



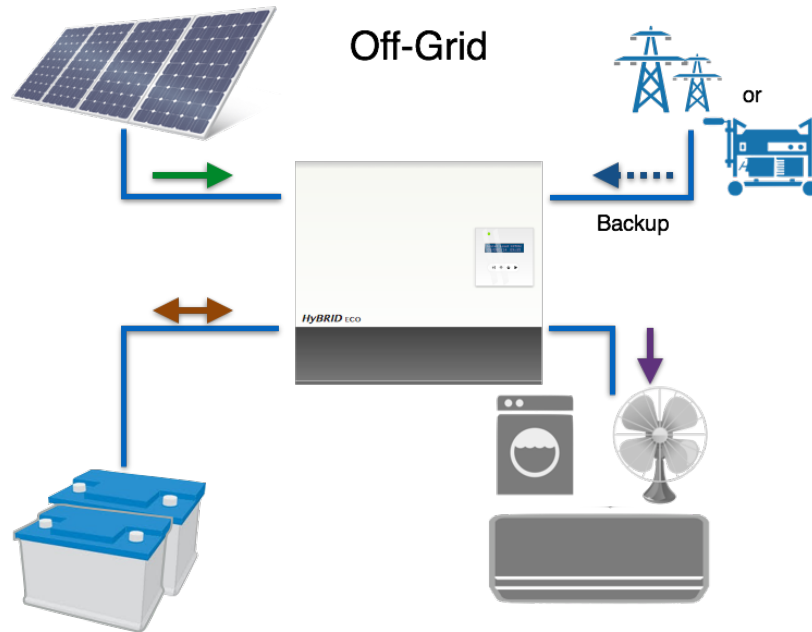
HYBRID ECO™ PV INVERTER

Economically powerful solution for Photovoltaic and Storage

FEATURES

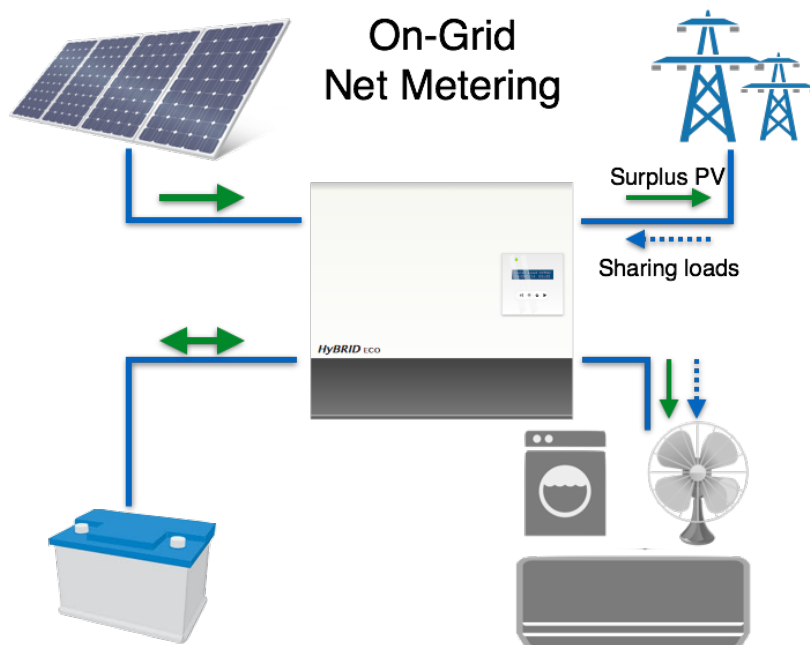
- Best CP value
- All-in-One
- 96% Conversion Efficiency
- Standalone/Grid Interactive
- 60A Charging Current
- 200% Overload
- Net-metering & Self-use
- Operation without Battery^{NEW}
- UPS Function^{NEW}
- VRLA & LiFePO₄ Batteries
- High Temp. & Humidity
- Parallel Operations
- Cloud Monitoring (Optional)
- iOS & Android APP

Operation Modes



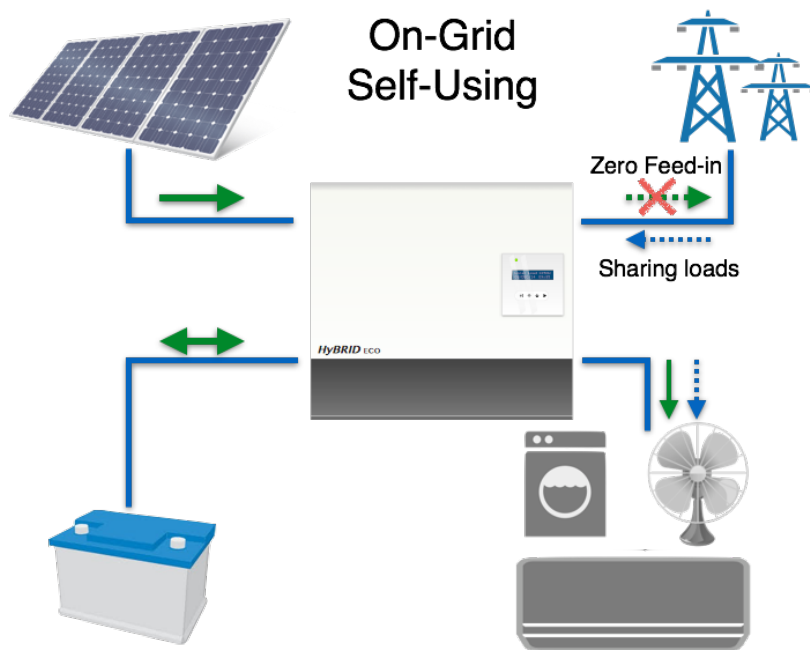
Operations

- AC grid or genset acts as a backup source
- Inverter supplies loads from PV and/or batteries
- Surplus PV power charges batteries
- Loads will be switched to backup input automatically while needed



