

BlueCore Series

NEW
KAC(20~50)DP2-BIS60-240E

High Efficiency & Smart Energy

Direct PV input with 4 MPPTs and up to 2x PV oversizing
Up to 97.5% conversion efficiency with EMS and VPP integration

Flexible & Scalable Solution

Modular battery expansion from 60.27kWh to 241.08kWh
Up to 20 units parallel on-grid and 10 units off-grid for
MW-scale applications

Reliable Safety & Backup

Tier-1 LiFePO4 cells with intelligent fan cooling
10ms-level* on/off grid switching time with integrated STS

Easy Installation & Smart O&M

Modular battery design enables rapid plug-and-play deployment
KSTAR Sync remote monitoring with third-party EMS compatibility



Battery Model	BC-PACK-20.1-20S-157A	
Technical Parameters		
Battery type	LFP (LiFePO4)	
Battery Cell Brand	EVE	
Norminal Capacity	20.09 kWh	
Norminal Voltage	64 V	
Operating Voltage Range	57 ~ 72 V	
Charging / Discharging Rate	0.5 C	
Standard Charging / Discharging Current	157 A / 157 A	
Depth of Discharge	95%	
Module Connection	3 ~ 12 (Max. 12 Modules in Series)	
Total Battery Capacity	60.27 ~ 241.08 kWh	
Geneneral Parameters		
Dimensions(WxHxD)	554 x 290 x 970 mm	
Weight	155 kg	
Installation Site	Indoor	
IP Protection	IP21	
Anti Corrosion Level	C2	
Operation Humidity	0 ~ 95% (No Condensing)	
Operation Temperature	Charging: 0 ~ 50°C; Discharging: -20 ~ 50°C	
Max. Operation Altitude	≤ 3000 (>2000m Derating)	
Communication Prot	Etherne / CAN / RS-485	
Communication Protocol	CAN / TCP	
Cooling Method	Intelligent Fan Cooling	
Warranty	5 Year Product Warranty, 10 Year Performance Warranty	
HV Box Model	BC-SG-360	BC-SG-936
Technical Parameters		
Dimensions(WxHxD)	554 x 290 x 970 mm	
Weight	80 kg	
Max. Charge / Discharge Current	157 A	
Current Measurement Range	-157 ~ 157 A	
Operation Humidity	0 ~ 95% (No Condensing)	
Operation Temperature	-25 ~ 55°C	
IP Protection	IP21	
Installation Site	Indoor	
Cooling Method	Natural cooling	
Display	LCD	
Communication Interfaces	CAN; RS-485; Ethernet	
Battery Module Connection	3 ~ 5	6 ~ 13
Rated Voltage Range	171 ~ 360 V	342 ~ 936 V

* The 10ms on / off-grid switching time applies to single-PCS operation with a purely resistive load.

Product Specifications	KAC20DP2	KAC25DP2	KAC29.9DP2	KAC30DP2	KAC40DP2	KAC49.9DP2	KAC50DP2
PV Side							
MPPT Voltage Range	250 ~ 950 Vdc (Max. 1000 Vdc)						
MPPT Rated Voltage	720 Vdc						
MPPT Rated Voltage (Full Load)	300 ~ 800 V	350 ~ 800 V	400 ~ 800 V	400 ~ 800 V	500 ~ 800 V	600 ~ 800 V	600 ~ 800 V
Max. PV Power	40 kWp	50 kWp	60 kWp	60 kWp	80 kWp	100 kWp	100 kWp
Number of MPPT / Strings per MPPT	4 / 2						
Max. Current per MPPT	45 A						
Battery Side							
Battery Voltage Range	150 ~ 950 Vdc						
Battery Rated Voltage Range	180 ~ 800 Vdc						
Max. DC Current	40 Adc x 2	50 Adc x 2	60 Adc x 2	60 Adc x 2	80 Adc x 2	80 Adc x 2	80 Adc x 2
Max. DC Power	22 kW	27.5 kW	29.9 kW	33 kW	44 kW	49.9 kW	55 kW
Number of DC Inputs	2						
AC Side (On Grid)							
Nominal AC Output Power	20 kW	25 kW	29.9 kW	30 kW	40 kW	49.9 kW	50 kW
Max. AC Output Power	22 kVA	27.5 kVA	29.9 kVA	33 kVA	44 kVA	49.9 kVA	55 kVA
Max. AC Input Power (Single-phase)	20 kW	25 kW	25 kW	25 kW	27.5 kW	37.5 kW	37.5 kW
Rate AC Output Current	29 A	36 A	43.5 A	43 A	58 A	72 A	72 A
Max. AC Input Current	64 A	80 A	87 A	96 A	128 A	144 A	160 A
AC Rated Voltage / Voltage Range	230 / 400 Vac; 220 / 380 Vac; 3L+PE+N; -15% ~ +10%						
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz (±5 Hz)						
THDi	< 3% (100% Load)						
Adjustable PF Range	0.8 inductive(under-excited) to 0.8 capacitive(over-excited)						
Backup Output							
Nominal AC Voltage	230 / 400 V; 220 / 380 Vac; 3L+PE+N						
THDv	< 3% (Rated Power)						
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz						
Nominal AC Output Power	20 kW	25 kW	29.9 kW	30 kW	40 kW	49.9 kW	50 kW
Max. AC Output Power (Single-phase)	20 kW	20 kW	20 kW	20 kW	25 kW	25 kW	25 kW
Max. Output Current	87 A	87 A	87 A	87 A	110 A	110 A	110 A
Genset Input							
Max. Input Current	87 A	87 A	87 A	87 A	110 A	110 A	110 A
Efficiency							
Max. Efficiency	97%				97.5%		
Protection							
Reverse DC Connection Protection	Yes						
Anti-Islanding Protection	Yes						
Over-Temperature Protection	Yes						
Grid Monitoring / Earthing Fault Detection	Yes						
Insulation Monitoring	Yes						
DC / AC Surge Protection	DC Type II; AC Type II						
AFCI	Optional						
General Parameters							
Dimensions (W x H x D)	900 x 730 x 355 mm						
Weight	101 kg						
Topology	Transformerless						
IP Protection	IP66						
Operation Temperature Range	-30 ~ 60°C (> 45°C Derating)						
Operation Humidity Range	0 ~ 100% (No Condensing)						
Cooling Method	Intelligent Air Cooling						
Max. Operation Altitude	4000 m (> 3000 m Derating)						
Communication Port	RS-485 / CAN						