



Where there is sunshine, there are "MUST" products and services  
— innovating a smarter green life.

— MUST ENERGY (GUANGDONG) TECHNOLOGY CO., LTD —

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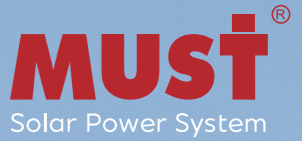
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Must Energy Group

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# PRODUCT CATALOGUE

## Inverter/ Solar Charge Controller



120V/230V

COMPANY PROFILE

**WHY CHOOSE MUST?**

MUST Energy has been deeply engaged in the global new energy industry for over 15 years. The company registered its independent brand "MUST" in 2010, providing global customers with full-stack integrated smart PV and energy storage products and solutions, covering PV inverters, residential energy storage, commercial & industrial energy storage, and network energy solutions. MUST is a National High-Tech Enterprise integrating R&D, manufacturing, sales and service.

MUST Energy currently operates a 50,000 m<sup>2</sup> intelligent manufacturing base, and will launch construction of a 60,000 m<sup>2</sup> Foshan New Energy Industrial Park in 2025, planned to include advanced R&D, smart manufacturing and high-efficiency delivery capabilities. MUST Energy persistently develops core cutting-edge technologies, having obtained 100+ patents and 30+ international authoritative certifications, while being recognized as a "National Specialized and Sophisticated SME 'Little Giant'" and the "Guangdong Provincial Engineering Research Center for Intelligent Off-grid Inverters".

MUST Energy drives global strategic development from the Guangdong-Hong Kong-Macao Greater Bay Area. The company is committed to delivering more cost-effective, efficient and intelligent PV and energy storage products and solutions for worldwide users.

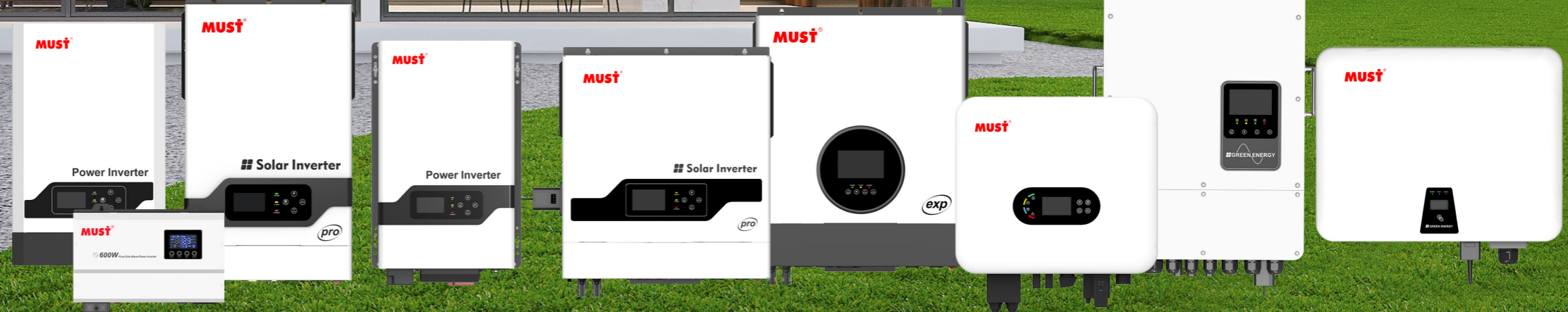
- Industry Experience **15+**
- R&D Personnel **100+**
- Global Subsidiaries **3**
- Manufacturing Base **50,000m<sup>2</sup>**
- Patents and Copyrights **120+**
- Employees **1000+**



**MUST** 美世乐  
美世乐(广东)新能源科技有限公司

# 230V Series

Off Grid Solar Inverter/ On/Off Grid Hybrid Solar Inverter/ Grid-Tie Solar Inverter/ Off Grid Power Inverter



## SIMULATED SINE WAVE SOLAR INVERTER PV1100 PLUS Series

1.2~2.4KVA | PWM 50A | AC 10A/20A



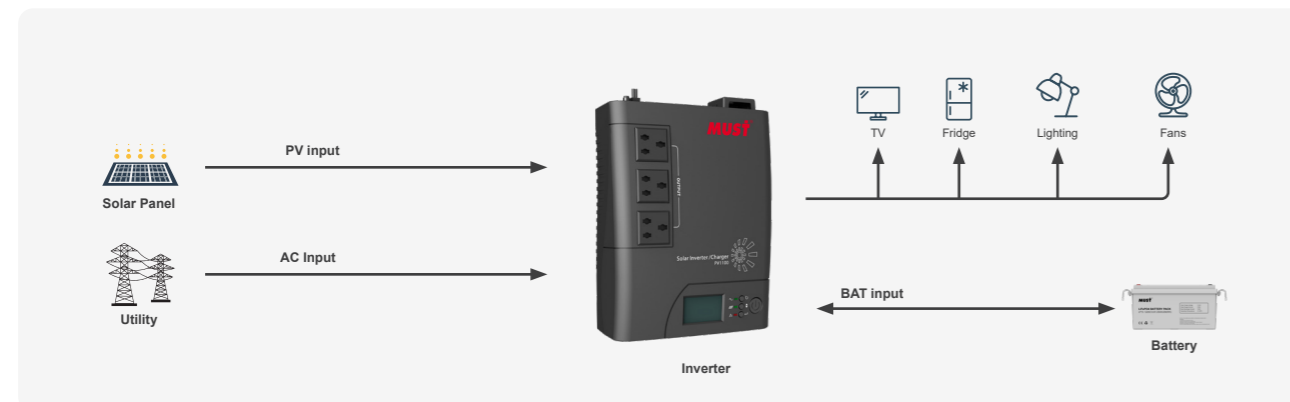
PV1100 Plus is a cost effective , intelligent hybrid off grid solar inverter. The LCD display offers friendly user-configurable button adjustment such as battery charging current, AC/solar charger priority and DC priority. When battery voltage is low, it will automatically switch to AC grid to supply continuous power to the loads. It suitable for personal home use.

- Simulated sine wave inverter
- Built-in 50A PWM Solar Charge Controller
- MFD (multi-function display)
- 10A or 20A standard charging current from utility
- AC/solar priority for output via MFD
- AC/solar priority for charging via MFD
- 3 steps charging algorithm
- Overload & short-circuit protection
- Battery reverse polarity protection
- Deep discharge protection
- Auto restart while AC/solar is recovering
- Adjustable solar and utility charging current

### Back panel description



### Solar system connection



| MODEL                                 | PV11-1200 Plus           | PV11-2400 Plus        |
|---------------------------------------|--------------------------|-----------------------|
| Nominal Battery System Voltage        | 12VDC                    | 24VDC                 |
| <b>INVERTER OUTPUT</b>                |                          |                       |
| Rated Power                           | 1200VA/720W              | 2400VA/1440W          |
| Waveform                              | Simulated Sine-wave      |                       |
| Nominal Output Voltage RMS            | 230V                     |                       |
| Output Voltage Regulation             | +10/-18%                 |                       |
| Output Frequency                      | 50Hz/60Hz +/-1 Hz        |                       |
| Inverter Efficiency(Peak)             | >80%                     |                       |
| Line Mode Efficiency                  | >98%                     |                       |
| Typical Transfer Time                 | Typical 15~20ms 40ms max |                       |
| <b>AC INPUT</b>                       |                          |                       |
| Voltage                               | 230VAC                   |                       |
| Selectable Voltage Range              | Narrow                   | 170~280VAC            |
|                                       | Wide                     | 90~280VAC             |
| Frequency Range                       | 40Hz-70Hz (Auto sensing) |                       |
| <b>BATTERY</b>                        |                          |                       |
| Nominal Input Voltage                 | 12VDC                    | 24VDC                 |
| Minimum Start Voltage                 | 10.5VDC                  | 21.0VDC               |
| Low Battery Alarm                     | 10.5VDC (min)            | 21VDC (min)           |
| Low Battery Cutoff                    | 10~12VDC (Can be set)    | 20~24VDC (Can be set) |
| High Voltage Cutoff                   | 15.0VDC (max)            | 30.0VDC (max)         |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |                          |                       |
| Maximum PV Charge Current             | 50A (max)                |                       |
| Maximum PV Array Power                | 750W                     | 1500W                 |
| PWM Range @ Operating Voltage         | 16~55VDC                 |                       |
| Maximum PV Array Open Circuit Voltage | 55VDC                    |                       |
| Maximum Efficiency                    | >95%                     |                       |
| Standby Power Consumption             | <2W                      |                       |
| AC Charger Voltage                    | 14.4V(max)               | 28.8V(max)            |
| AC Charging Current                   | 10A / 20A (Can be set)   |                       |
| Maximum Charge Current                | 10-50A (Can be set)      |                       |
| <b>BYPASS &amp; PROTECTION</b>        |                          |                       |
| Nominal Input Frequency               | 40Hz - 70Hz              |                       |
| Overload Protection (SMPS Load)       | FUSE                     |                       |
| Output Short Circuit Protection       | FUSE                     |                       |
| Bypass Fuse Rating                    | 10A                      |                       |
| Max Bypass Current                    | 10Amp                    |                       |
| <b>MECHANICAL SPECIFICATIONS</b>      |                          |                       |
| Machine Dimension (W*H*D)(mm)         | 295*230*85               |                       |
| Package Dimension (W*H*D)(mm)         | 365*295*140              |                       |
| N.W (kg)                              | 2.7                      |                       |
| G.W (kg)                              | 13.5kg/4pcs              |                       |
| <b>OTHER</b>                          |                          |                       |
| Operation Temperature Range           | 0°C to 50°C              |                       |
| Audible Noise                         | 50dB MAX                 |                       |
| Warranty                              | 2years                   |                       |
| Display                               | LED+LCD                  |                       |

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## HIGH FREQUENCY OFF GRID SOLAR INVERTER PV1500 Series

1~2KVA | MPPT 45A | AC 15A/20A



It is a cost effective, intelligent solar inverter which accepts Solar & Utility input at the same time. The comprehensive LCD display offers user- configurable and easy-accessible button adjustment such as battery charging current, AC/solar charger priority and DC priority. When battery voltage is low, it will automatically switch to AC grid to supply continuous power to the loads.

- Built-in 45A MPPT Solar Charge Controller
- 15A@24V, 20A@12V standard charging current from utility AC
- AC/solar priority for charging via MFD
- Different charging mode for different kinds of batteries
- Overload & short-circuit protection, Battery reverse polarity protection, Deep discharge protection
- Auto restart while AC/solar is recovering Adjustable solar and utility charging current
- Support two kinds of batteries include LiFePO4 Lithium Battery Pack and Lead-acid Battery.
- Support one key battery type fast setting
- Automatic activate protected lithium battery pack by Utility AC.
- Automatic activate protected lithium battery pack by Solar PV
- Low shutdown loss for energy storage system application

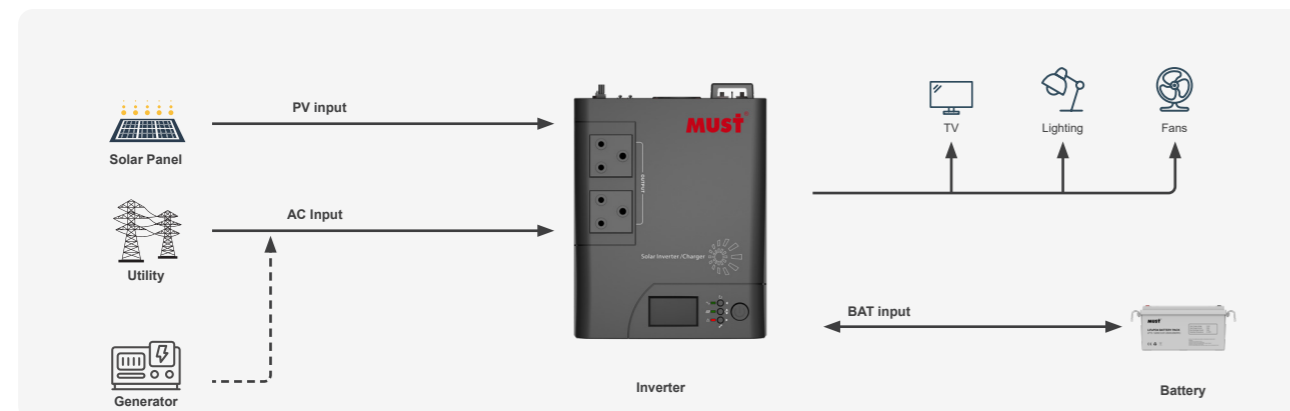
### Back panel description

1KW/ 2KW

AC Output Socket types

1. Output Receptacle (s)
2. LCD display
3. Status indicators
4. Setting button
5. Power switch
6. External battery connectors
7. FAN
8. Solar panel terminal
9. Input circuit breaker (plastic case)
10. AC input

### Solar system connection



| MODEL  | PV15-1012   | PV15-2024      |                           |
|--|---|----------------|---------------------------|
| Nominal Battery System Voltage   | 12VDC   | 24VDC          |                           |
| <b>INVERTER OUTPUT</b>   |   |                |                           |
| Rated Power  | 1000VA / 600W   | 2000VA / 1200W |                           |
| Waveform   | Pure Sine Wave  |                |                           |
| Nominal Output Voltage RMS   | 230V  |                |                           |
| Output Voltage Regulation  | +10/-18%  |                |                           |
| Output Frequency   | 50Hz / 60Hz ± 1Hz                                     |                |                           |
| Inverter Efficiency (Peak)   | >90%  |                |                           |
| Line Mode Efficiency   | >95%  |                |                           |
| Typical Transfer Time  | Typical < 10ms , 20ms max                             |                |                           |
| <b>AC INPUT</b>  |   |                |                           |
| Voltage  | 230VAC  |                |                           |
| Voltage Range  | 170~280VAC (UPS) / 90~280VAC (APL) / 184~258VAC (VDE) |                |                           |
| Frequency Range  | 50Hz/ 60Hz (auto sensing)                             |                |                           |
| <b>BATTERY</b>   |   |                |                           |
| <b>Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)</b> |   |                |                           |
| Nominal Input Voltage  | 12VDC   |                | 24VDC                     |
| Low Battery Cutoff   | 10.5VDC(PB)   | 11.5VDC(LI)    | 21.0VDC(PB) / 23.0VDC(LI) |
| Low Battery Alarm  | 11.0VDC(PB)   | 12.0VDC(LI)    | 22.0VDC(PB) / 24.0VDC(LI) |
| Low Battery Voltage Recover  | 12.5VDC(PB)   | 12.8VDC(LI)    | 25.0VDC(PB) / 25.6VDC(LI) |
| High Battery Voltage Recover   | 14.5VDC(PB)   | 14.5VDC(LI)    | 29.0VDC(PB) / 29.0VDC(LI) |
| High Battery Voltage Cutoff  | 15.0VDC(PB)   | 15.0VDC(LI)    | 30.0VDC(PB) / 30.0VDC(LI) |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |                |                           |
| Charger Voltage boost  | 14.4VDC(PB)   | 14.4VDC(LI)    | 28.8VDC(PB) / 28.8VDC(LI) |
| Charger Voltage float  | 13.8VDC(PB)   | 14.4VDC(LI)    | 27.6VDC(PB) / 28.8VDC(LI) |
| Maximum PV Charge Current  | 45A (max)   |                |                           |
| Maximum PV Array Power   | 600W  | 1200W          |                           |
| MPPT Operating Voltage Range   | 15 ~ 75VDC  |                | 30 ~ 75VDC                |
| Maximum PV Array Open Voltage  | 105V  |                |                           |
| Maximum Efficiency   | > 95%   |                |                           |
| AC Charging Current  | 10A/20A (Can be set)                                  |                | 7A/15A (Can be set)       |
| Maximum Charge Current AC+PV   | 10~65A (Can be set)                                   |                | 10~60A (Can be set)       |
| <b>BYPASS &amp; PROTECTION</b>   |   |                |                           |
| Overload Protection (SMPS Load)  |   |                | FUSE                      |
| Output Short Circuit Protection  |   |                | FUSE                      |
| Bypass Fuse Rating   | 7A  | 10A            |                           |
| Max Bypass Current   | 7A  | 10A            |                           |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                |                           |
| Machine Dimension (W*H*D)(mm)  | 235*290*92  |                | 235*290*92                |
| Package Dimension (W*H*D)(mm)  | 595*375*315   |                | 595*375*315               |
| N.W (kg)   | 2.8   |                | 3.0                       |
| G.W (kg)   | 3.5   |                | 3.7                       |
| Material   | Plastic case  |                | Plastic case              |
| <b>OTHER</b>   |   |                |                           |
| Operation Temperature Range  | 0°C to 40°C   |                |                           |
| Audible Noise  | 50dB MAX  |                |                           |
| Warranty   | 2years  |                |                           |
| Display  | LED+LCD   |                |                           |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |                |                           |
| CE   |   |                |                           |

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## HIGH FREQUENCY SOLAR INVERTER ECO Series



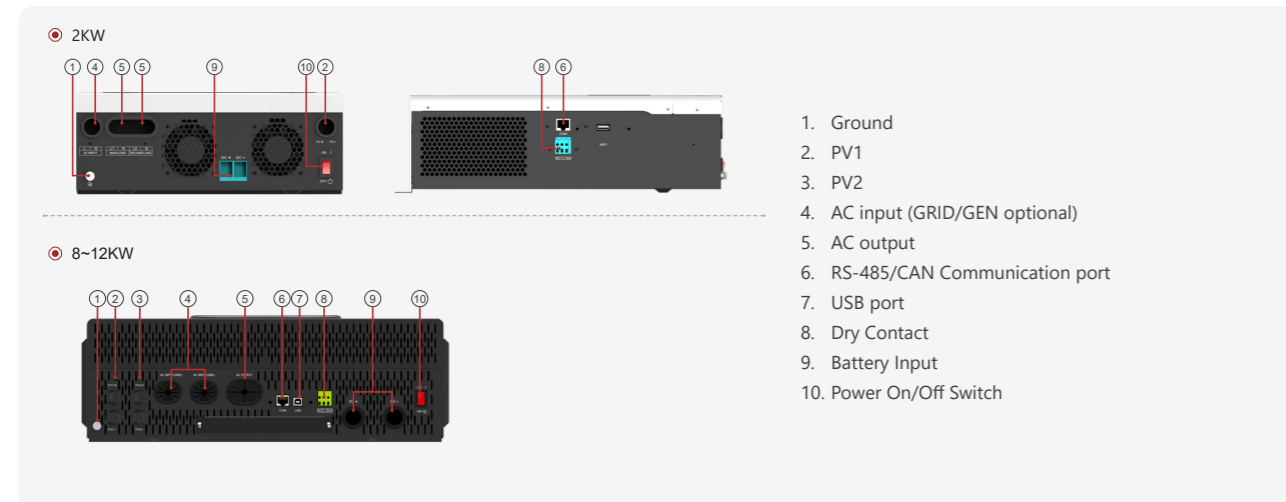
2~12KW | Dual output

ECO Series is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterrupted power support in portable size. ECO Series can run without battery. The Maximum PV input voltage can reach 400V/450V/500V, which can help customers make full use of solar energy.

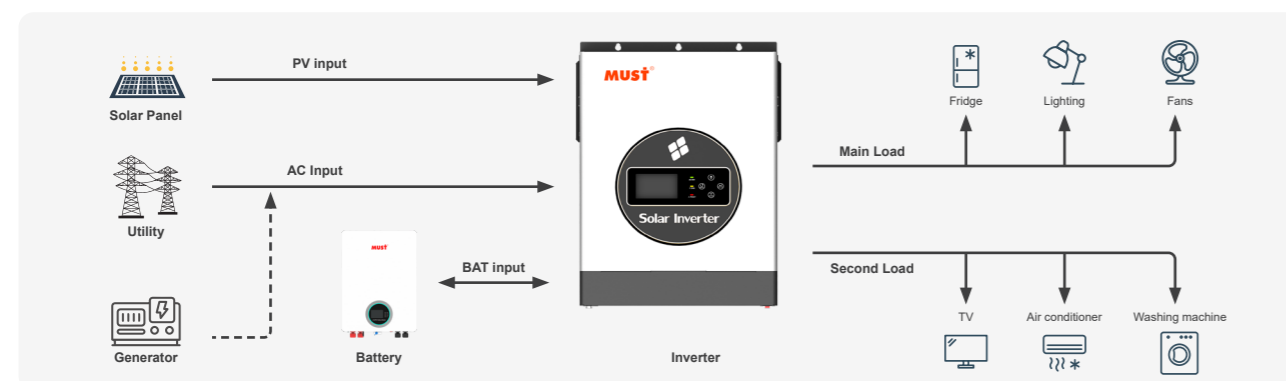


- Provide OEM Services: Appearance and Color
- Complete Solar System for Sale (Optional)
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc.)
- Built-in MPPT solar charge controller
- Wide PV input voltage range
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support RS485,CAN monitoring function
- Dual outputs for smart load management
- Can communicate with lithium batteries (CAN port)

### Back panel description



### Solar system connection



| MODEL                                 | ECO-2012  | ECO-3624         | ECO-4024         | ECO-6048         | ECO-6248         | ECO-8048         | ECO-10048                                       | ECO-12048                                       |
|---------------------------------------|---|------------------|------------------|------------------|------------------|------------------|---|---|
| Nominal Battery System Voltage        | 12VDC   | 24VDC            | 24VDC            | 48VDC            | 48VDC            | 48VDC            | 48VDC   | 48VDC   |
| <b>INVERTER OUTPUT</b>                |   |                  |                  |                  |                  |                  |   |   |
| Rated Power (Main+Second Load)        | 2000VA/<br>2000W  | 3600VA/<br>3600W | 4000VA/<br>4000W | 6000VA/<br>6000W | 6200VA/<br>6200W | 8000VA/<br>8000W | 10000VA/<br>10000W                              | 12000VA/<br>12000W                              |
| Battery Mode (Main+Second Load)       | 2000VA/<br>1600W  | 3000VA/<br>3000W | 3500VA/<br>3500W | 5500VA/<br>5500W | 6200VA/<br>6200W | 8000VA/<br>8000W | 10000VA/<br>10000W<br>(Battery current limited) | 12000VA/<br>12000W<br>(Battery current limited) |
| Surge Power                           | 3200W   | 6000W            | 7000W            | 11000W           | 12400W           | 16000W           | 20000W  | 24000W  |
| Waveform                              | Pure sine wave  |                  |                  |                  |                  |                  |   |   |
| AC Voltage Regulation (Batt.Mode)     | 230VAC±5%(Setting)  |                  |                  |                  |                  |                  |   |   |
| Inverter Efficiency(Peak)             | 90~93%  |                  |                  |                  |                  |                  |   |   |
| Transfer Time                         | 10ms (UPS / VDE4105) / 20ms (APL)                               |                  |                  |                  |                  |                  |   |   |
| <b>AC INPUT</b>                       |   |                  |                  |                  |                  |                  |   |   |
| Voltage                               | 230VAC±5%   |                  |                  |                  |                  |                  |   |   |
| Selectable Voltage Range              | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE4105)          |                  |                  |                  |                  |                  |   |   |
| Frequency Range                       | 50Hz / 60Hz(Auto sensing)                                       |                  |                  |                  |                  |                  |   |   |
| <b>BATTERY</b>                        |   |                  |                  |                  |                  |                  |   |   |
| Normal voltage                        | 12VDC   | 24VDC            | 24VDC            | 48VDC            | 48VDC            | 48VDC            | 48VDC   | 48VDC   |
| Floating Charge Voltage               | 13.7VDC   | 27.4VDC          | 27.4VDC          | 54.8VDC          | 54.8VDC          | 54.8VDC          | 54.8VDC   | 54.8VDC   |
| Overcharge Protection                 | 15VDC   | 30VDC            | 30VDC            | 60VDC            | 60VDC            | 60VDC            | 60VDC   | 60VDC   |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |                  |                  |                  |                  |                  |   |   |
| Maximum PV Array Open Circuit Voltage | 400VDC  | 400VDC           | 450VDC           | 450VDC           | 500VDC           | 500VDC           | 500VDC  | 500VDC  |
| Maximum PV Input Current              | 16A   | 18A              | 18A              | 28A              | 28A              | 18A*2            | 27A*2<br>(40A max)                              | 27A*2<br>(40A max)                              |
| Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                  |                  |                  |                  |                  |   |   |
| Maximum PV Array Power                | 2000W   | 4000W            | 4000W            | 6000W            | 6200W            | 4000W*2          | 5000W*2   | 6000W*2   |
| PV Array MPPT Voltage Range (Typ.)    | 30~320VDC   |                  | 60~360VDC        |                  | 120~450VDC       |                  | 90~450VDC                                       |   |
| Maximum Solar Charge Current          | 80A   | 100A             | 100A             | 100A             | 120A             | 120A             | 150A  | 150A  |
| Maximum AC Charge Current             | 80A   | 60A              | 60A              | 100A             | 100A             | 120A             | 150A  | 150A  |
| Maximum Charge Current                | 80A   | 100A             | 100A             | 100A             | 120A             | 120A             | 150A  | 150A  |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |                  |                  |                  |                  |                  |   |   |
| Machine Dimension (W*H*D)(mm)         | 290*367*111   |                  | 318*454*122.5    |                  |                  | 425*527*145      |   |   |
| Package Dimension (W*H*D)(mm)         | 446*187*394   |                  | 544.5*200*410    |                  |                  | 631.5**257*548   |   |   |
| N.W (kg)                              | 6.0   | 7.8              | 8.0              | 9.0              | 10.0             | 17.9             | 18.0  | 18.0  |
| G.W (kg)                              | 7.2   | 9.3              | 9.5              | 10.2             | 11.6             | 20.5             | 20.6  | 20.6  |
| <b>OTHER</b>                          |   |                  |                  |                  |                  |                  |   |   |
| Humidity                              | 5% to 95% Relative humidity (Non-condensing)                    |                  |                  |                  |                  |                  |   |   |
| Operating Temperature                 | -10°C~50°C  |                  |                  |                  |                  |                  |   |   |
| Storage Temperature                   | -15°C~60°C  |                  |                  |                  |                  |                  |   |   |
| Communication Interface               | USB/WIFI/RS-485/CAN   |                  |                  |                  |                  |                  |   |   |
| Warranty                              | 2 year  |                  |                  |                  |                  |                  |   |   |
| Anti-dust Kit                         | none  | yes              | yes              | yes              | yes              | yes              | yes   | yes   |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                  |                  |                  |                  |                  |   |   |
| CE                                    |   |                  |                  |                  |                  |                  |   |   |

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## HIGH FREQUENCY SOLAR INVERTER PV1800 PRO Series

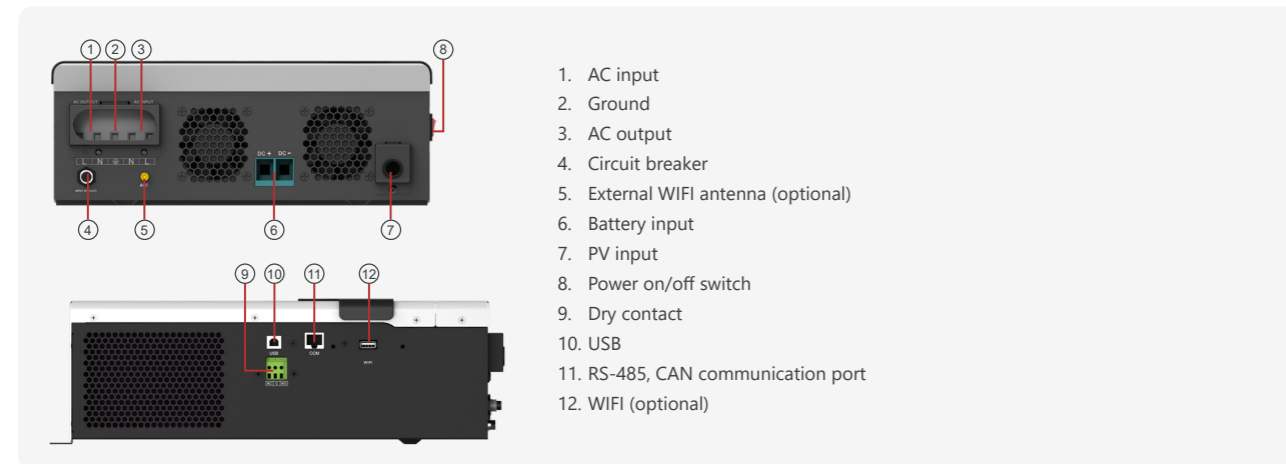
2~3.2KW | 400V | WiFi

PV1800 PRO is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PV1800 PRO Series can run without battery. The Maximum PV array open circuit voltage can reach 400V and MPPT voltage is 60~320Vdc, which Can help customers make full use of solar energy.

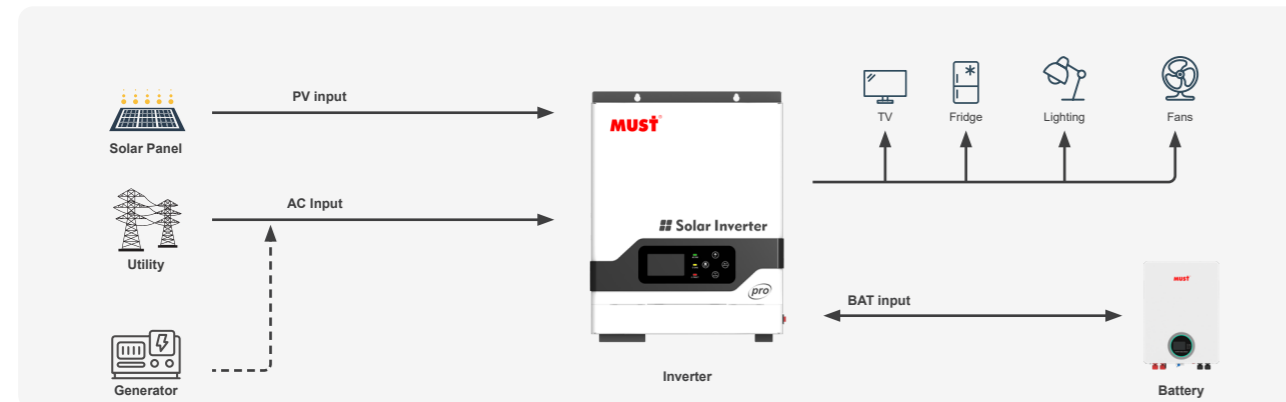


- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 400V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- WIFI remote monitoring (Built in wifi module and antenna)
- PV/ AC activation function
- BMS communication function

### Back panel description



### Solar system connection



| MODEL  | PV18-2024 PRO   | PV18-3224 PRO  |
|--|---|----------------|
| Nominal Battery System Voltage   | 24VDC   |                |
| <b>INVERTER OUTPUT</b>   |   |                |
| Rated Power  | 2000VA / 2000W  | 3200VA / 3200W |
| Surge Power  | 4000W   | 6400W          |
| Waveform   | Pure sine wave  |                |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |                |
| Inverter Efficiency(Peak)  | 90%   |                |
| Transfer Time  | 10ms (UPS / VDE4105) / 20ms (APL)                               |                |
| <b>AC INPUT</b>  |   |                |
| Voltage  | 230VAC±5%   |                |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)          |                |
| Frequency Range  | 50Hz / 60Hz(Auto sensing)                                       |                |
| <b>BATTERY</b>   |   |                |
| Normal voltage   | 24VDC   |                |
| Floating Charge Voltage  | 27.4VDC   |                |
| Overcharge Protection  | 30VDC   |                |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |                |
| Maximum PV Array Open Circuit Voltage  | 400VDC  |                |
| Maximum PV input current   | 18A   |                |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                |
| Maximum PV Array Power   | 3000W   | 4000W          |
| PV Array MPPT Voltage Range  | 60~320 VDC  |                |
| Maximum Solar Charge Current   | 80A   | 100A           |
| Maximum AC Charge Current  | 40A   | 60A            |
| Maximum Charge Current   | 80A   | 100A           |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                |
| Machine Dimension (W*H*D)(mm)  | 290*367*111   |                |
| Package Dimension (W*H*D)(mm)  | /   |                |
| N.W (kg)   | /   |                |
| G.W (kg)   | /   |                |
| <b>OTHER</b>   |   |                |
| Humidity   | 5% to 95% Relative humidity (Non-condensing)                    |                |
| Operating Temperature  | 0°C~50°C  |                |
| Storage Temperature  | -15°C~60°C  |                |
| Warranty   | 2 year  |                |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |                |

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## HIGH FREQUENCY SOLAR INVERTER PV1800 PRO Series

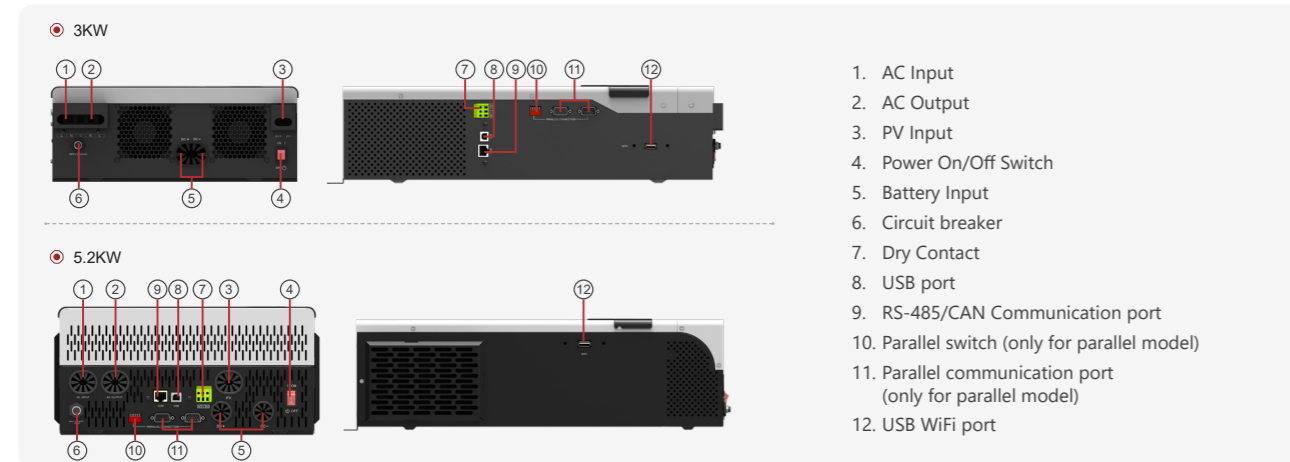
3~5.2KW | 450V | WiFi | 9pcs parallel

PV1800 PRO is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PV1800 PRO Series can run without battery. The Maximum PV array open circuit voltage can reach 450V and MPPT voltage is 150~430Vdc, which can help customers make full use of solar energy.

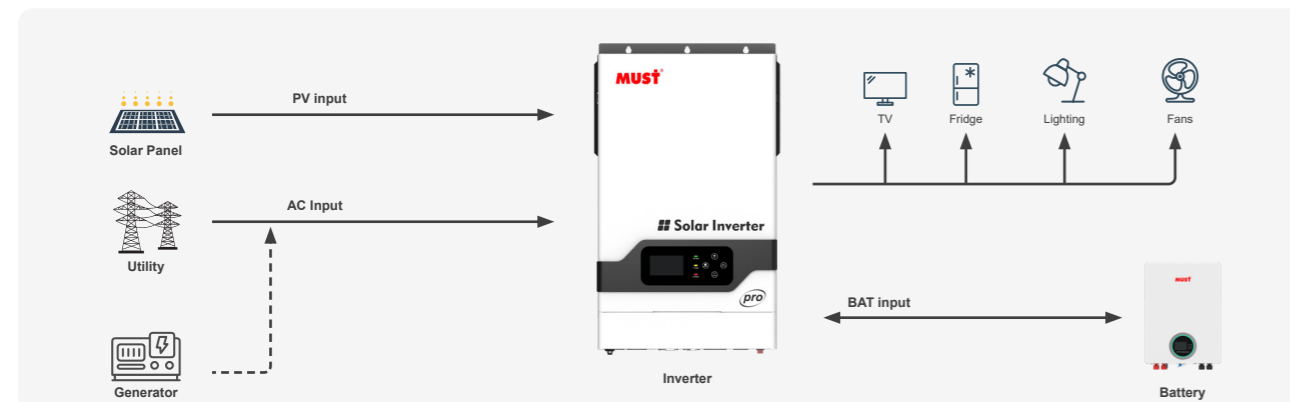


- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 450V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 9 units
- WIFI remote monitoring (optional)

### Back panel description



### Solar system connection



| MODEL  | PV18-3024 PRO   | PV18-5248 PRO  |             |      |
|--|---|----------------|-------------|------|
| Nominal Battery System Voltage   | 24VDC   | 48VDC          |             |      |
| <b>INVERTER OUTPUT</b>   |   |                |             |      |
| Rated Power  | 3000VA / 3000W  | 5200VA / 5200W |             |      |
| Surge Power  | 6000W   | 10400W         |             |      |
| Waveform   | Pure sine wave  |                |             |      |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |                |             |      |
| Inverter Efficiency(Peak)  | 90%   |                |             |      |
| Transfer Time  | 10ms (UPS / VDE4105) / 20ms (APL)                               |                |             |      |
| <b>AC INPUT</b>  |   |                |             |      |
| Voltage  | 230VAC±5%   |                |             |      |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)          |                |             |      |
| Frequency Range  | 50Hz / 60Hz(Auto sensing)                                       |                |             |      |
| <b>BATTERY</b>   |   |                |             |      |
| Normal voltage   | 24VDC   | 48VDC          |             |      |
| Floating Charge Voltage  | 27.4VDC   | 54.8VDC        |             |      |
| Overcharge Protection  | 30VDC   | 60VDC          |             |      |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |                |             |      |
| Maximum PV Array Open Circuit Voltage  | 450VDC  |                |             |      |
| Maximum PV input current   | 18A   | 18A            | 27A         |      |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                |             |      |
| Maximum PV Array Power   | 4000W   | 5000W          | 6000W       |      |
| PV Array MPPT Voltage Range  | 150~430 VDC   |                |             |      |
| Maximum Solar Charge Current   | 80A   | 100A           | 80A         | 100A |
| Maximum AC Charge Current  | 60A   | 80A            | 60A         | 80A  |
| Maximum Charge Current   | 80A   | 100A           | 80A         | 100A |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                |             |      |
| Machine Dimension (W*H*D)(mm)  | 322*486*134   |                | 309*505*147 |      |
| Package Dimension (W*H*D)(mm)  | 575*229*425   |                | 603*260*400 |      |
| N.W (kg)   | 10.6  |                | 12.9        |      |
| G.W (kg)   | 12  |                | 13.8        |      |
| <b>OTHER</b>   |   |                |             |      |
| Humidity   | 5% to 95% Relative humidity (Non-condensing)                    |                |             |      |
| Operating Temperature  | 0°C~50°C  |                |             |      |
| Storage Temperature  | -15°C~60°C  |                |             |      |
| Warranty   | 2years  |                |             |      |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |                |             |      |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2020+A11:2020<br>EN IEC62368-1:2018<br>Rohs-(2011/65/EUand2015/863/EU) |   |                |             |      |

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

## HIGH FREQUENCY SOLAR INVERTER PV1800 PRO II Series

4~6KW | 500V | 100~120A | Dual output

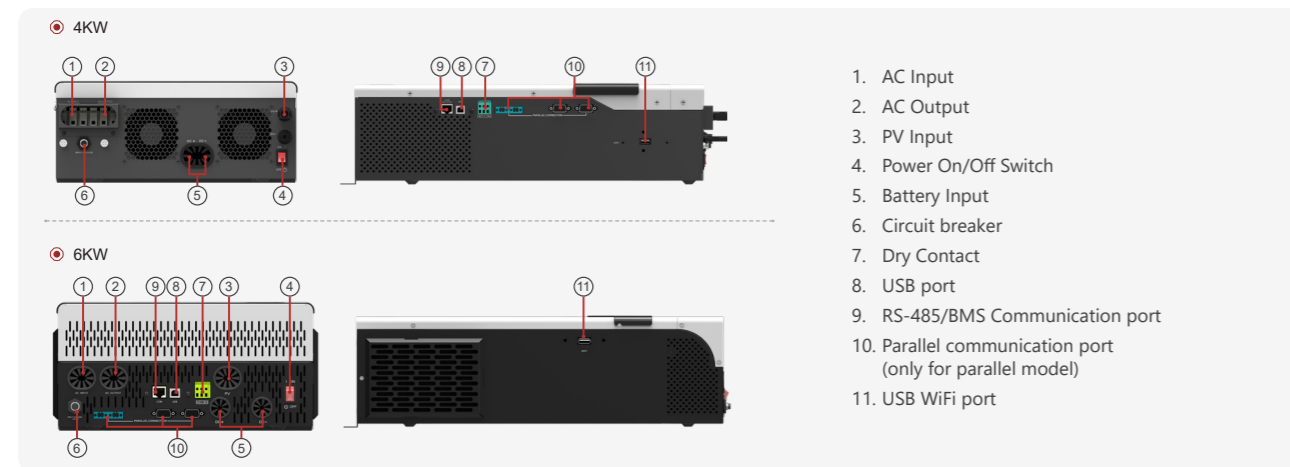
PV1800 PRO II is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PV1800 PRO II Series can run without battery. The Maximum PV array open circuit voltage can reach 500V and MPPT voltage range is 90~430V for 4KW, 120v~430V for 6KW, which Can help customers make full use of solar energy.



