MUST
Solar Power System

## ON/OFF GRID HYBRID SOLAR INVERTER

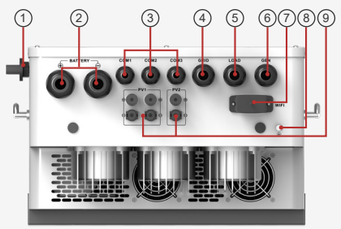
# PH1100 EU Series

5~12KW | Three Phase | 380VAC

PH1100 EU is brand new three phase hybrid inverter with low battery voltage 48V, ensuring system safe and reliable. With compact design and high-power density, this series supports 1.3 DC/AC ratio, saving device investment. It supports three phase unbalanced output, extending the application scenarios. Equipped with CAN port (x2) BMS and parallel, x1 RS485 port for BMS, x1 RS232 port for remotely control, x1 DRM port, which makes the system smart and flexible.

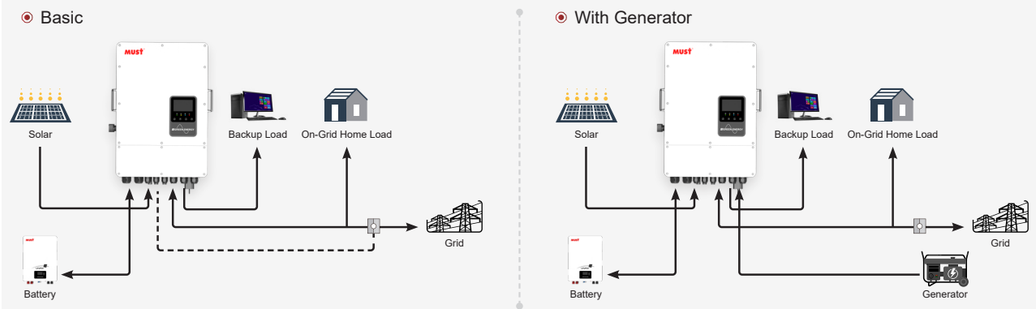

- 100% unbalanced output, each phase max. output up to 50% rated power
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 240A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation design
- IP65 water-proof and dust-proof
- "Time of use" function: a maximum of 6 time segments can be set
- Wifi monitoring

## Back panel description




1. DC switch
2. Battery input connectors
3. BTS terminals, BMS terminals, load monitor terminals, dry contact terminals, CAN communication terminals, USB terminal and cover
4. Circuit breaker of Grid
5. Load
6. Generator input
7. WiFi Interface
8. Ground
9. PV input with two MPPT

## Solar system connection




| MODEL | PH1100-5KL3-EU | PH1100-6.5KL3-EU | PH1100-8KL3-EU | PH1100-10KL3-EU | PH1100-12KL3-EU |
|---|---|---|---|---|---|
| Rated power | 5000W | 6500W | 8000W | 10000W | 12000W |
| **BATTERY INPUT DATA** | | | | | |
| Battery type | Lead-acid battery / Lithium battery | | | | |
| Battery voltage | 48V | | | | |
| Battery voltage range | 40~60V | | | | |
| Charging curve | 3-stage adaptive with maintenance/Equalization | | | | |
| Charging Strategy for Li-Ion Battery | Self-adaption to BMS | | | | |
| Over-current protection/ Over-temperature protection | Yes / Yes | | | | |
| Maximum charging/discharging power | 5000W | 6500W | 8000W | 10000W | 12000W |
| Maximum charging/discharging current | 120A | 150A | 190A | 210A | 240A |
| **PV STRING INPUT DATA** | | | | | |
| Max. DC Input Power | 6500W | 8450W | 10400W | 13000W | 15600W |
| Rated PV Input Voltage | 550V | | | | |
| Maximum DC voltage | 800V | | | | |
| Start-up Voltage | 160V | | | | |
| Minimum voltage for grid connection | 310V | | | | |
| Full Load DC Voltage Range | 350-650V | | | | |
| Enter high voltage error recovery point | 800V | | | | |
| MPPT voltage range | 200~650V | | | | |
| Maximum input current | 15A/15A | | | 30A/15A | |
| No.of MPP Trackers | 2 | | | | |
| No.of Strings per MPP Tracker | 1+1 | | | 2+1 | |
| **AC INPUT/OUTPUT DATA** | | | | | |
| Rated AC Input/ Output Power | 5000W | 6500W | 8000W | 10000W | 12000W |
| Max AC Input/ Output Power | 5500W | 7150W | 8800W | 11000W | 13200W |
| AC Input/ Output Rated Current | 7.6/7.2A | 9.8/9.42A | 12.1/11.6A | 15.2/14.5A | 18.2/17.4A |
| Max AC Input/ Output Current | 8.4/8A | 10.8/10.4A | 13.4/12.8A | 16.7/15.9A | 20/19.1A |
| Max. Three-phase Unbalanced Output Current | 11.4/10.9A | 14.7/14.1A | 18.2/17.4A | 22.7/21.7A | 27.3/26.1A |
| Power Factor Adjustment Range | 0.8 leading to 0.8 lagging | | | | |
| Rated Input/Output Voltage | 220/380,230/400Vac | | | | |
| Rated Input/Output Grid Frequency/Range | 50/60;45~55/55-65 | | | | |
| Grid Type | Three Phase | | | | |
| Total Harmonics Current Distortion (THDi) | <3% (of nominal power) | | | | |
| DC Current Injection | <0.5% In | | | | |
| **EFFICIENCY** | | | | | |
| Max. Efficiency | ≥97.6% | | | | |
| Euro Efficiency | 97.0% | | | | |
| **PROTECTION** | | | | | |
| Integrated | Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection | | | | |
| Surge Protection | DC Type III/AC Type III | | | | |
| Overvoltage Category | DC Type II/AC Type III | | | | |
| **GENERAL DATA** | | | | | |
| Operating Temperature Range (°C) | -20°C to +60°C, >45°C Derating | | | | |
| Cooling | Intelligent air cooling | | | | |
| Noise (dB) | ≤55dB | | | | |
| Communication with BMS | RS485/CAN | | | | |
| Machine Dimension (W*H*D)(mm) | 446*656*285 (excluding connectors and racks) | | | | |
| Package Dimension (W*H*D)(mm) | 567*816*404 | | | | |
| N.W(kg) | 35 | | | | |
| G.W(kg) | 37 | | | | |
| Protection Degree | IP65 | | | | |
| Installation Style | Wall-mounted | | | | |
| Warranty | 5 Years<br>the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy | | | | |
| **CERTIFICATION & STANDARDS** | | | | | |
| CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC 62109-1, EN IEC 62109-2); CE-LVD(EN 62477-1) ; IEC 60529; EN50549-1; Poland Type A, (NC RfG:2016, PSE:2018, PTPiREE:2021)C10/C11; UNE217001-2020; UNE217002-2020, NTS-631 (Type A); G98+G99 | | | | | |

*The technical specifications of this document are subject to change without any notice