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BKS Series

6kW Single Phase IP66 Hybrid Inverter



BKS-PV9000OD-48L Brief

A 6kW single-phase hybrid inverter in an IP66 outdoor enclosure. It takes up to 9kW of PV on two MPP trackers, exports 6kW to the grid, carries 6kW of backup load with a switch time under 20ms, and charges 48V lithium or lead-acid batteries at up to 120A.

The system diagram shows solar panels, grid, generator, smart loads and battery all connected through the one inverter, with monitoring over Wi-Fi to the cloud and app.

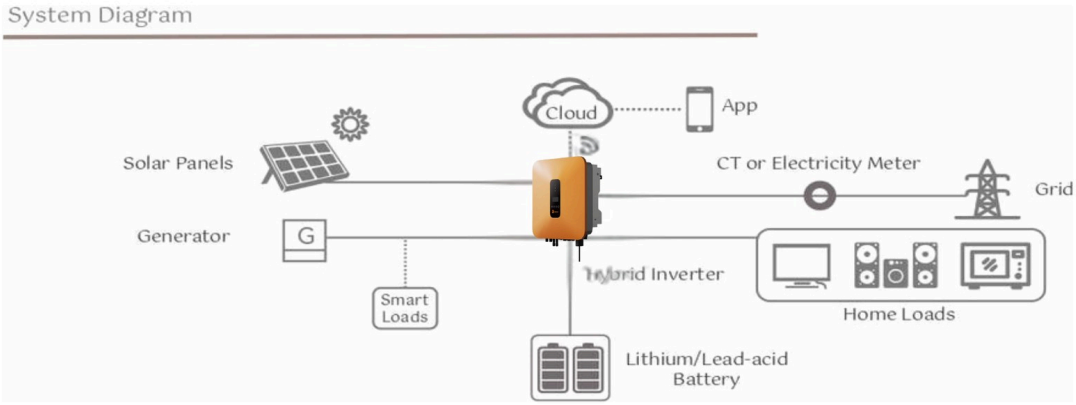
Main Features

- Wide MPPT range
- Type III SPD on both DC and AC side
- IP66 protection level
- 2 MPP trackers
- 19A MPPT input current per string
- Integrated and concise design

Application

- Residential solar with battery storage
- Generator-assisted sites
- Grid-tied self-consumption with backup

System Diagram



Technical Specifications

	Model	BKS-PV9000OD-48L
PV Input	Max. PV Input Power (kW)	9
	Max. PV Open Circuit Voltage (V)	550
	MPPT Range @ Operating Voltage (VDC)	80~520
	Full Power MPPT Voltage Range (VDC)	250~500
	Start-up Voltage (VDC)	90
	Max. Input Current per MPPT (A)	19/19
	Max. Short-circuit Current (A)	25/25
	MPPT Tracker / Strings	2/1
	Nominal Input Voltage (V)	360
AC Output (On-Grid)	Nominal Output Power to Grid (kW)	6
	Max. Apparent Power to Grid (kVA)	6
	Max. Apparent Power from Grid (kVA)	6
	Max. Apparent Current from Grid (A)	26.1
	Nominal Output Current from Grid (A)	26.1
	Max. Output Current to Grid (A)	26.1
	Nominal Voltage / Frequency	230V (176V~280V), 50/60Hz, L+N+PE
	Adjustable Power Factor	0.8 leading ~ 0.8 lagging
	THDi	<2%
AC Output (Backup)	Nominal Output Power (kW)	6
	Max. Apparent Power (kVA)	6
	Nominal Output Current (A)	26.1
	Max. Output Current (A)	26.1
	Nominal Voltage / Frequency	230V (176V~238V), 50/60Hz, L+N+PE
	Automatic Switch Time (ms)	<20
	THDu	<2%
	Overload Capacity	110%, 30s / 120%, 10s / 150%, 0.02s
Efficiency	Max. Efficiency	98.00%

	Model	BKS-PV9000OD-48L
Efficiency (cont.)	MPPT Efficiency	99.00%
	Max. Battery Charge / Discharge Efficiency	94.60%
Battery	Battery Voltage Range (V)	40~60
	Recommended Battery Voltage (V)	48
	Max. Charging Voltage (V)	60
	Max. Charging / Discharging Current (A)	120/120
	Battery Type	Lithium and lead-acid battery
Protection	DC Switch	Yes
	DC Reverse Polarity Protection	Yes
	DC/AC Surge Protection	Type III / Type III
	AC Overvoltage Protection	Yes
	AC Short-circuit Protection	Yes
	Ground Fault Monitoring	Yes
	Anti-islanding Protection	Yes
	Residual-current Monitoring	Yes
	Insulation Resistance Monitoring	Yes
	Peak / Valley Time Setting	Yes
General Data	HMI	LCD & app
	BMS	RS485; CAN
	EMS / Meter	RS485
	Communication	Wi-Fi (standard) / GPRS (optional) / 4G (optional)
	Ingress Protection	IP66
	Operating Temperature Range	-25~60℃
	Relative Humidity	0~95% (non-condensing)
	Max. Operating Altitude	4000m (derating above 3000m)
	Cooling	Natural
	Noise Emission	≤29dB
	Dimensions (W×H×D)	485×527×230mm
	Net Weight (kg)	24
	Self-consumption (W)	<10
Standards	Safety Regulation	IEC/EN 62109-1/-2
	EMC	IEC/EN 61000-6-1/-2/-3

Product specifications are subject to change without further notice.