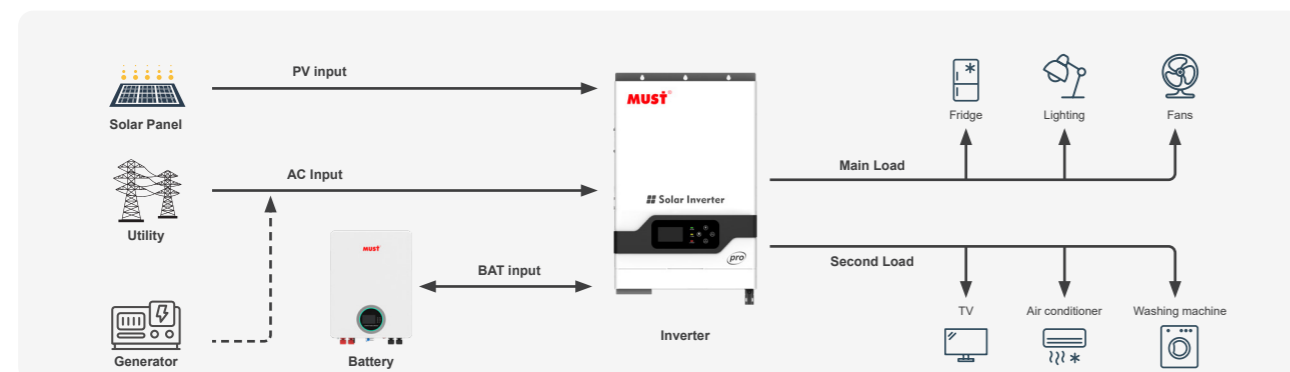
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 6 units (optional)
- WIFI remote monitoring (optional)
- Dual outputs for smart load management
- Can communicate with lithium batteries



### Back panel description



### Solar system connection



| MODEL                                 | PV18-4024 PRO II  | PV18-6048 PRO II |
|---------------------------------------|---|------------------|
| Default Battery System Voltage        | 24VDC   | 48VDC            |
| <b>INVERTER OUTPUT</b>                |   |                  |
| Rated Power                           | 4000VA / 4000W  | 6000VA / 6000W   |
| Surge Power                           | 8000W   | 12000W           |
| Waveform                              | Pure sine wave  |                  |
| AC Voltage Regulation (Batt.Mode)     | 230VAC±5%(Setting)  |                  |
| Inverter Efficiency(Peak)             | 92%   |                  |
| Transfer Time                         | 10ms(UPS / VDE4105) / 20ms(APL) / < 50ms typical (For parallel operation) |                  |
| <b>AC INPUT</b>                       |   |                  |
| Voltage                               | 230VAC  |                  |
| Selectable Voltage Range              | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)                        |                  |
| Frequency Range                       | 50Hz / 60Hz (Auto sensing)  |                  |
| <b>BATTERY</b>                        |   |                  |
| Normal voltage                        | 24VDC   | 48VDC            |
| Floating Charge Voltage               | 27.4VDC   | 54.8VDC          |
| Overcharge Protection                 | 30VDC   | 60VDC            |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |                  |
| Maximum PV Array Open Circuit Voltage | 500VDC (450V for parallel)  |                  |
| Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li)           |                  |
| Maximum PV Array Power                | 5000W   | 6000W            |
| PV Array MPPT Voltage Range           | 90~430VDC   | 120~430 VDC      |
| Maximum Solar Charge Current          | 100A  | 120A             |
| Maximum AC Charge Current             | 80A   | 100A             |
| Maximum Charge Current                | 100A  | 120A             |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |                  |
| Machine Dimension (W*H*D)(mm)         | 322*486*134   | 309*505*147      |
| Package Dimension (W*H*D)(mm)         | 575*229*425   | 603*260*400      |
| N.W (kg)                              | 9.5   | 12.5             |
| G.W (kg)                              | 12  | 13.8             |
| <b>OTHER</b>                          |   |                  |
| Humidity                              | 5% to 95% Relativ Humidity (Non-condensing)                               |                  |
| Operating Temperature                 | 0°C~50°C  |                  |
| Storage Temperature                   | -15°C~60°C  |                  |
| Communication Interface               | USB/ WIFI   |                  |
| Warranty                              | 2 year  |                  |

### CERTIFICATION & STANDARDS

CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)  
 CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)  
 EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011

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## HIGH FREQUENCY SOLAR INVERTER PV1800 PRO II Series

6.2~12KW | PV500V | 120A~150A | Dual output

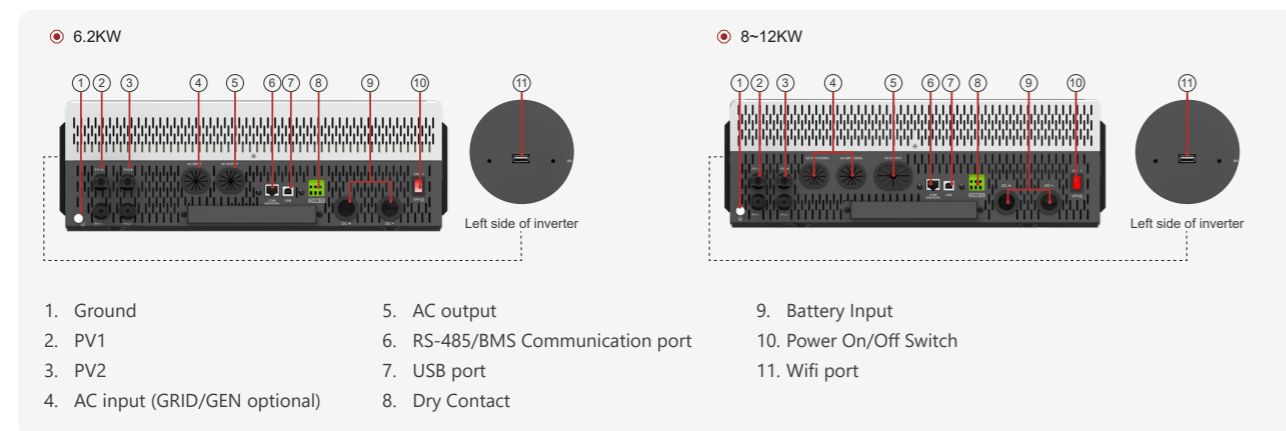


The PV1800 PRO II is a highly versatile inverter/charger that combines an inverter, MPPT solar charge controller, and battery charger in a compact, space-saving design. It delivers reliable, uninterrupted power and supports battery-free operation when sufficient solar energy is available. With a maximum PV input voltage of 500V and an MPPT operating range of 90~430VDC, it features dual built-in MPPT solar charge controllers to ensure optimal solar energy harvesting and efficiency.

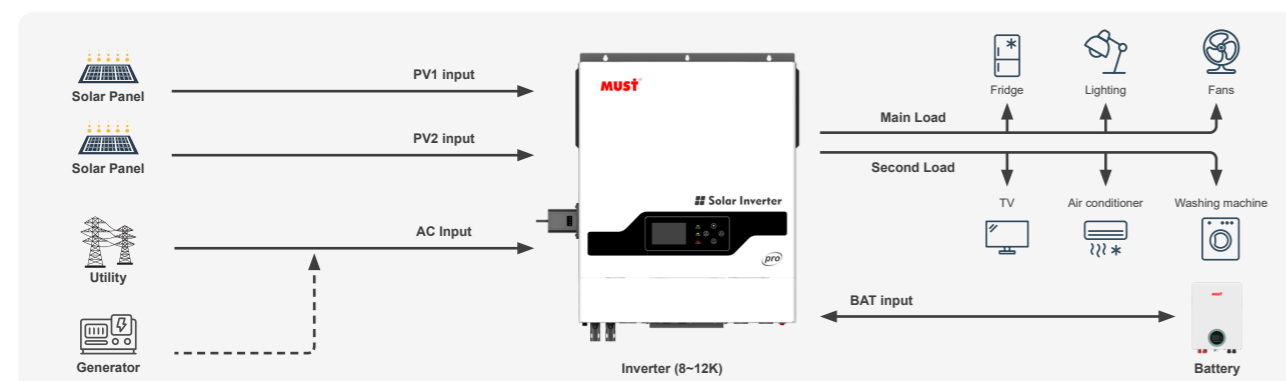


- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc.)
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- With BMS lithium battery communication function
- With AC/PV lithium battery activation function
- Support USB, RS485 monitoring function
- Parallel operation up to 6 units (optional)
- WIFI remote monitoring (optional)

### Back panel description



### Solar system connection



| MODEL  | PV18-6248 PRO II  | PV18-8048 PRO II | PV18-10048 PRO II | PV18-11048 PRO II | PV18-12048 PRO II |
|--|---|------------------|-------------------|-------------------|-------------------|
| Default Battery System Voltage   | 48VDC   |                  |                   |                   |                   |
| <b>INVERTER OUTPUT</b>   |   |                  |                   |                   |                   |
| Rated Power  | 6200VA/6200W  | 8000VA/8000W     | 10000VA/10000W    | 11000VA/11000W    | 12000VA/12000W    |
| Surge Power  | 12400W  | 16000W           | 20000W            | 22000W            | 24000W            |
| Waveform   | Pure sine wave  |                  |                   |                   |                   |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |                  |                   |                   |                   |
| Inverter Efficiency(Peak)  | 92%   |                  |                   |                   |                   |
| Transfer Time  | 10ms(UPS / VDE4105) / 20ms(APL)                                 |                  |                   |                   |                   |
| <b>AC INPUT</b>  |   |                  |                   |                   |                   |
| Voltage  | 230VAC  |                  |                   |                   |                   |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)              |                  |                   |                   |                   |
| Frequency Range  | 50Hz / 60Hz (Auto sensing)                                      |                  |                   |                   |                   |
| <b>BATTERY</b>   |   |                  |                   |                   |                   |
| Normal voltage   | 48VDC   |                  |                   |                   |                   |
| Floating Charge Voltage  | 54.8VDC   |                  |                   |                   |                   |
| Overcharge Protection  | 60VDC   |                  |                   |                   |                   |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |                  |                   |                   |                   |
| Maximum PV Array Open Circuit Voltage  | 500VDC  |                  |                   |                   |                   |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                  |                   |                   |                   |
| Maximum PV Array Power   | 4000W*2   | 4000W*2          | 5000W*2           | 5500W*2           | 6000W*2           |
| Maximum PV Input Current   | 18A*2   | 18A*2            | 27A*2(40A max)    | 27A*2(40A max)    | 27A*2(40A max)    |
| PV Array MPPT Voltage Range  | 90~430VDC   |                  |                   |                   |                   |
| Maximum Solar Charge Current   | 120A  | 120A             | 150A              | 150A              | 150A              |
| Maximum AC Charge Current  | 100A  | 120A             | 150A              | 150A              | 150A              |
| Maximum Charge Current   | 120A  | 120A             | 150A              | 150A              | 150A              |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                  |                   |                   |                   |
| Machine Dimension (W*H*D)(mm)  | 425*473*145   | 425*527*145      |                   |                   |                   |
| Package Dimension (W*H*D)(mm)  | /   | /                | /                 | /                 | /                 |
| N.W (kg)   | /   | 17.9             | 17.9              | 18.0              | 18.0              |
| G.W (kg)   | /   | 20.5             | 20.5              | 20.6              | 20.6              |
| <b>OTHER</b>   |   |                  |                   |                   |                   |
| Humidity   | 5% to 95% Relative Humidity (Non-condensing)                    |                  |                   |                   |                   |
| Operating Temperature Range  | -10°C~50°C  |                  |                   |                   |                   |
| Storage Temperature Range  | -15°C~60°C  |                  |                   |                   |                   |
| Warranty   | 2 year  |                  |                   |                   |                   |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |                  |                   |                   |                   |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011 |   |                  |                   |                   |                   |

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## HIGH FREQUENCY SOLAR INVERTER PV1800 VPK Series

1~5KW | PWM 50A/60A | WiFi

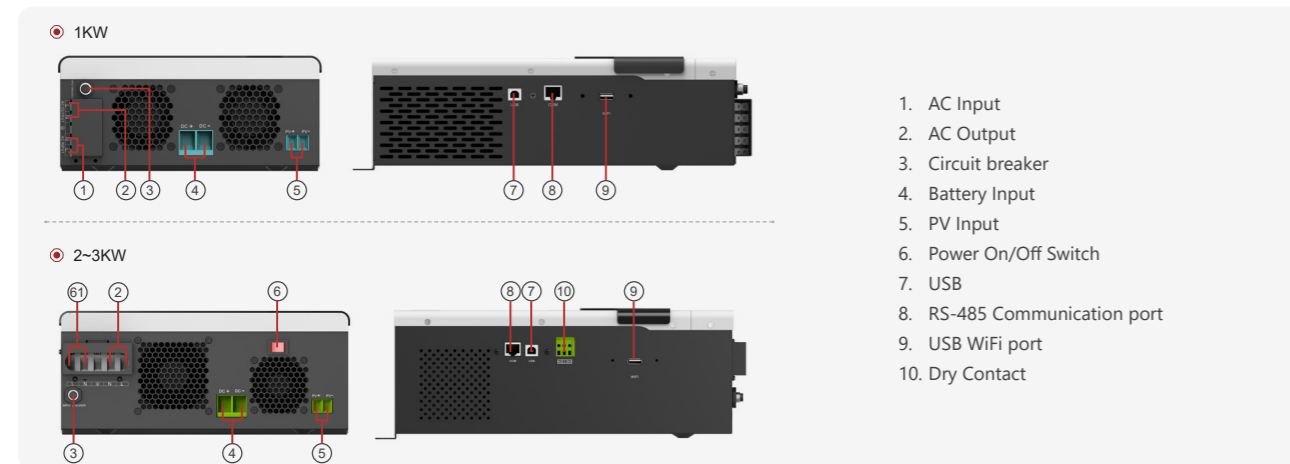


PV1800 VPK is a multi-function inverter/charger, combining functions of inverter, PWM solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable easy-accessible button operation such as battery charging current, AC/solar charger priority, and acceptable input voltage based on different applications.

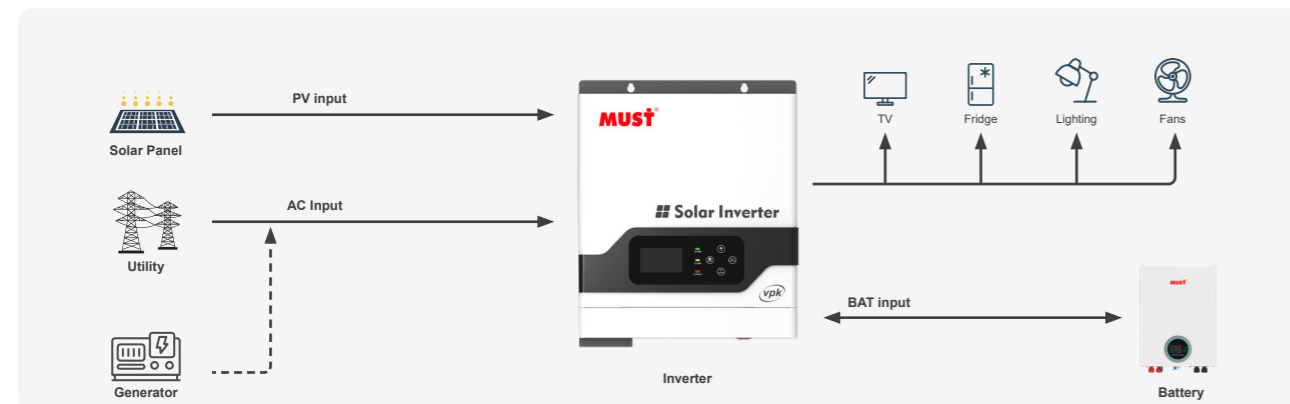


- Smart LCD setting(Working modes, Charge Current, Charge Voltage, etc.)
- Built-in PWM 50A/60A solar charge controller
- New SUB working mode(Solar-Utility-Battery working mode)
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and deep discharge protection
- Parallel operation with up to 3 units (Available for 4KW/5KW only)
- Cold start function
- Support USB, RS485 monitoring function
- WIFI remote monitoring (optional)
- Compatible to generator

### Back panel description



### Solar system connection



| MODEL  | PV18-1012 VPK  | PV18-2024 VPK | PV18-3024 VPK | PV18-4048 VPK | PV18-5048 VPK |
|--|--|---------------|---------------|---------------|---------------|
| Nominal Battery System Voltage   | 12VDC  | 24VDC         |               | 48VDC         |               |
| <b>INVERTER OUTPUT</b>   |  |               |               |               |               |
| Rated Power  | 1000W  | 2000W         | 3000W         | 4000W         | 5000W         |
| Surge Power  | 2000W  | 4000W         | 6000W         | 8000W         | 10000W        |
| Waveform   | Pure sine wave   |               |               |               |               |
| AC Voltage Regulation (Batt.Mode)  | (220VAC~240VAC)±5%   |               |               |               |               |
| Inverter Efficiency(Peak)  | 93%  |               |               |               |               |
| Transfer Time  | 10ms (UPS / VDE4105) 20ms (APL)  |               |               |               |               |
| <b>AC INPUT</b>  |  |               |               |               |               |
| Voltage  | 230VAC   |               |               |               |               |
| Selectable Voltage Range   | 170~280VAC(For personal computer) / 90~280VAC(For home appliances) / 184~253VAC(VDE4105) |               |               |               |               |
| Frequency Range  | 50Hz / 60Hz(Auto sensing)  |               |               |               |               |
| <b>BATTERY</b>   |  |               |               |               |               |
| Normal voltage   | 12VDC  | 24VDC         |               | 48VDC         |               |
| Floating Charge Voltage  | 13.7VDC  | 27.4VDC       |               | 54.8VDC       |               |
| Overcharge Protection  | 15.5VDC  | 30VDC         |               | 60VDC         |               |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |  |               |               |               |               |
| Maximum PV Array Open Circuit Voltage  | 55VDC  | 75VDC         | 80VDC         | 105VDC        |               |
| Standby Power Consumption  | 2W   | 2W            |               | 2W            |               |
| (PWM)Maximum Solar Charge Current  | 50A  | 50A           | 60A           | 60A           |               |
| Maximum AC Charge Current  | 10A or 20A   | 10A or 20A    | 20A or 30A    | 60A           |               |
| Maximum Charge Current   | 70A  | 70A           | 80A           | 120A          |               |
| <b>MECHANICAL SPECIFICATIONS</b>   |  |               |               |               |               |
| Machine Dimension (W*H*D)(mm)  | 224*337*98   | 290*342*125   |               | 297.5*468*125 |               |
| Package Dimension (W*H*D)(mm)  | /  | /             |               | /             |               |
| N.W (kg)   | /  | /             |               | /             |               |
| G.W (kg)   | /  | /             |               | /             |               |
| <b>OTHER</b>   |  |               |               |               |               |
| Humidity   | 5% to 95% Relative humidity (Non-condensing)   |               |               |               |               |
| Operating Temperature  | 0°C~50°C   |               |               |               |               |
| Storage Temperature  | -15°C ~60°C  |               |               |               |               |
| Warranty   | 2 year   |               |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |  |               |               |               |               |
| CE-EMC+LVD (EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)<br>UKCA |  |               |               |               |               |

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## HIGH FREQUENCY SOLAR INVERTER PV1800 VHM Series



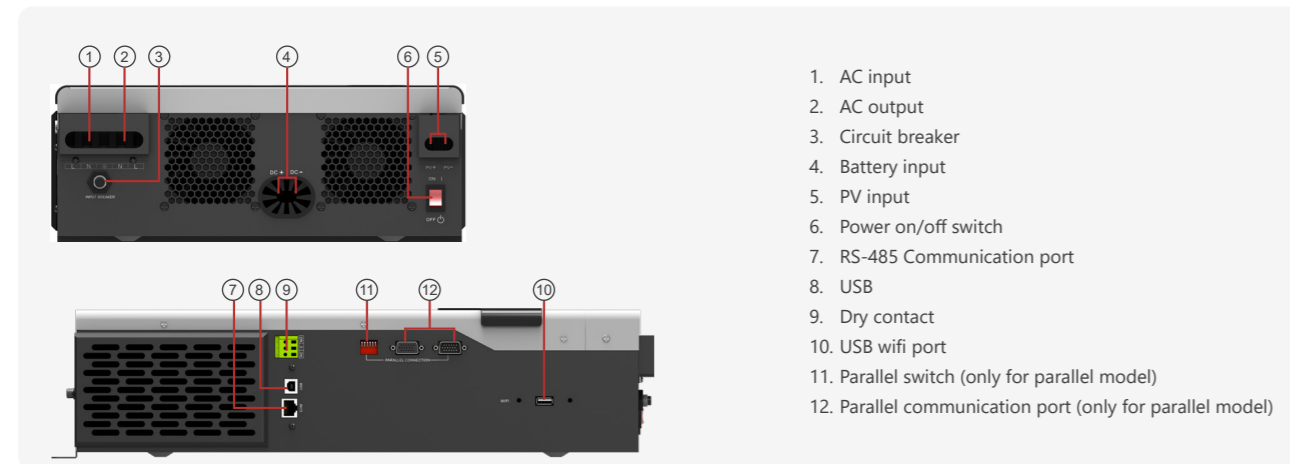
5~5.5KW | MPPT 80A | PV 250V

PV1800 VHM is a multi-functional inverter/charger, combining functions of inverter, solar charger and battery charger to offer uninterruptible power support in 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.

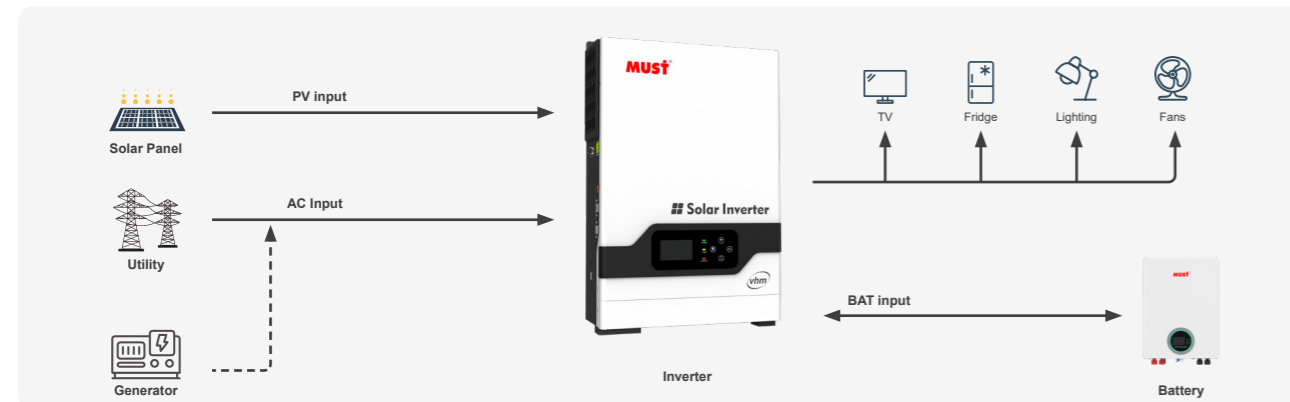


- Rated power : 5KW -5.5KW
- Pure sine wave solar inverter
- Max PV Array Open Circuit Voltage: 250V
- Output power factor 1
- Built-in 80A MPPT solar charger
- Support parallel operation up to 3 units
- Communication CAN/485 port for BMS (optional)
- PV lithium battery activation function
- WIFI remote monitoring (optional)
- Compatible to generator

### Back panel description



### Solar system connection



| MODEL   | PV18-5048 VHM  | PV18-5548 VHM |
|---|--|---------------|
| Nominal Battery System Voltage                | 48VDC  |               |
| <b>INVERTER OUTPUT</b>                        |  |               |
| Rated Power                                   | 5000W  | 5500W         |
| Surge Power                                   | 10000W   | 11000W        |
| Waveform                                      | Pure Sine Wave   |               |
| AC Voltage Regulation (Batt.Mode)             | (220VAC~240VAC)±5%                                     |               |
| Inverter Efficiency(Peak)                     | 93%  |               |
| Transfer Time                                 | 10ms (UPS / VDE4105) 20ms (APL)                        |               |
| <b>AC INPUT</b>                               |  |               |
| Voltage                                       | 230VAC   |               |
| Selectable Voltage Range                      | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE4105) |               |
| Frequency Range                               | 50Hz / 60Hz(Auto sensing)                              |               |
| <b>BATTERY</b>                                |  |               |
| Normal Voltage                                | 48VDC  |               |
| Floating Charge Voltage                       | 54.8VDC  |               |
| Overcharge Protection                         | 60VDC  |               |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>         |  |               |
| Maximum PV Array Open Circuit Voltage         | 250VDC   |               |
| PV Array MPPT Voltage Range                   | 60~200VDC  |               |
| Standby Power Consumption                     | 2W   |               |
| PV Input Power (STC)                          | 4500W  |               |
| Maximum Solar Charge Current                  | 80A  |               |
| Maximum Efficiency                            | 98%  |               |
| Maximum AC Charge Current                     | 60A  |               |
| Maximum Charge Current                        | 140A   |               |
| <b>MECHANICAL SPECIFICATIONS</b>              |  |               |
| Machine Dimension (W*H*D)(mm)                 | 329*485*134  |               |
| Package Dimension (W*H*D)(mm)                 | /  |               |
| N.W (kg)                                      | /  |               |
| G.W (kg)                                      | /  |               |
| <b>OTHER</b>                                  |  |               |
| Humidity                                      | 5% to 95% Relatiy Humidity (Non-condensing)            |               |
| Operating Temperature                         | 0°C~50°C   |               |
| Storage Temperature                           | -15°C ~60°C  |               |
| Warranty                                      | 2 year   |               |
| <b>CERTIFICATION &amp; STANDARDS</b>          |  |               |
| CE-LVD (IEC62109-1:2010, EN IEC62109-2); UKCA |  |               |

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## HIGH FREQUENCY SOLAR INVERTER PV1800 PREM Series

2~6.2KW | Dual output | WiFi | Bluetooth

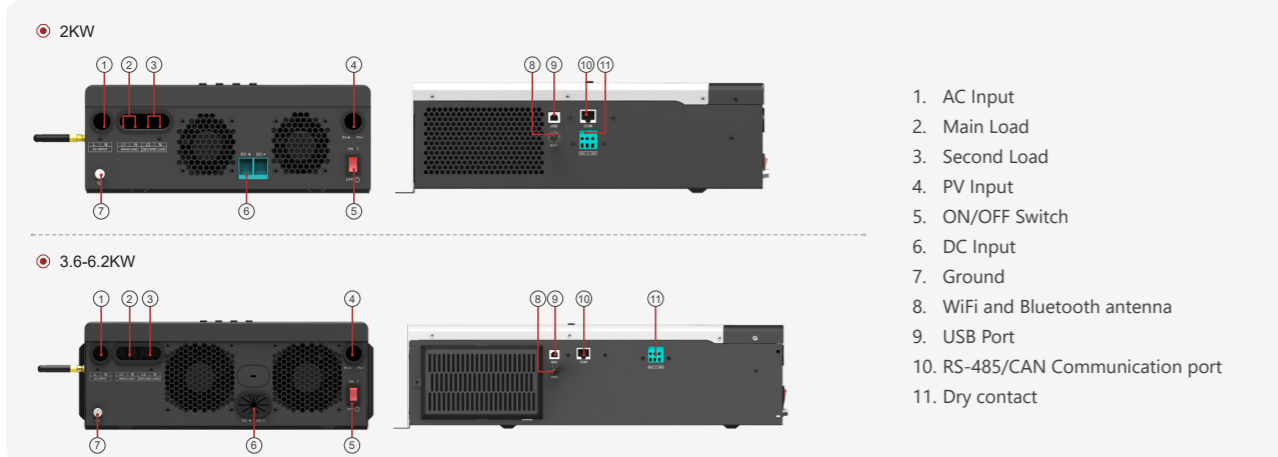
PV1800 PREM is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PV1800 PREM Series can run without battery. The Maximum PV array open circuit voltage can reach 400V/450V. which Can help customers make full use of solar energy.



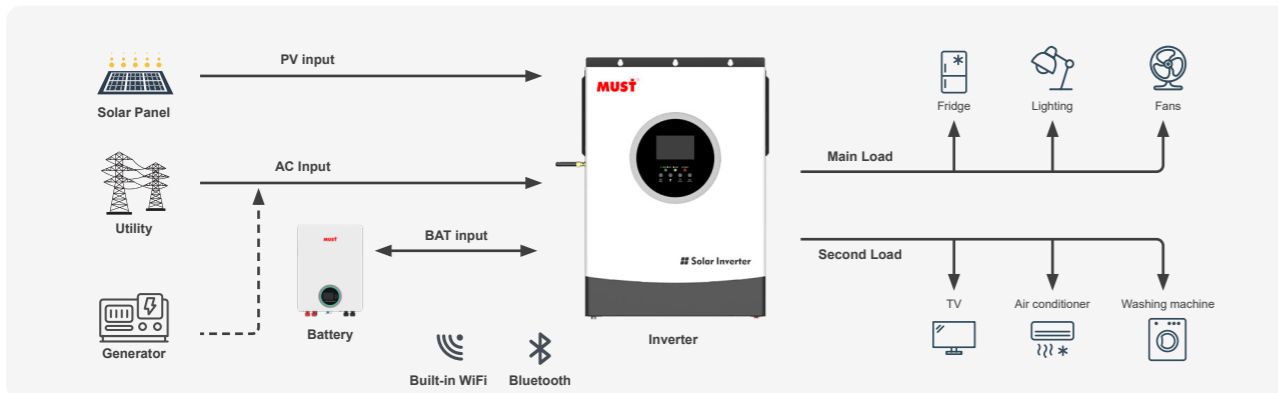
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485, CAN monitoring function
- WIFI remote monitoring (Built in wifi and bluetooth module and antenna)
- PV/ AC activation function
- BMS communication function (CAN Port)
- Dual output for smart load management



### Back panel description



### Solar system connection



| MODEL  | PV18-2012 PREM  | PV18-3624 PREM | PV18-4024 PREM | PV18-6248 PREM |
|--|---|----------------|----------------|----------------|
| Nominal Battery System Voltage                                   | 12VDC   | 24VDC          | 24VDC          | 48VDC          |
| <b>INVERTER OUTPUT</b>   |   |                |                |                |
| Rated Power (Main+Second Load)                                   | 2000VA/2000W  | 3600VA/3600W   | 4000VA/4000W   | 6200VA/6200W   |
| Battery Mode (Main+Second Load)                                  | 2000VA/1600W  | 3000VA/3000W   | 3500VA/3500W   | 5500VA/5500W   |
| Surge Power  | 3200W   | 6000W          | 7000W          | 11000W         |
| Waveform   | Pure sine wave  |                |                |                |
| AC Voltage Regulation (Batt.Mode)                                | 230VAC±5%(Setting)  |                |                |                |
| Inverter Efficiency(Peak)  | 90~93%  |                |                |                |
| Transfer Time  | 10ms (UPS / VDE4105) / 20ms (APL)                               |                |                |                |
| <b>AC INPUT</b>  |   |                |                |                |
| Voltage  | 230VAC±5%   |                |                |                |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)          |                |                |                |
| Frequency Range  | 50Hz / 60Hz(Auto sensing)                                       |                |                |                |
| <b>BATTERY</b>   |   |                |                |                |
| Normal voltage   | 12VDC   | 24VDC          | 24VDC          | 48VDC          |
| Floating Charge Voltage  | 13.7VDC   | 27.4VDC        | 27.4VDC        | 54.8VDC        |
| Overcharge Protection  | 15VDC   | 30VDC          | 30VDC          | 60VDC          |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>                            |   |                |                |                |
| Maximum PV Array Open Circuit Voltage                            | 400VDC  | 400VDC         | 450VDC         | 450VDC         |
| Maximum PV Input Current   | 16A   | 18A            | 18A            | 28A            |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                |                |                |
| Maximum PV Array Power   | 2000W   | 4000W          | 4000W          | 6000W          |
| PV Array MPPT Voltage Range(Typ.)                                | 30~320VDC   |                | 60~360VDC      |                |
| Maximum Solar Charge Current                                     | 80A   | 100A           | 100A           | 100A           |
| Maximum AC Charge Current  | 80A   | 60A            | 60A            | 100A           |
| Maximum Charge Current   | 80A   | 100A           | 100A           | 100A           |
| <b>MECHANICAL SPECIFICATIONS</b>                                 |   |                |                |                |
| Machine Dimension (W*H*D)(mm)                                    | 290*367*111   |                | 318*454*122.5  |                |
| Package Dimension (W*H*D)(mm)                                    | 446*394*187   |                | 544.5*410*200  |                |
| N.W (kg)   | 6   | 7.8            | 8.0            | 9.0            |
| G.W (kg)   | 7.2   | 9.3            | 9.5            | 10.2           |
| <b>OTHER</b>   |   |                |                |                |
| Humidity   | 5% to 95% Relative humidity (Non-condensing)                    |                |                |                |
| Operating Temperature  | -10°C~50°C  |                |                |                |
| Storage Temperature  | -15°C~60°C  |                |                |                |
| Communication Interface  | USB/WIFI/Bluetooth/RS-485/CAN                                   |                |                |                |
| Warranty   | 2years  |                |                |                |
| Anti-dust Kit  | none  | yes            | yes            | yes            |
| <b>CERTIFICATION &amp; STANDARDS</b>                             |   |                |                |                |
| CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2) |   |                |                |                |

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## HIGH FREQUENCY SOLAR INVERTER PV1800 VPM II Series

1~5.5KW | 24V,48V | 45~80A



This is a multi-function inverter/charger, combining functions of inverter, MPPT 45~80A solar charge controller 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.



- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built in MPPT 40A/60A solar charge controller
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485, CAN monitoring function
- WIFI remote monitoring (optional)
- Compatible to generator
- PV/ AC activation function
- Smart battery pack BMS communication function (CAN Port)

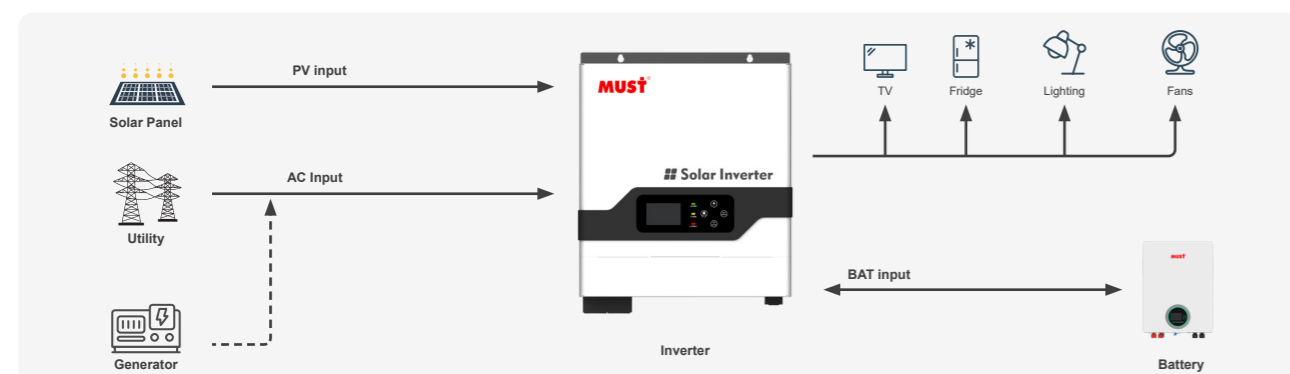
### Back panel description

**1.2KW**

**3.5KW/4KW**

1. AC output
2. AC input
3. Circuit breaker
4. PV input
5. Battery input
6. Power on/off switch
7. Dry contact
8. USB Communication port
9. RS-485,CAN Communication port
10. USB WiFi port (optional)
11. Ground

### Solar system connection



| MODEL   | PV18-1012 VPM II                                   | PV18-1512 VPM II | PV18-1224 VPM II | PV18-2224 VPM II | PV18-3224 VPM II | PV18-3524 VPM II | PV18-4024 VPM II | PV18-5048 VPM II | PV18-5548 VPM II |
|---|--|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Default Battery System Voltage                                  | 12VDC  | 12VDC            | 24VDC            | 24VDC            | 24VDC            | 24VDC            | 24VDC            | 48VDC            | 48VDC            |
| <b>INVERTER OUTPUT</b>  |  |                  |                  |                  |                  |                  |                  |                  |                  |
| Rated Power   | 1000VA/1000W                                       | 1500VA/1500W     | 1200VA/1200W     | 2200VA/2200W     | 3200VA/3200W     | 3500VA/3500W     | 4000VA/4000W     | 5000VA/5000W     | 5500VA/5500W     |
| Surge Power   | 2000VA   | 3000VA           | 2400VA           | 4400VA           | 6400VA           | 7000VA           | 8000VA           | 10000VA          | 11000VA          |
| Waveform  | Pure sine wave                                     |                  |                  |                  |                  |                  |                  |                  |                  |
| AC Voltage Regulation (Batt.Mode)                               | 230VAC   |                  |                  |                  |                  |                  |                  |                  |                  |
| Inverter Efficiency(Peak)                                       | 90%~93%  |                  |                  |                  |                  |                  |                  |                  |                  |
| Transfer Time   | 10ms(UPS / VDE4105) / 20ms(APL)                    |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>AC INPUT</b>   |  |                  |                  |                  |                  |                  |                  |                  |                  |
| Voltage   | 230VAC   |                  |                  |                  |                  |                  |                  |                  |                  |
| Selectable Voltage Range  | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE) |                  |                  |                  |                  |                  |                  |                  |                  |
| Frequency Range   | 50Hz / 60Hz (Auto sensing)                         |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>BATTERY</b>  |  |                  |                  |                  |                  |                  |                  |                  |                  |
| Normal voltage  | 12VDC  |                  |                  | 24VDC            |                  |                  |                  | 48VDC            |                  |
| Floating Charge Voltage   | 13.8VDC  |                  |                  | 27.4VDC          |                  |                  |                  | 54.8VDC          |                  |
| Overcharge Protection   | 15VDC  |                  |                  | 30VDC            |                  |                  |                  | 60VDC            |                  |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>                           |  |                  |                  |                  |                  |                  |                  |                  |                  |
| Maximum PV Array Open Circuit Voltage                           | 105VDC   | 145VDC           | 120VDC           | 160VDC           | 160VDC           | 160VDC           | 160VDC           | 245VDC           |                  |
| PV Array MPPT Voltage Range (Typ.)                              | 15~75VDC   | 15~130VDC        | 30~96VDC         | 30~128VDC        | 30~128VDC        | 30~128VDC        | 30~128VDC        | 60~200VDC        |                  |
| Standby Power Consumption                                       | 2W   |                  |                  |                  |                  |                  |                  |                  |                  |
| Maximum PV Array Power  | 600W   | 720W             | 1000W            | 1600W            | 1600W            | 1600W            | 1600W            | 4500W            |                  |
| Maximum Solar Charge Current                                    | 45A  | 60A              | 40A              | 60A              | 60A              | 60A              | 60A              | 80A              |                  |
| Maximum Efficiency  | 98%  |                  |                  |                  |                  |                  |                  |                  |                  |
| Maximum AC Charge Current                                       | 20A  | 20A              | 30A              | 40A              | 60A              | 60A              | 60A              | 60A              |                  |
| Maximum Charge Current  | 65A  | 70A              | 70A              | 100A             | 120A             | 120A             | 120A             | 140A             |                  |
| <b>MECHANICAL SPECIFICATIONS</b>                                |  |                  |                  |                  |                  |                  |                  |                  |                  |
| Machine Dimension (W*H*D) (mm)                                  | 224*337*98   | 255*318*110      | 224*337*98       | 290*367.4*121    | 290*367.4*121    | 318*367.4*121    | 318*367.4*121    | 329*485*134      |                  |
| Package Dimension (W*H*D) (mm)                                  | 410*178*300  | 402*206*355      | 299*184*292      | 430*205*389      | 430*205*389      | 549*200*410      | 549*200*410      | /                |                  |
| N.W (kg)  | 3.6  | 5.5              | 4.7              | 5.3              | 5.5              | 5.9              | 5.9              | /                |                  |
| G.W (kg)  | 4.3  | 6.0              | 5.5              | 6.4              | 6.6              | 7.2              | 7.2              | /                |                  |
| <b>OTHER</b>  |  |                  |                  |                  |                  |                  |                  |                  |                  |
| Humidity  | 5% to 95% Relativ Humidity (Non-condensing)        |                  |                  |                  |                  |                  |                  |                  |                  |
| Operating Temperature   | 0°C~50°C   |                  |                  |                  |                  |                  |                  |                  |                  |
| Storage Temperature   | -15°C -60°C  |                  |                  |                  |                  |                  |                  |                  |                  |
| Communication Interface   | USB/WIFI (optional)                                |                  |                  |                  |                  |                  |                  |                  |                  |
| Warranty  | 2years   |                  |                  |                  |                  |                  |                  |                  |                  |
| <b>CERTIFICATION &amp; STANDARDS</b>                            |  |                  |                  |                  |                  |                  |                  |                  |                  |
| CE-EMC+LVD(EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2) |  |                  |                  |                  |                  |                  |                  |                  |                  |

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## HIGH FREQUENCY SOLAR INVERTER PV1900 EXP Series



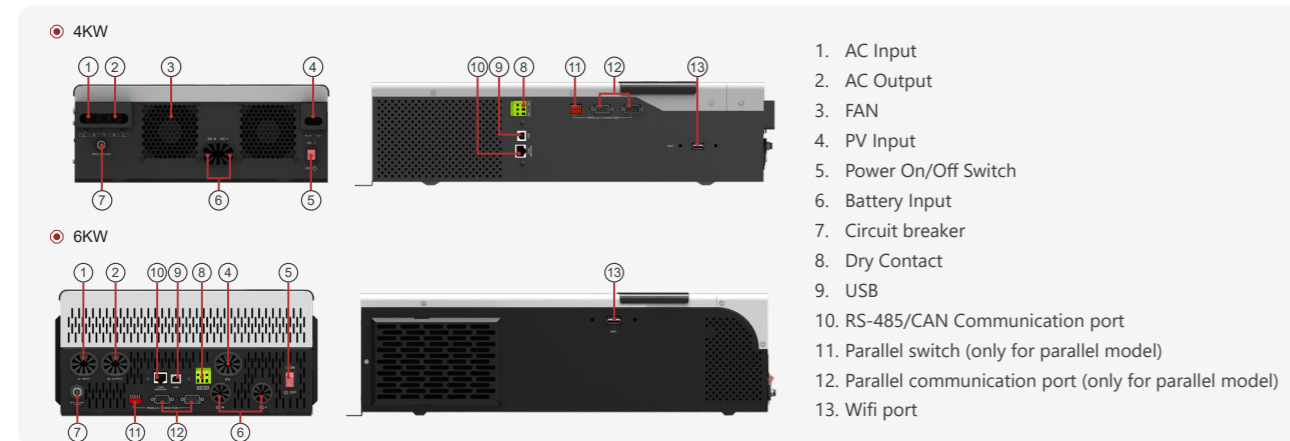
4~6KW | PV500V | 100~120A | Dual output | WiFi | 9pcs parallel

PV1900 EXP is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PV1900 EXP Series can run without battery when solar energy is enough. The Maximum PV array open circuit voltage can reach 500V and MPPT voltage is 150~450Vdc, which can help customers make full use of solar energy.

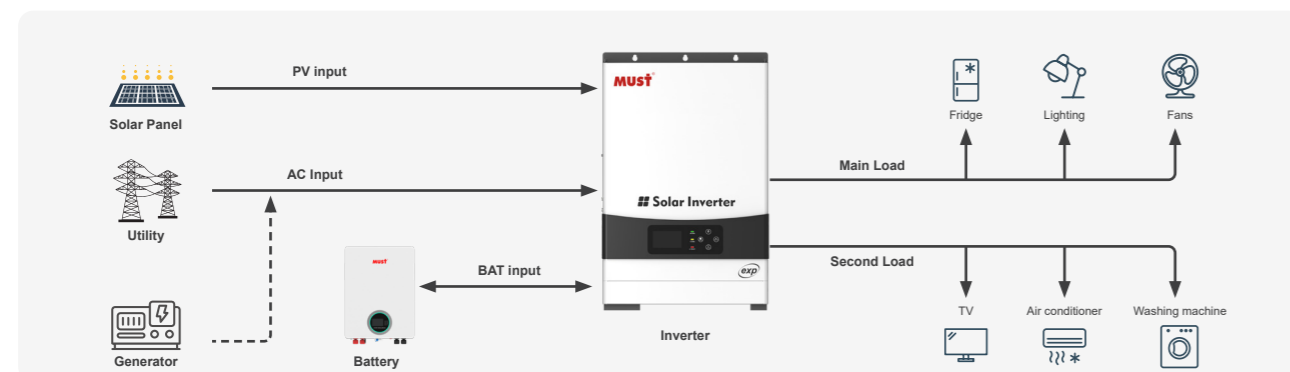


- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc.)
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 9 units (for 48V mode)
- WIFI remote monitoring (optional)
- Dual outputs for smart load management(optional)
- Can communicate with lithium batteries

### Back panel description



### Solar system connection



| MODEL                                 | PV19-4024 EXP   | PV19-6048 EXP  |
|---------------------------------------|---|----------------|
| Default Battery System Voltage        | 24VDC   | 48VDC          |
| <b>INVERTER OUTPUT</b>                |   |                |
| Rated Power                           | 4000VA / 4000W  | 6000VA / 6000W |
| Surge Power                           | 8000W   | 12000W         |
| Waveform                              | Pure sine wave  |                |
| AC Voltage Regulation (Batt.Mode)     | 230VAC±5%(Setting)  |                |
| Inverter Efficiency(Peak)             | 92%   |                |
| Transfer Time                         | 10ms(UPS / VDE4105) / 20ms(APL) / < 50ms typical (For parallel operation) |                |
| <b>AC INPUT</b>                       |   |                |
| Voltage                               | 230VAC  |                |
| Selectable Voltage Range              | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)                        |                |
| Frequency Range                       | 50Hz / 60Hz (Auto sensing)  |                |
| <b>BATTERY</b>                        |   |                |
| Normal voltage                        | 24VDC   | 48VDC          |
| Floating Charge Voltage               | 27.4VDC   | 54.8VDC        |
| Overcharge Protection                 | 30VDC   | 60VDC          |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |                |
| Maximum PV Array Open Circuit Voltage | 500VDC (450V for parallel)  |                |
| Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li)           |                |
| Maximum PV Array Power                | 5000W   | 6000W          |
| PV Array MPPT Voltage Range           | 90~430VDC   | 120~430 VDC    |
| Maximum Solar Charge Current          | 100A  | 120A           |
| Maximum AC Charge Current             | 80A   | 100A           |
| Maximum Charge Current                | 100A  | 120A           |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |                |
| Machine Dimension (W*H*D)(mm)         | 322*486*134   | 309*505*147    |
| Package Dimension (W*H*D)(mm)         | 575*229*425   | 603*260*400    |
| N.W (kg)                              | 9.5   | 12.5           |
| G.W (kg)                              | 12  | 13.8           |
| <b>OTHER</b>                          |   |                |
| Humidity                              | 5% to 95% Relativ Humidity (Non-condensing)                               |                |
| Operating Temperature                 | 0°C~50°C  |                |
| Storage Temperature                   | -15°C~60°C  |                |
| Communication Interface               | USB/ WIFI   |                |
| Warranty                              | 2 year  |                |

### CERTIFICATION & STANDARDS

CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)  
 CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)  
 EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011

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## HIGH FREQUENCY SOLAR INVERTER PV1900 EXP Series

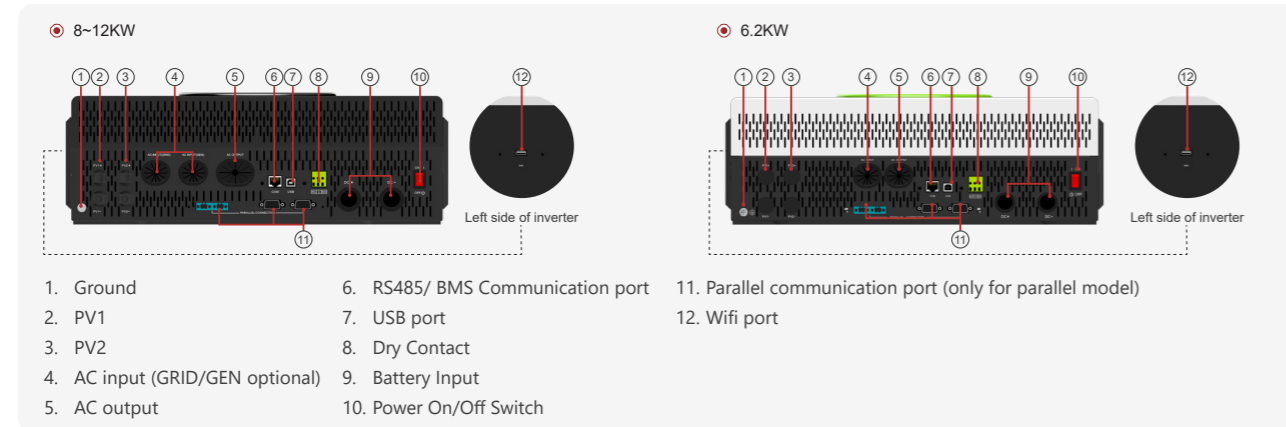
6.2~12KW | PV500V | 120A~150A | Dual output

The PV1900 EXP Series is a multi-functional inverter/charger that integrates an inverter, MPPT solar charge controller, and battery charger into a compact and easy-to-install unit, providing users with uninterrupted power supply. This series supports operation without batteries and features a maximum PV input voltage of up to 500V, with an MPPT voltage range of 90~450VDC. Equipped with dual MPPT solar charge controllers, it maximizes the utilization of solar energy and improves overall power generation efficiency.

