

# Low Frequency On/Off Grid Hybrid Solar Inverter

## PH3000 Series (3KW-4KW)



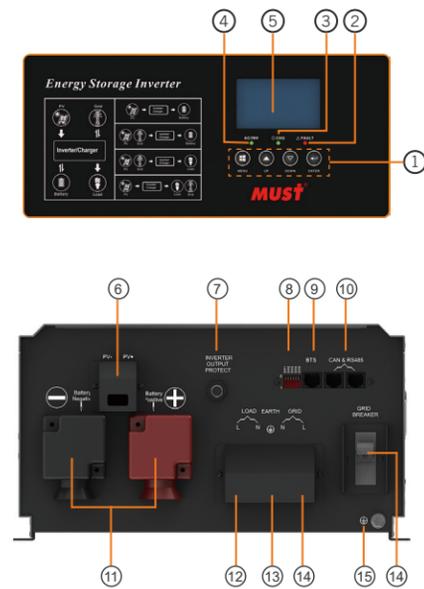
### Features

- Rated power 3KW to 4KW
- Smart LCD setting(Working modes, Charge Current, Charge Voltage, etc.)
- MPPT Efficiency max 98%
- Combining solar system, AC utility, and battery power source to supply continuous power
- Multiple operations: basic Grid-tie, Off-Grid, Grid-Interactive
- Parallel operation with up to 3 units
- Support CAN, RS485 monitoring function

### Introduction

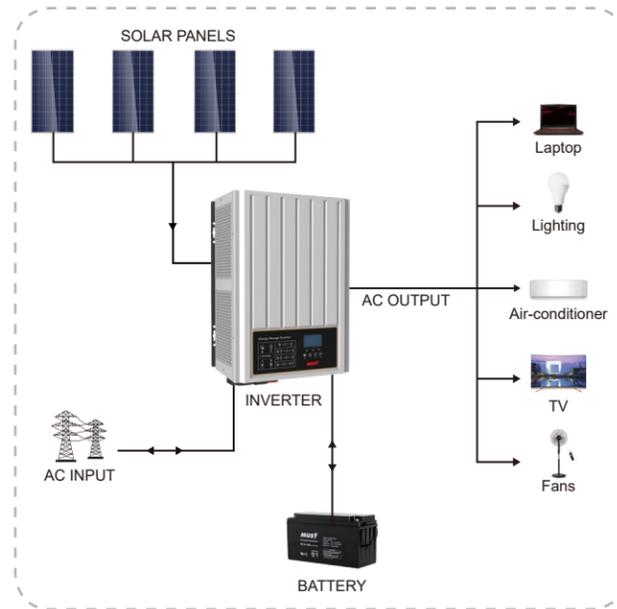
PH3000 series Energy Storage Inverter has capacity of 3KW and 4KW, it is multi-functional, combining functions of inverter, On-Grid, MPPT solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and acceptable input voltage based on different applications.

### Back panel printing description



- |                            |                                  |
|----------------------------|----------------------------------|
| 1. Function Buttons        | 9. BTS                           |
| 2. Fault Indicator         | 10. CAN&RS485 communication port |
| 3. Charging Indicator      | 11. Battery input                |
| 4. Status Indicator        | 12. Load                         |
| 5. LCD Display             | 13. Earth                        |
| 6. PV input                | 14. Grid                         |
| 7. Inverter output protect | 15. Earth                        |
| 8. Switch                  |                                  |

### Solar system connection



### Specification

| MODEL                                    | PH30-3048                          | PH30-4048   |               |
|--|------------------------------------|---|---------------|
| Nominal Battery System Voltage           | 48VDC                              |   |               |
| INVERTER OUTPUT                          | Rated capacity                     | 3750VA  | 5000VA        |
|  | Rated output power                 | 3000W   | 4000W         |
|  | Rated output voltage and frequency | 230Vac / 50Hz or 60Hz   |               |
|  | Rated output current               | 13A   | 17.4A         |
|  | Output voltage precision           | 230Vac ± 1%   |               |
|  | Output frequency precision         | 50Hz ± 0.1%   |               |
|  | THD (Linvar loads)                 | Off grid ≤ 2%   |               |
|  |                                    | Grid discharge ≤ 3%   |               |
|  |                                    | Grid charge ≤ 3%  |               |
|  | Dynamic response speed             | 20ms  |               |
|  | Power factor                       | Grid discharge 99.9% & Grid charge 99.9%  |               |
|  | Overload capability                | 30 minutes @ 100%<load≤110%   |               |
|  |                                    | 1 minutes @ 100%<load≤125%  |               |
|  |                                    | 30 seconds @ 125%<load≤150%   |               |
| 10 seconds @ 150%<load≤200%              |                                    |   |               |
| 5 seconds @ load>200%                    |                                    |   |               |
|  | 5 seconds @ short circuit          |   |               |
| Grid / Off grid change time              | < 10ms                             |   |               |
| Output wave                              | Sine wave                          |   |               |
| Inverting efficiency 80% resistive loads | ≥93%                               | ≥93%  |               |
| AC INPUT                                 | AC input maximum current           | 26A   | 34.8A         |
|  | Acceptable input voltage range     | Defaults 186Vac ~253Vac; Narrow 174Vac ~272Vac; Wide 95Vac ~272Vac  |               |
|  | AC Input frequency                 | 47.5Hz ~ 51.5Hz   |               |
| BATTERY                                  | Rated input voltage                | 48VDC   |               |
|  | Allowed input DC voltage range     | 40VDC~62VDC   |               |
|  | Low voltage alarm                  | 42VDC   |               |
|  | High voltage alarm                 | 60VDC   |               |
| SOLAR CHARGER & AC CHARGER               | PV Open Circuit Voltage            | 145VDC  |               |
|  | Max Solar Charging Current         | 60A   | 60A           |
|  | Max AC Charging Current            | 60A   | 80A           |
| DISPLAY & PROTECTION FUNCTION            | LED indication                     | Systematic operation, indication of charge and discharge, indication of fault   |               |
|  | LCD display                        | output voltage, output current, grid voltage, grid current, voltage of storage battery, load power, chart of capacity |               |
|  | Protection Function                | Input LV protection   |               |
|  |                                    | Input OV protection   |               |
| Output overload protection               |                                    |   |               |
|  | Output short circuit Protection    |   |               |
| MECHANICAL SPECIFICATIONS                | Mounting                           | Wall mounted  |               |
|  | Machine Dimensions (W*H*D)(mm)     | 337*462*183mm   | 370*462*183   |
|  | Package Dimensions (W*H*D)(mm)     | 476*602*325mm   | 476*602*325mm |
|  | Net Weight (kg)                    | 29.5  | 35            |
|  | Gross Weight (kg)                  | 33  | 38.5          |
| OTHER                                    | Communication terminal             | RS485 / CAN bus   |               |
|  | Operation Temperature Range        | 0°C~ +50°C  |               |
|  | Environmental Protection Rating    | Indoor(IP20)  |               |
|  | Ambient humidity                   | 0~90% relative humidity (non-condensing)  |               |
|  | Altitude                           | ≤3000m  |               |