / N / PE	L + N + PE
Peak Power (1S)	16000 VA	16000 VA
AC Input (Charging)		
Rated Power	8 kW	8 kW
Rated Voltage / Frequency	120 / 240 V (Split-phase) / 60 Hz	220 / 230 / 240 VAC 50 / 60 Hz
THDI	≤3%	≤3%
AC Connection	L1 / L2 / N / PE	L + N + PE
Battery		
Battery Chemistry	LiFePO ₄	LiFePO ₄
DoD	80%	80%
Rated Capacity	10 ~ 30 kWh (Adjustable)	10 ~ 30 kWh (Adjustable)
Voltage		48 VDC (Range 40 ~ 64 V)
DC Input (PV)		
Max. Power	12 kW	12 kW
Number of MPPT / Number of MPPT Input	3	3
Max. Input Current	30 A / 22 A / 22 A	30 A / 22 A / 22 A
MPPT Voltage Range	70 ~ 540 V	70 ~ 540 V
Number of String per MPPT	2 / 2 / 2	2 / 2 / 2
Start-up Voltage	90 V	90 V
Physical		
Ingress Rating	NEMA 3R	IP54
Scalability	Max. 2 in Parallel	Max. 2 in Parallel
Relative Humidity	0 ~ 100% Non-condensing	0 ~ 100% Non-condensing
Fire Suppression System	Hot Aerosol (Cell & Cabinet)	Hot Aerosol (Cell & Cabinet)
Max. Efficiency	98% (PV to AC) 94.5% (BAT to AC)	98% (PV to AC) 94.5% (BAT to AC)
Topology Operating Ambient	Transformerless	Transformerless
Temperature	-20 ~ 50°C (-4 ~ 122°F)	-20 ~ 50°C (-4 ~ 122°F)
Noise Emission (dB)	≤ 70	≤ 70
Cooling	Natural Cooling	Natural Cooling
Altitude (m)	4000 (>2000 Derating)	4000 (>2000 Derating)
Weight (kg)	≤350 KG	≤350 KG
Dimensions (LxWxH)	1100 x 1100 x 1000 mm	1100 x 1100 x 1000 mm
Standard Compliance	UL9540 / UL9540A / FCC / UL1973 / UL1741 / UL1741SA / IEEE1547 / CA RULE 21	EN50549, AS4777.2, VDE4105, G99, IEEE1547, NB/T 32004, IEC62109, NB/T 32004, UL1741, IEC61000, NB/T 32004

1. All pictures shown are for reference only and data are based on ROYPOW standard test procedures.

2. Actual performance may vary according to local conditions. Only authorized personnel are allowed to operate or make adjustments to the batteries.

3. We reserve the right to make revisions as well as product alterations and improvements at any time without prior notice.