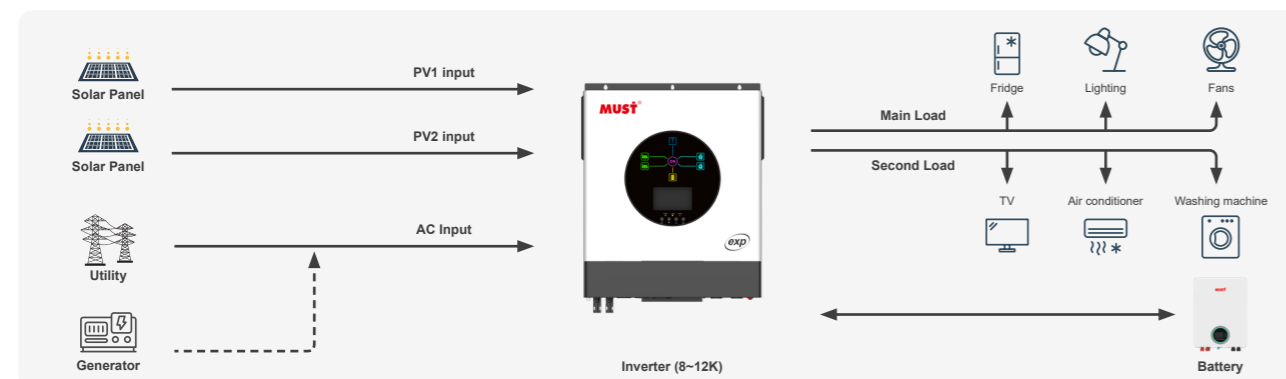


- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V (450V for parallel)
- Can provide the power to the load without battery when solar energy is enough
- Overload, short circuit and Deep discharge protection
- With BMS lithium battery communication function
- With AC/PV lithium battery activation function
- Support USB, RS485 monitoring function
- Parallel operation up to 6 units
- WIFI remote monitoring

### Back panel description



### Solar system connection



| MODEL  | PV19-6248 EXP   | PV19-8048 EXP | PV19-10048 EXP | PV19-11048 EXP | PV19-12048 EXP |
|--|---|---------------|----------------|----------------|----------------|
| Default Battery System Voltage   | 48VDC   |               |                |                |                |
| <b>INVERTER OUTPUT</b>   |   |               |                |                |                |
| Rated Power  | 6200VA/6200W  | 8000VA/8000W  | 10000VA/10000W | 11000VA/11000W | 12000VA/12000W |
| Surge Power  | 12400W  | 16000W        | 20000W         | 22000W         | 24000W         |
| Waveform   | Pure sine wave  |               |                |                |                |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |               |                |                |                |
| Inverter Efficiency(Peak)  | 92%   |               |                |                |                |
| Transfer Time  | 10ms(UPS / VDE4105) / 20ms(APL)                                 |               |                |                |                |
| <b>AC INPUT</b>  |   |               |                |                |                |
| Voltage  | 230VAC  |               |                |                |                |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)              |               |                |                |                |
| Frequency Range  | 50Hz / 60Hz (Auto sensing)                                      |               |                |                |                |
| <b>BATTERY</b>   |   |               |                |                |                |
| Normal voltage   | 48VDC   |               |                |                |                |
| Floating Charge Voltage  | 54.8VDC   |               |                |                |                |
| Overcharge Protection  | 60VDC   |               |                |                |                |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |               |                |                |                |
| Maximum PV Array Open Circuit Voltage  | 500VDC (450V for parallel)                                      |               |                |                |                |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |               |                |                |                |
| Maximum PV Array Power   | 4000W*2   | 4000W*2       | 5000W*2        | 5500W*2        | 6000W*2        |
| Maximum PV Input Current   | 18A*2   | 18A*2         | 27A*2(40A max) | 27A*2(40A max) | 27A*2(40A max) |
| PV Array MPPT Voltage Range  | 90~450VDC (90~430VDC for parallel)                              |               |                |                |                |
| Maximum Solar Charge Current   | 120A  | 120A          | 150A           | 150A           | 150A           |
| Maximum AC Charge Current  | 100A  | 120A          | 150A           | 150A           | 150A           |
| Maximum Charge Current   | 120A  | 120A          | 150A           | 150A           | 150A           |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |               |                |                |                |
| Machine Dimension (W*H*D) (mm)   | 425*455*147   |               | 425*527*145    |                |                |
| Package Dimension (W*H*D) (mm)   | 586*247*537   |               | 632*257*548    |                |                |
| N.W (kg)   | 13  | 18.0          | 18.0           | 18.1           | 18.1           |
| G.W (kg)   | 15.6  | 20.6          | 20.6           | 20.7           | 20.7           |
| <b>OTHER</b>   |   |               |                |                |                |
| Humidity   | 5% to 95% Relativ Humidity (Non-condensing)                     |               |                |                |                |
| Operating Temperature Range  | -10°C~50°C  |               |                |                |                |
| Storage Temperature Range  | -15°C ~60°C   |               |                |                |                |
| Warranty   | 2 year  |               |                |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |                |                |                |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011 |   |               |                |                |                |

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## LOW FREQUENCY OFF GRID SOLAR INVERTER PV2000 PK Series

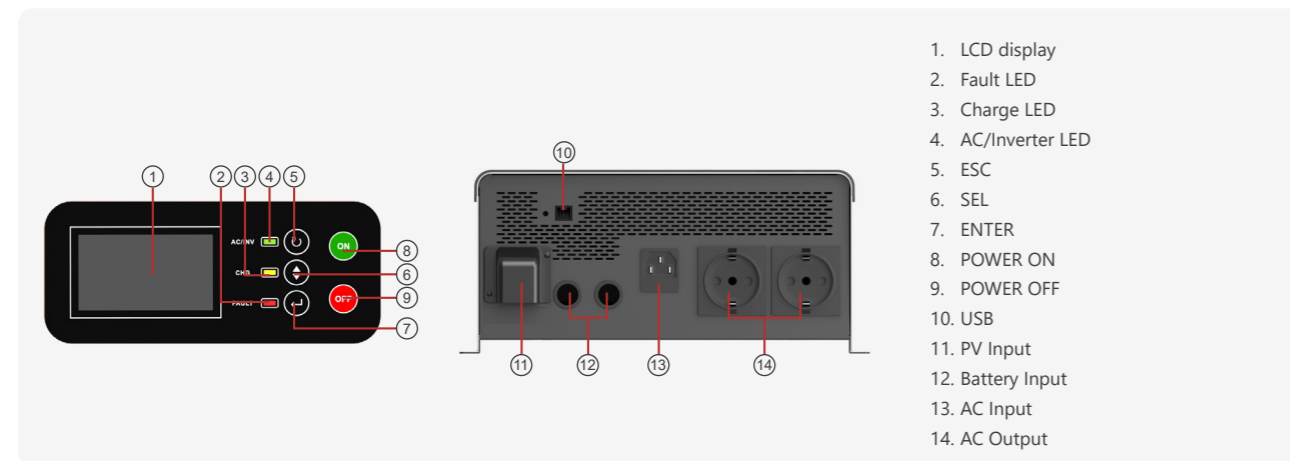
1~2KVA | 12V, 24V | 50A PWM

PV2000 PK built-in high efficiency solar controller. AC input voltage range for 140VAC-280VAC with regulated output (AVR) features, PV, AC function, A tracking feature such as power frequency. The output frequency can be set using the keys, AC /PV charging voltage, charge current, AC or PV priority mode, Battery under voltage shut-down point, and so many other functions.

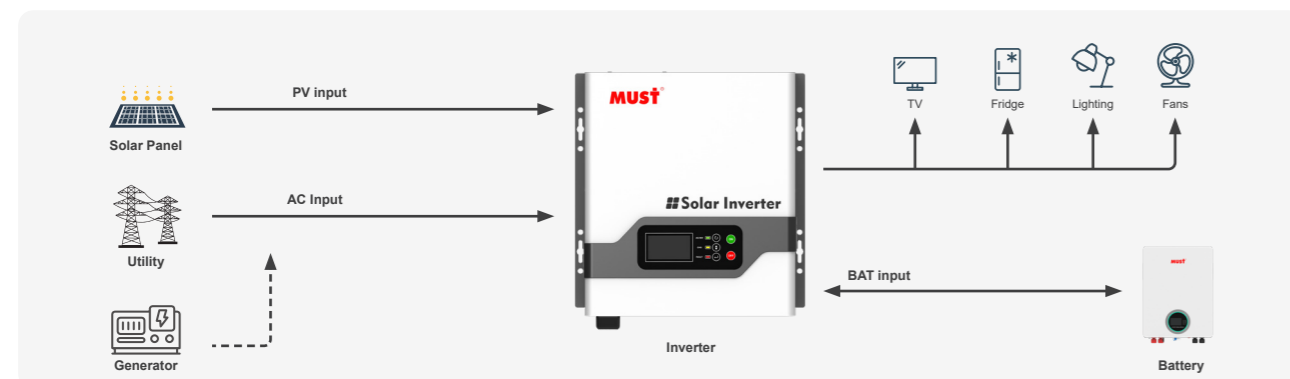


- Pure sine wave output
- Built-in 50A PWM solar charge controller
- Smart LCD setting ( frequency , charge voltage, charge current, etc).
- Overload and short-circuit protection
- Deep discharge protection
- Cold start function
- Support USB/RS232 monitoring function

### Back panel description



### Solar system connection



| MODEL   | PV20-1012 PK  | PV20-1512 PK                                | PV20-2024 PK |
|---|---|---|--------------|
| Battery Input Voltage Rating  | 12VDC   |   | 24VDC        |
| <b>INVERTER OUTPUT</b>  |   |   |              |
| Rated Power   | 1000VA  | 1500VA                                      | 2000VA       |
|   | 700W  | 900W  | 1200W        |
| Instantaneous Power Draw  | 2100VA  | 2700VA                                      | 3600VA       |
| Output Waveform   | Pure sine wave  |   |              |
| Output Voltage  | Inverter mode: 230VAC(±5% RMS), AVR mode: 200VAC-240VAC 220VAC(±5% RMS)                       |   |              |
| Output Power Factor   | 0.7   | 0.6   |              |
| Output Frequency  | 50Hz/60Hz ±0.2 Hz   |   |              |
| Inverting Efficiency (peak)   | >85%  |   |              |
| Mains Mode Efficiency   | > 95%   |   |              |
| Transfer Time   | Typical 2~6ms 10ms(max)   |   |              |
| <b>AC INPUT</b>   |   |   |              |
| Input Voltage   | 220/230VAC  |   |              |
| Input Voltage Range   | 140~280VAC±5%   |   |              |
| Low Pressure Shutdown   | 140VAC±5%   |   |              |
| High Pressure Shutdown  | 280VAC±5%   |   |              |
| Low Frequency Shutdown  | 45±0.2Hz(50Hz)  |   |              |
| High Frequency Shutdown   | 65±0.2Hz(60Hz)  |   |              |
| Frequency Range   | 50Hz/60Hz ±0.2Hz  |   |              |
| <b>BATTERY</b>  |   |   |              |
| Minimum Start Voltage   | Battery under voltage shut-down point +0.5V   | Battery under voltage shut-down point +1.0V |              |
| Low Battery Alarm   | Battery under voltage shut-down point +0.5V   | Battery under voltage shut-down point +1.0V |              |
| Low Battery Shutdown  | (0.1V / 10-12.0VDC mode) User set   | (0.2V / 20.0-24.0VDC mode) User set         |              |
| Battery High Voltage Alarm  | Average Charge Voltage+1V   | Average Charge Voltage +2V                  |              |
| <b>AC CHARGER</b>   |   |   |              |
| Float Voltage   | 13.5~14.5VDC to set   | 27~29VDC to set                             |              |
| Average Charge Voltage  | (0.1V each click, 13.8~14.5V mode) User set   | (0.2V each click , 27.6~29V mode) User set  |              |
| Maximum Charge Current  | 20A±2A  | 25A±2A                                      | 15A±2A       |
| <b>BYPASS &amp; PROTECTION</b>  |   |   |              |
| Input Frequency   | 50Hz / 60Hz   |   |              |
| Low Frequency Switching   | 45±1Hz  |   |              |
| High Frequency Switching  | 65±1Hz  |   |              |
| Overload Protection   | 110%~125%R load fault after 60s 125% ~150%R load fault after 3s >150%R load fault after 500ms |   |              |
| Output Short Circuit Protection   | Yes   |   |              |
| Bypass Circuit Breaker Insurance  | 10A   |   |              |
| Maximum Current Bypass  | 10A   | 10A   |              |
| <b>SOLAR CHARGER</b>  |   |   |              |
| Maximum PV Charge Current   | 50A±5A  |   |              |
| Battery Voltage   | 12VDC   | 24VDC                                       |              |
| Maximum PV Array Power  | 150W*5 solar panels   | 150W*10 solar panels                        |              |
| Maximum PV Array Open Circuit Voltage   | 55Vdc   |   |              |
| Maximum Efficiency  | > 95%   |   |              |
| Standby Consumption   | <2W   |   |              |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |   |              |
| Assembly  | Wall mount  |   |              |
| Machine Dimension (W*H*D) (mm)  | 300.5*319*132.2   |   |              |
| Package Dimension (W*H*D) (mm)  | 391*325*187   |   |              |
| N.W (kg)  | /   |   |              |
| G.W (kg)  | /   |   |              |
| <b>OTHER</b>  |   |   |              |
| Working Environment   | 0°C~40°C 0~90% Relative humidity (non-condensing)   |   |              |
| Noise   | Less than 60db  |   |              |
| Display   | LED + LCD   |   |              |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |   |              |
| CE-EMC+LVD(EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |   |              |

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## LOW FREQUENCY SOLAR INVERTER PV2900 HP Series

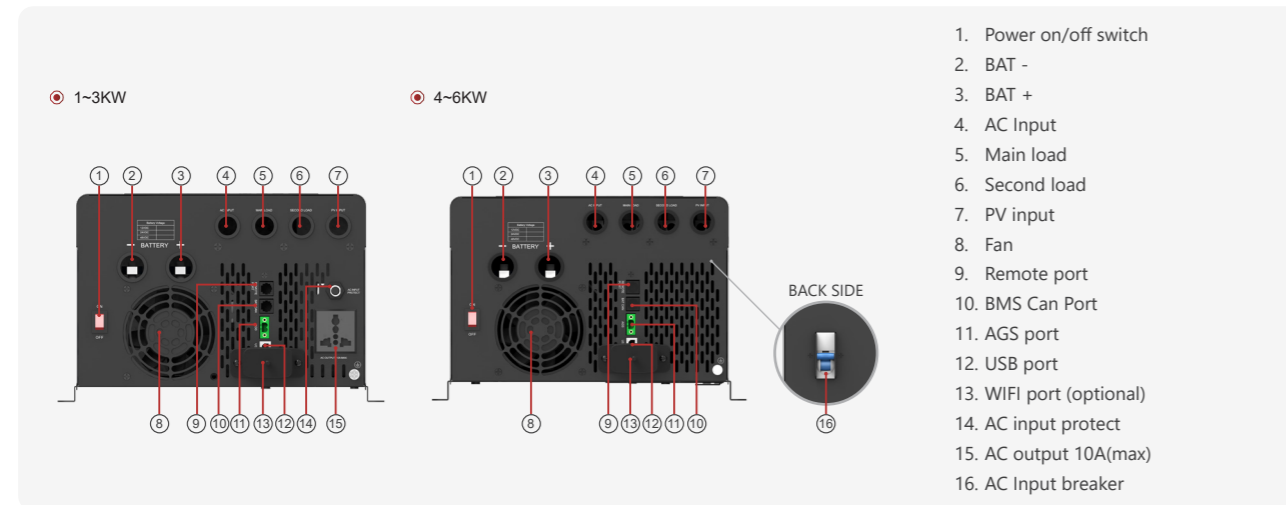
1~6KW | AC 230V | MPPT80A | WIFI | BMS | Dual output

PV2900 HP series is very economical pure sine wave solar inverter, Inbuilt with 80A MPPT charger; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is too lower, in this way system charge is optimized best. it enables inverter to operate with all kinds of home appliances.

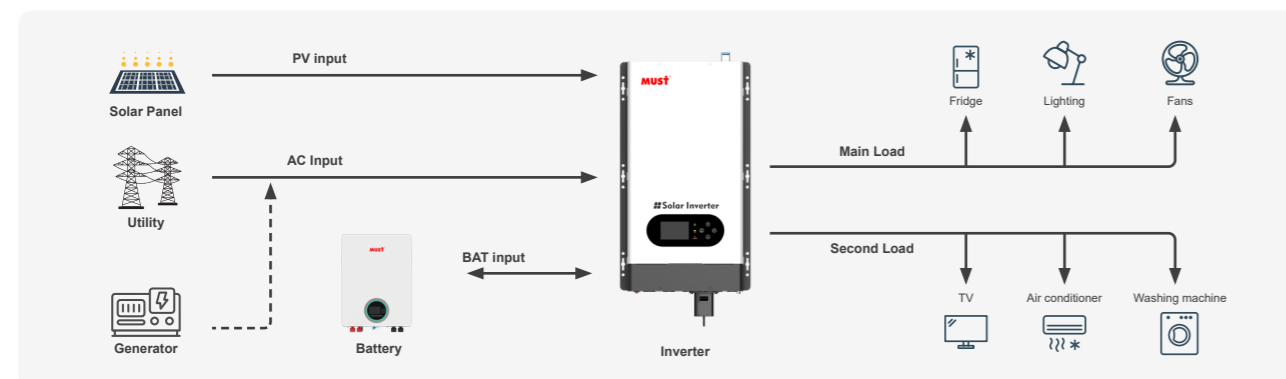


- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority /battery priority
- Set utility input wide/narrow voltage range
- Inverter voltage can be set to 220V/230V/240V
- Inverter frequency can be set to 50Hz/60Hz
- Set utility charging on/off switch
- Inbuilt 80A MPPT Solar Charge Controller
- Acid or Lithium Select
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function (CAN port)
- Dual output for smart load management

### Back panel description



### Solar system connection



| MODEL  | PV29-1012 HP  | PV29-1024 HP | PV29-1512 HP | PV29-1524 HP | PV29-2012 HP | PV29-2024 HP | PV29-3024 HP                     | PV29-3048 HP | PV29-4024 HP | PV29-4048 HP | PV29-5048 HP | PV29-6048 HP |
|--|---|--------------|--------------|--------------|--------------|--------------|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Nominal Battery System Voltage   | 12VDC   | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 24VDC                            | 48VDC        | 24VDC        | 48VDC        | 48VDC        | 48VDC        |
| <b>INVERTER OUTPUT</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Rated Power  | 1 KW  |              | 1.5 KW       |              | 2 KW         |              | 3 KW                             |              | 4 KW         |              | 5 KW         | 6 KW         |
| Surge Rating   | 3000VA  |              | 4500VA       |              | 6000VA       |              | 9000VA                           |              | 12000VA      |              | 15000VA      | 18000VA      |
| Capable Of Starting Electric Motor   | 1P  |              | 1P           |              | 1.5P         |              | 2P                               |              |              |              | 3P           |              |
| Waveform   | Pure sine wave / same as input (bypass mode)  |              |              |              |              |              |                                  |              |              |              |              |              |
| Nominal Output Voltage RMS   | 220V / 230V / 240VAC (±10% RMS)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Output Frequency   | 50Hz / 60Hz ±0.3Hz  |              |              |              |              |              |                                  |              |              |              |              |              |
| Inverter Efficiency (Peak)   | >88%  |              |              |              |              |              |                                  |              |              |              |              |              |
| Line Mode Efficiency   | >95%  |              |              |              |              |              |                                  |              |              |              |              |              |
| Power Factor   | 1.0   |              |              |              |              |              |                                  |              |              |              |              |              |
| Typical Transfer Time  | 10ms(max)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Overload   | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |              |              |              |              |              |                                  |              |              |              |              |              |
| <b>AC INPUT</b>  |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Voltage  | 230VAC  |              |              |              |              |              |                                  |              |              |              |              |              |
| Selectable Voltage Range   | 155~265VAC(For personal computers)  |              |              |              |              |              |                                  |              |              |              |              |              |
| Frequency Range  | 50Hz / 60Hz(Auto sensing) 40~80Hz   |              |              |              |              |              |                                  |              |              |              |              |              |
| <b>BATTERY</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Minimum Start Voltage  | (10V / 10.5V / 11V / 11.5V/ 12V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Low Battery Voltage Alarm  | (10V / 10.5V / 11V / 11.5V/ 12V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Low Battery Voltage Cut Off  | 10V / 10.5V / 11V / 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |              |              |              |              |              |                                  |              |              |              |              |              |
| High Battery Voltage Alarm   | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |                                  |              |              |              |              |              |
| High Battery Voltage Recover   | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Energy Saving Mode   | Load ≤50±20W(120V)/100±20W(220V)  |              |              |              |              |              |                                  |              |              |              |              |              |
| <b>CHARGER</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Output Voltage   | Depends on battery type   |              |              |              |              |              |                                  |              |              |              |              |              |
| Overcharge Protection S.D.   | 15.5VDC for 12VDC mode (*2 for 24VDC mode, *4 for 48VDC mode)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Maximum Charge Current   | 30A   | 20A          | 45A          | 25A          | 60A          | 30A          | 40A                              | 20A          | 60A          | 30A          | 35A          | 40A          |
| <b>PAYPASS &amp; PROTECTION</b>  |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Input Voltage Waveform   | Sine wave (grid or generator)   |              |              |              |              |              |                                  |              |              |              |              |              |
| Nominal Input Frequency  | 50Hz or 60Hz  |              |              |              |              |              |                                  |              |              |              |              |              |
| Overload Protection (SMPS Load)  | Circuit breaker   |              |              |              |              |              |                                  |              |              |              |              |              |
| Output Short Circuit Protection  | Circuit breaker   |              |              |              |              |              |                                  |              |              |              |              |              |
| AC Input Breaker   | 1-3K/30A  |              |              |              |              |              | 4-6K/50A                         |              |              |              |              |              |
| <b>SOLAR CHARGER</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Maximum PV Array Power   | 1250W   | 2500W        | 1250W        | 2500W        | 1250W        | 2500W        | 2500W                            | 5000W        | 2500W        | 5000W        | 5000W        | 5000W        |
| Maximum PV Charge Current  | 80A±4A  |              |              |              |              |              |                                  |              |              |              |              |              |
| DC Voltage   | 12V/ 24V auto work  |              |              |              |              |              | 24V/ 48V auto work               |              |              |              |              |              |
| MPPT Range @ Operating Voltage   | 15~95VDC @ 12V/ 30~230VDC @ 24V   |              |              |              |              |              | 30~230VDC @ 24V/ 60~230VDC @ 48V |              |              |              |              |              |
| Maximum PV Array Open Circuit Voltage  | 245VDC  |              |              |              |              |              |                                  |              |              |              |              |              |
| Standby Power Consumption  | <2W   |              |              |              |              |              |                                  |              |              |              |              |              |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Mounting   | Wall Mount  |              |              |              |              |              |                                  |              |              |              |              |              |
| Machine Dimension (W*H*D) (mm)   | 309*460*196   |              |              |              |              |              | 309*545*200                      |              |              |              |              |              |
| Package Dimensions (W*H*D)(mm)   | 610*310*400   |              |              |              |              |              | 695*310*400                      |              |              |              |              |              |
| N.W (kg)   | /   |              |              |              |              |              |                                  |              |              |              |              |              |
| G.W (kg)   | /   |              |              |              |              |              |                                  |              |              |              |              |              |
| <b>OTHER</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| Operating Temperature Range  | 0°C ~ 40°C  |              |              |              |              |              |                                  |              |              |              |              |              |
| Storage Temperature  | -15°C ~ 60°C  |              |              |              |              |              |                                  |              |              |              |              |              |
| Audible Noise  | 60dB MAX  |              |              |              |              |              |                                  |              |              |              |              |              |
| Display  | LED+LCD   |              |              |              |              |              |                                  |              |              |              |              |              |
| Standard Warranty  | 2 year  |              |              |              |              |              |                                  |              |              |              |              |              |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |              |              |              |              |              |                                  |              |              |              |              |              |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |              |              |              |              |              |                                  |              |              |              |              |              |

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## LOW FREQUENCY SOLAR INVERTER PV3000 VHM Series

1~6KW | AC 230V | MPPT80A | WIFI | BMS

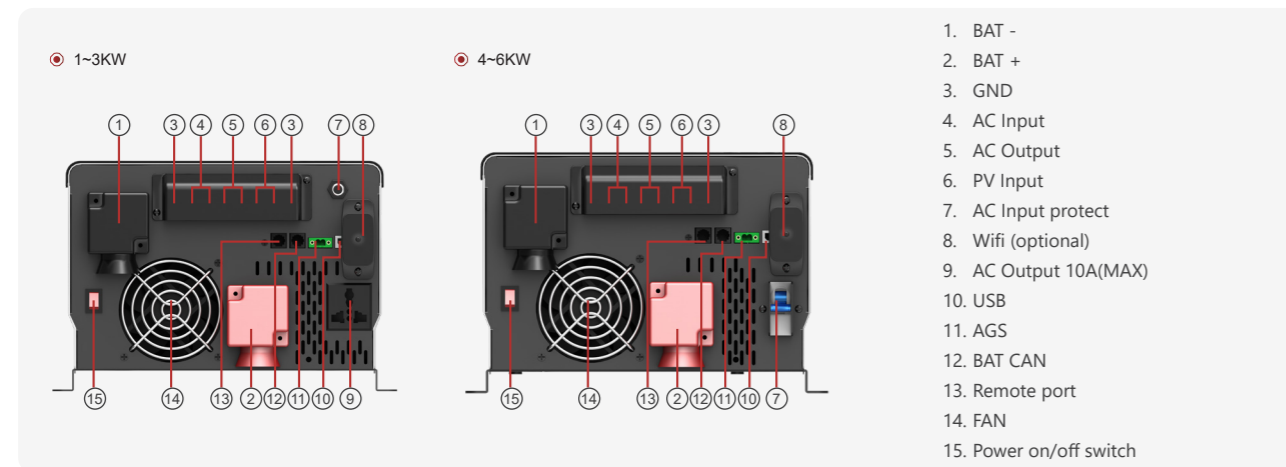
PV3000 VHM series is very economical pure sine wave solar inverter, Inbuilt with 80A MPPT charger; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is too lower, in this way system charge is optimized best. it enables inverter to operate with all kinds of home appliances.



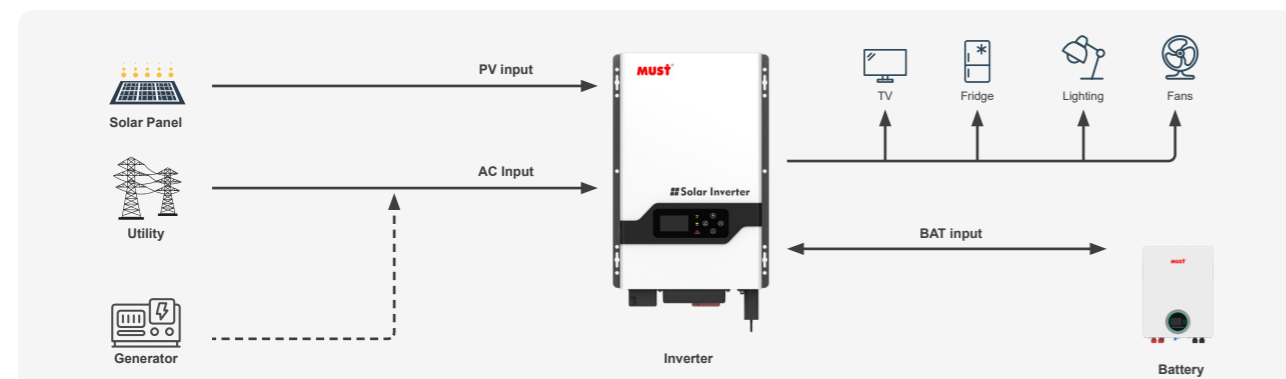
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority /battery priority
- Set utility input wide/narrow voltage range
- Inverter voltage can be set to 220V/230V/240V
- Inverter frequency can be set to 50Hz/60Hz
- Set utility charging on/off switch
- Inbuilt 80A MPPT Solar Charge Controller
- Acid or Lithium Select
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function (CAN port)



### Back panel description



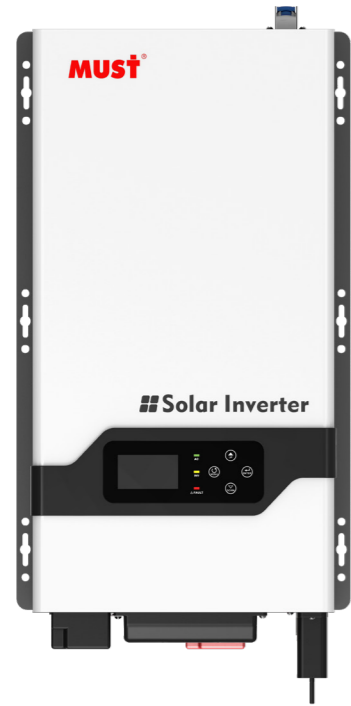
### Solar system connection



| MODEL  | PV30-1012 VHM   | PV30-1024 VHM | PV30-1512 VHM | PV30-1524 VHM | PV30-2012 VHM | PV30-2024 VHM | PV30-3024 VHM                       | PV30-3048 VHM | PV30-4024 VHM | PV30-4048 VHM | PV30-5048 VHM | PV30-6048 VHM |
|--|---|---------------|---------------|---------------|---------------|---------------|-------------------------------------|---------------|---------------|---------------|---------------|---------------|
| Nominal Battery System Voltage   | 12VDC   | 24VDC         | 12VDC         | 24VDC         | 12VDC         | 24VDC         | 24VDC                               | 48VDC         | 24VDC         | 48VDC         | 48VDC         | 48VDC         |
| <b>INVERTER OUTPUT</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Rated Power  | 1 KW  |               | 1.5 KW        |               | 2 KW          |               | 3 KW                                |               | 4 KW          |               | 5 KW          | 6 KW          |
| Surge Rating   | 3000VA  |               | 4500VA        |               | 6000VA        |               | 9000VA                              |               | 12000VA       |               | 15000VA       | 18000VA       |
| Capable Of Starting Electric Motor   | 1HP   |               | 1HP           |               | 1HP           |               | 2HP                                 |               |               |               | 3HP           |               |
| Waveform   | Pure sine wave / same as input (bypass mode)  |               |               |               |               |               |                                     |               |               |               |               |               |
| Nominal Output Voltage RMS   | 220V / 230V / 240VAC (±10% RMS)   |               |               |               |               |               |                                     |               |               |               |               |               |
| Output Frequency   | 50Hz / 60Hz ±0.3Hz  |               |               |               |               |               |                                     |               |               |               |               |               |
| Inverter Efficiency (Peak)   | >88%  |               |               |               |               |               |                                     |               |               |               |               |               |
| Line Mode Efficiency   | >95%  |               |               |               |               |               |                                     |               |               |               |               |               |
| Power Factor   | 1.0   |               |               |               |               |               |                                     |               |               |               |               |               |
| Typical Transfer Time  | 10ms(max)   |               |               |               |               |               |                                     |               |               |               |               |               |
| Overload   | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |               |               |               |               |               |                                     |               |               |               |               |               |
| <b>AC INPUT</b>  |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Voltage  | 230VAC  |               |               |               |               |               |                                     |               |               |               |               |               |
| Selectable Voltage Range   | 155~265VAC(For personal computers)  |               |               |               |               |               |                                     |               |               |               |               |               |
| Frequency Range  | 50Hz / 60Hz(Auto sensing) 40~80Hz   |               |               |               |               |               |                                     |               |               |               |               |               |
| <b>BATTERY</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Minimum start voltage  | (10V / 10.5V / 11V / 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |               |               |               |               |               |                                     |               |               |               |               |               |
| Low Battery Voltage Alarm  | (10V / 10.5V / 11V / 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |               |               |               |               |               |                                     |               |               |               |               |               |
| Low Battery Voltage Cut Off  | 10V / 10.5V / 11V / 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |               |               |               |               |               |                                     |               |               |               |               |               |
| High Battery Voltage Alarm   | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |                                     |               |               |               |               |               |
| High Battery Voltage Recover   | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |                                     |               |               |               |               |               |
| Energy Saving Mode   | Load ≤50±20W(120V)/100±20W(220V)  |               |               |               |               |               |                                     |               |               |               |               |               |
| <b>CHARGER</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Output Voltage   | Depends on battery type   |               |               |               |               |               |                                     |               |               |               |               |               |
| Overcharge Protection S.D.   | 15.7VDC for 12VDC mode (*2 for 24VDC mode, *4 for 48VDC mode)   |               |               |               |               |               |                                     |               |               |               |               |               |
| Maximum Charge Current   | 30A   | 20A           | 45A           | 25A           | 60A           | 30A           | 40A                                 | 20A           | 60A           | 30A           | 35A           | 40A           |
| <b>PAYPASS &amp; PROTECTION</b>  |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Input Voltage Waveform   | Sine wave (grid or generator)   |               |               |               |               |               |                                     |               |               |               |               |               |
| Nominal Input Frequency  | 50Hz or 60Hz  |               |               |               |               |               |                                     |               |               |               |               |               |
| Overload Protection (SMPS Load)  | Circuit breaker   |               |               |               |               |               |                                     |               |               |               |               |               |
| Output Short Circuit Protection  | Circuit breaker   |               |               |               |               |               |                                     |               |               |               |               |               |
| AC Input Breaker   | 1-3K/30A  |               |               |               |               |               | 4-6K/50A                            |               |               |               |               |               |
| <b>SOLAR CHARGER</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Maximum PV Array Power   | 1250W   | 2500W         | 1250W         | 2500W         | 1250W         | 2500W         | 2500W                               | 5000W         | 2500W         | 5000W         | 5000W         | 5000W         |
| Maximum PV Charge Current  | 80A±4A  |               |               |               |               |               |                                     |               |               |               |               |               |
| DC Voltage   | 12V/ 24V auto work  |               |               |               |               |               | 24V/ 48V auto work                  |               |               |               |               |               |
| MPPT Range @ Operating Voltage   | 15~95VDC @ 12V/<br>30~230VDC @ 24V  |               |               |               |               |               | 30~230VDC @ 24V/<br>60~230VDC @ 48V |               |               |               |               |               |
| Maximum PV Array Open Circuit Voltage  | 245VDC  |               |               |               |               |               |                                     |               |               |               |               |               |
| Standby Power Consumption  | <2W   |               |               |               |               |               |                                     |               |               |               |               |               |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Mounting   | Wall Mount  |               |               |               |               |               |                                     |               |               |               |               |               |
| Machine Dimension (W*H*D) (mm)   | 303*493*200   |               |               |               |               |               | 305*531*202                         |               |               |               |               |               |
| Package Dimensions (W*H*D) (mm)  | 615*400*319   |               |               |               |               |               | 686*400*319                         |               |               |               |               |               |
| N.W (kg)   | /   |               |               |               |               |               | /                                   |               |               |               |               |               |
| G.W (kg)   | /   |               |               |               |               |               | /                                   |               |               |               |               |               |
| <b>OTHER</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| Operating Temperature Range  | 0°C to 40°C   |               |               |               |               |               |                                     |               |               |               |               |               |
| Storage Temperature  | -15°C to 60°C   |               |               |               |               |               |                                     |               |               |               |               |               |
| Audible Noise  | 60dB MAX  |               |               |               |               |               |                                     |               |               |               |               |               |
| Display  | LED+LCD   |               |               |               |               |               |                                     |               |               |               |               |               |
| Standard Warranty  | 2 year  |               |               |               |               |               |                                     |               |               |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |               |               |               |               |                                     |               |               |               |               |               |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |               |               |               |               |               |                                     |               |               |               |               |               |

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## LOW FREQUENCY SOLAR INVERTER/CHARGER PV3000 VPM Series

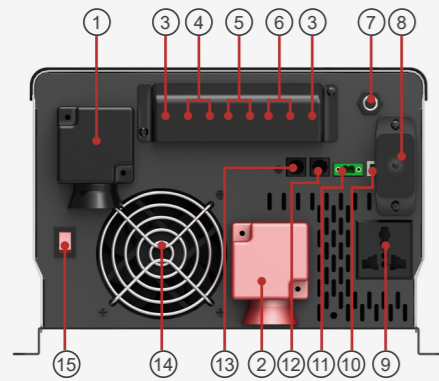


1~3KVA | 120/230V | 60A MPPT | WiFi | BMS

PV3000 VPM series is very economical pure sine wave solar inverter, inbuilt with 60A MPPT Charger and AC Charger from 20A to 60A; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is too lower, in this way system charge is optimized best. It enables inverter to operate with all kinds of home appliances.

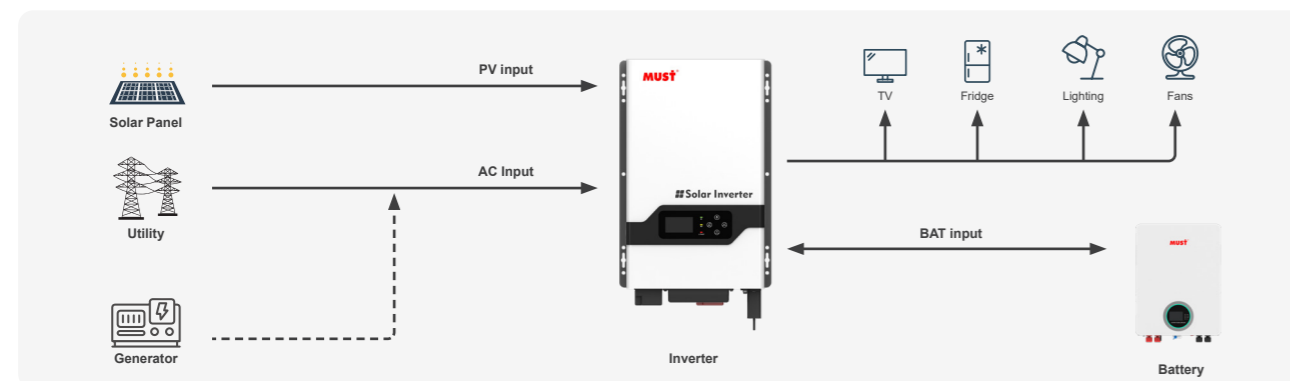
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 110V/115V/120V or 220V/230V/240V
- Inverter frequency can be set to 50Hz/60Hz
- Set utility charging on/off switch
- Inbuilt with 60A MPPT Solar Charge Controller
- Acid or Lithium Select
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



- |                     |                         |
|---------------------|-------------------------|
| 1. BAT -            | 9. AC Output 10A(MAX)   |
| 2. BAT +            | 10. USB                 |
| 3. GND              | 11. AGS                 |
| 4. AC Input         | 12. BAT CAN             |
| 5. AC Output        | 13. Remote port         |
| 6. PV Input         | 14. FAN                 |
| 7. AC Input protect | 15. Power on/off switch |
| 8. Wifi (optional)  |                         |

### Solar system connection



| MODEL                                 | PV30-1012 VPM   | PV30-1024 VPM | PV30-1512 VPM | PV30-1524 VPM | PV30-2012 VPM | PV30-2024 VPM | PV30-3024 VPM |
|---------------------------------------|---|---------------|---------------|---------------|---------------|---------------|---------------|
| Nominal Battery System Voltage        | 12VDC   | 24VDC         | 12VDC         | 24VDC         | 12VDC         | 24VDC         | 24VDC         |
| <b>INVERTER OUTPUT</b>                |   |               |               |               |               |               |               |
| Rated Power                           | 1000VA  |               | 1500VA        |               | 2000VA        |               | 3000VA        |
| Surge Rating                          | 3000VA  |               | 4500VA        |               | 6000VA        |               | 9000VA        |
| Capable Of Starting Electric Motor    | 1HP   |               | 1HP           |               | 1HP           |               | 2HP           |
| Waveform                              | Pure sine wave / same as input (bypass mode)  |               |               |               |               |               |               |
| Nominal Output Voltage RMS            | 110V /115V / 120V / 220V / 230V / 240VAC (±10% RMS)   |               |               |               |               |               |               |
| Output Frequency                      | 50Hz / 60Hz ±0.3Hz  |               |               |               |               |               |               |
| Inverter Efficiency (Peak)            | >88%  |               |               |               |               |               |               |
| Line Mode Efficiency                  | >95%  |               |               |               |               |               |               |
| Power Factor                          | 0.7   |               |               |               |               |               |               |
| Typical Transfer Time                 | 10ms(max)   |               |               |               |               |               |               |
| Overload                              | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |               |               |               |               |               |               |
| <b>AC INPUT</b>                       |   |               |               |               |               |               |               |
| Voltage                               | 230VAC  |               |               |               |               |               |               |
| Selectable Voltage Range              | 75~135VAC; 155~265VAC (For personal computers)  |               |               |               |               |               |               |
| Frequency Range                       | 50Hz / 60Hz(Auto sensing) 40~80Hz   |               |               |               |               |               |               |
| <b>BATTERY</b>                        |   |               |               |               |               |               |               |
| Minimum Start Voltage                 | (10V/ 10.5V/ 11V/ 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |               |
| Low Battery Voltage Alarm             | (10V/ 10.5V/ 11V/ 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |               |
| Low Battery Voltage Cut Off           | 10V/ 10.5V/ 11V/ 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |               |
| High Battery Voltage Alarm            | (12~14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |               |
| High Battery Voltage Recover          | (12~14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |               |
| Energy Saving Mode                    | Load ≤50±20W(120V)/100±20W(220V)  |               |               |               |               |               |               |
| <b>CHARGER</b>                        |   |               |               |               |               |               |               |
| Output Voltage                        | Depends on battery type   |               |               |               |               |               |               |
| Charge AC Input Breaker Rating        | 120V  | 1~2K/30A      |               |               |               |               | 3K/40A        |
|                                       | 230V  | 1~3K/30A      |               |               |               |               |               |
| Overcharge Protection S.D.            | 15.7VDC for 12VDC mode (*2 for 24VDC mode)  |               |               |               |               |               |               |
| Maximum Charge Current                | 30A   | 20A           | 45A           | 25A           | 60A           | 30A           | 40A           |
| <b>BYPASS &amp; PROTECTION</b>        |   |               |               |               |               |               |               |
| Input Voltage Waveform                | Sine wave (grid or generator)   |               |               |               |               |               |               |
| Nominal Input Frequency               | 50Hz or 60Hz  |               |               |               |               |               |               |
| Overload Protection (SMPS Load)       | Circuit breaker   |               |               |               |               |               |               |
| Output Short Circuit Protection       | Circuit breaker   |               |               |               |               |               |               |
| AC Input Breaker                      | 1-3K/30A  |               |               |               |               |               |               |
| <b>SOLAR CHARGER</b>                  |   |               |               |               |               |               |               |
| Maximum PV Array Power                | 1000W   | 2000W         | 1000W         | 2000W         | 1000W         | 2000W         | 2000W         |
| Maximum PV Charge Current             | 60A   |               |               |               |               |               |               |
| DC Voltage                            | 12V / 24V auto work   |               |               |               |               |               |               |
| MPPT Range @ Operating Voltage        | 12V: 16~75VDC; 24V: 32-100VDC   |               |               |               |               |               |               |
| Maximum PV Array Open Circuit Voltage | 12V:75VDC; 24V:100VDC   |               |               |               |               |               |               |
| Standby Power Consumption             | <2W   |               |               |               |               |               |               |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |               |               |               |               |               |               |
| Mounting                              | Wall Mount  |               |               |               |               |               |               |
| Dimensions (W*H*D) (mm)               | 303*493*200   |               |               |               |               |               |               |
| Package Dimensions (W*H*D) (mm)       | 615*400*319   |               |               |               |               |               |               |
| N.W (kg)                              | /   |               |               |               |               |               |               |
| G.W (kg)                              | /   |               |               |               |               |               |               |
| <b>OTHER</b>                          |   |               |               |               |               |               |               |
| Operating Temperature Range           | 0°C to 40°C   |               |               |               |               |               |               |
| Storage Temperature                   | -15°C to 60°C   |               |               |               |               |               |               |
| Audible Noise                         | 60dB MAX  |               |               |               |               |               |               |
| Display                               | LED+LCD   |               |               |               |               |               |               |
| Standard Warranty                     | 2 year  |               |               |               |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |               |               |               |               |               |               |
| /                                     |   |               |               |               |               |               |               |

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## LOW FREQUENCY SOLAR INVERTER PV3600 PRO Series

8~12KW | 245V | 100A, 200A

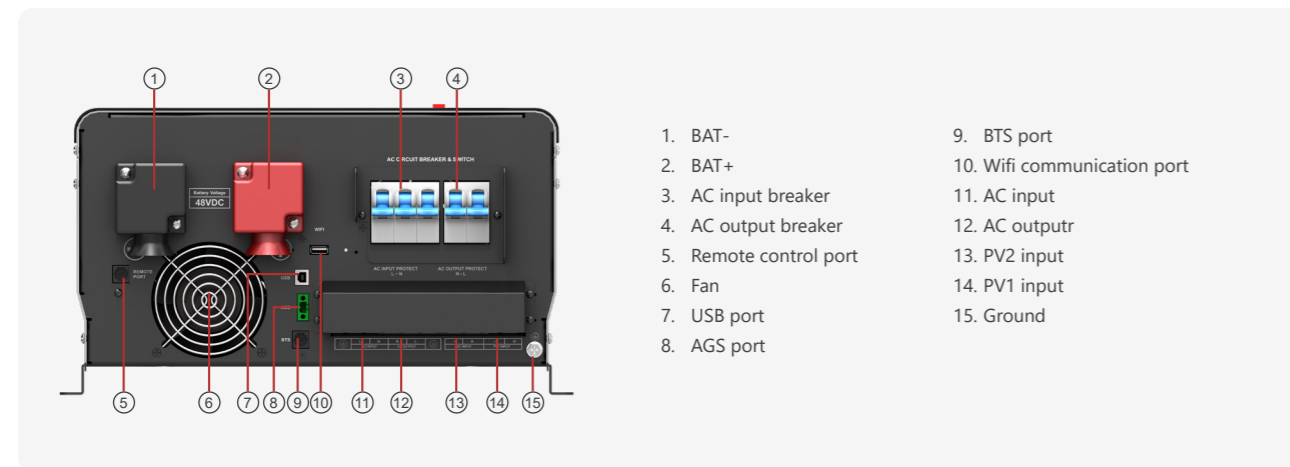
PV3600 PRO series is a multi-function inverter, combining functions of inverter and MPPT solar charge controller, solar charger and battery charger to offer uninterruptible power support. The comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and selectable input voltage based on different applications.



