



RACK-MOUNTED ENERGY STORAGE SYSTEM



BND-50k 143(户外一体柜)

- All-in-One Integration**
 - Built-in Battery/Fire Protection/Temperature Control/Monitoring, Ready for Immediate Installation and Use Upon Delivery.
- Elastic Scalability**
 - Modular design allows for flexible capacity adjustment, catering to dynamic demands.
- Intelligent BMS**
 - It has protection functions including over-discharge, over-charge, over-current and over-high or low temperature. The system can automatically manage charge and discharge state and balance current and voltage of each cell.
- Eco-friendly**
 - The whole module is non-toxic, non-polluting and environmentally friendly.
- Flexible Configuration**
 - Multiple battery modules can be in parallel for expanding capacity and power. Support USB upgrade, wifi upgrade (optional), remote upgrade (Compatible with Deye inverter).
- Wide Temperature**
 - Working temperature range is from -20°C to 55°C , with excellent discharge performance and cycle life.
- Smart Scenarios**
 - Peak Shaving and Valley Filling; Demand Response, Backup Power Support: Remote Strategy Upgrades, Reducing Operational Costs by 30%+.

Model	BND-50k 143(户外一体柜)	
Main Parameter		
Battery Chemistry	LiFePO ₄	
Capacity(Ah)	280	
Nominal Voltage (V)	512	
Operating Voltage(V)	432~576	
Energy (KWh)	143	
Charge/Discharge	Recommend	120
	Max.	140
Current (A)	Peak	160 (15s, 25°C)
Dimension (mm)	1180*1165*1955*(2015)(Left-Right * Front-Back * Height {including lifting rings})	
IP Rating of Enclosure	IP54	
Operating Temperature	Charge: 0~+55°C/Discharge: -20°C~+55°C	
Storage Temperature	0°C~+35°C	
Humidity	5%-95%	
Altitude	≤2000m	
Cycle Life	≥6000(25°C±2°C, 0.2C/0.2C, 70%EOL)	
Installation	Rack-Mounted	
Communication Port	CAN	
Warranty Period	5 years	

Cabinet Air Conditioner

Model	EC20HDNC1B
Rated Voltage	220VAC 50Hz
Rated Cooling Capacity	2000W (L35/L35)
Rated Heating Capacity	1000W
Rated Cooling Power Input	850W(L35/L35)
Rated Heating Power Input	1000W
Rated Cooling Current	3.9A(L35/L35)
Max.Current	6.5A
Design Pressure	ND/LP 1.6MPa (232 PSIG) HD/HP 2.8MPa (406 PSIG)
Refrigerant	R134a
IP Code	Ip55 for outdoor side
Weight	35kg

Inverter Specification Table

Models	50K
Input DC (PV side)	
Recommended max. PV array size	100 kW
Max. usable PV input power	96kW
Max. input voltage	1000 V
Rated voltage	600 V
Start-up voltage	180 V
MPPT voltage range	150 – 850 V
Max. input current	4 x 40 A
Max. short circuit current	4 x 60 A
MPPT number / Max. input strings number	4 / 8
Battery	
Battery type	Li-ion
Battery voltage range	150 – 800 V
Max. charge / discharge power	55 kW
Max. charge / discharge current	70 A x 2 (1)
No. of battery inputs	2
Max. charge / discharge power of each input	35 kW
Communication	CAN / RS485
Output AC (Grid side)	
Rated output power	50 kW
Max. apparent output power	50 kVA
Rated grid voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
Rated grid frequency	50 Hz / 60 Hz
Rated grid output current	76 A / 72.2 A
Max. output current	76 A / 72.2 A
Power factor	> 0.99 (0.8 leading – 0.8 lagging)
THDi	< 3%
Input AC (Grid side)	
Max. AC passthrough current	152 A / 144.4 A
Rated input voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
Rated input frequency	50 Hz / 60 Hz
Input Generator	
Max. input power	50 kW
Rated input current	76 A / 72.2 A
Rated input voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
Rated input frequency	50 Hz / 60 Hz
Output AC (Back-up)	
Rated output power	50 kW
Max. apparent output power	1.6 times of rated power, 2 s
Back-up switch time	< 10 ms
Rated output voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V
Rated frequency	50 Hz / 60 Hz
Rated output current	76 A / 72.2 A
THDv (@linear load)	< 2%
Efficiency	
Max. efficiency	97.8%
EU efficiency	97.4%
BAT charged by PV max. efficiency	98.5%
BAT charged / discharged to AC max. efficiency	97.5%

Protection	
Anti-islanding protection	Yes
Output over current protection	Yes
Short circuit protection	Yes
Integrated DC switch	Yes
DC reverse-polarity protection	Yes
Surge protection	DC Type II / AC Type II
Integrated AFCI 2.0	Optional
General Data	
Dimensions (W x H x D)	530 x 880 x 290 mm
Weight	73 kg
Topology	Transformerless
Self-consumption (night)	< 35 W
Operating ambient temperature range	-25 ~ +60°C
Relative humidity	0 – 95%
Ingress protection	IP66
Cooling concept	Intelligent fan-cooling
Max. operation altitude	4000 m
Grid connection standard	G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1/EN 50549-10, VDE 0126/UTE C 15/VFR:2019, NTS 631/RD 1699/RD 244/UNE 206006/UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA, PORTARIA Nº 140, DE 21 DE MARÇO DE 2022
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011
Features	
PV connection	Mc4 Quick connection plug
Battery connection	Terminal connector
AC connection	Terminal Block
Display	7.0" LCD display & Bluetooth + APP
Communication	CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN

(1) Supporting parallel 140A input.