



All-in-One Energy Storage Three-phase System

ZHEJIANG BENYI NEW ENERGY CO.,LTD.

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Product Introduction

The PowerSmart Duo series uses lithium iron phosphate (LFP) batteries , which are safe , long-lasting , efficient , and have high power density. Intelligent BMS provides comprehensive protection . Integrated design , capable of integrating 30/37/45/60KW energy storage systems and 15/20/25/35KW hybrid inverters . Waterproof rating IP54 , suitable for various household scenarios . Plug and play , no exposed power interface , safe and reliable .



	5 Year Warranty or 6,000 Charging Cycles
	Local &Remote Monitoring
	Plug and Play
	Expandable Storage
	IP54 Rating

Product Specifications

MODEL	BYAIO-3PH15-30	BYAIO-3PH20-39	BYAIO-3PH25-45	BYAIO-3PH30-60
PV input				
Max. DC input Power (kw)	22.5	30	37.5	45
Max. Pv Voltage (V)	1000	1000	1000	1000
Rated DC input Voltage (V)	620	620	620	620
DC input Voltage Range (V)	150-1000	150-1000	150-1000	150-1000
MPPT Voltage Range (V)	150-850	150-850	150-850	150-850
Full MPPT Range(V)	500-850	500-850	500-850	500-850
Start up Voltage (V)	160	160	160	160
Max. DC input current (A)	20+32	32x2	40x2	40x2
Max. Short Current(A)	30+48	48x2	60x2	60x2
No.of MPPT Tracker / Strings	2/3	2/4	2/4	2/4
Battery Port				
Battery Type	LiFePO4 102Ah	LiFePO4 102Ah	LiFePO4 102Ah	LiFePO4 102Ah
Battery Capacity	31.33kWH	39.16kWH	46.99kWH	62.66kWH
Nominal Battery Voltage	284.8V	356V	427.2V	569.6V
Battery Voltage Range	240-350.4V	300-438V	360-525.6V	480-700.8V
Number of Battery Pack	4	5	6	8
Charging Curve	3 Stages			
Protection	Over Voltage, Under Voltage, Over Current, Short Circuit, Over Temperature, Under temperature			
Depth Of Discharge	Lithium lon 0~90% DOD Adjustable			
AC Grid				
Nominal AC Output Power (kw)	15	20	25	30
Max. AC Input Power (kVA)	22.5	30	37.5	45
Max. AC Output current(A)	27	32	40	48
Nominal AC Voltage (V)	230/400			
Nominal AC Frenquency (Hz)	50/60			
Power Factor	1[-0.8~0.8]adjustable			
Current THD (%)	<3%			
AC Load Output (Back-up)				
No minal Output Power (VA)	15000	20000	25000	30000
Nominal Output Voltage (V)	230/400	230/400	230/400	230/400
Nominal Output Frequency (Hz)	50/60	50/60	50/60	50/60
Nominal Output Current (A)	21.8	29	36.3	43.5
Peak Output Power	16500VA, 60S	22000VA, 60S	27500VA, 60S	33000VA, 60S

THDV (with linear load)			<3%	
Switching Time (ms)			<10	
Efficiency				
Euro Efficiency	97.5%	97.8%	98%	98.1%
Max.Efficiency	98.3%	98.2%	98.5%	98.5%
Battery Charge/Discharge Efficiency	98%	98%	98%	98%
Protection				
Reverse Polarity Protection	YES			
Over Current / Voltage Protection	YES			
Anti-islanding Protection	YES			
AC Short-circuit Protection	YES			
Leakage Current Detection	YES			
Ground Fault Monitoring	YES			
Grid Monitoring	YES			
AC/DC surge protection	Type II			
General Data				
DC Switch	Standard			
Dimensions [W*H*D] [mm]	950*650*1810			
Net Weight [KG]	620	680	740	860
Protection Degree	IP54			
Topology	Transformerless			
Cooling Concept	Intelligent Fan			
Relatively Humidity	0-100%			
Operating Temperature Range [°C]	0°C~50°C charge/-20°C~50°C discharge			
Operating Altitude (m)	<4000			
Standby Consumption (w)	<5			
Display & Communication Interfaces	LCD,LED,RS485,CAN,Wi-Fi,GPRS,4G			
Certification & Approvals	NRS097,G98/G99,EN50549-1,C10/C11,AS4777.2,VDE-AR-N4105,VDE0126,IEC62109-1,IEC62109-2			
EMC	EN61000-6-2,EN61000-6-3			