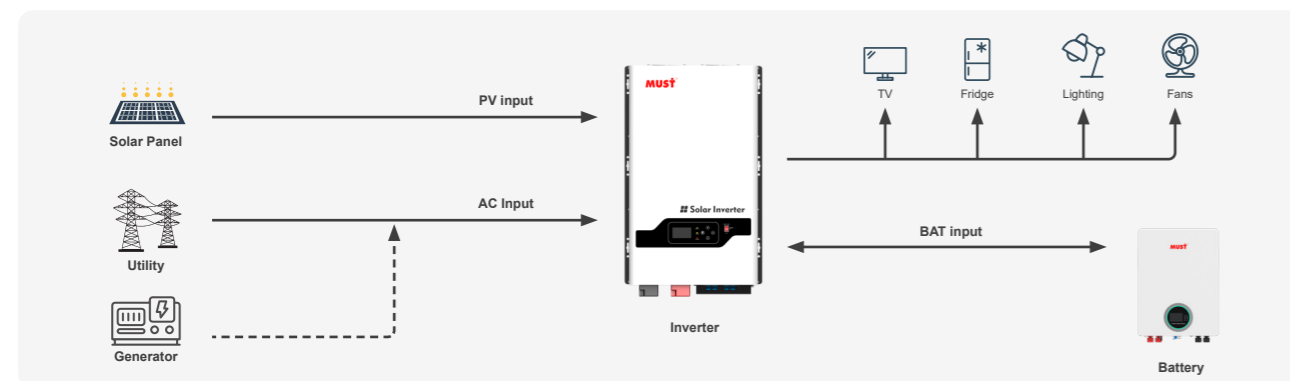
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 140Amp
- Inside BMS function
- DC start & Automatic Self-Diagnostic Function
- WIFI / USB monitoring function (wi-fi optional)
- Supporting AGS, BTS port
- Compatible to generator



### Back panel description



### Solar system connection



| MODEL  | PV36-8048 PRO  | PV36-10048 PRO | PV36-12048 PRO |
|--|--|----------------|----------------|
| Nominal Battery System Voltage               | 48VDC  | 48VDC          | 48VDC          |
| <b>INVERTER OUTPUT</b>                       |  |                |                |
| Rated power                                  | 8.0KW  | 10.0KW         | 12.0KW         |
| Surge rating                                 | 24000VA  | 30000VA        | 36000VA        |
| Capable of starting electric motor           | 4HP  | 5HP            | 6HP            |
| Waveform                                     | Pure sine wave / same as input (bypass mode)                                     |                |                |
| Nominal output voltage RMS                   | 220V / 230V / 240VAC (±10%RMS)   |                |                |
| Output frequency                             | 50Hz / 60Hz ± 0.3Hz  |                |                |
| Inverter efficiency(peak)                    | >88%   |                |                |
| Line mode efficiency                         | >95%   |                |                |
| Power factor                                 | 1.0  |                |                |
| Typical transfer time                        | 20ms(max)  |                |                |
| <b>AC INPUT</b>                              |  |                |                |
| Voltage                                      | 230VAC   |                |                |
| Selectable voltage range                     | 90-280 VAC (APL)   |                |                |
| Frequency range                              | 50Hz / 60Hz  |                |                |
| <b>BATTERY</b>                               |  |                |                |
| Low Battery Voltage Cut Off                  | 40-48VDC for 48VDC mode  |                |                |
| Low Battery Voltage Recover                  | 42-50VDC for 48VDC mode  |                |                |
| High Battery Voltage Alarm                   | 60VDC for 48VDC mode   |                |                |
| High Battery Voltage Recover                 | 57VDC for 48VDC mode   |                |                |
| Energy Saving Mode                           | <600W  |                |                |
| <b>AC CHARGER</b>                            |  |                |                |
| Output voltage                               | Depends on battery type  |                |                |
| Charger AC input breaker rating              | 80A  | 100A           | 100A           |
| Overcharge protection S.D.                   | 62.8VDC for 48VDC mode   |                |                |
| Maximum charge current                       | 100A   | 120A           | 140A           |
| <b>BTS</b>                                   |  |                |                |
| Continuous output power                      | Yes Variances in charging voltage & S.D. voltage base on the battery temperature |                |                |
| <b>BYPASS &amp; PROTECTION</b>               |  |                |                |
| Input voltage waveform                       | Sine wave (grid or generator)  |                |                |
| Nominal input frequency                      | 50Hz or 60Hz   |                |                |
| Overload protection (SMPS Load)              | Circuit breaker  |                |                |
| Output short circuit protection              | Circuit breaker  |                |                |
| Bypass breaker rating                        | 80A  | 100A           | 100A           |
| Max bypass current                           | 36A  | 45A            | 54.5A          |
| <b>SOLAR CHARGER</b>                         |  |                |                |
| Maximum PV charge current                    | 100A(200A optional)  |                |                |
| DC voltage                                   | 48V  |                |                |
| Maximim PV array power                       | 5000W(10000W for 200A optional)  |                |                |
| MPPT range @ operating voltage(VDC)          | 64~235VDC  |                |                |
| Maximum PV array open circuit voltage        | 245VDC   |                |                |
| Maximum efficiency                           | >98%   |                |                |
| Standby power consumption                    | <2W  |                |                |
| <b>MECHANICAL SPECIFICATIONS</b>             |  |                |                |
| Mounting                                     | Wall mount   |                |                |
| Dimensions (W*H*D)(mm)                       | 402*674*222  |                |                |
| Package Dimensions (W*H*D)(mm)               | /  |                |                |
| N.W (kg)                                     | /  |                |                |
| G.W (kg)                                     | /  |                |                |
| <b>OTHER</b>                                 |  |                |                |
| Operation temperature range                  | 0°C to 50°C  |                |                |
| Storage temperature                          | -15°C to 60°C  |                |                |
| Audible noise                                | 60dB MAX   |                |                |
| Display                                      | LED+LCD  |                |                |
| Standard Warranty                            | 2 year   |                |                |
| Loading (20GP/40GP/40HQ)                     | 140pcs / 280pcs / 320pcs   |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>         |  |                |                |
| CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011) |  |                |                |

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## LOW FREQUENCY SOLAR INVERTER PV3900 Series

8-12KW | 250V | 100A/200A

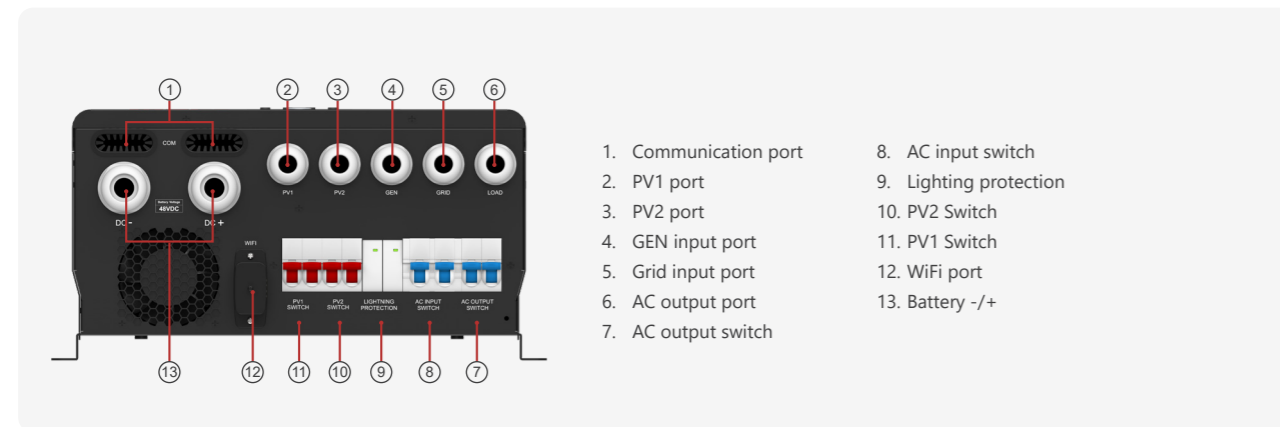
PV3900 Series is a multi-function inverter ,combining functions of inverter and MPPT solar charge controller, solar charger and battery charger to offer uninterruptible power support. The comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and selectable input voltage based on different applications.



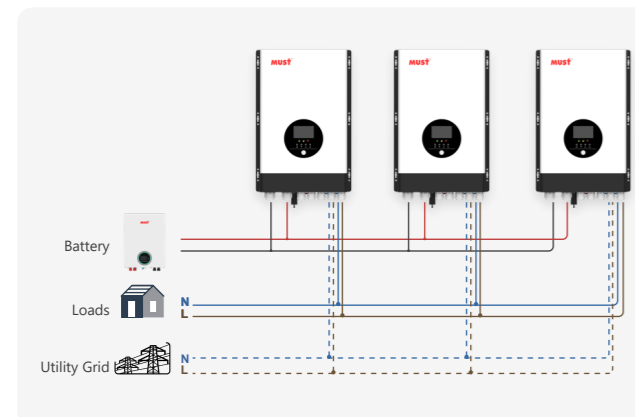
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 200A
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI monitoring function (optional)
- Compatible to generator
- Parallel operation with up to 3 units



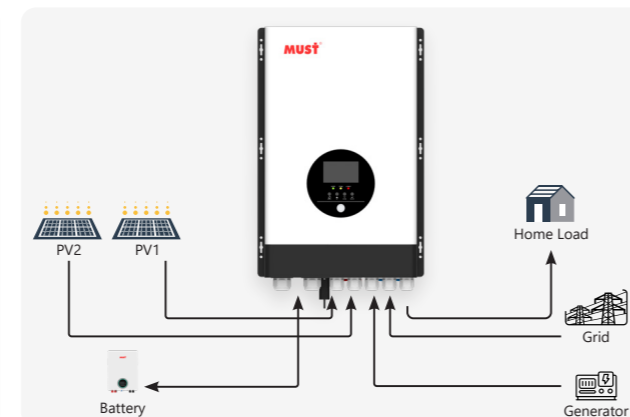
### Back panel description



### Parallel operation



### Solar system connection



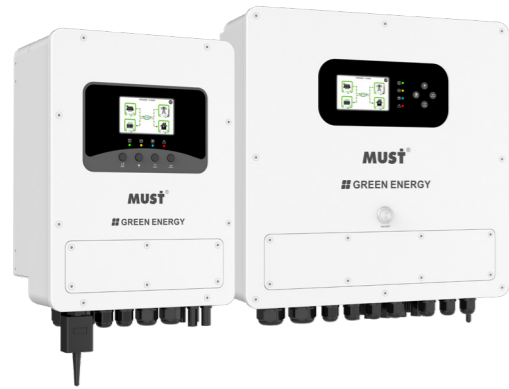
| MODEL  | PV39-8048  | PV39-10048 | PV39-12048 |
|--|--|------------|------------|
| Nominal Battery System Voltage               | 48VDC  |            |            |
| Stand-alone mode                             | Yes  |            |            |
| Parallel operation                           | 3 units  |            |            |
| <b>INVERTER OUTPUT</b>                       |  |            |            |
| Rated power                                  | 8KW  | 10KW       | 12KW       |
| Surge rating                                 | 24000VA  | 30000VA    | 36000VA    |
| Capable of starting electric motor           | 4HP  | 5HP        | 6HP        |
| Waveform                                     | Pure sine wave / same as input (bypass mode)                                     |            |            |
| Nominal output voltage RMS                   | 220V/230V/240V   |            |            |
| Inverter efficiency (peak)                   | >88%   |            |            |
| Line mode efficiency                         | >95%   |            |            |
| Power factor                                 | 1.0  |            |            |
| Typical transfer time                        | 10ms(max)  |            |            |
| <b>AC INPUT</b>                              |  |            |            |
| Voltage                                      | 220V/230V/240V   |            |            |
| Selectable voltage range                     | 90-280 VAC (APL)   |            |            |
| Frequency range                              | 50Hz / 60Hz  |            |            |
| <b>BATTERY</b>                               |  |            |            |
| Low battery voltage cutoff                   | 40-48VDC for 48VDC mode  |            |            |
| Low battery voltage recover                  | 42-50VDC for 48VDC mode  |            |            |
| High battery voltage cutoff                  | 60VDC for 48VDC mode   |            |            |
| High battery voltage recover                 | 57VDC for 48VDC mode   |            |            |
| <b>AC CHARGER</b>                            |  |            |            |
| Output voltage                               | Depends on battery type (Supports lead-acid, gel, and lithium batteries)         |            |            |
| Charger AC input breaker rating              | 100A   |            |            |
| Overcharge protection S.D.                   | 62.8VDC for 48VDC mode   |            |            |
| Maximum charge current                       | 10~100A  | 10~120A    | 10~140A    |
| <b>BTS</b>                                   |  |            |            |
| Continuous output power                      | Yes Variances in charging voltage & S.D. voltage base on the battery temperature |            |            |
| <b>BYPASS &amp; PROTECTION</b>               |  |            |            |
| Input voltage waveform                       | Sine wave (grid or generator)  |            |            |
| Nominal input frequency                      | 50Hz or 60Hz   |            |            |
| Overload protection (SMPS Load)              | Software + Circuit breaker   |            |            |
| Output short circuit protection              | Software + Circuit breaker   |            |            |
| Bypass breaker rating                        | 63A  |            |            |
| Max bypass current                           | 80A  |            |            |
| <b>SOLAR CHARGER</b>                         |  |            |            |
| Maximum PV charge current                    | 200A   |            |            |
| DC voltage                                   | 48V  |            |            |
| Maximum PV array power                       | 10000W   | 10000W     | 10000W     |
| MPPT range @ operating voltage(VDC)          | 64~235VDC  |            |            |
| Maximum PV array open circuit voltage        | 250VDC   |            |            |
| Maximum efficiency                           | >98%   |            |            |
| Standby power consumption                    | <2W  |            |            |
| <b>MECHANICAL SPECIFICATIONS</b>             |  |            |            |
| Mounting                                     | Wall mount   |            |            |
| Packing                                      | Wooden box   |            |            |
| Machine Dimension (W*H*D)(mm)                | 439*660.5*223  |            |            |
| Package Dimension (W*H*D)(mm)                | 782*304*520.5  |            |            |
| N.W(kg)                                      | 59   | 68         | 75         |
| G.W(kg)                                      | 76   | 85         | 92         |
| Warranty                                     | 2years   |            |            |
| <b>OTHER</b>                                 |  |            |            |
| Operating temperature range                  | 0°C to 50°C  |            |            |
| Storage temperature                          | 15°C to 60°C   |            |            |
| Audible noise                                | 60dB MAX   |            |            |
| Communication                                | WiFi   |            |            |
| Display                                      | LED+LCD  |            |            |
| <b>CERTIFICATION &amp; STANDARDS</b>         |  |            |            |
| CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011) |  |            |            |

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## SINGLE PHASE OFF-GRID SOLAR INVERTER PV9000 HM Series

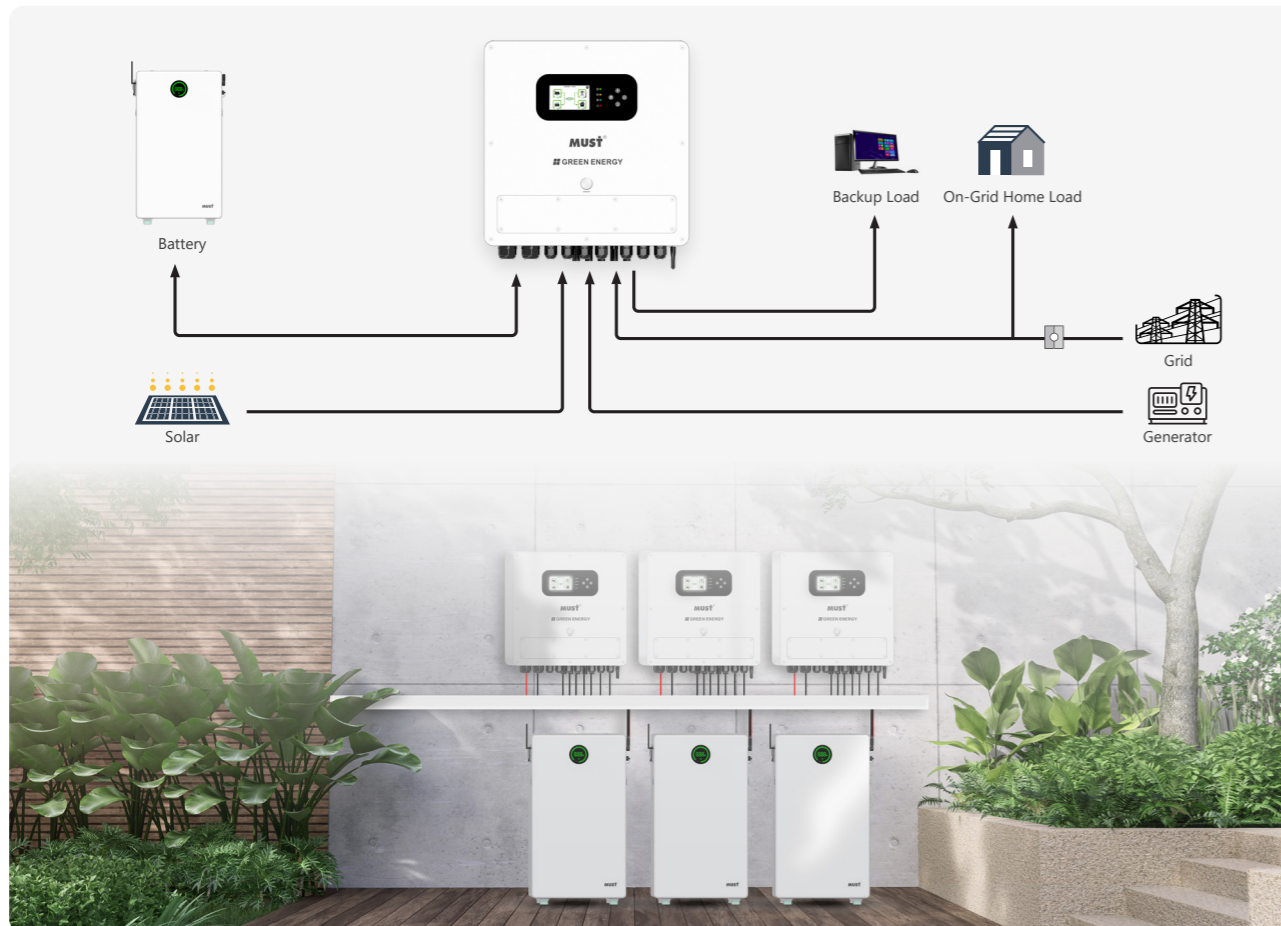
3.6-12KW | IP66 | WiFi

The PV9000 HM Series is a Single Phase Off-Grid Solar Inverter with IP66 protection, ensuring superior resistance to water and dust for reliable performance in diverse environments. Built for durability, it minimizes maintenance needs and delivers a long-lasting, sustainable power solution. With a power range from 3.6kW to 12kW, it supports low-voltage (40–60V) batteries, offering flexibility and efficiency for various off-grid applications.



- 4.3-inch Color Touch LCD
- IP66-rated, built to withstand tough environments
- Supports 16 pcs parallel (off-grid)
- Independent cooling design reduces dust accumulation and extends lifespan
- Support storing energy from diesel generator
- Wifi monitoring

### Solar system connection



| MODEL   | PV90-3.6KL1 HM   | PV90-5KL1 HM | PV90-6KL1 HM | PV90-8KL1 HM | PV90-10KL1 HM  | PV90-12KL1 HM  |
|---|--|--------------|--------------|--------------|----------------|----------------|
| Rated power   | 3600W  | 5000W        | 6000W        | 8000W        | 10000W         | 12000W         |
| <b>BATTERY INPUT DATA</b>                             |  |              |              |              |                |                |
| 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                    | 3600W  | 5000W        | 6000W        | 8000W        | 10000W         | 12000W         |
| Maximum charging/discharging current                  | 90A  | 120A         | 150A         | 190A         | 220A           | 240A           |
| <b>PV STRING INPUT DATA</b>                           |  |              |              |              |                |                |
| Max. PV access power                                  | 7200W  | 10000W       | 12000W       | 14500W       | 18000W         | 20000W         |
| Max. PV input power                                   | 5760W  | 8000W        | 9600W        | 12000W       | 15000W         | 18000W         |
| Max. PV Input Voltage (Voc)                           | 500V   |              |              |              |                |                |
| Start-up Voltage                                      | 125V   |              |              |              |                |                |
| PV Input Voltage Range                                | 125~500V   |              |              |              |                |                |
| Full Load Voltage Range                               | 300~425V   |              |              |              |                |                |
| Rated PV Input Voltage                                | 370V   |              |              |              |                |                |
| Max.Operating PV Input Current                        | 18A+18A  | 18A+18A      | 18A+18A      | 26A+26A      | 26A+39A        | 26A+39A        |
| No.of MPP Trackers                                    | 2/1+1  | 2/1+1        | 2/1+1        | 2/2+2        | 2/2+3          | 2/2+3          |
| Input terminal type                                   | H4/MC4   |              |              |              |                |                |
| <b>AC INPUT/OUTPUT DATA</b>                           |  |              |              |              |                |                |
| Rated AC Output Power                                 | 3600W/3600VA   | 5000W/5000VA | 6000W/6000VA | 8000W/8000VA | 10000W/10000VA | 12000W/12000VA |
| Rated AC Output Current                               | 15.7A  | 21.7A        | 26A          | 34.7A        | 43.4A          | 52.2A          |
| Max. AC Input Current                                 | 35A  | 35A          | 35A          | 38.2A        | 47.8A          | 55A            |
| Rated Input/Output Voltage/Range                      | 230VAC   |              |              |              |                |                |
| Rated Input/Output Grid Frequency                     | 60Hz±5Hz/ 50Hz±5Hz   |              |              |              |                |                |
| Rated output power factor                             | 1  |              |              |              |                |                |
| Power Factor Adjustment Range                         | 0.8 leading to 0.8 lagging   |              |              |              |                |                |
| Total Harmonics Current Distortion (THDi)             | <3%  |              |              |              |                |                |
| Grid Type   | Single phase   |              |              |              |                |                |
| Output Voltage Waveform                               | Pure Sine Wave   |              |              |              |                |                |
| <b>EFFICIENCY</b>                                     |  |              |              |              |                |                |
| Max. Efficiency                                       | 97.5%  |              |              |              |                |                |
| Euro Efficiency                                       | 96.5%  |              |              |              |                |                |
| MPPT Efficiency                                       | >99%   |              |              |              |                |                |
| <b>PROTECTION</b>                                     |  |              |              |              |                |                |
| Integrated  | DC Polarity Reverse Connection Protection; AC Output Overcurrent Protection; AC Output Overvoltage Protection; AC Output short Circuit Protection; Island Protection Monitoring Integrated all-pole sensitive leakage current; ISO monitoring; Over temperature protection Gird monitoring; Surge protection level |              |              |              |                |                |
| Surge Protection                                      | Type II (DC); Type II (AC)   |              |              |              |                |                |
| Overvoltage Category                                  | OVC II (DC); OVC III (AC)  |              |              |              |                |                |
| <b>GENERAL DATA</b>                                   |  |              |              |              |                |                |
| Operating Temperature Range (°C)                      | -40°C~+60°C, >45°C Derating  |              |              |              |                |                |
| Permissible Ambient Humidity                          | 0~100%   |              |              |              |                |                |
| Cooling   | Fan cooling  |              |              |              |                |                |
| Noise (dB)  | ≤50dB  |              |              | ≤55dB        |                |                |
| Altitude  | 3000m, >3000m Derating   |              |              |              |                |                |
| Inverter Topology                                     | Battery-side transformer isolation, PV-side non-transformer isolation  |              |              |              |                |                |
| Communication   | WiFi/RS485/CAN/Bluetooth   |              |              |              |                |                |
| Display   | 4.3-inch touch screen+LED  |              |              |              |                |                |
| Protection Degree                                     | IP66   |              |              |              |                |                |
| Installation Style                                    | Wall-mounted   |              |              |              |                |                |
| <b>MECHANICAL SPECIFICATIONS</b>                      |  |              |              |              |                |                |
| Machine Dimension (W*H*D)(mm)                         | 321*431*200  |              |              | 486*486*235  |                |                |
| Warranty  | 5 Year<br>the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy   |              |              |              |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>                  |  |              |              |              |                |                |
| IEC/EN61000-6-1/2/3/4, IEC/EN 62109-1, IEC/EN 62109-2 |  |              |              |              |                |                |

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## PURE SINE WAVE SOLAR INVERTER PV5000 Series

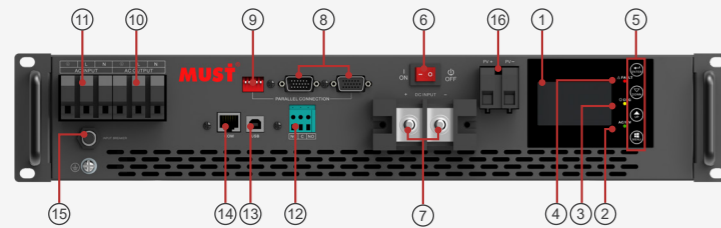
3~5KW | 145V | 80A MPPT

This is a multi-function inverter/charger, combining functions of inverter, 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.



- Pure sine wave inverter
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC/Solar Charger priority via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/ Over temperature/ short circuit protection
- Smart battery charger design for optimized battery performance
- Cold start function
- Built-in MPPT solar charge controller 80A
- WIFI remote monitoring (optional)

### Back panel description



- |                       |   |                              |
|-----------------------|---|------------------------------|
| 1. LCD display        | 6. Power on/off switch                                  | 11. AC input                 |
| 2. Status indicator   | 7. Battery input  | 12. Dry contact              |
| 3. Charging indicator | 8. Parallel communication port (only for parallel mode) | 13. USB                      |
| 4. Fault indicator    | 9. Parallel switch                                      | 14. RS485 communication port |
| 5. Function buttons   | 10. AC output   | 15. Circuit breaker          |
|                       |   | 16. PV Input                 |

### Solar system connection



| MODEL                                 | PV50-3048   | PV50-4048 | PV50-5048 |
|---------------------------------------|---|-----------|-----------|
| Nominal Battery System Voltage        | 48V   |           |           |
| <b>INVERTER OUTPUT</b>                |   |           |           |
| Rated Output Power                    | 3KW   | 4KW       | 5KW       |
| Surge Power                           | 6KW   | 8KW       | 10KW      |
| Waveform                              | Pure Sine Wave  |           |           |
| Power factor                          | 1   |           |           |
| Output Voltage Regulation             | 230Vac±5%   |           |           |
| Inverter Efficiency(Peak)             | 90%   |           |           |
| Transfer Time                         | 10ms typical (UPS / VDE4105) 20ms typical (APL)       |           |           |
| <b>AC INPUT</b>                       |   |           |           |
| Nominal Input Voltage                 | 230VAC  |           |           |
| Selectable voltage range              | 170~280VAC(UPS), 90~280VAC(APL) , 184~253VAC(VDE4105) |           |           |
| Input Voltage Waveform                | Sinusoidal (utility or generator)                     |           |           |
| Frequency Range                       | 50Hz / 60Hz   |           |           |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |           |           |
| Maximum PV Array Open Circuit Voltage | 145VDC  |           |           |
| MPPT Range @ Operating Voltage        | 60~130VDC   |           |           |
| Standby Power Consumption             | 2W  |           |           |
| Maximum PV Array Power                | 4000W   |           |           |
| Maximum PV Charge Current:            | 80A   |           |           |
| Maximum Efficiency                    | 98%   |           |           |
| Maximum AC Charge Current             | 60A   |           |           |
| Maximum Charge Current(PC+AC)         | 80A   |           |           |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |           |           |
| Machine Dimension (W*H*D)(mm)         | 468*86.3*400  |           |           |
| Package Dimension (W*H*D)(mm)         | /   |           |           |
| N.W (kg)                              | 10  |           |           |
| G.W (kg)                              | /   |           |           |
| <b>OTHER</b>                          |   |           |           |
| Parallel operation                    | 3 units   |           |           |
| Operating Temperature Range           | -10°C ~ 40°C  |           |           |
| Storage temperature                   | -15°C~ 60°C   |           |           |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |           |           |
| CE, EN IEC62368-1                     |   |           |           |

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

## PURE SINE WAVE SOLAR INVERTER PV5000 PRO Series

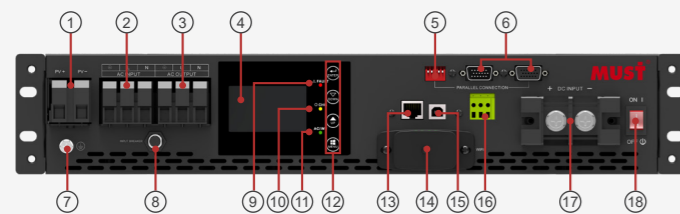
3~5.2KW | 450V | 100A MPPT

PV5000 PRO is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PV5000 PRO Series can run without battery. The Maximum PV array open circuit voltage can reach 450V and MPPT voltage is 150~430Vdc, which Can help customers make full use of solar energy.



- Pure sine wave inverter
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC/Solar Charger priority via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/ Over temperature/ short circuit protection
- Smart battery charger design for optimized battery performance
- Cold start function
- Parallel operation with up to 3 units
- WIFI remote monitoring (optional)

### Back panel description



- |   |                        |                              |
|---|------------------------|------------------------------|
| 1. PV Input   | 7. Ground              | 13. RS485 communication port |
| 2. AC input   | 8. Input breaker       | 14. WiFi port                |
| 3. AC output  | 9. Fault indicator     | 15. USB port                 |
| 4. LCD display  | 10. Charging indicator | 16. Dry contact              |
| 5. Parallel switch                                      | 11. Status indicator   | 17. Battery input            |
| 6. Parallel communication port (only for parallel mode) | 12. Function buttons   | 18. Power on/off switch      |

### Solar system connection



| MODEL                                 | PV50-3048 PRO   | PV50-4048 PRO  | PV50-5248 PRO  |
|---------------------------------------|---|----------------|----------------|
| Nominal Battery System Voltage        | 48VDC   |                |                |
| <b>INVERTER OUTPUT</b>                |   |                |                |
| Rated Power                           | 3000VA / 3000W  | 5200VA / 5200W | 5200VA / 5200W |
| Surge Power                           | 6000W   | 8000W          | 10400W         |
| Waveform                              | Pure sine wave  |                |                |
| AC Voltage Regulation (Batt.Mode)     | 230VAC±5%(Setting)  |                |                |
| Inverter Efficiency(Peak)             | 90%   |                |                |
| Transfer Time                         | 10ms (UPS / VDE4105) / 20ms (APL)                               |                |                |
| <b>AC INPUT</b>                       |   |                |                |
| Voltage                               | 230VAC±5%   |                |                |
| Selectable Voltage Range              | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)          |                |                |
| Frequency Range                       | 50Hz / 60Hz(Auto sensing)                                       |                |                |
| <b>BATTERY</b>                        |   |                |                |
| Normal voltage                        | 48VDC   |                |                |
| Floating Charge Voltage               | 54.8VDC   |                |                |
| Overcharge Protection                 | 60VDC   |                |                |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |                |                |
| Maximum PV Array Open Circuit Voltage | 450VDC  |                |                |
| Maximum PV input voltage              | 18A   | 18A            | 27A            |
| Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                |                |
| Maximum PV Array Power                | 4000W   | 5000W          | 6000W          |
| PV Array MPPT Voltage Range           | 150~430 VDC   |                |                |
| Maximum Solar Charge Current          | 80A   | 80A            | 100A           |
| Maximum AC Charge Current             | 60A   | 60A            | 80A            |
| Maximum Charge Current                | 80A   | 80A            | 100A           |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |                |                |
| Machine Dimension (W*H*D)(mm)         | 468*86.3*400  |                |                |
| Package Dimension (W*H*D)(mm)         | 546*185*540   |                |                |
| N.W(kg)                               | 12.5  |                |                |
| G.W(kg)                               | 14  |                |                |
| Warranty                              | 2years  |                |                |
| <b>OTHER</b>                          |   |                |                |
| Parallel operation                    | 3 units   |                |                |
| Humidity                              | 5% to 95% Relative humidity (Non-condensing)                    |                |                |
| Operating Temperature                 | 0°C~50°C  |                |                |
| Storage Temperature                   | -25°C~60°C  |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                |                |
| CE/IEC                                |   |                |                |

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## HIGH FREQUENCY POWER INVERTER/CHARGER EP1100 Pro Series

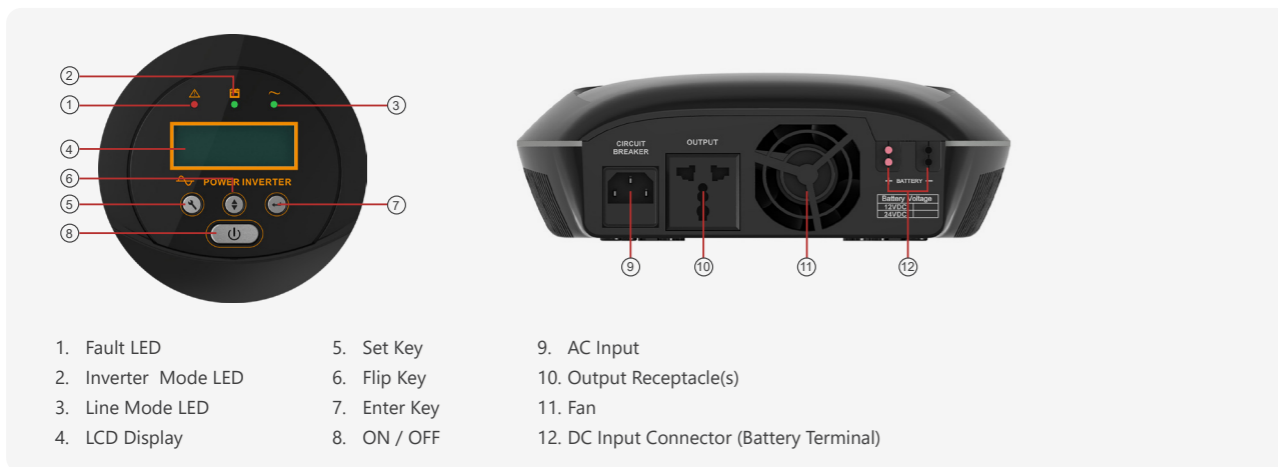
1.2~2.4KVA | 12V/24V

EP1100 Pro 1200VA/2400VA is a modified sine wave inverter applied to TV, stereos, laptops, and desktop computers and other home appliances. It will automatically switch to inverter and provide power when AC is interrupted unexpectedly. It's perfect for the user who need a simple and economical inverter, with user-friendly installation and setting.

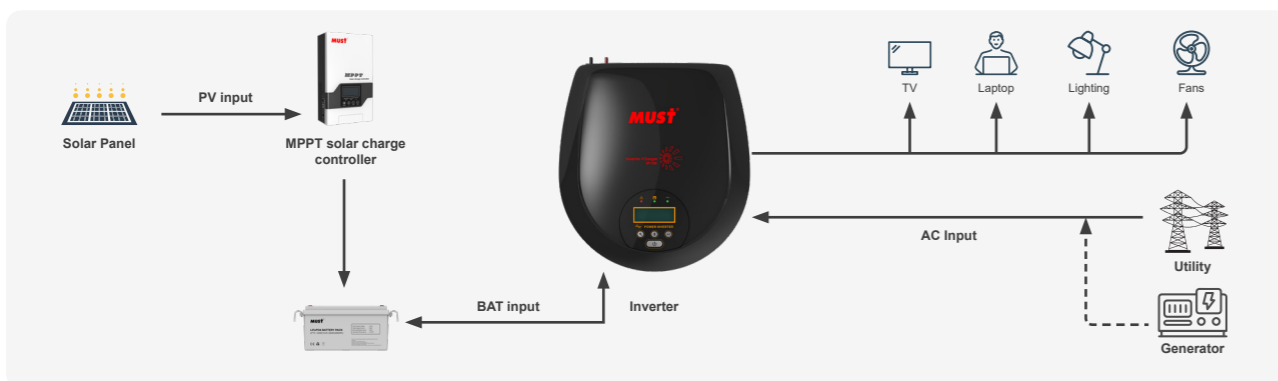


- Rated power 1.2KVA to 2.4KVA
- Modified sine wave inverter
- Double layers PCB board.
- Configurable input voltage ranges (90-280VAC/170-280VAC) via LCD setting
- Display accumulated working time
- 3 steps charging algorithm
- Auto restart while AC recovery
- Overload & short-circuit protection, Battery reverse polarity protection, Deep discharge protection
- Advanced technology optimizes battery life
- Automatic line-to-battery switchover

### Back panel description



### Solar system connection



| MODEL                                | EP11-1200 PRO             | EP11-2400 PRO  |
|--------------------------------------|---------------------------|----------------|
| Nominal Battery System Voltage       | 12VDC                     | 24VDC          |
| <b>INVERTER OUTPUT</b>               |                           |                |
| Rated Power                          | 1200VA / 720W             | 2400VA / 1440W |
| Waveform                             | Modified Sine Wave        |                |
| Nominal Output Voltage RMS           | 230V                      |                |
| Output Voltage Regulation            | +10/-18%                  |                |
| Output Frequency                     | 50Hz / 60Hz±0.5Hz         |                |
| Inverter Efficiency (Peak)           | >80%                      |                |
| Line Mode Efficiency                 | >95%                      |                |
| Power Factor                         | 0.6                       |                |
| Typical Transfer Time                | Typical 15~20ms; 40ms max |                |
| <b>AC INPUT</b>                      |                           |                |
| Voltage                              | 220 / 230 / 240VAC        |                |
| Selectable Voltage Range             | Narrow                    | 170~280VAC     |
|                                      | Wide                      | 90~280VAC      |
| Frequency Range                      | 50Hz / 60Hz(Auto sensing) |                |
| <b>BATTERY</b>                       |                           |                |
| Nominal Input Voltage                | 12VDC                     | 24VDC          |
| Minimum Start Voltage                | 10.5VDC                   | 21.0VDC        |
| Low Battery Alarm                    | 10.5VDC±0.2V              | 21.0VDC±0.4V   |
| Low Battery Cutoff                   | 10.0VDC±0.2V              | 20.0VDC±0.4V   |
| High Voltage Alarm                   | 16.0VDC±0.2V              | 32.0VDC±0.4V   |
| High Battery Voltage Recover         | 15.0VDC±0.2V              | 30.0VDC±0.4V   |
| <b>CHARGER</b>                       |                           |                |
| Boost Voltage (Vbat<12.5V)           | 14.4VDC±0.2V              | 28.8VDC±0.4V   |
| Float Voltage (Vbat>12.5V)           | 13.7VDC±0.2V              | 27.4VDC±0.4V   |
| Charging Current 10A                 | 10A±2A                    |                |
| Charging Current 20A                 | 20A±2A                    |                |
| Overcharge Protection S.D.           | 15.5VDC±0.4A              | 31VDC±0.8A     |
| <b>BYPASS &amp; PROTECTION</b>       |                           |                |
| Nominal Input Frequency              | 50Hz or 60Hz              |                |
| Overload Protection (SMPS Load)      | FUSE                      |                |
| Output Short Circuit Protection      | 10A                       |                |
| Bypass Fuse Rating                   | 10A                       |                |
| Max Bypass Current                   | 10A                       |                |
| <b>MECHANICAL SPECIFICATIONS</b>     |                           |                |
| Machine Dimension (W*H*D)(mm)        | 246*253*87                |                |
| Package Dimension (W*H*D)(mm)        | 394*347*715 (6pcs)        |                |
| N.W(kg)                              | ≈2.675                    | ≈2.775         |
| G.W(kg)                              | ≈3.175                    | ≈3.275         |
| <b>OTHER</b>                         |                           |                |
| Operating Temperature Range          | 0°C to 40°C               |                |
| Audible Noise                        | 60dB MAX                  |                |
| Display                              | LED+LCD                   |                |
| Standard Warranty                    | 2 year                    |                |
| <b>CERTIFICATION &amp; STANDARDS</b> |                           |                |
| IEC60950-1+A1+A2                     |                           |                |

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## HIGH FREQUENCY POWER INVERTER/CHARGER EP1500 Series

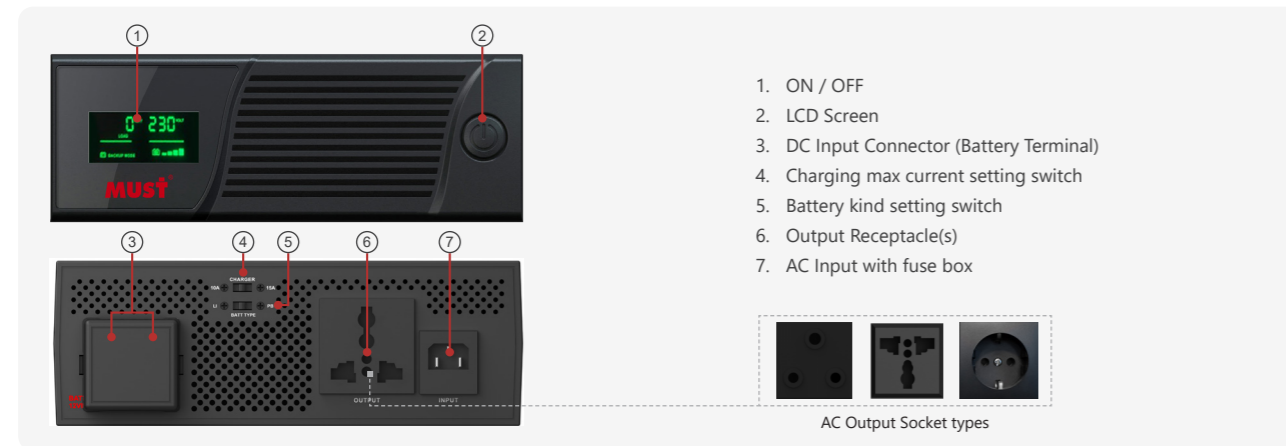
1~2KVA | 12V/24V | 230V

EP1500 series is a pure sine wave inverter applied to TV, stereos, laptops, and desktop computers and other home appliances. It will automatically switch to inverter and provide power when AC is interrupted unexpectedly. It's perfect for the user who need a simple and economical inverter, with user-friendly installation and setting.