Operations

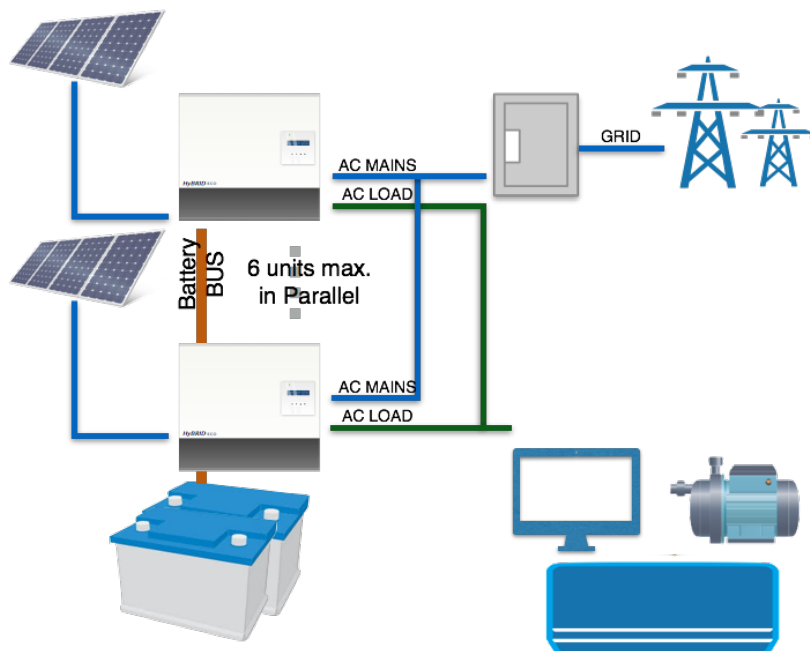
- Inverter output is physically connected to grid AC
- Inverter supplies loads from PV and/or batteries
- Extra PV power charges batteries and/or feeds grid
- Inverter and grid AC power loads together



Operations

- Inverter output is physically connected to grid AC
- Inverter supplies loads from PV and/or batteries
- Extra PV power charges batteries
- Zero feeding to grid
- Inverter and grid AC power loads together

Multi-unit System



Features

- Up to 6 units in parallel for increasing system capacity
- Inverters share same battery bank
- Inverters power common loads
- Off-grid or on-grid mode

Specifications

| Model | | PH-3000E-D | PH-5000E-D |
|-----------------------------------|----------------|--|-------------------|
| Input (PV) | | Unit | |
| Max. PV Power | W _p | 3000 | 5000 |
| MPPT Range ¹ | V | 150 ~ 450 | 150 ~ 450 |
| Max. DC Voltage | V | 500 | 500 |
| Max. Current | A | 10 | 20 |
| Input (AC) | | Unit | |
| Nominal Voltage, Frequency | V/Hz | 230, 50/60 | |
| Maximum Current | A | 15 | 25 |
| Battery | | | |
| Nominal Voltage | V | 48 | 48 |
| Max. Charging I Current | A | 40 | 60 |
| Output (AC) | | | |
| Nominal Power | W/VA | 2400/3000 | 4000/5000 |
| Nominal Voltage, Frequency | V/Hz | 230, 50/60 | |
| Over-Load Capacity | % | 200 | |
| Waveform | | Pure Sinusoidal | |
| Regulation (Linear Load) | % | ± 2 | |
| General | | | |
| Temperature Range ² | °C | -20 ~ 55 | |
| Environment | | Indoor | |
| Cooling | | Forced Air-Cooling | |
| Humidity | % | 0~95, non-condensing | |
| Battery Type | | VRLA or LiFePO ₄ | |
| UPS function | | Yes. Transfer time < 4mS ³ | |
| Parallel Operation | | No | Yes |
| Interface & Mechanical | | | |
| Display | | 16 x 2 Text Display | |
| Communication Interface | | RS485, USB and optional CloudVOLT™ monitoring | |
| Dimension (W / H / D) | mm | 425/388/120 | 425/388/120 |
| Weight | kg | 12 | 14 |
| Regulation⁴ | | | |
| Safety | | IEC 62109-1 & IEC 62109-2 | |
| EMC | | IEC/EN 61000-3-2 | IEC/EN 61000-3-11 |
| | | IEC/EN 61000-3-3 | IEC/EN 61000-3-12 |
| | | IEC/EN 61000-6-2, IEC/EN 61000-6-4 | |
| Grid Monitoring | | VDE 0126-1-1/A1, IEEE 519 CEA (2013), IEC 61727, IEC 62116 | |

Note: 1. Input power may be reduced for $V_{PV} < 265V$ 2. AC power may need to be reduced for $T > 40^{\circ}C$ 3. Valid for single unit operation 4. Design to meet 5. Specifications are subject to change without prior notice

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