



All-in-One Energy Storage single-phase System

ZHEJIANG BENYI NEW ENERGY CO.,LTD.

SHUANGHUANGLOU INDUSTRIAL ZONE, BEIBAIXIANG TOWN, YUEQING CITY, WENZHOU CITY, ZHEJIANG PROVINCE, CHINA.

TEL: +86-577-5717 7008 FAX: +86-577-5717 7007

✉ info@beny.com

Importer:xxxxxx

✉ www.beny.com

Address:xxxxxx

⌚ This catalogue has been printed on ecological paper.

© Zhejiang Benyi New Energy Co., Ltd. All rights reserved.

⚠ If the models and specifications in this product catalogue change due to product updates, we will not provide prior notification.



VERSION 0 20240911 -01

Product Introduction

The BYAIO 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 20/25/30/40kWH energy storage systems and 6/8/10/12kW 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-1PH6-20 | BYAIO-1PH8-25 | BYAIO-1PH10-30 | BYAIO-1PH12-40 |
|-------------------------------|---|----------------------------------|----------------------------------|----------------------------------|
| PV input | | | | |
| Max. input Power (kw) | 9 | 12 | 15 | 18 |
| Max. Pv Voltage (V) | 550 | 550 | 550 | 550 |
| MPPT Range (V) | 80-500 | 80-500 | 80-500 | 80-500 |
| Full MPPT Range (V) | 170-500 | 150-500 | 130-500 | 160-500 |
| Normal Voltage (V) | 360 | 360 | 360 | 360 |
| Startup Voltage (V) | 100 | 100 | 100 | 100 |
| Max. input Current (A) | 18.5x2 | 18.5x3 | 18.5x3 | 18.5x3 |
| Max. short Current (A) | 26x2 | 26x2 | 26x2 | 26x2 |
| No. of MPPT Tracker / Strings | 2/2 | 3/4 | 3/4 | 3/4 |
| Battery Port | | | | |
| Battery Type | LiFePO4 102Ah | LiFePO4 102Ah | LiFePO4 102Ah | LiFePO4 102Ah |
| Total Battery Capacity | 20.8kWH | 26kWH | 31.2kWH | 41.6kWH |
| Nominal Battery Voltage | 51.2V | 51.2V | 51.2V | 51.2V |
| Battery Voltage Range | 40-58.4V | 40-58.4V | 40-58.4V | 40-58.4V |
| Protection | Over Voltage, Under Voltage, Over Current, Short Circuit, Over Temperature, Under temperature | | | |
| Depth Of Discharge | Lithium Ion 0~90% DOD Adjustable | | | |
| AC Grid | | | | |
| Max Continuous Current (A) | 28 | 37 | 46 | 55 |
| Max Continuous Power (kVA) | 6 | 8 | 10 | 12 |
| Nominal Grid Current (A) | 28/26.1 | 37/35 | 46/44 | 55/52 |
| Nominal Grid Voltage (V) | 198 to 242 @220/ 207 to 253 @230 | 198 to 242 @220/ 207 to 253 @230 | 198 to 242 @220/ 207 to 253 @230 | 198 to 242 @220/ 207 to 253 @230 |
| Nominal AC Frequency (Hz) | 50/60 | 50/60 | 50/60 | 50/60 |
| Current THD(%) | <3 | <3 | <3 | <3 |
| AC Load Output | | | | |
| Max Continuous Current (A) | 28 | 37 | 46 | 55 |
| Max Continuous Power (kVA) | 6 | 8 | 10 | 12 |
| Max Peak Current (A) (10min) | 41/39.2 | 55.5/52.5 | 69/66 | 82.5/78 |
| Max Peak Power (kVA) (10min) | 9 | 12 | 15 | 18 |
| Nominal Ac Voltage L-N (V) | 220 /230 | 220 /230 | 220 /230 | 220 /230 |

| | | | | |
|----------------------------------|--|-----------------|-----------------|-----------------|
| Nominal Ac Frequency(Hz) | 50/60 | | | |
| Switching Time (ms) | <10 | | | |
| Woltage THD(%) | <3 | | | |
| Efficiency | | | | |
| CEC Effciency (%) | 97.0% | / | / | / |
| Max. Efficiency (%) | 97.6% | 96.8% | 96.8% | 96.8% |
| PV to Bat. Efficiency (%) | 98.1% | / | / | / |
| Bat. between AC Efficiency (%) | 96.8% | / | / | / |
| Protection | | | | |
| PV Reverse Polarity Protection | YES | YES | YES | YES |
| Over Current/Voltage Protection | YES | YES | YES | YES |
| Anti-Islanding Protection | YES | YES | YES | YES |
| AC Short-circuit Protection | YES | YES | YES | YES |
| Residual Current Detection | YES | YES | YES | YES |
| Ground Fault Monitoring | YES | YES | YES | YES |
| Insulation Resister Detection | YES | YES | YES | YES |
| PV Arc Detection | YES | YES | YES | YES |
| AC/DC surgeprotection | Type II | Type II | Type II | Type II |
| General Data | | | | |
| DC Switch | Standard | Standard | Standard | Standard |
| Dimensions [W*H*D] [mm] | 950*650*1810 | 950*650*1810 | 950*650*1810 | 950*650*1810 |
| Net Weight [KG] | 450 | 505 | 560 | 670 |
| Protection Degree | Ip54 | Ip54 | Ip54 | Ip54 |
| Topology | Transformerless | Transformerless | Transformerless | Transformerless |
| Cooling Concept | Intelligent Fan | Intelligent Fan | Intelligent Fan | Intelligent Fan |
| Relatively Humidity | 0-100% | 0-100% | 0-100% | 0-100% |
| Operating Temperature Range(°C) | 0 to 50 °C | 0 to 50 °C | 0 to 50 °C | 0 to 50 °C |
| Operating Altitude(m) | <4000 | | | |
| Stand by Consumption(w) | <5 | | | |
| Display&Communication Interfaces | LCD,LED,RS485,CAN,Wi-Fi,GPRS,4G | | | |
| Certification&Approvals | NRS097,EN50549-1,C10/C11,AS4777.2,VDE-AR-N4105,VDE0126,IEC62109-1,IEC62109-2 | | | |
| EMC | EN61000-6-2,EN61000-6-3 | | | |