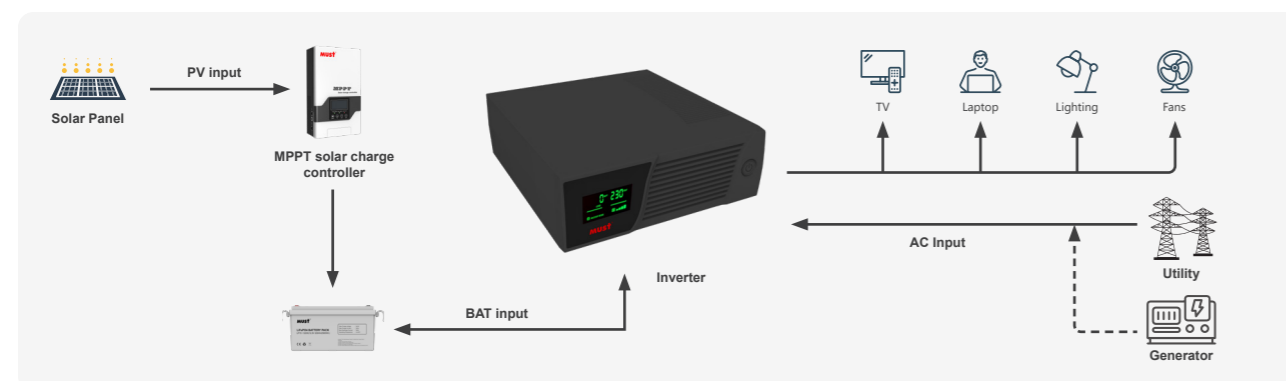


- Pure sine wave inverter
- Low shutdown loss for energy storage system application
- Support two kinds of batteries: Lithium Battery Pack and Lead-acid Battery
- Support fast max charging current setting
- Different charging mode for different kinds of batteries
- Auto restart while AC recovery
- Overload & short-circuit protection, Battery reverse polarity protection, Deep discharge protection
- Advanced technology optimizes battery life
- Automatic line-to-battery switch over
- Automatic activate lithium battery pack which is be over discharged no output when AC input is OK

### Back panel description



### Solar system connection



| MODEL  | EP15-1012                            | EP15-1512                 | EP15-2024                 |
|--|--------------------------------------|---------------------------|---------------------------|
| Nominal Battery System Voltage   | 12VDC                                | 12VDC                     | 24VDC                     |
| <b>INVERTER OUTPUT</b>   |                                      |                           |                           |
| Rated Power  | 1000VA / 600W                        | 1500VA / 1000W            | 2000VA / 1200W            |
| Waveform   | Pure Sine Wave                       |                           |                           |
| Nominal Output Voltage RMS   | 230V                                 |                           |                           |
| Output Voltage Regulation  | +10/-18%                             |                           |                           |
| Output Frequency   | 50Hz / 60Hz ±1Hz                     |                           |                           |
| Inverter Efficiency (Peak)   | >90%                                 |                           |                           |
| Line Mode Efficiency   | >95%                                 |                           |                           |
| Typical Transfer Time  | <10ms typical, 20ms max              |                           |                           |
| <b>AC INPUT</b>  |                                      |                           |                           |
| Voltage  | 230VAC                               |                           |                           |
| Voltage Range  | 176~278VAC ± 3%                      |                           |                           |
| Frequency Range  | 45~65Hz ± 2Hz                        |                           |                           |
| <b>BATTERY</b>   |                                      |                           |                           |
| <b>Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)</b> |                                      |                           |                           |
| Nominal Input voltage  | 12VDC                                | 12VDC                     | 24VDC                     |
| Low Battery Voltage Cut Off  | 10.5VDC(PB) / 11.5VDC(LI)            | 10.5VDC(PB) / 11.5VDC(LI) | 21.0VDC(PB) / 23.0VDC(LI) |
| Low Battery Voltage Alarm  | 11.0VDC(PB) / 12.0VDC(LI)            | 11.0VDC(PB) / 12.0VDC(LI) | 22.0VDC(PB) / 24.0VDC(LI) |
| Low Battery Voltage Recovery   | 12.5VDC(PB) / 12.8VDC(LI)            | 12.5VDC(PB) / 12.8VDC(LI) | 25.0VDC(PB) / 25.6VDC(LI) |
| High Battery Voltage Alarm   | 14.5VDC(PB) / 14.5VDC(LI)            | 14.5VDC(PB) / 14.5VDC(LI) | 29.0VDC(PB) / 29.0VDC(LI) |
| High Battery Voltage Recovery  | 15.0VDC(PB) / 14.8VDC(LI)            | 15.0VDC(PB) / 15.0VDC(LI) | 30.0VDC(PB) / 29.6VDC(LI) |
| <b>CHARGER</b>   |                                      |                           |                           |
| Boost Voltage  | 14.4VDC(PB) / 14.4VDC(LI)            | 14.4VDC(PB) / 14.4VDC(LI) | 28.8VDC(PB) / 28.8VDC(LI) |
| Float Voltage  | 13.8VDC(PB) / 14.4VDC(LI)            | 13.8VDC(PB) / 14.4VDC(LI) | 27.6VDC(PB) / 28.8VDC(LI) |
| Charging Current   | 10A±2A @ 12V                         | 10A±2A @ 12V              | 7A±2A @ 24V               |
| Charging Current   | 20A±2A @ 12V                         | 20A±2A @ 12V              | 15A±2A @ 24V              |
| Overcharge Protection S.D.   | 15.5VDC                              | 15.5VDC                   | 31VDC                     |
| <b>BYPASS &amp; PROTECTION</b>   |                                      |                           |                           |
| Nominal Input Frequency  | 50Hz / 60Hz (Auto sensing)           |                           |                           |
| Overload Protection (SMPS Load)  | FUSE                                 |                           |                           |
| Output Short Circuit Protection  | 6.3A                                 | 10A                       | 10A                       |
| Bypass Fuse Rating   | 6.3A                                 | 10A                       | 10A                       |
| Max Bypass Current   | 6.3A                                 | 10A                       | 10A                       |
| <b>MECHANICAL SPECIFICATIONS</b>   |                                      |                           |                           |
| Machine Dimension (W*H*D)(mm)  | 255*80*224                           |                           |                           |
| Package Dimension (W*H*D)(mm)  | 332*127*288(1pcs); 400*596*347(6pcs) |                           |                           |
| N.W(kg)  | 2.3                                  |                           |                           |
| G.W(kg)  | 16(6pcs)                             |                           |                           |
| Material   | Plastic case                         |                           |                           |
| <b>OTHER</b>   |                                      |                           |                           |
| Operation Temperature Range  | 0°C ~ 40°C                           |                           |                           |
| Audible Noise  | 60dB MAX                             |                           |                           |
| Display  | LED+LCD                              |                           |                           |
| Standard Warranty  | 2 year                               |                           |                           |
| <b>CERTIFICATION &amp; STANDARDS</b>   |                                      |                           |                           |
| EN IEC62368-1+A11  |                                      |                           |                           |

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## HIGH FREQUENCY POWER INVERTER/CHARGER EP1500 PLUS Series

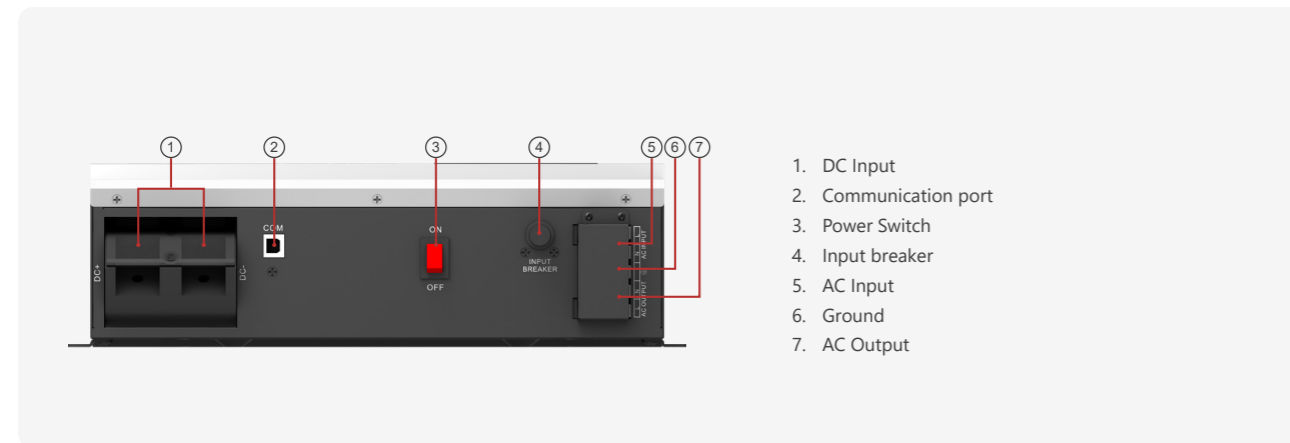
0.6~1.2KVA | 12V/24V | 230V

EP1500 PLUS series is a pure sine wave inverter applied to TV, stereos, laptops, and desktop computers and other home appliances. It will automatically switch to inverter and provide power when AC is interrupted unexpectedly. It's perfect for the user who need a simple and economical inverter, with user-friendly installation and setting.

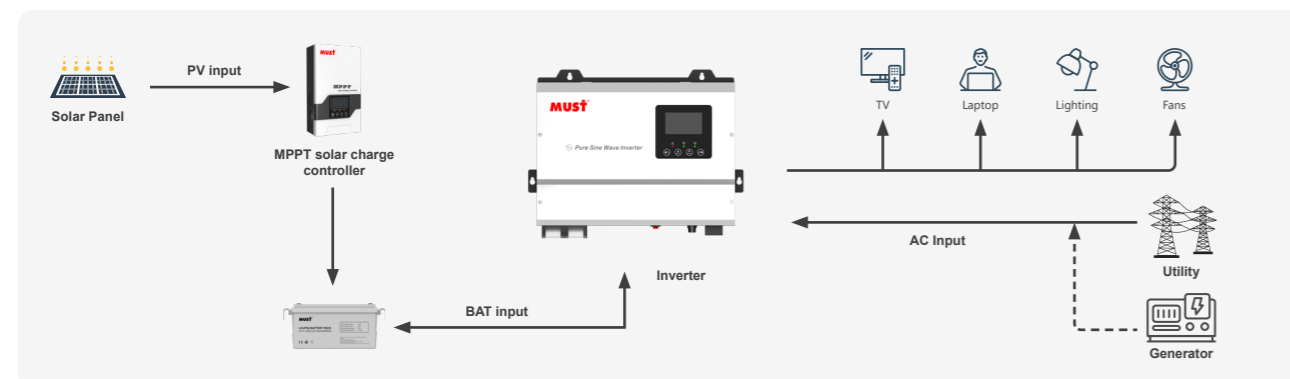


- Pure sine wave inverter
- Low shutdown loss for energy storage system application
- Support two kinds of batteries: Lithium Battery Pack and Lead-acid Battery
- Support fast max charging current setting
- Different charging mode for different kinds of batteries
- Auto restart while AC recovery
- Overload & short-circuit protection, Battery reverse polarity protection, Deep discharge protection
- Advanced technology optimizes battery life
- Automatic line-to-battery switch over
- Automatic activate lithium battery pack which is be over discharged no output when AC input is OK

### Back panel description



### Solar system connection



| MODEL                          | EP15-0612 PLUS          | EP15-1012 PLUS | EP15-1224 PLUS |
|--------------------------------|-------------------------|----------------|----------------|
| Nominal Battery System Voltage | 12VDC                   | 12VDC          | 24VDC          |
| <b>INVERTER OUTPUT</b>         |                         |                |                |
| Rated Power                    | 600VA / 600W            | 1000VA / 1000W | 1200VA / 1200W |
| Waveform                       | Pure Sine Wave          |                |                |
| Nominal Output Voltage RMS     | 230V                    |                |                |
| Output Voltage Regulation      | +10/-18%                |                |                |
| Output Frequency               | 50Hz / 60Hz ± 1Hz       |                |                |
| Inverter Efficiency (Peak)     | >90%                    |                |                |
| Line Mode Efficiency           | >95%                    |                |                |
| Typical Transfer Time          | <10ms typical, 20ms max |                |                |
| <b>AC INPUT</b>                |                         |                |                |
| Voltage                        | 230VAC                  |                |                |
| Voltage Range                  | 90~280VAC ± 3%          |                |                |
| Frequency Range                | 45~65Hz ± 2Hz           |                |                |

| <b>BATTERY</b>   |             |             |             |             |             |             |
|--|-------------|-------------|-------------|-------------|-------------|-------------|
| <b>Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)</b> |             |             |             |             |             |             |
| Nominal Input voltage  | 12VDC       |             | 12VDC       |             | 24VDC       |             |
| Low Battery Voltage Cut Off  | 10.5VDC(PB) | 11.5VDC(LI) | 10.5VDC(PB) | 11.5VDC(LI) | 21.0VDC(PB) | 23.0VDC(LI) |
| Low Battery Voltage Alarm  | 11.0VDC(PB) | 12.0VDC(LI) | 11.0VDC(PB) | 12.0VDC(LI) | 22.0VDC(PB) | 24.0VDC(LI) |
| Low Battery Voltage Recovery   | 12.5VDC(PB) | 12.8VDC(LI) | 12.5VDC(PB) | 12.8VDC(LI) | 25.0VDC(PB) | 25.6VDC(LI) |
| High Battery Voltage Recovery  | 14.5VDC(PB) | 14.5VDC(LI) | 14.5VDC(PB) | 14.5VDC(LI) | 29.0VDC(PB) | 29.0VDC(LI) |
| High Battery Voltage Cut Off   | 15.0VDC(PB) | 15.0VDC(LI) | 15.0VDC(PB) | 15.0VDC(LI) | 30.0VDC(PB) | 30.0VDC(LI) |

| <b>CHARGER</b>                  |                            |             |              |             |              |             |
|---------------------------------|----------------------------|-------------|--------------|-------------|--------------|-------------|
| Boost Voltage                   | 14.4VDC(PB)                | 14.4VDC(LI) | 14.4VDC(PB)  | 14.4VDC(LI) | 28.8VDC(PB)  | 28.8VDC(LI) |
| Float Voltage                   | 13.8VDC(PB)                | 14.4VDC(LI) | 13.8VDC(PB)  | 14.4VDC(LI) | 27.6VDC(PB)  | 28.8VDC(LI) |
| Charging Current                | 20A±2A @ 12V               |             | 20A±2A @ 12V |             | 15A±2A @ 24V |             |
| <b>BYPASS &amp; PROTECTION</b>  |                            |             |              |             |              |             |
| Nominal Input Frequency         | 50Hz / 60Hz (Auto sensing) |             |              |             |              |             |
| Overload Protection (SMPS Load) | FUSE                       |             |              |             |              |             |
| Output Short Circuit Protection | 6.3A                       |             | 10A          |             | 10A          |             |
| Bypass Fuse Rating              | 6.3A                       |             | 10A          |             | 10A          |             |
| Max Bypass Current              | 6.3A                       |             | 10A          |             | 10A          |             |

| <b>MECHANICAL SPECIFICATIONS</b> |             |            |            |
|----------------------------------|-------------|------------|------------|
| Machine Dimension (W*H*D)(mm)    | 300*253*95  |            |            |
| Package Dimension (W*H*D)(mm)    | 355*147*290 |            |            |
| N.W(kg)                          | 3.4         | 3.7        |            |
| G.W(kg)                          | 3.7         | 4.0        |            |
| Material                         | Metal case  | Metal case | Metal case |

| <b>OTHER</b>                |            |
|-----------------------------|------------|
| Operating Temperature Range | 0°C ~ 45°C |
| Audible Noise               | 60dB MAX   |
| Display                     | LED+LCD    |
| Standard Warranty           | 2 year     |

| <b>CERTIFICATION &amp; STANDARDS</b> |  |
|--------------------------------------|--|
| EN IEC62368-1+A11                    |  |

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## HIGH FREQUENCY POWER INVERTER/CHARGER EP1800 Series

1~5KW | 12V/24V/48V | 230V



This is a multi-function inverter/charger, combining functions of inverter, 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 charger priority, and acceptable input voltage based on different applications.



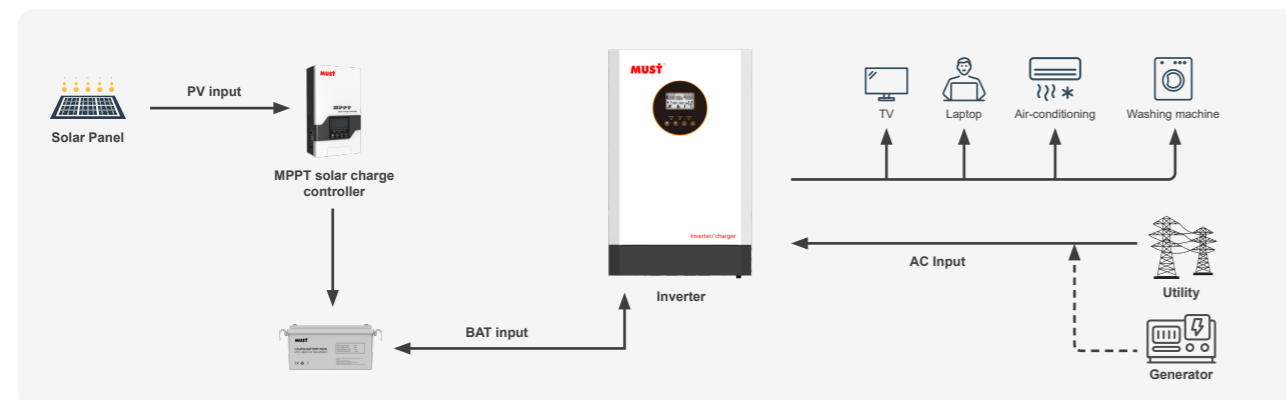
- Pure sine wave inverter
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC Charger via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/ Over temperature/ short circuit protection
- Smart battery charger design for optimized battery performance
- Cold start function
- With BMS lithium battery communication function (CAN port)

### Back panel description



- |                             |                        |  |
|-----------------------------|------------------------|--|
| 1. Circuit breaker          | 5. USB port            | 9. Parallel communication port (only for parallel model) |
| 2. AC input                 | 6. Dry contact         | 10. Parallel switch                                      |
| 3. AC output                | 7. Power on/off switch | 11. WiFi port (optional)                                 |
| 4. RS485 communication port | 8. Battery input       |  |

### Solar system connection



| MODEL   | EP18-1012   | EP18-2024   | EP18-3024   | EP18-4048     | EP18-5048     |
|---|---|-------------|-------------|---------------|---------------|
| Nominal Battery System Voltage                    | 12VDC   | 24VDC       | 24VDC       | 48VDC         | 48VDC         |
| <b>INVERTER OUTPUT</b>                            |   |             |             |               |               |
| Rated Power                                       | 1000W   | 2000W       | 3000W       | 4000W         | 5000W         |
| Surge Power                                       | 2000W   | 4000W       | 6000W       | 8000W         | 10000W        |
| Waveform  | Pure sine wave  |             |             |               |               |
| Output Voltage Regulation                         | 230Vac±5%   |             |             |               |               |
| Output Frequency                                  | 60Hz or 50Hz  |             |             |               |               |
| Inverter Efficiency (Peak)                        | 90%   |             |             |               |               |
| Transfer Time                                     | 10ms typical (UPS,VDE); 20ms typical (APL)                    |             |             |               |               |
| <b>AC INPUT</b>                                   |   |             |             |               |               |
| Nominal Input Voltage                             | 230VAC  |             |             |               |               |
| Selectable Voltage Range                          | 170~280VAC(UPS), 90~280VAC(APL), 184~253VAX(VDE)              |             |             |               |               |
| Frequency Range                                   | 50Hz/60Hz (Auto sensing)                                      |             |             |               |               |
| <b>BATTERY</b>                                    |   |             |             |               |               |
| Nominal voltage                                   | 12VDC   | 24VDC       | 24VDC       | 48VDC         | 48VDC         |
| Floating Charge Voltage                           | 13.7VDC   | 27.4VDC     | 27.4VDC     | 54.8VDC       | 54.8VDC       |
| Overcharge Protection                             | 15VDC   | 30VDC       | 30VDC       | 60VDC         | 60VDC         |
| <b>CHARGER</b>                                    |   |             |             |               |               |
| Charging Current @ Nominal Input Voltage          | 10/20A  | 20/30A      | 20/30A      | 1~60A         | 1~60A         |
| Charging Algorithm                                | 3-Step(Flooded Battery, AGM/Gel/LEAD Battery),4-Step(LI)      |             |             |               |               |
| Max Charging Current                              | 20A   | 30A         | 30A         | 60A           | 60A           |
| Default Charging Current                          | 10A   | 20A         | 20A         | 30A           | 30A           |
| <b>PROTECTION</b>                                 |   |             |             |               |               |
| Nominal Input Frequency                           | 50Hz / 60Hz (Auto detection)                                  |             |             |               |               |
| Output Short Circuit Protection                   | Line mode: Circuit Breaker; Battery mode: Electronic Circuits |             |             |               |               |
| <b>MECHANICAL SPECIFICATIONS</b>                  |   |             |             |               |               |
| Machine Dimension (W*H*D)(mm)                     | 240*316*95  | 272*355*100 | 272*355*100 | 297.5*468*125 | 297.5*468*125 |
| Package Dimension (W*H*D)(mm)                     | /   |             |             |               |               |
| N.W(kg)   | /   |             |             |               |               |
| G.W(kg)   | /   |             |             |               |               |
| <b>OTHER</b>                                      |   |             |             |               |               |
| Operation Temperature Range                       | -10°C ~ 50°C  |             |             |               |               |
| Storage temperature                               | -15°C~ 60°C   |             |             |               |               |
| Audible Noise                                     | 60dB MAX  |             |             |               |               |
| Display   | LED+LCD   |             |             |               |               |
| Standard Warranty                                 | 2 year  |             |             |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>              |   |             |             |               |               |
| CE-EMC+LVD (EN6100-6-4, EN6100-6-2+EN IEC62109-1) |   |             |             |               |               |

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## HIGH FREQUENCY POWER INVERTER/CHARGER EP1800 PRO Series

5.2KW | 48V | 230V



This is a multi-function inverter/charger, combining functions of inverter, 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 charger priority, and acceptable input voltage based on different applications.



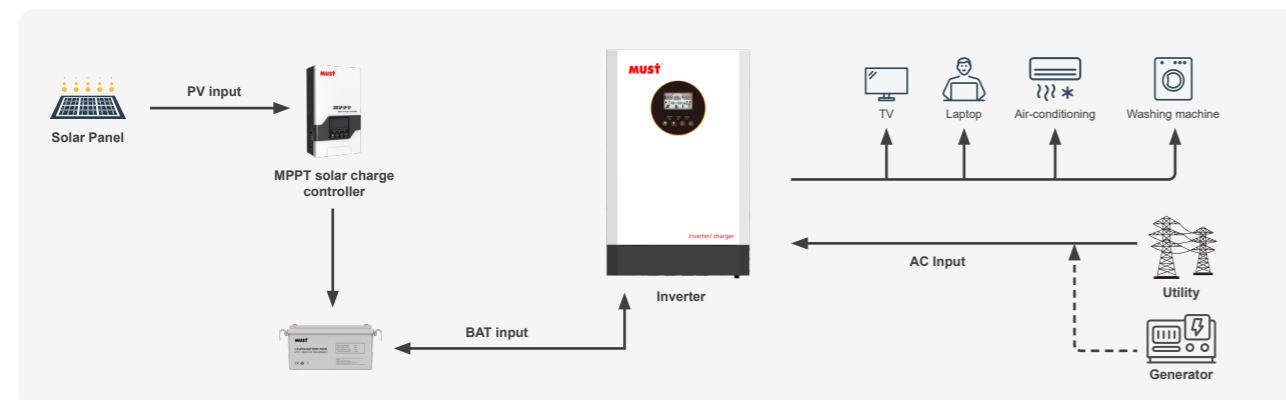
- Pure sine wave inverter
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC Charger via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/ Over temperature/ short circuit protection
- Smart battery charger design for optimized battery performance
- Acid or Lithium select
- Parallel operation with up to 3 units
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



- |                             |                        |  |
|-----------------------------|------------------------|--|
| 1. Circuit breaker          | 5. USB port            | 9. Parallel communication port (only for parallel model) |
| 2. AC input                 | 6. Dry contact         | 10. Parallel switch                                      |
| 3. AC output                | 7. Power on/off switch | 11. WiFi port (optional)                                 |
| 4. RS485 communication port | 8. Battery input       |  |

### Solar system connection



| MODEL  | EP18-5248 PRO   |                     |
|--|---|---------------------|
| Rated output power                           | 5200VA/5200W  |                     |
| Surge Power                                  | 10400W  |                     |
| <b>AC INPUT</b>                              |   |                     |
| Nominal Input Voltage                        | 230Vac±5%   |                     |
| Selectable Voltage range                     | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)              |                     |
| Frequency Range                              | 50Hz/60Hz (Auto sensing)  |                     |
| Inverter Efficiency(Peak)                    | 90%   |                     |
| <b>INVERTER OUTPUT</b>                       |   |                     |
| Output voltage waveform                      | Pure sine wave  |                     |
| Output Voltage Regulation                    | 230Vac ± 5%   |                     |
| Output Frequency                             | 50Hz / 60Hz(Auto sensing)                                       |                     |
| Power Factor                                 | ≈ 1   |                     |
| Transfer Time                                | 10ms (UPS / VDE4105) / 20ms (APL) <50ms(For parallel operation) |                     |
| Nominal DC Input Voltage                     | 48VDC   |                     |
| Cold Start Voltage                           | 46VDC   |                     |
| Output Short Circuit Protection              | Line mode   | Circuit Breaker     |
|  | Battery mode  | Electronic Circuits |
| <b>BATTERY</b>                               |   |                     |
| Battery voltage                              | 48VDC   |                     |
| Floating voltage                             | 54.8V   |                     |
| Overcharge Protection                        | 60V   |                     |
| <b>CHARGER</b>                               |   |                     |
| Charging Current(UPS) @Nominal Input Voltage | Default:30A; MAX:80A  |                     |
| Bulk Charging Voltage                        | 56.4Vdc   |                     |
| Floating Charging Voltage                    | 54Vdc   |                     |
| Charging Algorithm                           | 3-Step  |                     |
| <b>GENERAL</b>                               |   |                     |
| Mounting                                     | Wall mount  |                     |
| Display                                      | LED+LCD   |                     |
| Parallel operation                           | 3 units   |                     |
| Operating Temperature Range                  | -10°C to 50°C   |                     |
| Storage Temperature                          | -15°C to 60°C   |                     |
| Standard Warranty                            | 2 year  |                     |
| <b>MECHANICAL SPECIFICATIONS</b>             |   |                     |
| Machine Dimension (W*H*D)(mm)                | 297.5*468*125   |                     |
| Package Dimension (W*H*D)(mm)                | /   |                     |
| N.W(kg)                                      | /   |                     |
| G.W(kg)                                      | /   |                     |
| <b>CERTIFICATION &amp; STANDARDS</b>         |   |                     |
| CE   |   |                     |

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## POWER INVERTER/CHARGER EP2100 PRO Series

300W~1000W | 12V/24V | 10~30A

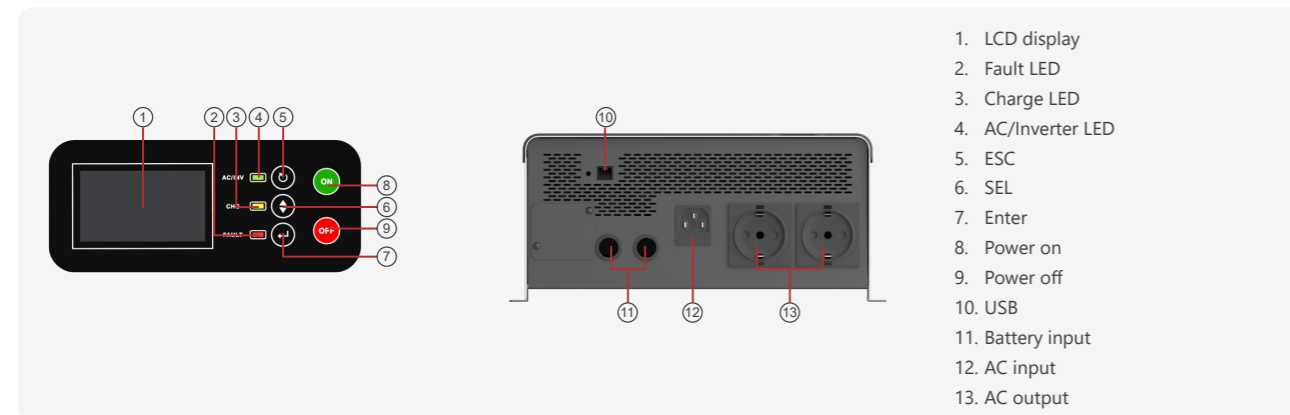


EP2100 PRO series inverter is a cost effective, intelligent with UPS function. The comprehensive LCD offers user-configurable and easy-accessible button adjustment such as battery charge current, battery charge voltage, frequency, buzzer etc. It's perfect for the user who need a simple and economical inverter, with user-friendly installation and setting. Tower and rack design available for different choices.

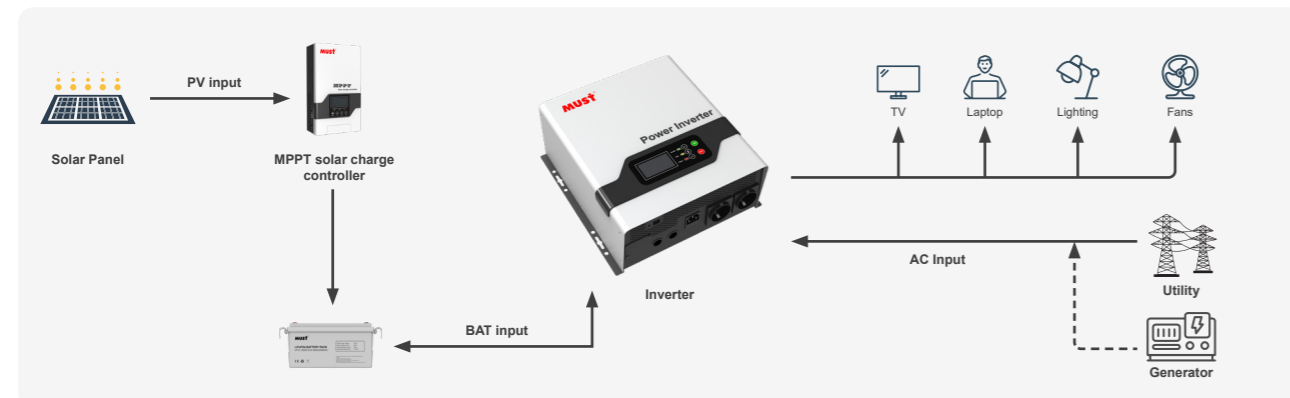


- Rated power 300W to 1000W
- Pure sine wave output
- Smart LCD setting ( frequency , charge voltage, charge current, etc).
- 3 steps charging algorithm
- Built in AVR function
- Overload and short-circuit protection
- Battery reverse polarity protection (Optional)
- Deep discharge protection
- Cold start function

### Back panel description



### Solar system connection



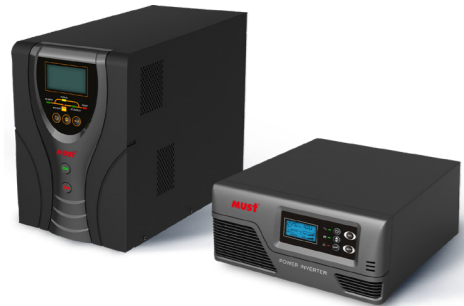
| MODEL  | EP21-0312 PRO   | EP21-0412 PRO | EP21-0512 PRO | EP21-0612 PRO | EP21-0812 PRO | EP21-1012 PRO | EP21-0624 PRO                    | EP21-0824 PRO | EP21-1024 PRO |
|--|---|---------------|---------------|---------------|---------------|---------------|----------------------------------|---------------|---------------|
| Default Battery System Voltage   | 12VDC   |               |               |               |               |               | 24VDC                            |               |               |
| <b>INVERTER OUTPUT</b>   |   |               |               |               |               |               |                                  |               |               |
| Rated Power  | 300W  | 400W          | 500W          | 600W          | 800W          | 1000W         | 600W                             | 800W          | 1000W         |
| Surge Rating   | 900VA   | 1200VA        | 1500VA        | 1800VA        | 2400VA        | 3000VA        | 1800VA                           | 2400VA        | 3000VA        |
| Waveform   | Pure sine wave  |               |               |               |               |               |                                  |               |               |
| Voltage Regulation   | Battery mode: 220 or 230VAC Line mode: 220~240VAC   |               |               |               |               |               |                                  |               |               |
| Output Frequency   | 50Hz / 60Hz   |               |               |               |               |               |                                  |               |               |
| Inverter Frequency (Peak)  | >75%  |               |               |               |               |               | >81%                             |               |               |
| Bypass Efficiency  | >95%  |               |               |               |               |               |                                  |               |               |
| Output Transfer Time   | Typical:8ms 12ms(max)   |               |               |               |               |               |                                  |               |               |
| <b>AC INPUT</b>  |   |               |               |               |               |               |                                  |               |               |
| Voltage  | 220 / 230 / 240VAC  |               |               |               |               |               |                                  |               |               |
| Selectable Voltage Range   | 140~280VAC ±5%  |               |               |               |               |               |                                  |               |               |
| Low Battery Alarm  | 140VAC ±5%  |               |               |               |               |               |                                  |               |               |
| Low Voltage Recover  | 150VAC ±5%  |               |               |               |               |               |                                  |               |               |
| High Battery Alarm   | 280VAC ±5%  |               |               |               |               |               |                                  |               |               |
| High Voltage Recover   | 270VAC ±5%  |               |               |               |               |               |                                  |               |               |
| Low Frequency Alarm  | 45 ±5Hz   |               |               |               |               |               |                                  |               |               |
| Low Frequency Recover  | 46 ±5Hz   |               |               |               |               |               |                                  |               |               |
| High Frequency Alarm   | 65 ±5Hz   |               |               |               |               |               |                                  |               |               |
| High Frequency Recover   | 64 ±5Hz   |               |               |               |               |               |                                  |               |               |
| Nominal Input Range  | 50Hz / 60Hz ±5Hz  |               |               |               |               |               |                                  |               |               |
| AC Auto Restart  | YES   |               |               |               |               |               |                                  |               |               |
| <b>BATTERY</b>   |   |               |               |               |               |               |                                  |               |               |
| Minimum Start Voltage  | Low Battery Voltage Cut Off+0.5V  |               |               |               |               |               | Low Battery Voltage Cut Off+0.5V |               |               |
| Low Battery Voltage Alarm  | Low Battery Voltage Cut Off+0.5V  |               |               |               |               |               | Low Battery Voltage Cut Off+1.0V |               |               |
| Min Voltage For Power On   | Shutdown voltage +0.5V  |               |               |               |               |               | Shutdown voltage +1V             |               |               |
| Low Battery Voltage Cut Off  | 10-12.0VDC  |               |               |               |               |               | 20.0-24.0VDC                     |               |               |
| High Battery Voltage Alarm   | (13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC)   |               |               |               |               |               |                                  |               |               |
| <b>AC CHARGE</b>   |   |               |               |               |               |               |                                  |               |               |
| Floating Voltage   | 13.5-14.5VDC  |               |               |               |               |               | 27-29VDC                         |               |               |
| Boost Voltage  | 13.8~14.5VDC  |               |               |               |               |               | 27.6~29VDC                       |               |               |
| Maximum Charge Current   | 300W<br>10A   | 400W<br>10A   | 500W<br>15A   | 600W<br>20A   | 800W<br>25A   | 1000W<br>30A  | 600W<br>10A                      | 800W<br>15A   | 1000W<br>15A  |
| <b>BYPASS &amp; PROTECTION</b>   |   |               |               |               |               |               |                                  |               |               |
| Input Waveform   | Pure sine wave  |               |               |               |               |               |                                  |               |               |
| Input Frequency  | 50Hz or 60Hz  |               |               |               |               |               |                                  |               |               |
| Overload Protection  | >110%~125% Load fault after 60s; >125%~150% Load fault after 3s; >150% Load fault after 500ms |               |               |               |               |               |                                  |               |               |
| Over Temperature Protection  | ≥90°C   |               |               |               |               |               |                                  |               |               |
| Bypass Output Protection   | 10A 250VAC  |               |               |               |               |               |                                  |               |               |
| Output Circuit Protection  | YES   |               |               |               |               |               |                                  |               |               |
| Battery Reverse Protection   | Optional  |               |               |               |               |               |                                  |               |               |
| Battery Low Voltage Protection   | YES   |               |               |               |               |               |                                  |               |               |
| Battery High Voltage Protection  | YES   |               |               |               |               |               |                                  |               |               |
| Bypass Breaker Rating  | 10A   |               |               |               |               |               |                                  |               |               |
| Maximum Bypass Current   | 10A   |               |               |               |               |               |                                  |               |               |
| <b>MECHANICAL SPECIFICATION</b>  |   |               |               |               |               |               |                                  |               |               |
| Machine Dimension (W*H*D)(mm)  | 300.5*319*132.2   |               |               |               |               |               |                                  |               |               |
| Package Dimension (W*H*D)(mm)  | 391*325*187   |               |               |               |               |               |                                  |               |               |
| N.W(kg)  | /   |               |               |               |               |               |                                  |               |               |
| G.W(kg)  | /   |               |               |               |               |               |                                  |               |               |
| Operating Temperature  | 0°C~40°C 0~90% relative humidity (non-condensing)   |               |               |               |               |               |                                  |               |               |
| Storage Temperature  | -15°Cto 55°C  |               |               |               |               |               |                                  |               |               |
| Altitude   | ≤1000M  |               |               |               |               |               |                                  |               |               |
| Audible Noise  | ≤60dB   |               |               |               |               |               |                                  |               |               |
| Display  | LED+LCD   |               |               |               |               |               |                                  |               |               |
| Cooling Mode   | Fan cooling   |               |               |               |               |               |                                  |               |               |
| Fan Starting   | >45°Cstarting, <30°C Closing  |               |               |               |               |               |                                  |               |               |
| Communication  | USB   |               |               |               |               |               |                                  |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |               |               |               |               |                                  |               |               |
| CE-LVD (EN IEC62109-1:2010, EN IEC62109-2:2011)                                      |   |               |               |               |               |               |                                  |               |               |
| CE-EMC+LVD (EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |               |               |               |               |               |                                  |               |               |
| IEC60950-1:2005A+1:2009+A2:2013  |   |               |               |               |               |               |                                  |               |               |
| EN IEC62040-1:2019   |   |               |               |               |               |               |                                  |               |               |

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## POWER INVERTER/CHARGER EP2000 PRO Series

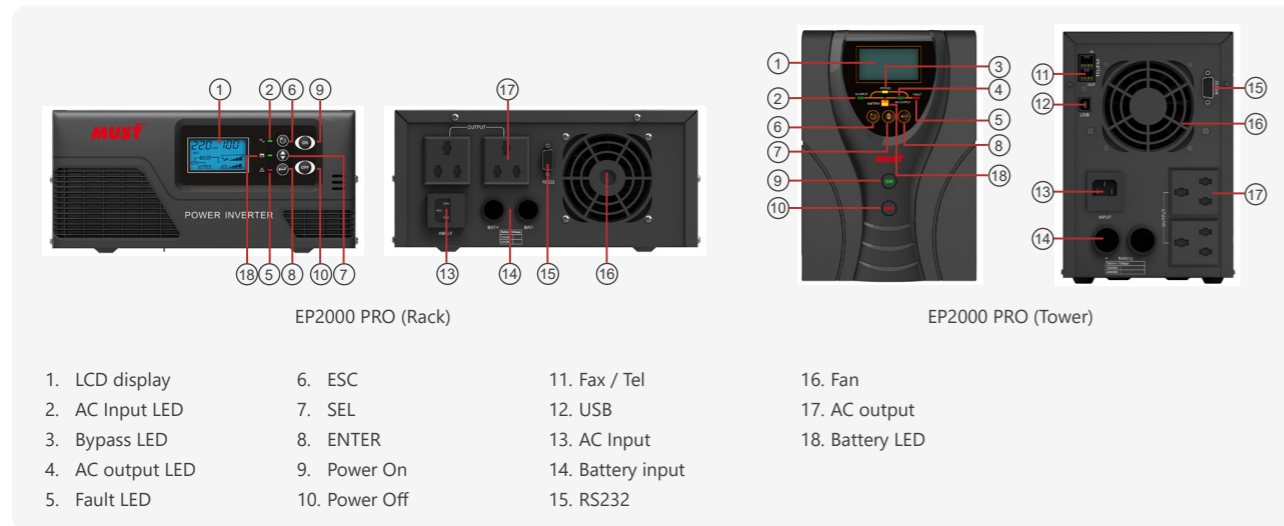
300W~1000W | 12V/24V | 10~30A

EP2000 PRO series inverter is a cost effective, intelligent with UPS function. The comprehensive LCD offers user-configurable and easy-accessible button adjustment such as battery charge current, battery charge voltage, frequency, buzzer etc. It's perfect for the user who need a simple and economical inverter, with user-friendly installation and setting. Tower and rack design available for different choices.

