KSTAR
Powering the Future

BluePulse Series

NEW

KAC20DP2 / KAC25DP2 / KAC29.9DP2 / KAC30DP2 / KAC40DP2 / KAC49.9DP2 / KAC50DP2
BC70DE2 / BC89DE2 / BC107DE2



Versatile Application

- Ideal for factories, hotels, and farms with DC / AC-coupled solar-storage
- 10ms-level* on / off grid switching time with integrated STS

Safe & Reliable

- 280ah large capacity cell,higher energy density
- Carbon monoxide detection, Sound and light alarm, Exhaust fan, Explosion vent window, Inlet valve, Fire water injection port

Smart Energy

- Supports self-consumption, peak shifting, time-of-use, and battery backup
- Integrated self-developed BMS / EMS for flexibility

High Performance

- Max. 20 PCS parallel for on-grid, 10 PCS for on / off-grid situation
- Long-lasting battery cycle life

Easy Operation

- Compact design saves space
- Cloud control with 24 / 7 monitoring

Technical Parameters	BC70DE2	BC89DE2	BC107DE2
Battery Type		LFP	
Battery Module Capacity		17.92 kWh	
Cell Type		280 Ah	
Number of Modules	4	5	6
Total Battery Capacity	71.68 kWh	89.6 kWh	107.52 kWh
Nominal Voltage	256 V	320 V	384 V
Operating Voltage Range	228 ~ 288 V	285 ~ 360 V	342 ~ 432 V
Max. Charge / Discharge Rate		0.5 C *	
DoD		95%	
General Parameters			
Dimensions (W x H x D)		1062 x 2083 x 1371 mm	
Weight	< 1.2 T	< 1.35 T	< 1.5 T
Installation Site		Outdoor	
IP Protection		IP54	
Anti Corrosion Level		C4	
Operation Humidity		5% ~ 95% (No Condensing)	
Operation Ttemperature		-30°C ~ +50°C	
Max. Operation Altitude		≤ 3000 m	
Communication Port		Ethernet; CAN; RS485	
Communication Protocol		CAN; MODBUS TCP / IP	
Cooling Method		Air Conditioner	
Certification		UL 9540A; UN38.3; MSDS; IEC 62040; IEC 62477; IEC 62619; IEC 63056; IEC 61000-6-2/4	

* The 10ms on / off-grid switching time applies to single-PCS operation with a purely resistive load.
** Max charge / discharge rate is limited to the inverter, in case of use 2 batteries and one inverter, max power remain the same.

Hybrid Inverter Parameters

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	IP65						
Operation Temperature Range	-30 ~ 60℃ (> 45℃ 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						

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BluePulse Series NEW

KAC50DP-BC100DE / KAC50DP-BC107DE / KAC50DP(2)-BC197DE[1)]

Safe & Reliable

- CATL LFP Battery Cell
- Double Fire Suppression System Design

Economical & Efficient

- Save CapEx, Expanding as Required
- Efficient and Energy-saving HVAC Design

Simple & User-friendly

- Pre-installed in Factory for Easy Installation on site
- Integrated BMS / EMS, Suitable for Various Applications
- Effortless Operation, Cloud Control



Outdoor Battery Cabinet Parameters

Technical Parameters	BC100DE	BC107DE	BC197DE
Battery Type		LFP	
Manufacturer		CATL	
Cell Type	100 Ah	280 Ah	280 Ah
Battery Module Capacity	5.12 kWh	17.92 kWh	17.92 kWh
Number of Modules	20	6	11
Total Battery Capacity	102. 4 kWh	107.52 kWh	197.12 kWh
Nominal Voltage	512 V	384 V	704 V
Operating Voltage Range	456 ~ 576 V	342 ~ 432 V	627 ~ 792 V
Charge / Discharge Rate		Max. 0.5 C	
DoD		90%	
General Parameters			
Dimensions (W x H x D)	1100 x 2380 x 1100 mm	1050 x 2000 x 1366 mm	1300 x 2380 x 1200 mm
Weight	< 1.5 T	< 1.45 T	< 2.5 T
Installation Site		Outdoor	
IP Protection		IP54	
Anti Corrosion Level		C4	
Operation Humidity		5% ~ 95% (No Condensing)	
Operation Temperature		-30°C ~ +50°C	
Max. Operation Altitude		≤ 3000 m	
Communication Port		Ethernet; CAN	
Communication Protocol		CAN; TCP	
Cooling Method		Air Conditioner	
Certificates		UN38.3; MSDS; IEC 62040; IEC 62477; IEC 62619; IEC 63056; IEC 61000-6-2/4	

1) The BC197DE battery cabinet supports both a 0.25 C configuration with a single KAC50DP and a 0.5 C configuration with two KAC50DP units.

Hybrid Inverter Parameters

Product Specifications	KAC50DP
PV Side	
Max. Input Voltage	1000 V
MPPT Voltage Range	350 ~ 800 V
Max. Current per MPPT	36 A
Number of MPPT	3
Number of Inputs per MPPT	2
Battery Side	
Max. Input Voltage	750 V
Min. Input Voltage	350 V
DC Voltage at Nominal Operation	500 ~ 750 V
Max. DC Current	55 A x 2
Max. DC Input Power	55 kW [1)]
Number of DC Inputs	2
AC Side (On Grid)	
Nominal AC Output Power	50 kW
Max. AC Output Power	55 kVA
Max. AC Current	80 A
Nominal AC Voltage	400 V
AC Voltage Range	340 ~ 440 V
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz (±5 Hz)
THDi	< 3% (100% Load)
Adjustable PF Range	-1 (Lagging) ~ 1 (Leading)
AC Side (Off Grid) [2)]	
Nominal AC Voltage	400 V
THDv	< 3% (Linear Load)
Nominal Grid Frequency / Frequency Range	50 Hz / 60 Hz
Nominal AC Output Power	50 kW
Max. AC Output Power	55 kVA
Efficiency	
Max. Efficiency	97.5%
Protection	
Reverse Connection Protection	Yes
DC Switch	Yes
Over-Temperature Protection	Yes
Grid Monitoring / Earthing Fault Detection	Yes
Insulation Monitoring	Yes
DC / AC Surge Protection	DC Type II; AC Type III
General Parameters	
Dimensions (W x H x D)	650 x 715 x 325 mm
Weight	76 kg
Topology	Transformerless
IP Protection	IP65
Operation Temperature Range	-25 ~ 60℃ (> 45℃ Derating)
Operation Humidity Range	0 ~ 100% (No Condensing)
Cooling Method	Intelligent Air Cooling
Max. Operation Altitude	3000 m
Communication Port	RS-485 / CAN
Certificates	EN IEC 62109-1/2; IEC EN 62477-1; EN IEC 61000-6-2/4; EN IEC 61000-3-11; EN 61000-3-12; IEC 60068-2-1/2/14/30/52; IEC 61683; IEC 61727; IEC 62116; IEC 60529; C10/11; CEI 0-21; EN 50549-1; DIN VDE 0126-1-1; VDE-AR-N 4105; UNE 217001

1) When KAC50DP is used with BC107DE, Max. charge and discharge power is 40 kW.
2) For on / off-grid switching application, STS100D or STS250D automatic switching cabinet is needed.

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