



KAS Series Off-Grid Hybrid Inverter

Single-Phase | US Standard | Seamless Backup Power

Overview

The KAS Series is a high-performance, multi-functional energy storage inverter that integrates Pure Sine Wave Inversion, MPPT Solar Charging, and Grid Charging into a single, compact unit. Engineered for millisecond-level power switching, it ensures your devices stay powered without interruption. With its intuitive LCD interface and customizable settings (voltage, current, and priority), the KAS Series is the ultimate portable power solution for home backup and emergency preparedness.

Features

Pure Power, Maximum Flexibility

Pure sine wave output compatible with grid or generator power.
Supports Battery-Free Mode for versatile energy management.

Next-Gen MPPT Efficiency

Integrated MPPT controller with 99.9% efficiency.

Advanced Battery Compatibility

Optimized for Lead-acid and Lithium batteries.
Features Dual Activation (AC/Solar) to wake up dormant lithium batteries.

Intelligent Power Management

4 specialized charging modes and multi-stage charging
to significantly extend battery lifespan.

Eco-Friendly & Quiet

Power-Saving Mode minimizes idle consumption,
while smart variable-speed fans ensure silent, efficient cooling.

Reliable UPS Functionality

Seamless transition between Utility Bypass and Inversion
to protect your sensitive electronics during outages.

360° All-Round Protection

Full-spectrum safety suite: Over/Under Voltage, Overload,
Short Circuit, Reverse Polarity, and Over-temperature protection.



Technical Specifications

Model	KAS3021	KAS3621	KAS3641	KAS6541
Battery (DC)				
Battery Type	Lead-acid and Lithium			
Voltage Range	20-33VDC		40-60.0VDC	
Rated Voltage	24VDC		48VDC	
Max. Charging Current	100A	120A	80A	150A
Max. PV Charging Current	100A	120A	80A	150A
Max. Utility Charging Current	60A	80A	60A	120A
PV Input (DC)				
Max. Input Power	4,000W	6000W	4500W	9000W
Max. Input Voltage	500V		300V	
Max. PV Input Current	18A	27A	27A	22A+22A
Max. PV Short-Circuit Current	20A	30A	30A	25A+25A
MPPT Voltage Range	90-450V		90-260V	
Number of MPPTs		1		2
Number of Strings per MPPT		1		
Utility Input				
Rated Input Power (Charging+Bypass)	3600W	4800W		7200W
Max. Input Current	30A	40A		60A
Rated Input Voltage		110VAC/120VAC		
Input Voltage Range		90-140VAC		
Rated Input Frequency		50/60Hz		
Inverter Output				
Rated Power	3000W	3600W		6500W
Transient Surge Output Power	4500VA	5400VA		9750VA
Rated Output Current	25A	30A		54.1A
Output Voltage Level		110/120VAC		
Output Voltage Waveform		Pure sine wave		
Output Frequency Level		50Hz/60Hz±0.2%		
THDu		≤3%		
Load Power Factor		0.2-1		
Switch Time		10ms		
Efficiency				
Max. Inverter Efficiency		94%		
Max. Load Efficiency		91%		
Environmental Parameters				
Operating Temperature		-10°C-55°C		
Storage Temperature		-25°C-60°C		
Relative Humidity		< 95%		
Altitude		2000m		
Ingress Protection		IP20		
Mechanical Parameters				
Dimensions (L × W × H) (mm)	350×312×110	428×280×110		540×350×120
Weight (kg)	6.9	8.2	7.8	18.5
Others				
Communication with BMS		RS485		
Communication with Portal		RS485		
Parallel Function	No		Yes, max 6 unit	
Display		LCD		
Protection	AC Bypass Overload Protection, PV Input Reverse Polarity Protection, PV Current Limiting, PV Power Limiting Protection, PV Short Circuit Protection, Inverter Overheating Protection, Load Output Short Circuit Protection, Inverter Output Overload			