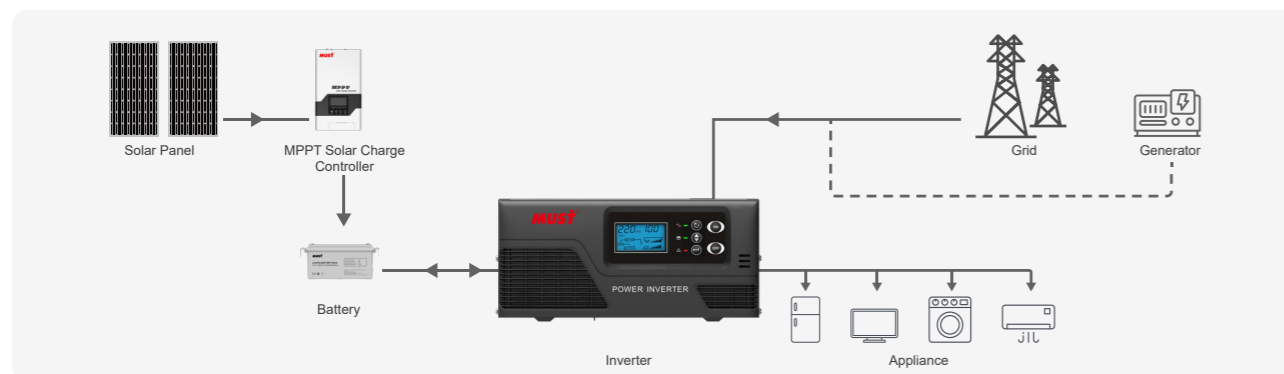


- Rated power 300W to 1000W
- Pure sine wave output
- Smart LCD setting ( frequency , charge voltage, charge current, etc).
- 3 steps charging algorithm
- Built in AVR function
- Overload and short-circuit protection
- Battery reverse polarity protection (Optional)
- Deep discharge protection
- Cold start function

### Back panel description



### Solar system connection



| MODEL  | EP20-0312 PRO   | EP20-0612 PRO | EP20-0812 PRO | EP20-1012 PRO | EP20-0324 PRO                   | EP20-0624 PRO | EP20-0824 PRO | EP20-1024 PRO |
|--|---|---------------|---------------|---------------|---------------------------------|---------------|---------------|---------------|
| Default Battery System Voltage   | 12VDC   |               |               |               | 24VDC                           |               |               |               |
| <b>INVERTER OUTPUT</b>   |   |               |               |               |                                 |               |               |               |
| Rated Power  | 300W  | 600W          | 800W          | 1000W         | 300W                            | 600W          | 800W          | 1000W         |
| Surge Rating   | 900VA   | 1800VA        | 2400VA        | 3000VA        | 900VA                           | 1800VA        | 2400VA        | 3000VA        |
| Waveform   | Pure sine wave  |               |               |               |                                 |               |               |               |
| Voltage Regulation   | Battery mode: 220 or 230VAC Line mode: 220~240VAC   |               |               |               |                                 |               |               |               |
| Output Frequency   | 50Hz / 60Hz   |               |               |               |                                 |               |               |               |
| Inverter Frequency (Peak)  | >75%  |               |               |               | >81%                            |               |               |               |
| Bypass Efficiency  | >95%  |               |               |               |                                 |               |               |               |
| Output Transfer Time   | Typical:8ms 12ms(max)   |               |               |               |                                 |               |               |               |
| <b>AC INPUT</b>  |   |               |               |               |                                 |               |               |               |
| Voltage  | 220 / 230 / 240VAC  |               |               |               |                                 |               |               |               |
| Selectable Voltage Range   | 140~280VAC ±5%  |               |               |               |                                 |               |               |               |
| Low Battery Alarm  | 140VAC ±5%  |               |               |               |                                 |               |               |               |
| Low Voltage Recover  | 150VAC ±5%  |               |               |               |                                 |               |               |               |
| High Battery Alarm   | 280VAC ±5%  |               |               |               |                                 |               |               |               |
| High Voltage Recover   | 270VAC ±5%  |               |               |               |                                 |               |               |               |
| Low Frequency Alarm  | 45 ±5Hz   |               |               |               |                                 |               |               |               |
| Low Frequency Recover  | 46 ±5Hz   |               |               |               |                                 |               |               |               |
| High Frequency Alarm   | 65 ±5Hz   |               |               |               |                                 |               |               |               |
| High Frequency Recover   | 64 ±5Hz   |               |               |               |                                 |               |               |               |
| Nominal Input Range  | 50Hz / 60Hz ±5Hz  |               |               |               |                                 |               |               |               |
| AC Auto Restart  | YES   |               |               |               |                                 |               |               |               |
| <b>BATTERY</b>   |   |               |               |               |                                 |               |               |               |
| Minimum Start Voltage  | Low Battery Voltage Cutoff+0.5V   |               |               |               | Low Battery Voltage Cutoff+1.0V |               |               |               |
| Low Battery Voltage Alarm  | Low Battery Voltage Cutoff+0.5V   |               |               |               | Low Battery Voltage Cutoff+1.0V |               |               |               |
| Low Battery Voltage Cut Off  | 10-12.0VDC  |               |               |               | 20.0-24.0VDC                    |               |               |               |
| High Battery Voltage Alarm   | (13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC)   |               |               |               |                                 |               |               |               |
| <b>AC CHARGE</b>   |   |               |               |               |                                 |               |               |               |
| Floating Voltage   | 13.5-14.5VDC  |               |               |               | 27-29VDC                        |               |               |               |
| Boost Voltage  | 13.8~14.5VDC  |               |               |               | 27.6~29VDC                      |               |               |               |
| Maximum Charge Current   | 300W<br>10A   | 600W<br>20A   | 800W<br>25A   | 1000W<br>30A  | 300W<br>5A                      | 600W<br>10A   | 800W<br>15A   | 1000W<br>15A  |
| <b>BYPASS &amp; PROTECTION</b>   |   |               |               |               |                                 |               |               |               |
| Input Waveform   | Pure sine wave  |               |               |               |                                 |               |               |               |
| Input Frequency  | 50Hz or 60Hz  |               |               |               |                                 |               |               |               |
| Overload Protection  | 110%~125% Load fault after 60s; 125%~150% Load fault after 3s; >150% Load fault after 500ms |               |               |               |                                 |               |               |               |
| Over Temperature Protection  | ≥90°C   |               |               |               |                                 |               |               |               |
| Bypass Output Protection   | 10A 250VAC  |               |               |               |                                 |               |               |               |
| Output Circuit Protection  | YES   |               |               |               |                                 |               |               |               |
| Battery Reverse Protection   | Optional  |               |               |               |                                 |               |               |               |
| Battery Low Voltage Protection   | YES   |               |               |               |                                 |               |               |               |
| Battery High Voltage Protection  | YES   |               |               |               |                                 |               |               |               |
| Bypass Breaker Rating  | 10A   |               |               |               |                                 |               |               |               |
| Maximum Bypass Current   | 10A   |               |               |               |                                 |               |               |               |
| <b>MECHANICAL SPECIFICATION</b>  |   |               |               |               |                                 |               |               |               |
| Machine Dimension (W*H*D)(mm)  | 315*145*210   |               |               |               |                                 |               |               |               |
| N.W(kg)  | 300W<br>7.5   | 600W<br>10.7  | 800W<br>12.5  | 1000W<br>13.5 | 300W<br>7.5                     | 600W<br>10.7  | 800W<br>12.5  | 1000W<br>13.5 |
| Package Dimension (W*H*D)(mm)  | 420*280*225   |               |               |               |                                 |               |               |               |
| G.W(kg)  | 300W<br>8   | 600W<br>11.5  | 800W<br>13    | 1000W<br>14.0 | 300W<br>8                       | 600W<br>11.5  | 800W<br>13    | 1000W<br>14   |
| <b>OTHER</b>   |   |               |               |               |                                 |               |               |               |
| Operating Temperature  | 0°C~40°C 0~90% relative humidity (non-condensing)   |               |               |               |                                 |               |               |               |
| Storage Temperature  | -15°C to 55°C   |               |               |               |                                 |               |               |               |
| Altitude   | ≤1000M  |               |               |               |                                 |               |               |               |
| Audible Noise  | ≤60dB   |               |               |               |                                 |               |               |               |
| Display  | LED+LCD   |               |               |               |                                 |               |               |               |
| Cooling Mode   | Fan cooling   |               |               |               |                                 |               |               |               |
| Fan Starting   | >45°C starting, <30°C Closing   |               |               |               |                                 |               |               |               |
| Communication  | USB   |               |               |               |                                 |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |               |               |                                 |               |               |               |
| CE-LVD (EN IEC62109-1:2010, EN IEC62109-2:2011)                                      |   |               |               |               |                                 |               |               |               |
| CE-EMC+LVD (EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |               |               |               |                                 |               |               |               |
| IEC60950-1:2005A+1:2009+A2:2013  |   |               |               |               |                                 |               |               |               |
| EN IEC62040-1:2019   |   |               |               |               |                                 |               |               |               |

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## LOW FREQUENCY POWER INVERTER EP3000 PLUS Series

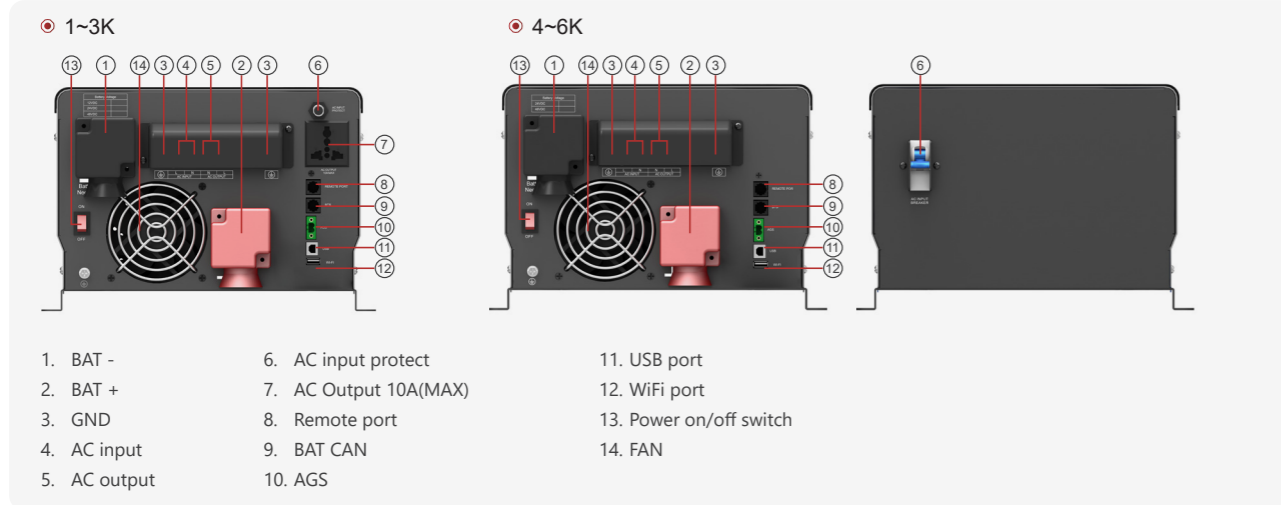
1~6kW | 230V | WIFI | BMS

EP3000 PLUS series is a very economical pure sine wave inverter, with AC charger from 20A to 60A; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is too lower. With pure copper transformer, it enables inverter to operate with all kinds of home appliances.

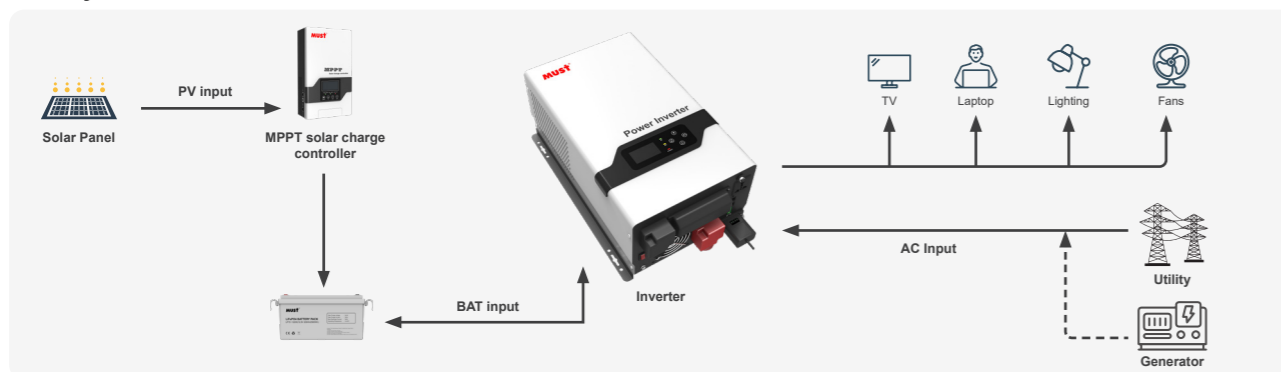


- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5V/ 12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 220V:220V/230V/240V
- Inverter frequency can be set to 50/60Hz
- Set utility charging on/off switch
- Acid or Lituim select
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



### Solar system connection



| MODEL   | EP30-1012 PLUS  | EP30-1024 PLUS | EP30-1512 PLUS | EP30-1524 PLUS | EP30-2012 PLUS | EP30-2024 PLUS | EP30-3024 PLUS | EP30-3048 PLUS | EP30-4024 PLUS | EP30-4048 PLUS | EP30-5048 PLUS | EP30-6048 PLUS |
|---|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Nominal Battery System Voltage  | 12VDC   | 24VDC          | 12VDC          | 24VDC          | 12VDC          | 24VDC          | 24VDC          | 48VDC          | 24VDC          | 48VDC          | 48VDC          | 48VDC          |
| <b>INVERTER OUTPUT</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| Rated Power   | 1KW   | 1.5KW          | 2KW            | 3KW            | 4KW            | 5KW            | 6KW            |                |                |                |                |                |
| Surge Rating  | 3000VA  | 4500VA         | 6000VA         | 9000VA         | 12000VA        | 15000VA        | 18000VA        |                |                |                |                |                |
| Capable Of Starting Electric Motor  | 1HP   | 1HP            | 1HP            | 2HP            |                | 3HP            |                |                |                |                |                |                |
| Waveform  | Pure sine wave / same as input (bypass mode)  |                |                |                |                |                |                |                |                |                |                |                |
| Nominal Output Voltage RMS  | 220V / 230V / 240VAC ±10% (RMS)   |                |                |                |                |                |                |                |                |                |                |                |
| Output Frequency  | 50Hz / 60Hz ±0.3Hz  |                |                |                |                |                |                |                |                |                |                |                |
| Inverter Efficiency (Peak)  | >88%  |                |                |                |                |                |                |                |                |                |                |                |
| Line Mode Efficiency  | >95%  |                |                |                |                |                |                |                |                |                |                |                |
| Power Factor  | 1.0   |                |                |                |                |                |                |                |                |                |                |                |
| Typical Transfer Time   | 10ms(max)   |                |                |                |                |                |                |                |                |                |                |                |
| Overload  | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |                |                |                |                |                |                |                |                |                |                |                |
| <b>AC INPUT</b>   |   |                |                |                |                |                |                |                |                |                |                |                |
| Voltage   | 230VAC  |                |                |                |                |                |                |                |                |                |                |                |
| Selectable Voltage Range  | 155~265VAC(For personal computers)  |                |                |                |                |                |                |                |                |                |                |                |
| Frequency Range   | 50Hz / 60Hz(Auto sensing) 40~80Hz   |                |                |                |                |                |                |                |                |                |                |                |
| <b>BATTERY</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| Minimum Start Voltage   | (10V/ 10.5V/ 11V/ 11.5/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |                |                |                |                |                |                |                |                |                |                |                |
| Low Battery Voltage Alarm   | (10V/ 10.5V/ 11V/ 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                |                |                |                |                |                |
| Low Battery Voltage Cut Off   | 10V/ 10.5V/ 11V/ 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                |                |                |                |                |                |
| High Battery Voltage Alarm  | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                |                |                |                |                |                |
| High Battery Voltage Recover  | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                |                |                |                |                |                |
| Energy Saving Mode  | Load ≤100±20W(220V)   |                |                |                |                |                |                |                |                |                |                |                |
| <b>CHARGER</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| Output Voltage  | Depends on battery type   |                |                |                |                |                |                |                |                |                |                |                |
| Charge AC Input Breaker Rating (230V)   | 1-3K/30A  |                |                |                |                |                | 4-6K/50A       |                |                |                |                |                |
| Overcharge Protection S.D.  | 15.7VDC for 12VDC mode (*2 for 24VDC mode, *4 for 48VDC mode)   |                |                |                |                |                |                |                |                |                |                |                |
| Maximum Charge Current  | 30A   | 20A            | 45A            | 25A            | 60A            | 30A            | 40A            | 20A            | 60A            | 30A            | 35A            | 40A            |
| <b>BYPASS &amp; PROTECTION</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| Input Voltage Waveform  | Sine wave (grid or generator)   |                |                |                |                |                |                |                |                |                |                |                |
| Nominal Input Frequency   | 50Hz or 60Hz  |                |                |                |                |                |                |                |                |                |                |                |
| Overload Protection (SMPS Load)   | Circuit breaker   |                |                |                |                |                |                |                |                |                |                |                |
| Output Short Circuit Protection   | Circuit breaker   |                |                |                |                |                |                |                |                |                |                |                |
| AC Input Breaker  | 1-3K/30A  |                |                |                |                |                | 4-6K/50A       |                |                |                |                |                |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| Mounting  | Wall Mount  |                |                |                |                |                |                |                |                |                |                |                |
| Machine Dimension (W*H*D)(mm)   | 303*493*200mm   |                |                |                |                |                | 305*531*202mm  |                |                |                |                |                |
| Package Dimension (W*H*D)(mm)   | 615*400*319mm   |                |                |                |                |                | 686*400*319mm  |                |                |                |                |                |
| N.W(kg)   | 14.8kg  | 15kg           | 18.8kg         | 17.1kg         | 19.5kg         | 18.6kg         | 20.3kg         | 20.1kg         | 31kg           | 29.5kg         | 30.9kg         | 34.5kg         |
| G.W(kg)   | 16.3kg  | 16.5kg         | 20.3kg         | 18.6kg         | 21kg           | 20.1kg         | 21.8kg         | 21.6kg         | 32.5kg         | 31kg           | 32.4kg         | 36kg           |
| <b>OTHER</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| Operating Temperature Range   | 0°C to 40°C   |                |                |                |                |                |                |                |                |                |                |                |
| Storage Temperature   | -15°C to 60°C   |                |                |                |                |                |                |                |                |                |                |                |
| Audible Noise   | 60dB MAX  |                |                |                |                |                |                |                |                |                |                |                |
| Display   | LED+LCD   |                |                |                |                |                |                |                |                |                |                |                |
| Standard Warranty   | 1 year, 2 or 3 years optional (IP20)  |                |                |                |                |                |                |                |                |                |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                |                |                |                |                |                |                |                |                |                |                |
| CE-EMC+LVD(EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2)<br>IEC60950-1 A1+A2; CE-EMC+LVD,EN62040-2,EN62040-1 |   |                |                |                |                |                |                |                |                |                |                |                |

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## HIGH FREQUENCY POWER INVERTER EP5000 Series

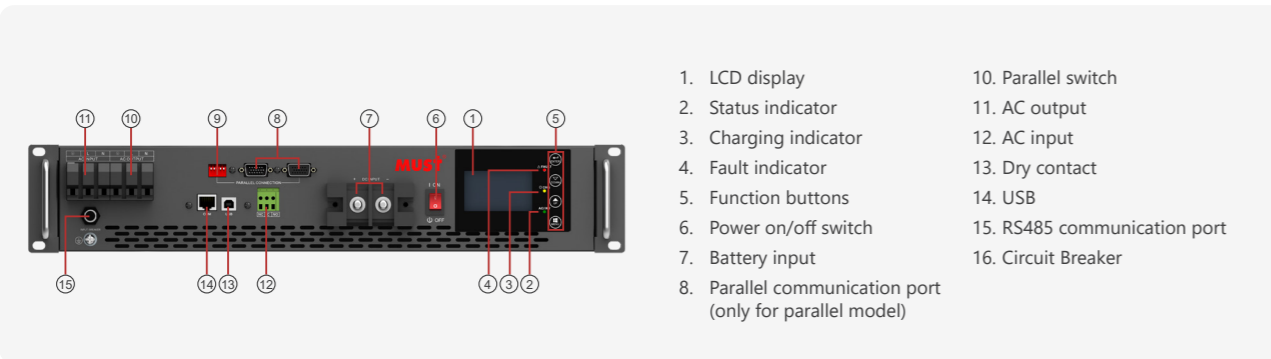
3~5KW | 230V | WIFI | BMS

This is a multi-function inverter/charger, combining functions of inverter, battery charger to offer uninterruptible power with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger, and acceptable input voltage based on different applications.

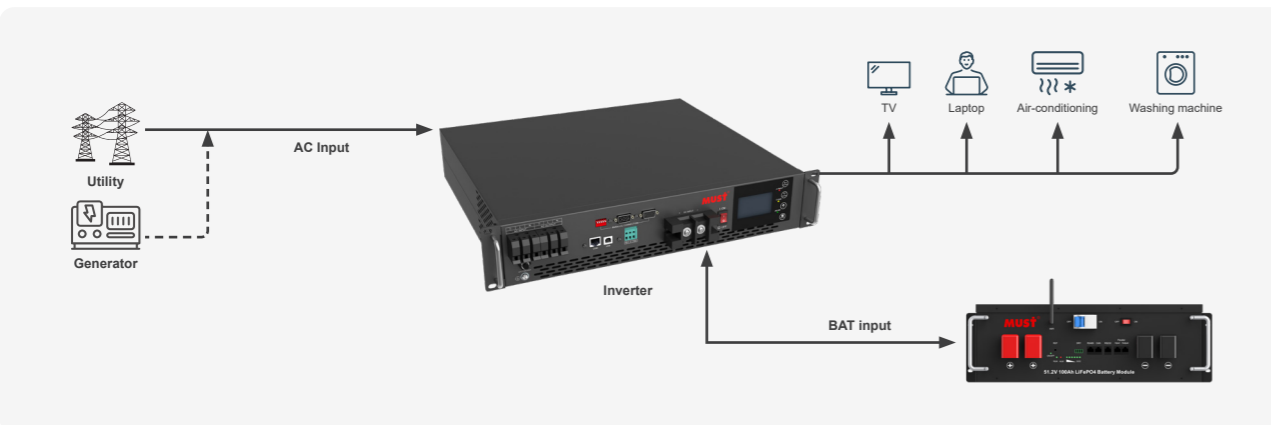


- Pure sine wave inverter
- Configurable input voltage range For home appliances and personal computers via LCD setting Configurable battery charging current based on applications via LCD setting
- Configurable AC Charger via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/Over temperature/short circuit protection
- Smart battery charger design For optimized battery performance
- Cold start Function

### Back panel description



### Solar system connection



| MODEL  | EP50-3KW                 | EP50-4KW            | EP50-5KW |
|--|--------------------------|---------------------|----------|
| Rated output power                           | 3000W                    | 4000W               | 5000W    |
| <b>AC INPUT</b>                              |                          |                     |          |
| Nominal Input Voltage                        | 230Vac±5%                |                     |          |
| Selectable Voltage range                     | AC 185V~270V             |                     |          |
| Frequency Range                              | 50Hz/60Hz (Auto sensing) |                     |          |
| Inverter Efficiency(Peak)                    | 97%                      |                     |          |
| <b>INVERTER OUTPUT</b>                       |                          |                     |          |
| Output voltage waveform                      | Pure sine wave           |                     |          |
| Output Voltage Regulation                    | 220Vac ± 5%              |                     |          |
| Output Frequency                             | 50Hz                     |                     |          |
| Power Factor                                 | 1                        |                     |          |
| Transfer Time                                | 10ms typical             |                     |          |
| Peak Efficiency                              | 92%                      |                     |          |
| Nominal DC Input Voltage                     | 48VDC                    |                     |          |
| Cold Start Voltage                           | 46VDC                    |                     |          |
| Output Short Circuit Protection              | Line mode                | Circuit Breaker     |          |
|  | Battery mode             | Electronic Circuits |          |
| <b>BATTERY</b>                               |                          |                     |          |
| Battery voltage                              | 48VDC ( ±0.5)            |                     |          |
| Floating voltage                             | 54V                      |                     |          |
| <b>CHARGER</b>                               |                          |                     |          |
| Charging Current(UPS) @Nominal Input Voltage | Default:30A; MAX:60A     |                     |          |
| Bulk Charging Voltage                        | 56.4Vdc                  |                     |          |
| Floating Charging Voltage                    | 54Vdc                    |                     |          |
| Charging Algorithm                           | 3-Step                   |                     |          |
| <b>GENERAL</b>                               |                          |                     |          |
| Mounting                                     | Rack mount               |                     |          |
| Display                                      | LED+LCD                  |                     |          |
| Parallel operation                           | 3 units                  |                     |          |
| Operation Temperature Range                  | 0°C to 40°C              |                     |          |
| Storage Temperature                          | -15°C to 60°C            |                     |          |
| Machine Dimension (W*H*D)                    | 468*86.3*400mm           |                     |          |
| Package Dimension (W*H*D)                    | /                        |                     |          |
| N.W  | /                        |                     |          |
| G.W  | /                        |                     |          |
| <b>CERTIFICATION &amp; STANDARDS</b>         |                          |                     |          |
| CE   |                          |                     |          |

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# HIGH FREQUENCY POWER INVERTER EP5000 PRO Series

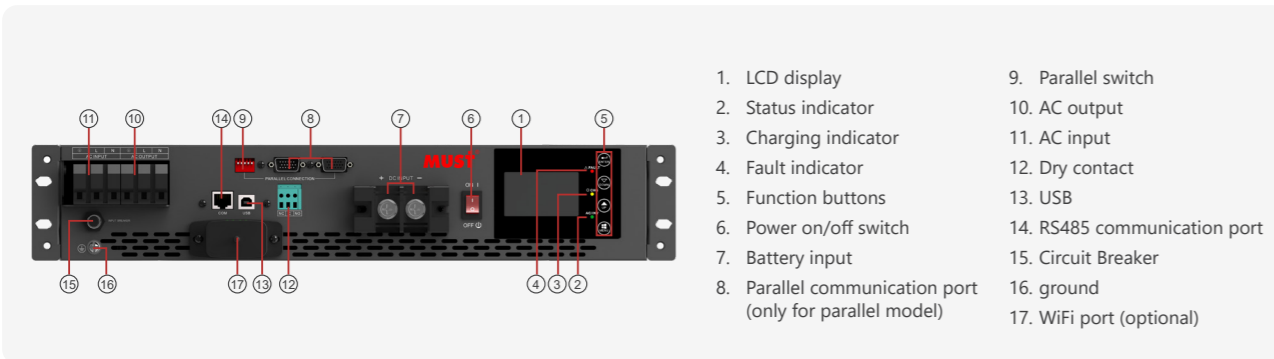
5.2KW | 230V | WIFI | BAT-CAN

This is a multi-function inverter/charger ,combining Functions of inverter, battery charger to offer uninte uninterruptible power with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger, and acceptable input voltage based on different applications.

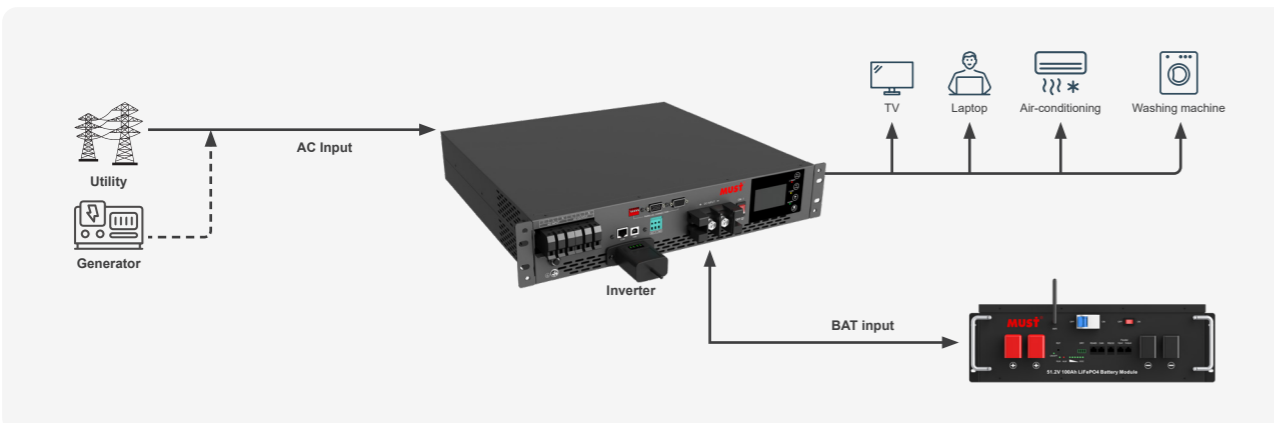


- Pure sine wave inverter
- Configurable input voltage range For home appliances and personal computers via LCD setting Configurable battery charging current based on applications via LCD setting
- Configurable AC Charger via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/Over temperature/short circuit protection
- Smart battery charger design For optimized battery performance
- Cold start Function
- WIFI remote monitoring (optional)

## Back panel description



## Solar system connection



| MODEL  | EP50-5248 PRO   |                     |
|--|---|---------------------|
| Rated output power                           | 5200VA/5200W  |                     |
| <b>AC INPUT</b>                              |   |                     |
| Nominal Input Voltage                        | 230Vac±5%   |                     |
| Selectable Voltage range                     | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VE4105)           |                     |
| Frequency Range                              | 50Hz/60Hz (Auto sensing)  |                     |
| Inverter Efficiency(Peak)                    | 90%   |                     |
| <b>INVERTER OUTPUT</b>                       |   |                     |
| Output voltage waveform                      | Pure sine wave  |                     |
| Output Voltage Regulation                    | 230Vac ± 5%   |                     |
| Output Frequency                             | 50Hz / 60Hz(Auto sensing)                                       |                     |
| Power Factor                                 | ≈1  |                     |
| Transfer Time                                | 10ms (UPS / VDE4105) / 20ms (APL) □50ms(For parallel operation) |                     |
| Nominal DC Input Voltage                     | 48VDC   |                     |
| Cold Start Voltage                           | 46VDC   |                     |
| Output Short Circuit Protection              | Line mode   | Circuit Breaker     |
|  | Battery mode  | Electronic Circuits |
| <b>BATTERY</b>                               |   |                     |
| Battery voltage                              | 48VDC   |                     |
| Floating voltage                             | 54.8V   |                     |
| Overcharge Protection                        | 60V   |                     |
| <b>CHARGER</b>                               |   |                     |
| Charging Current(UPS) @Nominal Input Voltage | Default:30A; MAX:80A  |                     |
| Bulk Charging Voltage                        | 56.4Vdc   |                     |
| Floating Charging Voltage                    | 54Vdc   |                     |
| Charging Algorithm                           | 3-Step  |                     |
| <b>GENERAL</b>                               |   |                     |
| Mounting                                     | Rack mount  |                     |
| Display                                      | LED+LCD   |                     |
| Parallel operation                           | 3 units   |                     |
| Operation Temperature Range                  | -10°C to 50°C   |                     |
| Storage Temperature                          | -15°C to 60°C   |                     |
| Machine Dimension (W*H*D)                    | 468*86.3*400mm  |                     |
| Package Dimension (W*H*D)                    | /   |                     |
| N.W (kg)                                     | 11  |                     |
| G.W (kg)                                     | /   |                     |
| <b>CERTIFICATION &amp; STANDARDS</b>         |   |                     |
| CE   |   |                     |

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## HYBRID SOLAR INVERTER PH1100 PRO Series

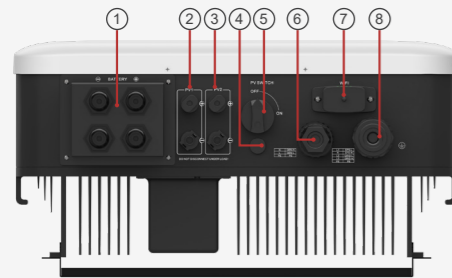
3.6~6KW | Single Phase | IP66 | WIFI | BMS

This is a flexible and intelligent energy storage solar inverter with a wide range of MPPT Voltage. Combining functions of off grid and on grid. This hybrid solar inverter can power all kinds of appliances in home or office, and can also be used in power stations.



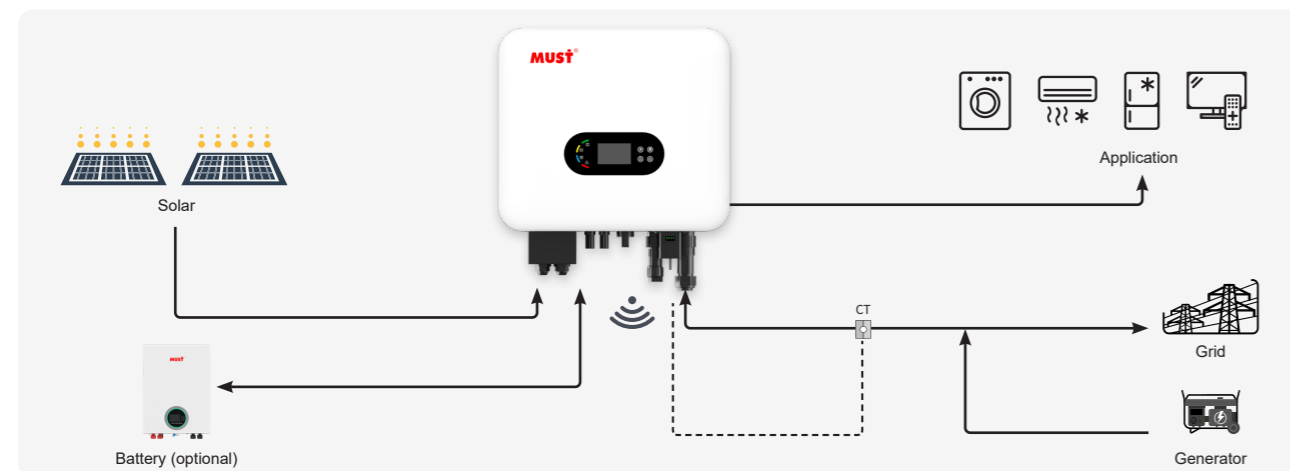
- Multiple operation modes: Grid-tie, off grid with storage backup
- IP66 water-proof and dust-proof
- MPPT voltage range 120-500V
- Support LCD display & Smart LCD setting
- Available Export control CT sensor function
- Multiple communications: RS485, GPRS and wifi etc
- Full protection function: Over-voltage, over-frequency, over-current, over-temperature, and AC short-circuit automatic protection
- Intelligent BMS battery management function
- Fanless low-noise design
- Wifi monitoring

### Back panel description



1. Battery input terminals and cover
2. PV1 input terminals
3. PV2 input terminals
4. Breather valve
5. PV input switch
6. BTS terminals, BMS terminals, load monitor terminals, dry contact terminals, CAN communication terminals and cover
7. Wi-Fi com module
8. AC input & output terminals and cover

### Solar system connection



| MODEL  | PH11-3648 PRO   | PH11-4048 PRO | PH11-4648 PRO | PH11-5048 PRO | PH11-6048 PRO |
|--|---|---------------|---------------|---------------|---------------|
| Rated power  | 3600W   | 4000W         | 4600W         | 5000W         | 6000W         |
| Nominal Battery System Voltage   | 48V   |               |               |               |               |
| <b>PV INPUT(DC)</b>  |   |               |               |               |               |
| Maximum recommended DC power   | 4700W   | 5200W         | 6000W         | 6500W         | 7800W         |
| Nominal DC operating voltage   | 360V  |               |               |               |               |
| Maximum DC voltage   | 500V  |               |               |               |               |
| MPPT voltage range   | 120V~500V   |               |               |               |               |
| Maximum input current  | 15A / 15A   |               |               |               |               |
| No. of MPP tracker   | 2   |               |               |               |               |
| Strings per MPP tracker  | 1   |               |               |               |               |
| <b>INVERTER INPUT/ OUTPUT(AC)</b>  |   |               |               |               |               |
| Nominal AC input/ output power   | 3600W   | 4000W         | 4600W         | 5000W         | 6000W         |
| Nominal input/ output voltage; range   | 220/230/240V; 180-280V                                |               |               |               |               |
| AC grid frequency; range   | 50/60Hz; 45~55/55-65Hz                                |               |               |               |               |
| Nominal input/ output current  | 15.6A   | 17.5A         | 20A           | 21.7A         | 26A           |
| Maximum input/ output current  | 16A   | 18.1A         | 20.8A         | 22.7A         | 27.2A         |
| Inrush current (spike/duration)  | 57.5A/5.2us   |               |               |               |               |
| Total harmonic distortion i(THDi)  | <3%   |               |               |               |               |
| Power factor at rated power  | 1   |               |               |               |               |
| Displacement power factor  | 0.8leading~0.8lagging                                 |               |               |               |               |
| Grid type  | Single phase  |               |               |               |               |
| <b>BATTERY MODE OUTPUT(AC)</b>   |   |               |               |               |               |
| Output Rated Power   | 3600W   | 4000W         | 4600W         | 5000W         | 6000W         |
| Nominal output voltage; accuracy range   | 230±1%  |               |               |               |               |
| Output frequency; accuracy range   | 50/60Hz (optional)±0.2%                               |               |               |               |               |
| Output rated current   | 15.6A   | 17.5A         | 20A           | 21.7A         | 26A           |
| Output waveform  | Pure sine wave  |               |               |               |               |
| Peak power   | 5400W, 10s  | 6000W, 10s    | 6900W, 10s    | 7500W, 10s    | 9000W, 10s    |
| Total harmonic distortion v (linear load)  | <3%   |               |               |               |               |
| <b>BATTERY &amp; CHARGER</b>   |   |               |               |               |               |
| Battery type   | Lead-acid battery / Lithium battery                   |               |               |               |               |
| Battery voltage  | 48V   |               |               |               |               |
| Battery voltage range  | 40~60V  |               |               |               |               |
| Charging curve   | 3-stage adaptive with maintenance                     |               |               |               |               |
| Protection   | Over-current protection / Over-temperature protection |               |               |               |               |
| Maximum charging power   | 3600W   | 4000W         | 4600W         | 5000W         | 6000W         |
| Maximum charging current   | 75A   | 85A           | 95A           | 100A          | 125A          |
| <b>EFFICIENCY</b>  |   |               |               |               |               |
| Maximum efficiency   | 97.1%   |               |               |               |               |
| Euro-efficiency  | 96.5%   |               |               |               |               |
| MPPT efficiency  | 99.8%   |               |               |               |               |
| <b>PROTECTION DEVICES</b>  |   |               |               |               |               |
| Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |   |               |               |               |               |
| <b>GENERAL</b>   |   |               |               |               |               |
| Machine Dimension (W*H*D)(mm)  | 420*480*215   |               |               |               |               |
| Package Dimension (W*H*D)(mm)  | 610*327*595   |               |               |               |               |
| N.W(kg)  | 30  |               |               |               |               |
| G.W(kg)  | 32  |               |               |               |               |
| DC connection  | H4 / MC4  |               |               |               |               |
| AC connection  | Terminal Block  |               |               |               |               |
| Display  | LED+LCD   |               |               |               |               |
| Communication interfaces   | Wi-Fi / USB / GPRS / RS485                            |               |               |               |               |
| Ingress protection rating  | IP66  |               |               |               |               |
| Humidity   | 0~95% RH(No condensing)                               |               |               |               |               |
| Operating temperature range  | -25°C+60°C With derating above 45°C                   |               |               |               |               |
| Cooling concept  | Natural   |               |               |               |               |
| Altitude   | <3000m  |               |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |               |               |               |
| CE-EMC+LVD (EN6100-6-3: 2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011); CE-LVD(EN62477-1:2022); IEC60529; EN50549-1:2019 Poland Type A, (NC RfG:2016, PSE:2018, PTPIREE:2021); C10/C11; UNE217001-2020; UNE217002-2020, NTS-631:2021 (Type A); G98+G99                                  |   |               |               |               |               |

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## HYBRID SOLAR INVERTER PH1100 EU-G2 Series

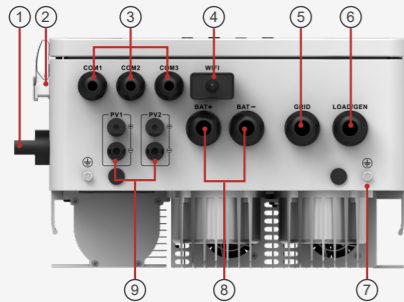
3~8KW | Single Phase | IP66

The PH1100 EU-G2 is an advanced Single phase hybrid inverter that intelligently combines solar energy generation, battery storage, generator and grid interaction. Engineered for residential and small commercial use, it offers a reliable and high-efficiency energy management solution that maximizes self-consumption and supports energy independence. With exceptional performance in both on-grid and off-grid scenarios, it adapts seamlessly to diverse energy demands.



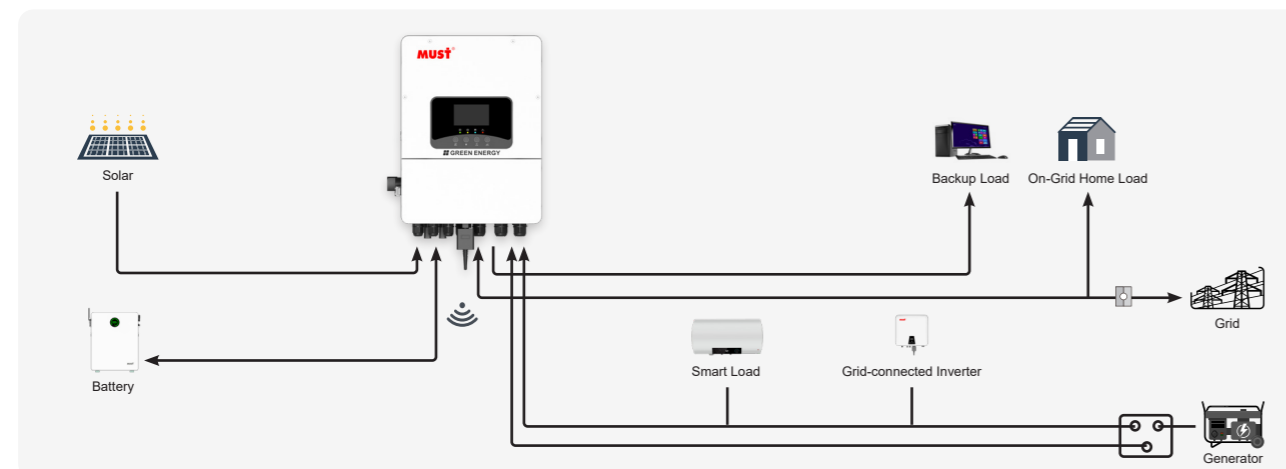
- 4.3-inch Colorful touch LCD
- IP66 protection degree
- AC couple to retrofit existing solar system
- Max. 9 pcs parallel for on-grid and off-grid operation;
- Max. charging/discharging current of 190A
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator
- Wifi monitoring

### Back panel description



1. DC switch
2. Safety lock
3. CAN communication terminals×2, RS485 communication terminals×2 and cover
4. WiFi Interface
5. Grid
6. Load and Generator input
7. Ground
8. Battery input connectors
9. PV input with two MPPT

### Solar system connection



| MODEL   | PH11-3KL1-EU-G2  | PH11-3.6KL1-EU-G2 | PH11-4KL1-EU-G2 | PH11-4.6KL1-EU-G2 | PH11-5KL1-EU-G2 | PH11-6KL1-EU-G2 | PH11-7KL1-EU-G2 | PH11-7.6KL1-EU-G2 | PH11-8KL1-EU-G2 |
|---|--|-------------------|-----------------|-------------------|-----------------|-----------------|-----------------|-------------------|-----------------|
| <b>BATTERY INPUT DATA</b>                           |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Battery type  | Lead-acid battery / Lithium battery  |                   |                 |                   |                 |                 |                 |                   |                 |
| Battery voltage                                     | 48V  |                   |                 |                   |                 |                 |                 |                   |                 |
| Battery voltage range                               | 40~64V   |                   |                 |                   |                 |                 |                 |                   |                 |
| Charging curve                                      | 4-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                  | 3000W  | 3600W             | 4000W           | 4600W             | 5000W           | 6000W           | 7000W           | 7600W             | 8000W           |
| Maximum charging/discharging current                | 75A  | 90A               | 100A            | 110A              | 120A            | 135A            | 175A            | 190A              | 190A            |
| <b>PV STRING INPUT DATA</b>                         |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Max. DC Input Power                                 | 7500W  | 5400W             | 6000W           | 6900W             | 7500W           | 9000W           | 10500W          | 11400W            | 12000W          |
| Maximum DC voltage                                  | 550V   |                   |                 |                   |                 |                 |                 |                   |                 |
| Start-up Voltage                                    | 125V   |                   |                 |                   |                 |                 |                 |                   |                 |
| Full Load DC Voltage Range                          | 250-500V   | 300-500V          | 167-500V        | 192-500V          | 208-500V        | 250-500V        | 165-500V        | 179-500V          | 188-500V        |
| Rated PV Input Voltage                              | 370V   |                   |                 |                   |                 |                 |                 |                   |                 |
| Minimum voltage for grid connection                 | 150V   |                   |                 |                   |                 |                 |                 |                   |                 |
| Enter high voltage error recovery point             | 550V   |                   |                 |                   |                 |                 |                 |                   |                 |
| Maximum input current                               | 18A  | 18A               | 18A+18A         | 18A+18A           | 18A+18A         | 18A+18A         | 32A+32A         | 32A+32A           | 32A+32A         |
| No.of MPP Trackers                                  | 1  | 1                 | 2               | 2                 | 2               | 2               | 2               | 2                 | 2               |
| Input terminal type                                 | H4/MC4   |                   |                 |                   |                 |                 |                 |                   |                 |
| <b>AC INPUT/OUTPUT DATA</b>                         |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Rated AC Input/Output Active Power                  | 3000W  | 3600W             | 4000W           | 4600W             | 5000W           | 6000W           | 7000W           | 7600W             | 8000W           |
| Max. AC Input/Output Apparent Power                 | 3300VA   | 3960VA            | 4400VA          | 5060VA            | 5500VA          | 6600VA          | 7700VA          | 8360VA            | 8800VA          |
| Rated AC Input/Output Current                       | 13A  | 15.6A             | 17.3A           | 20A               | 21.7A           | 26A             | 30.4A           | 33A               | 34.7A           |
| Max. AC Input/Output Current                        | 14.3A  | 17.2A             | 19.1A           | 22A               | 23.9A           | 28.6A           | 34.5A           | 36.3A             | 38.3A           |
| Max. Continuous AC Passthrough (grid to load)       | 35A  |                   |                 | 40A               |                 |                 | 50A             |                   |                 |
| Rated Input/Output Voltage/Range                    | 220/230/240VAC   |                   |                 |                   |                 |                 |                 |                   |                 |
| Rated Input/Output Grid Frequency/Range             | 60Hz±5Hz/ 50Hz±5Hz   |                   |                 |                   |                 |                 |                 |                   |                 |
| Rated output power factor                           | 1  |                   |                 |                   |                 |                 |                 |                   |                 |
| Power Factor Adjustment Range                       | 0.8 leading to 0.8 lagging   |                   |                 |                   |                 |                 |                 |                   |                 |
| Total Harmonics Current Distortion (THDi)           | <3%  |                   |                 |                   |                 |                 |                 |                   |                 |
| Grid Type   | Single phase   |                   |                 |                   |                 |                 |                 |                   |                 |
| DC Current Injection                                | 0.5%   |                   |                 |                   |                 |                 |                 |                   |                 |
| <b>EFFICIENCY</b>                                   |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Max. Efficiency                                     | 97.5%  |                   |                 |                   |                 |                 |                 |                   |                 |
| Euro Efficiency                                     | 96.5%  |                   |                 |                   |                 |                 |                 |                   |                 |
| MPPT Efficiency                                     | >99%   |                   |                 |                   |                 |                 |                 |                   |                 |
| <b>PROTECTION</b>                                   |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Integrated  | Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |                   |                 |                   |                 |                 |                 |                   |                 |
| Surge Protection                                    | AC Type III  |                   |                 |                   |                 |                 |                 |                   |                 |
| Overvoltage Category                                | AC Type III  |                   |                 |                   |                 |                 |                 |                   |                 |
| <b>GENERAL DATA</b>                                 |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Operating Temperature Range (°C)                    | -25°C~+60°C, >45°C Derating  |                   |                 |                   |                 |                 |                 |                   |                 |
| Cooling   | Intelligent Fan  |                   |                 |                   |                 |                 |                 |                   |                 |
| Noise (dB)  | ≤50dB  |                   |                 |                   |                 |                 |                 |                   |                 |
| Altitude  | 3000m, >3000mDerating  |                   |                 |                   |                 |                 |                 |                   |                 |
| Topology  | Battery-side transformer isolation, PV-side non-transformer isolation  |                   |                 |                   |                 |                 |                 |                   |                 |
| Communication                                       | USB/ WiFi/ Ethernet(optional)  |                   |                 |                   |                 |                 |                 |                   |                 |
| Display   | 4.3-inch touch screen  |                   |                 |                   |                 |                 |                 |                   |                 |
| Protection Degree                                   | IP66   |                   |                 |                   |                 |                 |                 |                   |                 |
| Installation Style                                  | Wall-mounted   |                   |                 |                   |                 |                 |                 |                   |                 |
| <b>MECHANICAL SPECIFICATIONS</b>                    |  |                   |                 |                   |                 |                 |                 |                   |                 |
| Machine Dimension (W*H*D)(mm)                       | 360*500*238  |                   |                 |                   |                 |                 |                 |                   |                 |
| Package Dimension (W*H*D)(mm)                       | 622*479*363  |                   |                 |                   |                 |                 |                 |                   |                 |
| N.W(kg)   | 22   |                   |                 |                   |                 |                 |                 |                   |                 |
| G.W(kg)   | 25   |                   |                 |                   |                 |                 |                 |                   |                 |
| Warranty  | 5 year   |                   |                 |                   |                 |                 |                 |                   |                 |
| <b>CERTIFICATION &amp; STANDARDS</b>                |  |                   |                 |                   |                 |                 |                 |                   |                 |
| NBT32004-2013/EN50549                               |  |                   |                 |                   |                 |                 |                 |                   |                 |

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## SINGLE PHASE HYBRID SOLAR INVERTER PH1100 EU Series

5~10KW | Single Phase | IP66

The PH1100 EU Series single-phase hybrid inverter is the ideal gateway to an all-round energy transition in the home. As a PV and battery inverter in one, it ensures a reliable and sustainable supply of energy. The power range is from 5KW to 10kW, compatible with low voltage (40-60V) batteries. Energy management is based on time-of-use and demand charge rate structures, which significantly reduce the amount of energy purchased from the public grid.

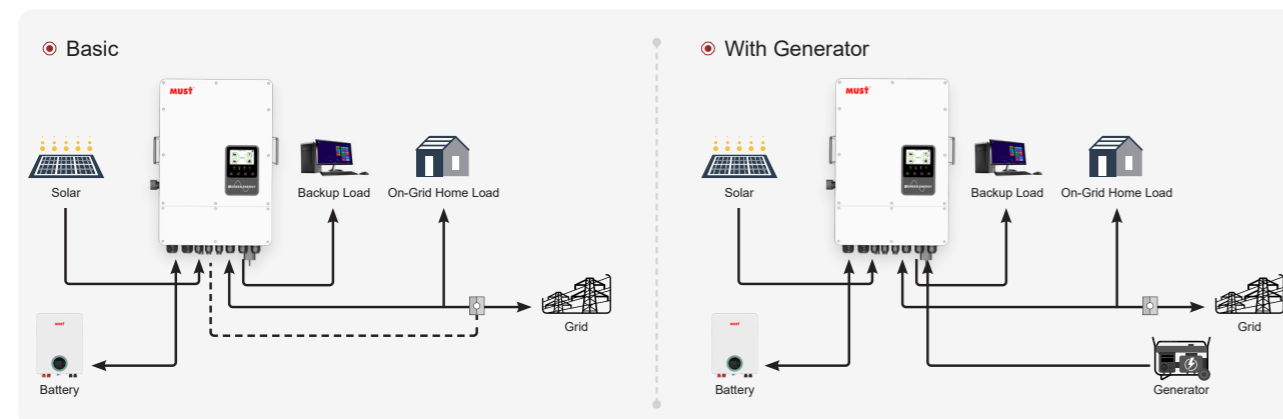


- Colorful touch LCD
- IP66 protection degree
- Max. charging/discharging current of 220A
- Ac coupling to retrofit existing solar system
- Max. 16 pcs parallel for on-grid and off-grid operation
- Support multiple batteries parallel
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator
- 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 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  | PH11-5KL1-EU   | PH11-6KL1-EU | PH11-8KL1-EU | PH11-10KL1-EU |
|--|--|--------------|--------------|---------------|
| Rated power  | 5000W  | 6000W        | 8000W        | 10000W        |
| <b>BATTERY INPUT DATA</b>                            |  |              |              |               |
| Battery type   | Lead-acid battery / Lithium battery  |              |              |               |
| Battery voltage                                      | 48V  |              |              |               |
| Battery voltage range                                | 40~60V   |              |              |               |
| Charging curve                                       | 4-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  | 6000W        | 8000W        | 10000W        |
| Maximum charging/discharging current                 | 120A   | 150A         | 190A         | 220A          |
| <b>PV STRING INPUT DATA</b>                          |  |              |              |               |
| Max. DC Input Power                                  | 6500W  | 7800W        | 10400W       | 13000W        |
| Maximum DC voltage                                   | 600V   |              |              |               |
| Start-up Voltage                                     | 125V   |              |              |               |
| Full Load DC Voltage Range                           | 150~540V   |              |              |               |
| Rated PV Input Voltage                               | 370V   |              |              |               |
| Minimum voltage for grid connection                  | 150V   |              |              |               |
| Enter high voltage error recovery point              | 600V   |              |              |               |
| Maximum input current                                | 16A/16A  | 16A/16A      | 32A/16A      | 32A/16A       |
| No. of MPP Trackers                                  | 2  | 2            | 2            | 2             |
| Input terminal type                                  | H4/MC4   |              |              |               |
| <b>AC INPUT/OUTPUT DATA</b>                          |  |              |              |               |
| Rated AC Input/Output Active Power                   | 5000W  | 6000W        | 8000W        | 10000W        |
| Max. AC Input/Output Apparent Power                  | 5500VA   | 6600VA       | 8800VA       | 11000VA       |
| Rated AC Input/Output Current                        | 21.7A  | 26A          | 34.7A        | 43.4A         |
| Max. AC Input/Output Current                         | 23.9A  | 28.6A        | 38.2A        | 47.8A         |
| Max. Continuous AC Passthrough (grid to load)        | 32.6A  | 39.1A        | 52.1A        | 65.2A         |
| Rated Input/Output Voltage/Range                     | 220/230/240VAC   |              |              |               |
| Rated Input/Output Grid Frequency/Range              | 60Hz±5Hz/ 50Hz±5Hz   |              |              |               |
| Rated output power factor                            | 1  |              |              |               |
| Power Factor Adjustment Range                        | 0.8 leading to 0.8 lagging   |              |              |               |
| Total Harmonics Current Distortion (THDi)            | <3%  |              |              |               |
| Grid Type  | Single phase   |              |              |               |
| DC Current Injection                                 | 0.5%   |              |              |               |
| <b>EFFICIENCY</b>                                    |  |              |              |               |
| Max. Efficiency                                      | 97.5%  |              |              |               |
| Euro Efficiency                                      | 96.5%  |              |              |               |
| MPPT Efficiency                                      | 99.5%  |              |              |               |
| <b>PROTECTION</b>                                    |  |              |              |               |
| Integrated   | Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |              |              |               |
| Surge Protection                                     | AC Type III  |              |              |               |
| Overvoltage Category                                 | AC Type III  |              |              |               |
| <b>GENERAL DATA</b>                                  |  |              |              |               |
| Operating Temperature Range (°C)                     | -25°C~+60°C, >45°C Derating  |              |              |               |
| Cooling  | Intelligent Fan  |              |              |               |
| Noise (dB)   | ≤55dB  |              |              |               |
| Altitude   | 3000m, >3000mDerating  |              |              |               |
| Topology   | Battery-side transformer isolation, PV-side non-transformer isolation  |              |              |               |
| Communication  | USB/ WiFi/ Ethernet(optional)  |              |              |               |
| Display  | 4.3-inch touch screen  |              |              |               |
| Protection Degree                                    | IP66   |              |              |               |
| Installation Style                                   | Wall-mounted   |              |              |               |
| <b>MECHANICAL SPECIFICATIONS</b>                     |  |              |              |               |
| Machine Dimension (W*H*D)(mm)                        | 446*692*260 (excluding connectors and racks)   |              |              |               |
| Package Dimension (W*H*D)(mm)                        | 816*404*567  |              |              |               |
| N.W(kg)  | 38 (Excluding Connectors and Brackets)   |              |              |               |
| G.W(kg)  | 42   |              |              |               |
| Warranty   | 5 Year<br>the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy   |              |              |               |
| <b>CERTIFICATION &amp; STANDARDS</b>                 |  |              |              |               |
| NBT32004-2013  |  |              |              |               |

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## HYBRID SOLAR INVERTER PH1100 EU Series



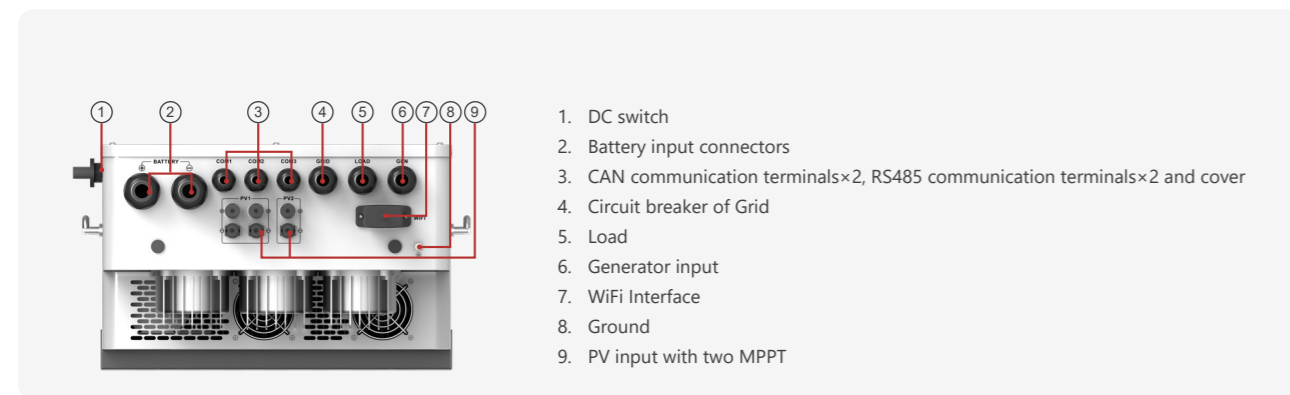
5~16KW | Three Phase | 380VAC | IP66

The PH1100 EU series is a three-phase on/off-grid bidirectional energy storage inverter with a compact design and high power density. It supports lithium and lead-acid batteries, provides a stable 380V/400V three-phase output, and features remote monitoring and multiple safety protections. It is widely used in home energy storage, small commercial energy storage, smart microgrids, and off-grid power supply in remote areas.

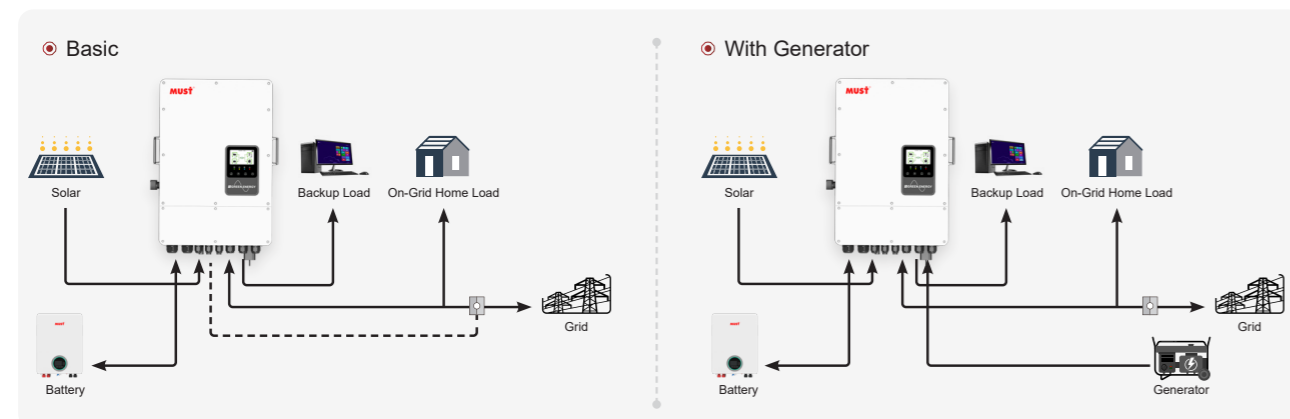


- 100% unbalanced output
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 320A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation design
- IP66 water-proof and dust-proof
- "Time of use" function: a maximum of 6 time segments can be set
- Wifi monitoring

### Back panel description



### Solar system connection



| MODEL  | PH11-5KL3-EU   | PH11-6.5KL3-EU | PH11-8KL3-EU | PH11-10KL3-EU | PH11-12KL3-EU | PH11-13KL3-EU | PH11-14KL3-EU                   | PH11-15KL3-EU | PH11-16KL3-EU |
|--|--|----------------|--------------|---------------|---------------|---------------|---------------------------------|---------------|---------------|
| Rated power  | 5000W  | 6500W          | 8000W        | 10000W        | 12000W        | 13000W        | 14000W                          | 15000W        | 16000W        |
| <b>BATTERY INPUT DATA</b>  |  |                |              |               |               |               |                                 |               |               |
| Battery type   | Lead-acid battery / Lithium battery  |                |              |               |               |               |                                 |               |               |
| Battery voltage  | 48V  |                |              |               |               |               |                                 |               |               |
| Battery voltage range  | 40~64V   |                |              |               |               |               |                                 |               |               |
| Charging curve   | 4-stage adaptive with maintenance/Equalization   |                |              |               |               |               |                                 |               |               |
| Charging Strategy for Li-Ion Battery   | Self-adaption to BMS   |                |              |               |               |               |                                 |               |               |
| Overcurrent / Overtemperature Protection   | Yes / Yes  |                |              |               |               |               |                                 |               |               |
| Max. charging/discharging power  | 5000W  | 6500W          | 8000W        | 10000W        | 12000W        | 13000W        | 14000W                          | 15000W        | 16000W        |
| Max. Charge/Discharge Current  | 120A   | 150A           | 190A         | 210A          | 240A          | 260A          | 280A                            | 300A          | 320A          |
| <b>PV STRING INPUT DATA</b>  |  |                |              |               |               |               |                                 |               |               |
| Max. DC Input Power  | 6500W  | 8450W          | 10400W       | 13000W        | 15600W        | 16900W        | 18200W                          | 19500W        | 20800W        |
| Rated PV Input Voltage   | 550V   |                |              | 370V          |               |               | 800V                            |               |               |
| Maximum DC voltage   | 800V   |                |              | 125V          |               |               | 200V                            |               |               |
| Start-up Voltage   | 160V   |                |              | 352~650V      |               |               | 379~650V                        | 406~650V      | 433~650V      |
| Minimum voltage for grid connection  | 200V   |                |              | 800V          |               |               | 150~800V                        |               |               |
| Full Load DC Voltage Range   | 350-650V   |                |              | 800V          |               |               | 32A/16A 32A/16A 32A/16A 32A/16A |               |               |
| Enter high voltage error recovery point  | 800V   |                |              | 800V          |               |               | 3                               |               |               |
| MPPT voltage range   | 200~650V   |                |              | 2+1           |               |               | 2+1                             |               |               |
| Maximum input current  | 13A+13A  |                |              | 13A+26A       |               |               | 32A/16A 32A/16A 32A/16A 32A/16A |               |               |
| No.of MPP Trackers   | 2  |                |              | 2+1           |               |               | 2+1                             |               |               |
| No.of Strings per MPP Tracker  | 1+1  |                |              | 2+1           |               |               | 2+1                             |               |               |
| <b>AC INPUT/OUTPUT DATA</b>  |  |                |              |               |               |               |                                 |               |               |
| Rated AC Input/ Output Power   | 5000W  | 6500W          | 8000W        | 10000W        | 12000W        | 13000W        | 14000W                          | 15000W        | 16000W        |
| Max AC Input/ Output Power   | 5500W  | 7150W          | 8800W        | 11000W        | 13200W        | 13000W        | 14000W                          | 15000W        | 16000W        |
| Rated AC Input/ Output Current   | 7.6A/7.2A  | 9.8A/9.42A     | 12.1A/11.6A  | 15.2A/14.5A   | 18.2A/17.4A   | 19.7A/18.8A   | 21.2A/20.3A                     | 22.7A/21.7A   | 24.2A/23.2A   |
| Max AC Input/ Output Current   | 8.4A/8A  | 10.8A/10.4A    | 13.4A/12.8A  | 16.7A/15.9A   | 20A/19.1A     | 20.6A/20.6A   | 22.6A/22.6A                     | 23.8A/23.8A   | 25.5A/25.5A   |
| Max. 3-Phase Unbalanced Current  | 11.4A/10.9A  | 14.7A/14.1A    | 18.2A/17.4A  | 22.7A/21.7A   | 27.3A/26.1A   | 29.5A/28.2A   | 31.8A/30.4A                     | 34A/32.5A     | 36.3A/34.8A   |
| Power Factor Adjustment Range  | 0.8 leading to 0.8 lagging   |                |              |               |               |               |                                 |               |               |
| Rated Input/Output Voltage   | 220/380,230/400Vac   |                |              |               |               |               |                                 |               |               |
| Rated Input/Output Grid Frequency  | 60Hz±5Hz/50Hz±5Hz  |                |              |               |               |               |                                 |               |               |
| Grid Type  | Three Phase  |                |              |               |               |               |                                 |               |               |
| THDi   | <3% (of nominal power)   |                |              |               |               |               |                                 |               |               |
| DC Current Injection   | 0.5%   |                |              |               |               |               |                                 |               |               |
| <b>EFFICIENCY</b>  |  |                |              |               |               |               |                                 |               |               |
| Max. Efficiency  | ≥97.6%   |                |              | 97.5%         |               |               | 96.5%                           |               |               |
| Euro Efficiency  | 97.0%  |                |              | 99.5%         |               |               | 96.5%                           |               |               |
| MPPT Efficiency  | 99.5%  |                |              |               |               |               |                                 |               |               |
| <b>PROTECTION</b>  |  |                |              |               |               |               |                                 |               |               |
| Integrated   | Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |                |              |               |               |               |                                 |               |               |
| Surge Protection   | AC Type III  |                |              |               |               |               |                                 |               |               |
| Overvoltage Category   | AC Type III  |                |              |               |               |               |                                 |               |               |
| <b>GENERAL DATA</b>  |  |                |              |               |               |               |                                 |               |               |
| Operating Temperature Range  | -25°C to +60°C, >45°C Derating   |                |              |               |               |               |                                 |               |               |
| Cooling  | Intelligent Fan  |                |              |               |               |               |                                 |               |               |
| Noise  | ≤55dB  |                |              |               |               |               |                                 |               |               |
| Communication with BMS   | RS485/CAN  |                |              |               |               |               |                                 |               |               |
| Machine Dimension (W*H*D)(mm)  | 446*692*260 (excluding connectors and racks)   |                |              |               |               |               |                                 |               |               |
| Package Dimension (W*H*D)(mm)  | 567*816*404  |                |              |               |               |               |                                 |               |               |
| N.W(kg)  | 38 (Excluding Connectors and Brackets)   |                |              |               |               |               |                                 |               |               |
| G.W(kg)  | 42   |                |              |               |               |               |                                 |               |               |
| Protection Degree  | IP66   |                |              |               |               |               |                                 |               |               |
| 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  |                |              |               |               |               |                                 |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |  |                |              |               |               |               |                                 |               |               |
| 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 |  |                |              |               |               |               |                                 |               |               |

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## HIGH VOLTAGE HYBRID SOLAR INVERTER PH1100 EU Series



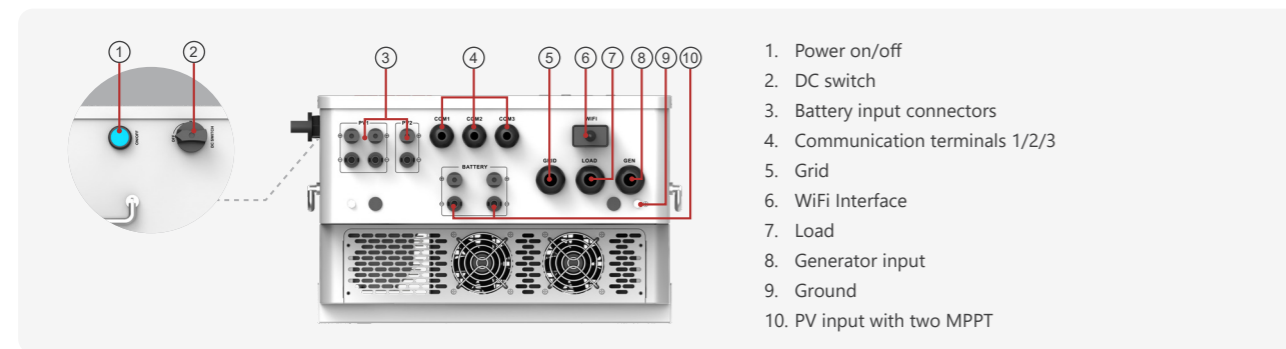
5-25KW | Three Phase | 380VAC | HV Battery Supported

The PH1100 EU series three-phase energy storage inverter supports connection with high-voltage lithium batteries, making it suitable for large residential and small commercial and industrial PV energy storage systems. This series supports generator integration and parallel operation of multiple units, making it ideal for complex large-scale rooftop PV storage systems with various orientations. It also supports three-phase unbalanced loads and half-wave loads, ensuring more reliable and efficient power supply to connected loads.

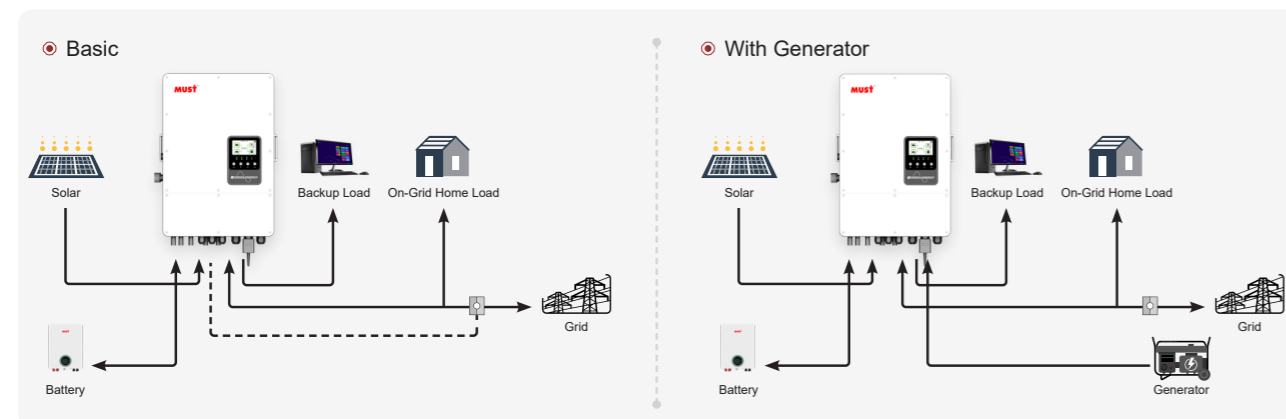


- Supports high-voltage batteries for efficient operation
- Maximum Charge and Discharge up to 50A
- IP65 Indoor & Outdoor use
- Colorful Touch Screen
- Supports Parallel Connection of Multiple Batteries
- Supports Charging and Discharging in 6 Time Periods
- Monitoring & Remote Upgrade with Wifi Module
- Support Storing Energy from Diesel Generator without External Converter
- 100% Three-Phase Unbalanced Output, Each Phase Output up to 50% of Rated Power
- AC couple to retrofit existing solar system
- Max.Supports up to 9 Units in Parallel for Both On-grid and Off-grid Operation

### Back panel description



### Solar system connection



| MODEL                                     | PH11-5KL3-EU-HV  | PH11-6KL3-EU-HV | PH11-8KL3-EU-HV | PH11-10KL3-EU-HV | PH11-12KL3-EU-HV | PH11-15KL3-EU-HV | PH11-20KL3-EU-HV | PH11-25KL3-EU-HV |
|---|--|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|
| Rated power                               | 5000W  | 6000W           | 8000W           | 10000W           | 12000W           | 15000W           | 20000W           | 25000W           |
| <b>BATTERY INPUT DATA</b>                 |  |                 |                 |                  |                  |                  |                  |                  |
| Battery type                              | Lead-acid battery / Lithium battery  |                 |                 |                  |                  |                  |                  |                  |
| Battery voltage range                     | 150~750V   |                 |                 |                  |                  |                  |                  |                  |
| Charging curve                            | 4-stage adaptive with maintenance/Equalization   |                 |                 |                  |                  |                  |                  |                  |
| Charging Strategy for Li-ion Battery      | Self-adaption to BMS   |                 |                 |                  |                  |                  |                  |                  |
| Over-current protection                   | Yes  |                 |                 |                  |                  |                  |                  |                  |
| Over-temperature protection               | Yes  |                 |                 |                  |                  |                  |                  |                  |
| Maximum charging/discharging current      | 30A  | 30A             | 37A             | 37A              | 37A              | 37A              | 37A              | 50A              |
| <b>PV STRING INPUT DATA</b>               |  |                 |                 |                  |                  |                  |                  |                  |
| Max. DC Input Power                       | 10000W   | 12000W          | 16000W          | 20000W           | 24000W           | 30000W           | 40000W           | 50000W           |
| Rated PV Input Voltage                    | 600V   |                 |                 |                  |                  |                  |                  |                  |
| Maximum DC voltage                        | 1000V  |                 |                 |                  |                  |                  |                  |                  |
| Start-up Voltage                          | 180V   |                 |                 |                  |                  |                  |                  |                  |
| Minimum voltage for grid connection       | 200V   |                 |                 |                  |                  |                  |                  |                  |
| Full Load DC Voltage Range                | 192~800V   | 230~800V        | 307~800V        | 384~800V         | 461~800V         | 576~800V         | 625~800V         | 781~800V         |
| MPPT voltage range                        | 150~800V   |                 |                 |                  |                  |                  |                  |                  |
| Maximum input current                     | 26A+26A  |                 |                 |                  |                  |                  | 32A+32A          |                  |
| No.of MPP Trackers                        | 2/4  |                 |                 |                  |                  |                  |                  |                  |
| Input terminal type                       | H4/MC4   |                 |                 |                  |                  |                  |                  |                  |
| <b>AC INPUT/OUTPUT DATA</b>               |  |                 |                 |                  |                  |                  |                  |                  |
| Rated AC Input/ Output Power              | 5000W  | 6000W           | 8000W           | 10000W           | 12000W           | 15000W           | 20000W           | 25000W           |
| Max. AC Input/ Output Power               | 5000W  | 6000W           | 8000W           | 10000W           | 12000W           | 15000W           | 20000W           | 25000W           |
| Max. AC Input/ Output Current             | 8.4/8A   | 10/9.6A         | 13.4/12.8A      | 16.7/16A         | 18.2/17.4A       | 22.8/21.8A       | 30.4/29A         | 36.2/37.8A       |
| Power Factor Adjustment Range             | 0.8 leading to 0.8 lagging   |                 |                 |                  |                  |                  |                  |                  |
| Rated Input/Output Voltage                | 220/380VAC; 230/400VAC; 230/380VAC   |                 |                 |                  |                  |                  |                  |                  |
| Rated Input/Output Grid Frequency Range   | 60Hz±5Hz/50Hz±5Hz  |                 |                 |                  |                  |                  |                  |                  |
| Grid Type                                 | Three Phase  |                 |                 |                  |                  |                  |                  |                  |
| Total Harmonics Current Distortion (THDi) | <3% (of nominal power)   |                 |                 |                  |                  |                  |                  |                  |
| Rated output power factor                 | 1  |                 |                 |                  |                  |                  |                  |                  |
| <b>EFFICIENCY</b>                         |  |                 |                 |                  |                  |                  |                  |                  |
| Max. Efficiency                           | 97.5%  |                 |                 |                  |                  |                  |                  |                  |
| Euro Efficiency                           | 96.5%  |                 |                 |                  |                  |                  |                  |                  |
| Euro Efficiency                           | 99.5%  |                 |                 |                  |                  |                  |                  |                  |
| <b>PROTECTION</b>                         |  |                 |                 |                  |                  |                  |                  |                  |
| Integrated                                | Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |                 |                 |                  |                  |                  |                  |                  |
| Surge Protection                          | AC Type III  |                 |                 |                  |                  |                  |                  |                  |
| Overvoltage Category                      | AC Type III  |                 |                 |                  |                  |                  |                  |                  |
| <b>GENERAL DATA</b>                       |  |                 |                 |                  |                  |                  |                  |                  |
| Operating Temperature Range (°C)          | -25°C to +60°C, >45°C Derating   |                 |                 |                  |                  |                  |                  |                  |
| Cooling                                   | Intelligent Fan  |                 |                 |                  |                  |                  |                  |                  |
| Noise (dB)                                | ≤55dB  |                 |                 |                  |                  |                  |                  |                  |
| Communication                             | USB/ WI-FI/ Ethernet(optional)   |                 |                 |                  |                  |                  |                  |                  |
| Machine Dimension (W*H*D)(mm)             | 446*692*260 (excluding connectors and racks)   |                 |                 |                  |                  |                  |                  |                  |
| Package Dimension (W*H*D)(mm)             | 567*816*404  |                 |                 |                  |                  |                  |                  |                  |
| N.W(kg)                                   | 38   |                 |                 |                  |                  |                  |                  |                  |
| G.W(kg)                                   | 42   |                 |                 |                  |                  |                  |                  |                  |
| Protection Degree                         | IP66   |                 |                 |                  |                  |                  |                  |                  |
| Installation Style                        | Wall-mounted   |                 |                 |                  |                  |                  |                  |                  |
| Warranty                                  | 5 Years  |                 |                 |                  |                  |                  |                  |                  |
| <b>CERTIFICATION &amp; STANDARDS</b>      |  |                 |                 |                  |                  |                  |                  |                  |
| NBT32004-2013/EN50549                     |  |                 |                 |                  |                  |                  |                  |                  |

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## THREE PHASE HYBRID SOLAR INVERTER PH1100 EU Series

20~50KW | High Voltage | IP66



The PH1100 EU(20-50KW) Series three phase storage inverters are designed to increase energy independence for homeowners and commercial users. The power range is from 20kW to 50kW, compatible with high voltage (150-800V) batteries. Energy management is based on time-of-use and demand charge rate structures, significantly reduce the amount of energy purchased from public grid. Thanks for the UPS function (switch time < 10ms), that enables the crucial loads power on during outages. Additionally, under the backup operation mode, the inverter provides you up to 150% peak output overloading.

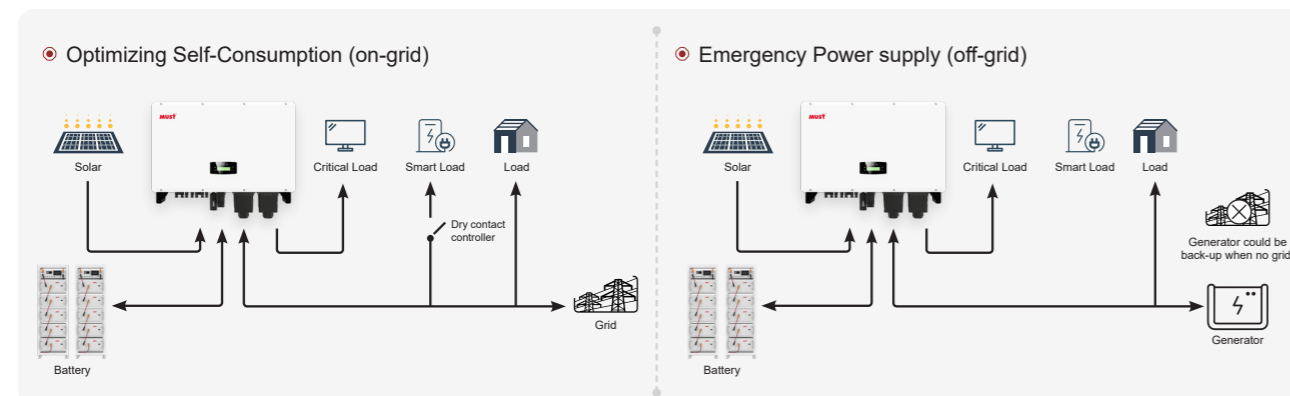


- Support high voltage (150-800V) batteries
- Support 100% Unbalance Load
- 1.5 Times PV Oversize
- String current up to 40A
- Switch time < 10ms
- Support Generator Input
- Support 280AH, 315AH battery system
- Support for Time-of-use Optimization
- Configurable Operation Modes
- AFCI (Optional) & Rapid Shutdown Ready
- 2 times AC Oversize (50kw)
- Build in Anti-feed-in Function
- Smart Monitoring & Remote Firmware Upgrade

### Application



### Solar system connection



| MODEL  | PH11-20KL3-EU-HV                                   | PH11-30KL3-EU-HV       | PH11-50KL3-EU-HV |
|--|--|------------------------|------------------|
| Rated power                                    | 20000W   | 30000W                 | 50000W           |
| <b>PV INPUT</b>                                |  |                        |                  |
| Max. Dc Input Power                            | 30KW   | 45KW                   | 75KW             |
| Max. PV Voltage                                |  | 1000V                  |                  |
| Rated DC input Voltage                         |  | 620V                   |                  |
| DC Input Voltage Range                         |  | 150-1000V              |                  |
| MPPT Voltage Range                             |  | 150-850V               |                  |
| Full MPPT Range                                |  | 500-850V               |                  |
| Start-up Voltage                               |  | 160V                   |                  |
| Max.DC input Current                           | 32A*2  | 40A*2                  | 40A*4            |
| Max.Short Current                              | 48A*2  | 60A*2                  | 48A*4            |
| No. of MPPT Tracker/Strings                    | 2/4  | 2/4                    | 4/8              |
| <b>BATTERY PORT</b>                            |  |                        |                  |
| Battery Nominal Voltage                        | 500V   | 550V                   | 500V             |
| Battery Voltage Range                          |  | 150-800V               |                  |
| Max. Charge/Discharge Current                  | 50A  | 60A                    | 120A             |
| Max. Charge/Discharge Power                    | 20KW   | 30KW                   | 50KW             |
| Charging Curve                                 |  | 3 Stages               |                  |
| Compatible Battery Type                        | Li-ion / Lead-acid / Sodium metal chloride battery |                        |                  |
| <b>AC GRID</b>                                 |  |                        |                  |
| Nominal AC Output Power                        | 20KW   | 30KW                   | 50KW             |
| Max. AC Input/Output Power                     | 30KVA/22KVA  | 45KVA/33KVA            | 100KVA/55KVA     |
| Max. AC Output Current                         | 32A  | 48A                    | 83.38A           |
| Nominal AC Voltage                             |  | 230V/400V              |                  |
| Nominal AC Frequency                           |  | 50Hz/60Hz              |                  |
| Power Factor                                   |  | 1(-0.8-0.8) adjustable |                  |
| Current THD                                    |  | <3%                    |                  |
| <b>AC LOAD OUTPUT (BACK-UP)</b>                |  |                        |                  |
| Nominal Output Power                           | 20000VA  | 30000VA                | 55000VA          |
| Nominal Output Voltage                         |  | 230V/400V              |                  |
| Nominal Output Frequency                       |  | 50Hz/60Hz              |                  |
| Nominal Output Current                         | 29A  | 43.5A                  | 72.5A            |
| Peak Output Power                              | 22000VA, 60s                                       | 33000VA, 60s           | 55000VA, 60s     |
| THDV (with linear load)                        |  | 3%                     |                  |
| Switching Time                                 |  | <10ms                  |                  |
| <b>EFFICIENCY</b>                              |  |                        |                  |
| Europe Efficiency                              | 97.80%   | 98.10%                 | 98.30%           |
| Max. Efficiency                                | 98.30%   | 98.50%                 | 98.60%           |
| Battery Charge/Discharge Efficiency            | 98.00%   | 98.00%                 | 99.00%           |
| <b>PROTECTION</b>                              |  |                        |                  |
| Reverse Polarity Protection                    |  | Yes                    |                  |
| Over Current/ Voltage Protection               |  | Yes                    |                  |
| Anti-islanding Protection                      |  | Yes                    |                  |
| AC Short-circuit Protection                    |  | Yes                    |                  |
| Leakage Current Detection                      |  | Yes                    |                  |
| Ground Fault Monitoring                        |  | Yes                    |                  |
| Grid Monitoring                                |  | Yes                    |                  |
| Enclosure Protect Level                        | IP65   | IP65                   | IP66             |
| AC/DC surge protection                         |  | Type II                |                  |
| <b>GENERAL DATA</b>                            |  |                        |                  |
| Dimensions (W x H x D, mm)                     | 558*535*260  |                        | 979*610*310      |
| Weight (kg)                                    | 29   | 36                     | 70               |
| Topology                                       | Transformerless                                    |                        |                  |
| Cooling Concept                                | Intelligent Fan                                    |                        |                  |
| Relative Humidity                              | 0-100%   |                        |                  |
| Operating Temperature Range (°C)               | -25°C to 60°C                                      |                        |                  |
| Operating Altitude (m)                         | <4000m   |                        |                  |
| Standby Consumption (W)                        | <100W  |                        |                  |
| Display & Communication Interfaces             | LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G              |                        |                  |
| <b>CERTIFICATION &amp; STANDARDS</b>           |  |                        |                  |
| EN50549-1, IEC62109-1, IEC62109-2, EN61000-6-3 |  |                        |                  |

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## AC-COUPLED ENERGY STORAGE INVERTER PH1600 PRO Series

4~6KW | Single Phase | 230VAC

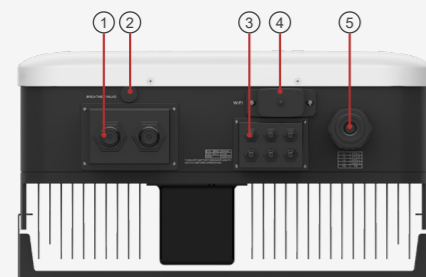


The PH1600 PRO Series is designed for retrofitting PV systems, including power classes ranging from 4kw to 6kw. It can be installed with existing PV inverters, forming an AC coupling system. Capable of being grid-interactive, it allows users to store surplus power and sell it back to the grid when demand peaks and the price of electricity is at its highest. It runs reliably under even the most extreme conditions with metal aluminium housing with IP66 protection.



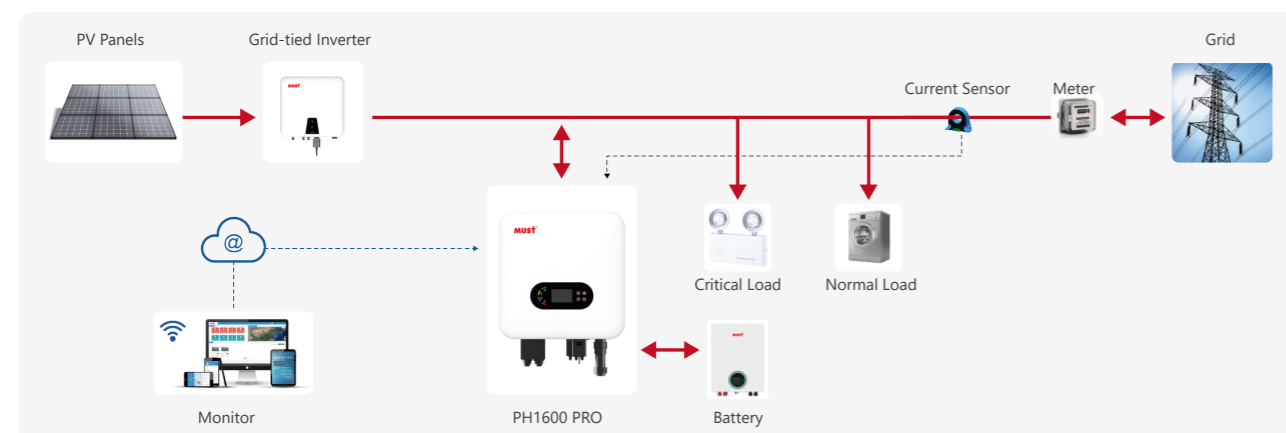
- LCD+LED – user friendly interface
- IP66 design for outdoor
- Compatible with other brands of inverter
- Various work mode for different application scenarios
- Natural cooling without external fan
- BMS Function
- Wifi monitoring
- UPS level switching time <10 ms
- Retrofit any on-grid systems to be able to run battery

### Back panel description



1. Battery input terminals and cover
2. Breather valve
3. BTS terminals, BMS terminals, load monitor terminals, dry contact terminals, CAN communication terminals, USB terminal and cover
4. Wi-Fi commodule
5. AC output terminals and cover

### Solar system connection



| MODEL   | PH16-4048 PRO   | PH16-5048 PRO | PH16-6048 PRO |
|---|---|---------------|---------------|
| Rated AC output power   | 4000W   | 5000W         | 6000W         |
| Nominal Battery System Voltage  | 48V   |               |               |
| <b>INVERTER OUTPUT(AC)</b>  |   |               |               |
| Nominal AC output power   | 4000W   | 5000W         | 6000W         |
| Nominal output voltage range  | 220/230/240V;180-280V ±5VAC                           |               |               |
| AC grid frequency range   | 50/60Hz; 45~55/55-65Hz                                |               |               |
| Nominal output current  | 17.5A   | 21.7A         | 26A           |
| Maximum output current  | 18.1A   | 22.7A         | 27.2A         |
| Inrush current (spike/duration)   | 57.5A/5.2us   |               |               |
| Total harmonic distortion i(THDi) @Nominal Output                           | <3%   |               |               |
| Power factor at rated power   | ≈1  |               |               |
| Displacement power factor   | Adjustable from 0.8 leading to 0.8 lagging            |               |               |
| Grid type   | Single phase  |               |               |
| <b>BATTERY MODE OUTPUT(AC)</b>  |   |               |               |
| Output Rated Power  | 4000W   | 5000W         | 6000W         |
| Nominal output voltage; accuracy range                                      | 230±1%  |               |               |
| Output ferequency; accuracy range   | 50/60Hz (optional)±0.2%                               |               |               |
| Output rated current  | 17.5A   | 23A           | 26A           |
| Output waveform   | Pure sine wave  |               |               |
| Peak power  | 6000W/10S   | 7500W/10S     | 9000W/10S     |
| Total harmonic distortion v (linear load)                                   | <3%   |               |               |
| <b>BATTERY &amp; CHARGER</b>  |   |               |               |
| Battery type  | Lead-acid battery / Lithium battery                   |               |               |
| Battery voltage   | 48V ±0.3  |               |               |
| Battery voltage range   | 40~60V ±0.3   |               |               |
| Charging curve  | 3-stage adaptive with maintenance                     |               |               |
| Protection  | Over-current protection / Over-temperature protection |               |               |
| Maximum charging power  | 4000W   | 5000W         | 6000W         |
| Maximum charging current  | 85A   | 105A          | 125A          |
| <b>EFFICIENCY</b>   |   |               |               |
| Battery discharge (full load)   | 94.5%   |               |               |
| Maximum battery charging current efficiency                                 | 94.5%   |               |               |
| <b>PROTECTION DEVICES</b>   |   |               |               |
| Grid monitoring   | Yes   |               |               |
| Output over current protection  | Yes   |               |               |
| Output overvoltage protection-varistor                                      | Yes   |               |               |
| Ground fault monitoring   | Yes   |               |               |
| Integrated all-pole sensitive leakage current                               | Yes   |               |               |
| <b>GENERAL</b>  |   |               |               |
| Machine Dimension (W*H*D)(mm)   | 410*420*215   |               |               |
| Package Dimension (W*H*D)(mm)   | /   |               |               |
| N.W(kg)   | 25  |               |               |
| G.W(kg)   | /   |               |               |
| AC connection   | Terminal Block  |               |               |
| Display   | LED+LCD   |               |               |
| Communication interfaces  | Wi-Fi/USB/GPRS/RS485/CAN                              |               |               |
| Ingress protection rating   | IP66  |               |               |
| Humidity  | 0~95% RH(No condensing)                               |               |               |
| Operating temperature range   | -20°C+60°C With derating above 45°C                   |               |               |
| Cooling concept   | Natural   |               |               |
| Noise figure [dB]   | ≤25   |               |               |
| Altitude  | <3000m  |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |               |               |
| CE-EMC+LVD (EN IEC61000-6-3: 2007, ENIEC61000-6-1:2017; EN IEC62477-1:2022) |   |               |               |

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## ON GRID SOLAR INVERTER PH5900 M Series

3~6KW | Single Phase | 230VAC

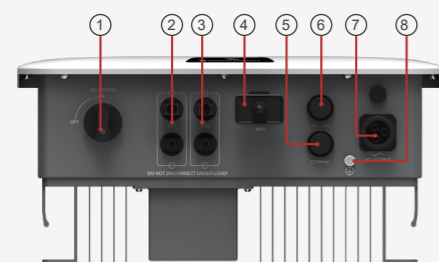


PH5900 M series PV inverters fully considers the needs of end customers. It is used to convert the DC generated by photovoltaic panels into AC, which is sent to the grid in a single-phase mode. The product has excellent performance. The OLED is used for the status display of inverter, which can effectively improve human-computer interaction. Using high precision DSP digital control, could afford wide sampling range, to achieve the significance of all-directional protection. High quality IP66 structural model, which maximizes the benefits of the product and improve the reliability of the product.



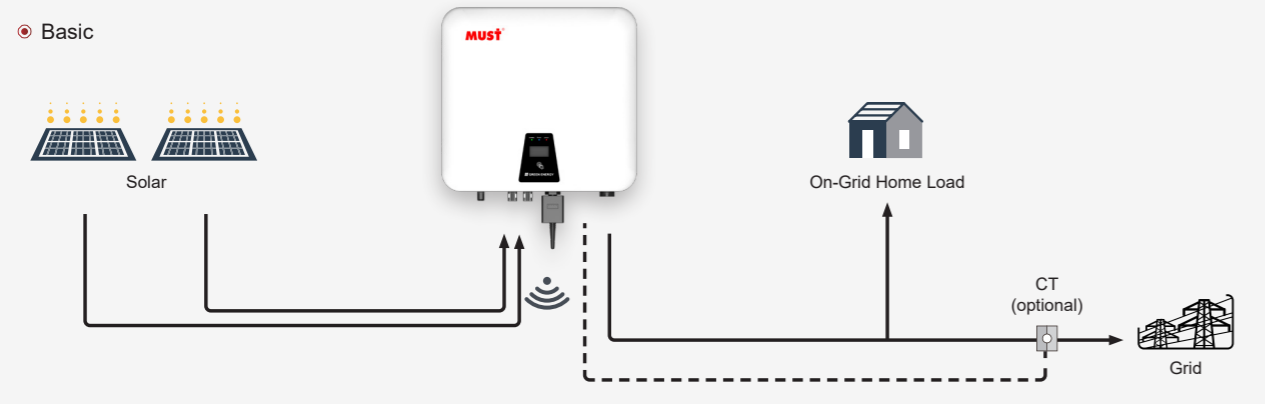
- High Frequency On Grid Solar Inverter
- Rate power: 3-6KW
- MPPT efficiency up to 99.50%
- Multiple communications: WIFI etc
- Monitoring inverters freely via mobile phone APP
- Fanless low-noise design
- IP66 water-proof and dust-proof

### Back panel description



1. DC switch
2. PV1 input
3. PV2 input
4. WIFI connector
5. CT/Meter port
6. RS-485 connector
7. AC output
8. Ground

### Solar system connection



| MODEL  | PH59-3000M                            | PH59-3600M | PH59-4200M | PH59-4600M | PH59-5000M | PH59-6000M |
|--|---------------------------------------|------------|------------|------------|------------|------------|
| Rated AC output power  | 3000W                                 | 3600W      | 4200W      | 4600W      | 5000W      | 6000W      |
| <b>PV INPUT(DC)</b>  |                                       |            |            |            |            |            |
| Maximum recommended DC power   | 4200W                                 | 5040W      | 5880W      | 6440W      | 7000W      | 8400W      |
| Nominal DC operating voltage   | 360V                                  |            |            |            |            |            |
| Maximum DC voltage   | 600V                                  |            |            |            |            |            |
| Start voltage  | 50V                                   |            |            |            |            |            |
| MPPT voltage range   | 40~550V                               |            |            |            |            |            |
| Maximum input current  | 16A/16A                               |            |            |            |            |            |
| No.of MPP tracker/ strings per MPP tracker   | 2/1                                   |            |            |            |            |            |
| DC connection  | H4/MC4                                |            |            |            |            |            |
| <b>GRID OUTPUT(AC)</b>   |                                       |            |            |            |            |            |
| Max. AC output power   | 3300VA                                | 3960VA     | 4620VA     | 5060VA     | 5500VA     | 6600VA     |
| AC grid frequency  | 50/60Hz ±5Hz                          |            |            |            |            |            |
| Maximum output current   | 14.3A                                 | 17.2A      | 20A        | 22A        | 23.9A      | 28.6A      |
| AC nominal voltage   | 220V/230V                             |            |            |            |            |            |
| Total harmonic distortion (THDi)   | <3%                                   |            |            |            |            |            |
| Rate power factor  | >0.99                                 |            |            |            |            |            |
| Power factor adjustable range  | 0.8 leading ~ 0.8 lagging             |            |            |            |            |            |
| AC grid connection type  | L+N+PE                                |            |            |            |            |            |
| <b>EFFICIENCY</b>  |                                       |            |            |            |            |            |
| Maximum efficiency   | 98.0%                                 | 98.0%      | 98.1%      | 98.1%      | 98.2%      | 98.2%      |
| Euro-efficiency  | 96.8%                                 | 96.8%      | 97.0%      | 97.0%      | 97.2%      | 97.2%      |
| MPPT efficiency  | 99.5%                                 |            |            |            |            |            |
| Self-Consumption night   | <1W                                   |            |            |            |            |            |
| <b>PROTECTION DEVICES</b>  |                                       |            |            |            |            |            |
| Output over current protection   | Yes                                   |            |            |            |            |            |
| Output AC overvoltage protection   | Yes                                   |            |            |            |            |            |
| DC reverse polarity protection   | Yes                                   |            |            |            |            |            |
| DC switch  | Yes                                   |            |            |            |            |            |
| Ground fault monitoring  | Yes                                   |            |            |            |            |            |
| Integrated all-pole sensitive leakage current monitoring unit  | Yes                                   |            |            |            |            |            |
| <b>PHYSICAL</b>  |                                       |            |            |            |            |            |
| Machine Dimension (W*H*D)(mm)  | 402*378*195                           |            |            |            |            |            |
| Package Dimension (W*H*D)(mm)  | 493*315*468                           |            |            |            |            |            |
| N.W(kg)  | 15.5                                  |            |            |            |            |            |
| G.W(kg)  | 19.1                                  |            |            |            |            |            |
| <b>INTERFACE</b>   |                                       |            |            |            |            |            |
| DC connection  | H4/MC4                                |            |            |            |            |            |
| AC connection  | Connector                             |            |            |            |            |            |
| Display  | OLED+LED WIFI+APP                     |            |            |            |            |            |
| Communication interfaces   | WIFI/RS485/GPRS(opt)                  |            |            |            |            |            |
| <b>ENVIRONMENT</b>   |                                       |            |            |            |            |            |
| Ingress protection rating  | IP66                                  |            |            |            |            |            |
| Humidity   | 0-100%                                |            |            |            |            |            |
| Operating temperature range  | -25°C~ +60°C With derating above 45°C |            |            |            |            |            |
| Cooling concept  | Natural                               |            |            |            |            |            |
| Noise emission(typical)[dB]  | ≤35dB(A)                              |            |            |            |            |            |
| Self-consumption night   | <1W                                   |            |            |            |            |            |
| Altitude   | 4000m                                 |            |            |            |            |            |
| <b>OTHERS</b>  |                                       |            |            |            |            |            |
| Topology   | Transformerless                       |            |            |            |            |            |
| Warranty   | Standard 5years/10 years(opt.)        |            |            |            |            |            |
| <b>CERTIFICATION &amp; STANDARDS</b>   |                                       |            |            |            |            |            |
| CE-EMC+LVD(EN6100-6-3,2007,EN6100-6-1:2017+EN IEC62109-1:2010,EN IEC62109-2:2011)<br>IEC60529; EN50549-10; Poland Type A (NC RFG:2016,PSE:2018,PTPIREE:2021); VDE0126. |                                       |            |            |            |            |            |

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## ON GRID SOLAR INVERTER PH5900 TM Series

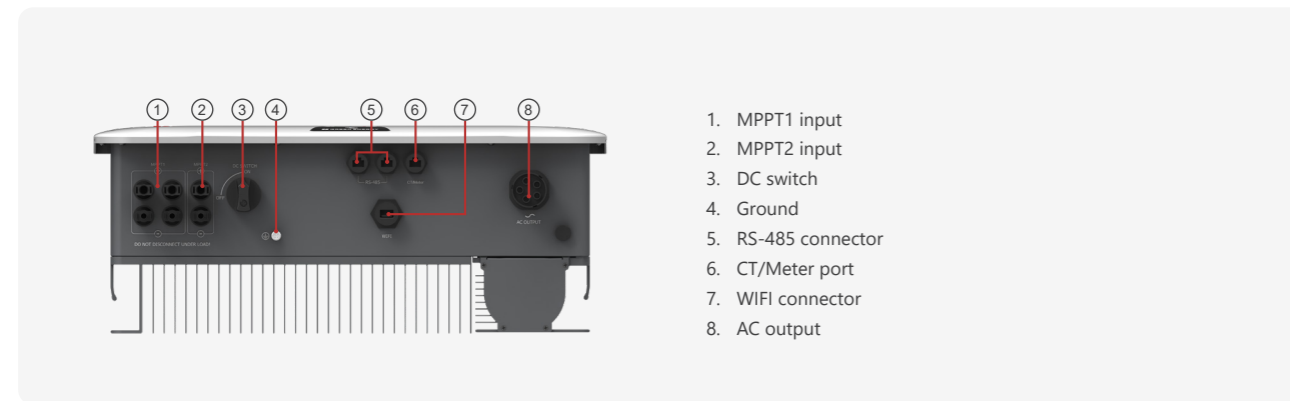
4~15KW | Three-phase | 380VAC

PH5900 TM series PV inverters fully considers the needs of end customers. It is used to convert the DC generated by photovoltaic panels into AC, which is sent to the grid in a three-phase mode. The product has excellent performance. The OLED is used for the status display of inverter, which can effectively improve human-computer interaction. Using high precision DSP digital control, could afford wide sampling range, to achieve the significance of all-directional protection. High quality IP66 structural model, which maximizes the benefits of the product and improve the reliability of the product.

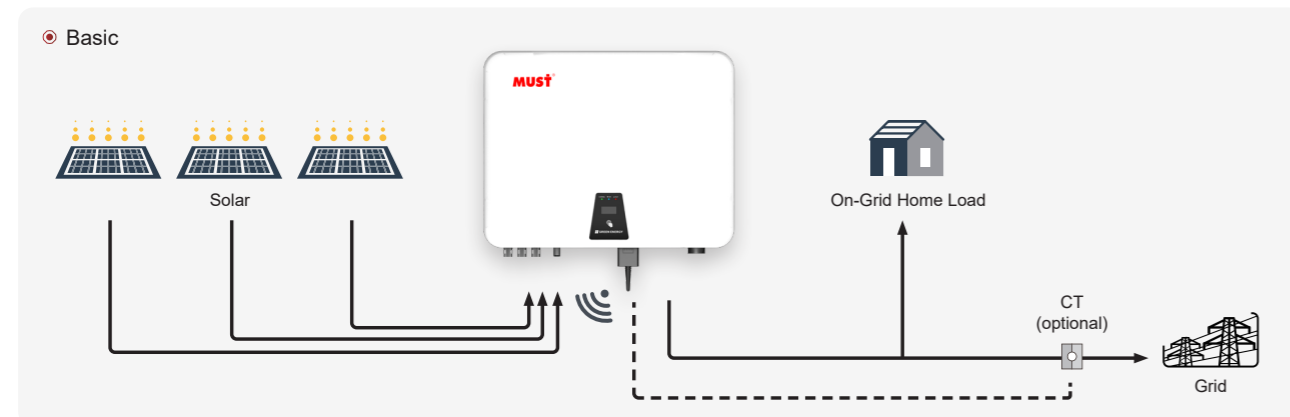


- Wide MPPT voltage range from 200V-1000V
- IP66 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.4%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

### Back panel description



### Solar system connection



| MODEL  | PH59-4000 TM   | PH59-5000 TM | PH59-6000 TM | PH59-7000 TM | PH59-8000 TM | PH59-9000 TM | PH59-10000 TM | PH59-11000 TM | PH59-12000 TM | PH59-13000 TM | PH59-15000 TM |  |
|--|--|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|--|
| Rated AC output power  | 4000W  | 5000W        | 6000W        | 7000W        | 8000W        | 9000W        | 10000W        | 11000W        | 12000W        | 13000W        | 15000W        |  |
| <b>OUTPUT (AC)</b>   |  |              |              |              |              |              |               |               |               |               |               |  |
| Max.AC apparent power  | 4400VA   | 5500VA       | 6600VA       | 7700VA       | 8800VA       | 9900VA       | 11000VA       | 12100VA       | 13200VA       | 14300VA       | 16500VA       |  |
| Max.output current   | 6.4A   | 8A           | 9.6A         | 11.1A        | 12.7A        | 14.3A        | 15.9A         | 17.5A         | 19A           | 20.6A         | 23.8A         |  |
| Nominal AC Voltage   | 230V / 400V  |              |              |              |              |              |               |               |               |               |               |  |
| AC grid frequency range  | 50/60Hz ±5Hz   |              |              |              |              |              |               |               |               |               |               |  |
| Power factor at Rated power  | >0.99  |              |              |              |              |              |               |               |               |               |               |  |
| Adjustable displacement power factor   | 0.8leading...0.8lagging  |              |              |              |              |              |               |               |               |               |               |  |
| Total harmonic distortion (THDi)   | < 3%   |              |              |              |              |              |               |               |               |               |               |  |
| AC grid connection type  | 3W+N+PE  |              |              |              |              |              |               |               |               |               |               |  |
| <b>INPUT DATA</b>  |  |              |              |              |              |              |               |               |               |               |               |  |
| Max.recommended PV power   | 6000W  | 7500W        | 9000W        | 10500W       | 12000W       | 13500W       | 15000W        | 16500W        | 18000W        | 19500W        | 22500W        |  |
| Max.DC voltage   | 1000V  |              |              |              |              |              |               |               |               |               |               |  |
| Start voltage  | 160V   |              |              |              |              |              |               |               |               |               |               |  |
| Nominal voltage  | 600V   |              |              |              |              |              |               |               |               |               |               |  |
| MPPT voltage range   | 200V-1000V   |              |              |              |              |              |               |               |               |               |               |  |
| Max.input current  | 13A/13A  | 13A/13A      | 13A/13A      | 13A/13A      | 13A/13A      | 13A/13A      | 13A/13A       | 13A/13A       | 21A/11A       | 21A/11A       | 21A/11A       |  |
| Number of independent MPP trackers / strings per MPP tracker   | 2/1  | 2/1          | 2/1          | 2/1          | 2/1          | 2/1          | 2/1           | 2/1           | 2/2+1         | 2/2+1         | 2/2+1         |  |
| DC connection  | H4 / MC4   |              |              |              |              |              |               |               |               |               |               |  |
| <b>EFFICIENCY</b>  |  |              |              |              |              |              |               |               |               |               |               |  |
| Max. efficiency  | 98.4%  |              |              |              |              |              |               |               |               |               |               |  |
| Euro weighted efficiency   | 97.6%  | 97.6%        | 97.6%        | 98%          | 98%          | 98%          | 98%           | 98%           | 98%           | 98%           | 98%           |  |
| MPPT efficiency  | 99.5%  |              |              |              |              |              |               |               |               |               |               |  |
| Protection devices   | Island protection, DC reverse polarity protection , Output over current protection, Output overvoltage protection-varistor, Integrated DC switch, Ground fault monitoring, Integrated all-pole sensitive leakage current monitoring unit |              |              |              |              |              |               |               |               |               |               |  |
| <b>GENERAL DATA FEATURES</b>   |  |              |              |              |              |              |               |               |               |               |               |  |
| Machine Dimension (W*H*D)(mm)  | 540*426*219  |              |              |              |              |              |               |               |               |               |               |  |
| Package Dimension (W*H*D)(mm)  | 644*330*520  |              |              |              |              |              |               |               |               |               |               |  |
| N.W(kg)  | 21   |              |              | 23.2         |              |              | 24.8          |               |               |               |               |  |
| G.W(kg)  | 23.2   |              |              | 25.4         |              |              | 27            |               |               |               |               |  |
| Operation temperature range  | -25°C- +60°C with derating above 45°C  |              |              |              |              |              |               |               |               |               |               |  |
| Noise emission(typical)  | ≤35dB(A)   |              |              |              |              |              |               |               |               |               |               |  |
| Altitude   | 3000m  |              |              |              |              |              |               |               |               |               |               |  |
| Self-consumption (night)   | < 1W   |              |              |              |              |              |               |               |               |               |               |  |
| Topology   | Transformerless  |              |              |              |              |              |               |               |               |               |               |  |
| Cooling concept  | Natural  |              |              |              |              |              |               |               |               |               |               |  |
| Environmental protection Rating  | IP66   |              |              |              |              |              |               |               |               |               |               |  |
| Relative humidity  | 0~100%   |              |              |              |              |              |               |               |               |               |               |  |
| <b>FEATURES</b>  |  |              |              |              |              |              |               |               |               |               |               |  |
| AC connection  | Connector  |              |              |              |              |              |               |               |               |               |               |  |
| Display  | OLED+LED WIFI+APP  |              |              |              |              |              |               |               |               |               |               |  |
| Communication interfaces   | WIFI/RS485/GPRS(opt)   |              |              |              |              |              |               |               |               |               |               |  |
| Warranty   | Standard 5 years / 10 years (opt.)   |              |              |              |              |              |               |               |               |               |               |  |
| <b>CERTIFICATION &amp; STANDARDS</b>   |  |              |              |              |              |              |               |               |               |               |               |  |
| CE-EMC+LVD(EN6100-6-3,2007,EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011) IEC60529; EN50549-1; Poland Type A (NC RfG:2016,PSE:2018,PTPIREE:2021); IEC61727; IEC62116. |  |              |              |              |              |              |               |               |               |               |               |  |

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## ON GRID SOLAR INVERTER PH5900 TM Series

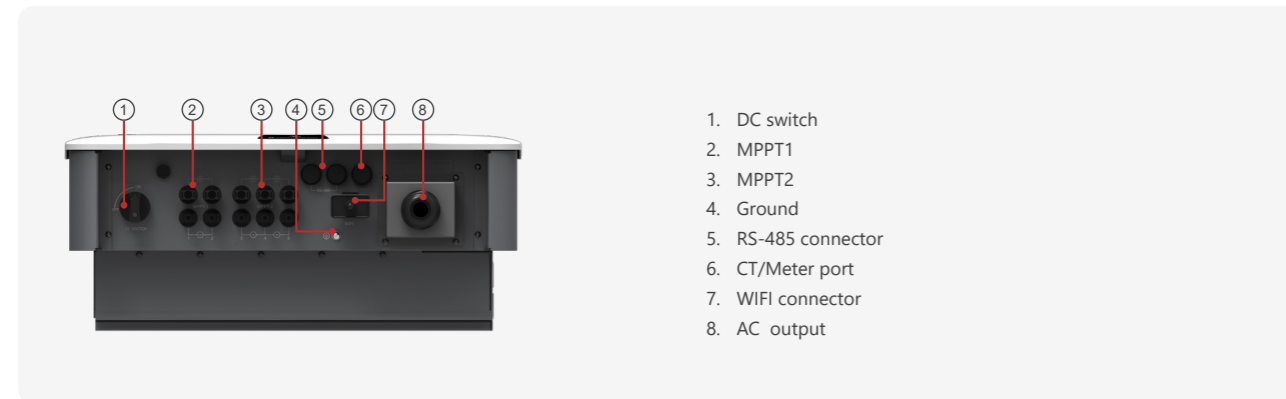
17~25KW | Three-phase | 380VAC

PH5900 TM series PV inverters fully considers the needs of end customers. It is used to convert the DC generated by photovoltaic panels into AC, which is sent to the grid in a three-phase mode. The product has excellent performance. The OLED is used for the status display of inverter, which can effectively improve human-computer interaction. Using high precision DSP digital control, could afford wide sampling range, to achieve the significance of all-directional protection. High quality IP66 structural model, which maximizes the benefits of the product and improve the reliability of the product.



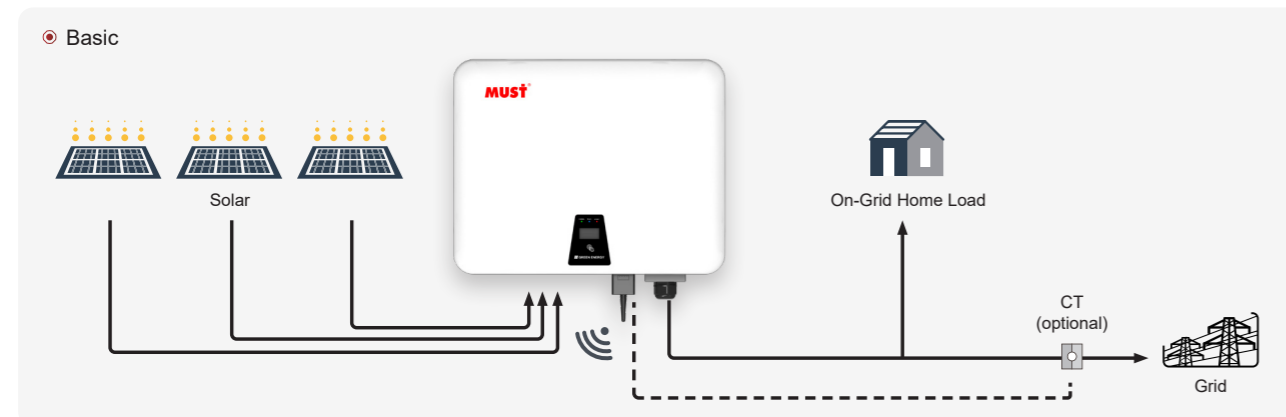
- Wide MPPT voltage range from 200V-1000V
- IP66 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.6%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

### Back panel description



1. DC switch
2. MPPT1
3. MPPT2
4. Ground
5. RS-485 connector
6. CT/Meter port
7. WIFI connector
8. AC output

### Solar system connection



| MODEL  | PH59-17000 TM  | PH59-18000 TM | PH59-19000 TM | PH59-20000 TM | PH59-21000 TM | PH59-22000 TM | PH59-23000 TM | PH59-24000 TM | PH59-25000 TM |
|--|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Rated AC output power  | 17000W   | 18000W        | 19000W        | 20000W        | 21000W        | 22000W        | 23000W        | 24000W        | 25000W        |
| <b>OUTPUT (AC)</b>   |  |               |               |               |               |               |               |               |               |
| Max.AC apparent power  | 18700VA  | 19800VA       | 20900VA       | 22000VA       | 23100VA       | 24200VA       | 25300VA       | 26400VA       | 27500VA       |
| Max.output current   | 27.1A  | 28.6A         | 30.2A         | 31.8A         | 33.5A         | 35A           | 36.6A         | 38A           | 39A           |
| Nominal AC Voltage   | 230V/400V  |               |               |               |               |               |               |               |               |
| AC grid frequency range  | 50/60±5Hz  |               |               |               |               |               |               |               |               |
| Power factor at Rated power  | >0.99  |               |               |               |               |               |               |               |               |
| Adjustable displacement power factor   | 0.8leading...0.8lagging  |               |               |               |               |               |               |               |               |
| Total harmonic distortion (THDi)   | < 3%   |               |               |               |               |               |               |               |               |
| AC grid connection type  | 3W+N+PE  |               |               |               |               |               |               |               |               |
| <b>INPUT DATA</b>  |  |               |               |               |               |               |               |               |               |
| Max.recommended PV power   | 25500W   | 27000W        | 28500W        | 30000W        | 31500W        | 33000W        | 34500W        | 36000W        | 37500W        |
| Max.DC voltage   | 1100V  |               |               |               |               |               |               |               |               |
| Start voltage  | 250V   |               |               |               |               |               |               |               |               |
| Nominal voltage  | 600V   |               |               |               |               |               |               |               |               |
| MPPT voltage range   | 200V-1000V   |               |               |               |               |               |               |               |               |
| Max.input current  | 26A/26A  | 26A/26A       | 26A/26A       | 26A/26A       | 26A/39A       | 26A/39A       | 26A/39A       | 26A/39A       | 26A/39A       |
| Number of independent MPP trackers / strings per MPP tracker   | 2/2  | 2/2           | 2/2           | 2/2           | 2/2+3         | 2/2+3         | 2/2+3         | 2/2+3         | 2/2+3         |
| DC connection  | H4 / MC4   |               |               |               |               |               |               |               |               |
| <b>EFFICIENCY</b>  |  |               |               |               |               |               |               |               |               |
| Max.efficiency   | 98.3%  |               |               |               | 98.6%         |               |               |               |               |
| Euro weighted efficiency   | 98%  | 98%           | 98%           | 98%           | 98.3%         | 98.3%         | 98.3%         | 98.3%         | 98.3%         |
| MPPT efficiency  | 99.5%  |               |               |               |               |               |               |               |               |
| Protection devices   | Island protection, DC reverse polarity protection , Output over current protection, Output overvoltage protection-varistor, Integrated DC switch, Ground fault monitoring, Integrated all-pole sensitive leakage current monitoring unit, DC Surge protection, AC Surge protection |               |               |               |               |               |               |               |               |
| <b>GENERAL DATA FEATURES</b>   |  |               |               |               |               |               |               |               |               |
| Machine Dimension (W*H*D)(mm)  | 540*426*234  |               |               |               |               |               |               |               |               |
| Package Dimension (W*H*D)(mm)  | 650*338*542  |               |               |               |               |               |               |               |               |
| N.W(kg)  | 28.6   |               |               |               |               |               |               |               |               |
| G.W(kg)  | 32.5   |               |               |               |               |               |               |               |               |
| Operation temperature range  | -25°C- +60°C with derating above 45°C  |               |               |               |               |               |               |               |               |
| Noise emission(typical)  | ≤40dB(A)   |               |               |               |               |               |               |               |               |
| Altitude   | 3000m  |               |               |               |               |               |               |               |               |
| Self-consumption (night)   | < 1W   |               |               |               |               |               |               |               |               |
| Topology   | Transformerless  |               |               |               |               |               |               |               |               |
| Cooling concept  | Smart air cooling  |               |               |               |               |               |               |               |               |
| Environmental protection Rating  | IP66   |               |               |               |               |               |               |               |               |
| Relative humidity  | 0~100%   |               |               |               |               |               |               |               |               |
| <b>FEATURES</b>  |  |               |               |               |               |               |               |               |               |
| AC connection  | Cable gland + OT terminal  |               |               |               |               |               |               |               |               |
| Display  | OLED+LED WIFI+APP  |               |               |               |               |               |               |               |               |
| Communication interfaces   | WIFI/RS485/GPRS(opt)   |               |               |               |               |               |               |               |               |
| Warranty   | Standard 5 years / 10 years (opt.)   |               |               |               |               |               |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |  |               |               |               |               |               |               |               |               |
| CE-EMC+LVD(EN6100-6-3,2007,EN6100-6-1:2017+EN IEC62109-1:2010,EN IEC62109-2:2011) IEC60529; EN50549-10 |  |               |               |               |               |               |               |               |               |

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## ON/OFF GRID HYBRID SOLAR INVERTER PH1800 PRO Series

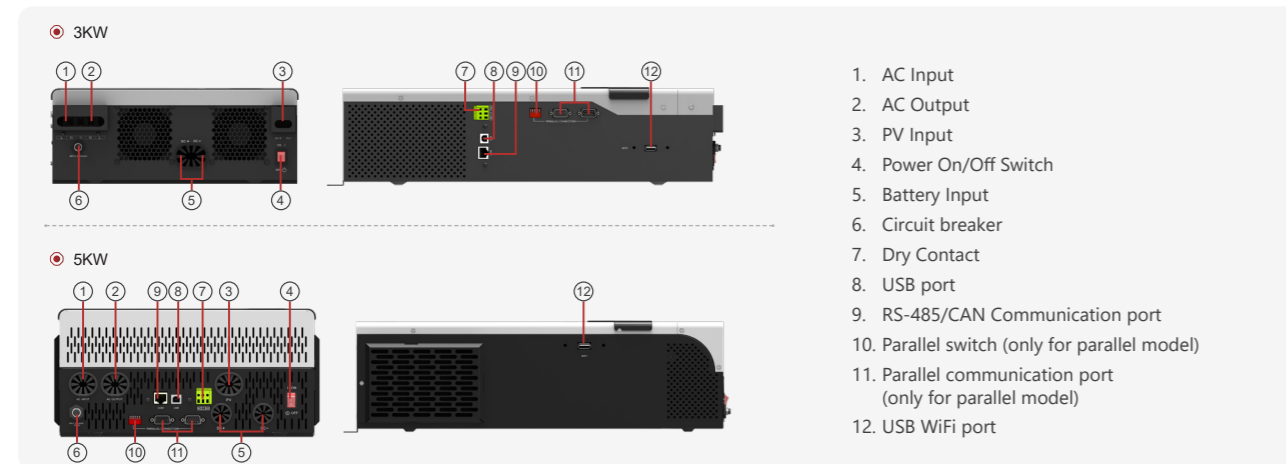
3~5.2KW | 450V | WiFi

PH1800 PRO is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PH1800 PRO Series can run without battery. The Maximum PV array open circuit voltage can reach 450V and MPPT voltage is 150~430V, which can help customers make full use of solar energy.

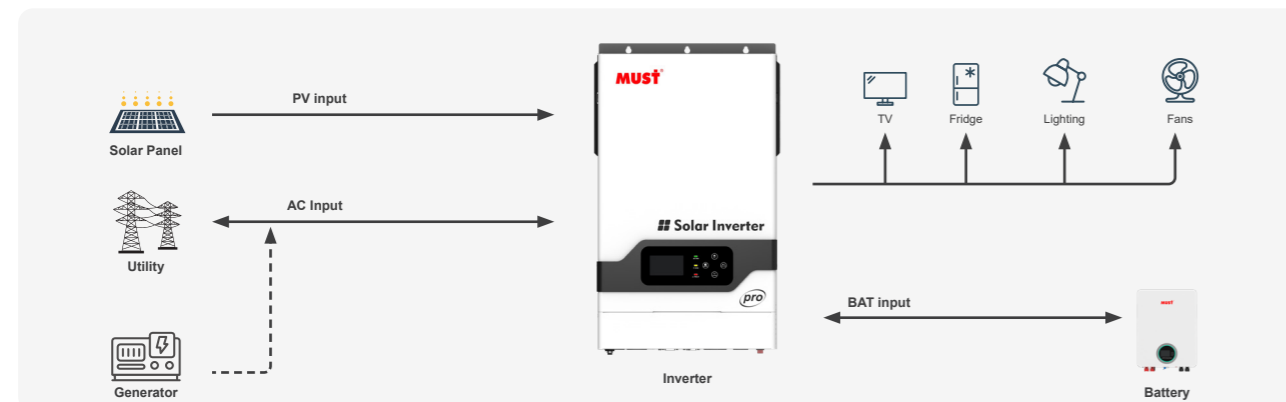


- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 450V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 3 units
- WIFI remote monitoring (optional)

### Back panel description



### Solar system connection



| MODEL  | PH18-3024 PRO   | PH18-5248 PRO  |             |      |
|--|---|----------------|-------------|------|
| Nominal Battery System Voltage   | 24VDC   | 48VDC          |             |      |
| <b>INVERTER OUTPUT</b>   |   |                |             |      |
| Rated Power  | 3000VA / 3000W  | 5200VA / 5200W |             |      |
| Surge Power  | 6000W   | 10400W         |             |      |
| Waveform   | Pure sine wave  |                |             |      |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |                |             |      |
| Inverter Efficiency(Peak)  | 90%   |                |             |      |
| Transfer Time  | 10ms (UPS / VDE4105) / 20ms (APL)                               |                |             |      |
| <b>AC INPUT</b>  |   |                |             |      |
| Voltage  | 230VAC±5%   |                |             |      |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)          |                |             |      |
| Frequency Range  | 50Hz / 60Hz(Auto sensing)                                       |                |             |      |
| <b>BATTERY</b>   |   |                |             |      |
| Normal voltage   | 24VDC   | 48VDC          |             |      |
| Floating Charge Voltage  | 27.4VDC   | 54.8VDC        |             |      |
| Overcharge Protection  | 30VDC   | 60VDC          |             |      |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |                |             |      |
| Maximum PV Array Open Circuit Voltage  | 450VDC  |                |             |      |
| Maximum PV input voltage   | 18A   | 18A            | 27A         |      |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                |             |      |
| Maximum PV Array Power   | 4000W   | 5000W          | 6000W       |      |
| PV Array MPPT Voltage Range  | 150~430 VDC   |                |             |      |
| Maximum Solar Charge Current   | 80A   | 100A           | 80A         | 100A |
| Maximum AC Charge Current  | 60A   | 80A            | 60A         | 80A  |
| Maximum Charge Current   | 80A   | 100A           | 80A         | 100A |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                |             |      |
| Machine Dimension (W*H*D)(mm)  | 322*486*134   |                | 309*505*147 |      |
| Package Dimension (W*H*D)(mm)  | 575*229*425   |                | 603*260*400 |      |
| N.W(kg)  | 10.6  |                | 12.9        |      |
| G.W(kg)  | 12  |                | 13.8        |      |
| <b>OTHER</b>   |   |                |             |      |
| Humidity   | 5% to 95% Relative humidity (Non-condensing)                    |                |             |      |
| Operating Temperature  | 0°C~50°C  |                |             |      |
| Storage Temperature  | -15°C~60°C  |                |             |      |
| Warranty   | 2 year  |                |             |      |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |                |             |      |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2020+A11:2020<br>EN IEC62368-1:2018<br>Rohs-(2011/65/EUand2015/863/EU) |   |                |             |      |

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## ON/OFF GRID HYBRID SOLAR INVERTER PH1800 PRO II Series

4~6KW | 500V | 100~120A | Dual output

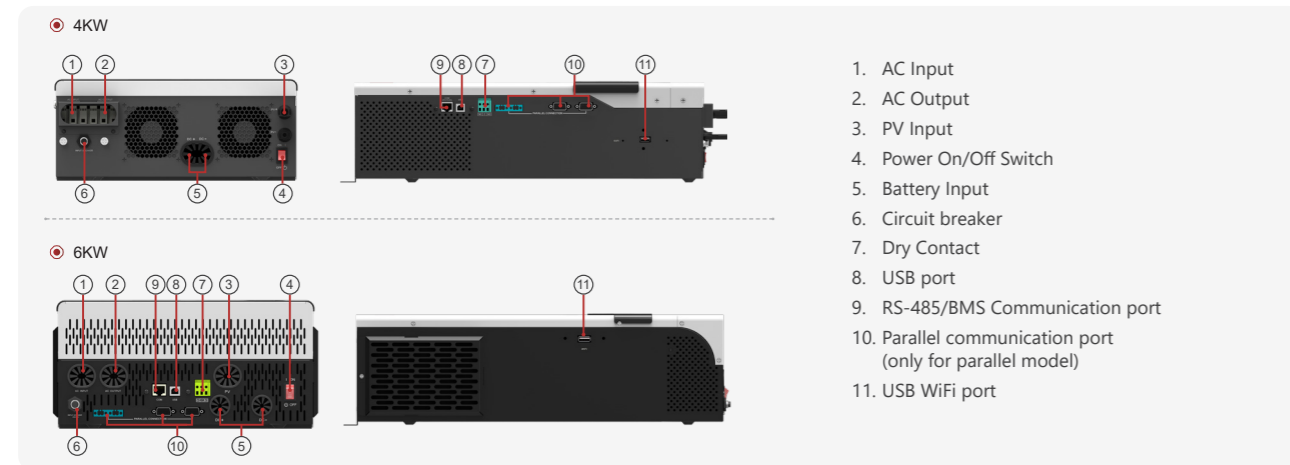
PH1800 PRO II is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PH1800 PRO II Series can run without battery. The Maximum PV array open circuit voltage can reach 500V and MPPT voltage range is 90~430V for 4KW, 120v~430V for 6KW, which Can help customers make full use of solar energy.



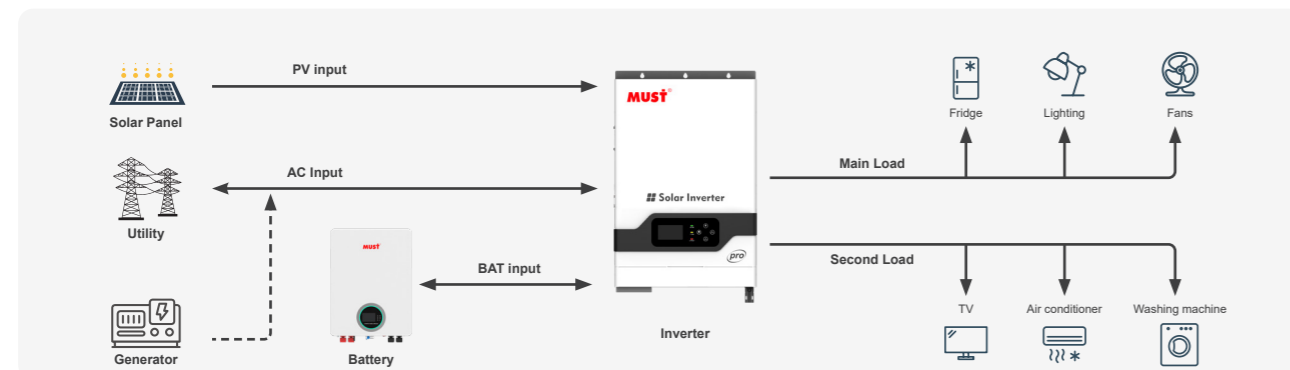
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc.)
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 6 units (optional)
- WIFI remote monitoring (optional)
- Dual outputs for smart load management
- Can communicate with lithium batteries
- Supports export-to-grid operation (optional)



### Back panel description



### Solar system connection



| MODEL                                 | PH18-4024 PRO II  | PH18-6048 PRO II |
|---------------------------------------|---|------------------|
| Default Battery System Voltage        | 24VDC   | 48VDC            |
| <b>INVERTER OUTPUT</b>                |   |                  |
| Rated Power                           | 4000VA / 4000W  | 6000VA / 6000W   |
| Surge Power                           | 8000W   | 12000W           |
| Waveform                              | Pure sine wave  |                  |
| AC Voltage Regulation (Batt.Mode)     | 230VAC±5%(Setting)  |                  |
| Inverter Efficiency(Peak)             | 92%   |                  |
| Transfer Time                         | 10ms(UPS / VDE4105) / 20ms(APL) / < 50ms typical (For parallel operation) |                  |
| <b>AC INPUT</b>                       |   |                  |
| Voltage                               | 230VAC  |                  |
| Selectable Voltage Range              | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)                        |                  |
| Frequency Range                       | 50Hz / 60Hz (Auto sensing)  |                  |
| <b>BATTERY</b>                        |   |                  |
| Normal voltage                        | 24VDC   | 48VDC            |
| Floating Charge Voltage               | 27.4VDC   | 54.8VDC          |
| Overcharge Protection                 | 30VDC   | 60VDC            |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |                  |
| Maximum PV Array Open Circuit Voltage | 500VDC (450V for parallel)  |                  |
| Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li)           |                  |
| Maximum PV Array Power                | 5000W   | 6000W            |
| PV Array MPPT Voltage Range           | 90~430VDC   | 120~430 VDC      |
| Maximum Solar Charge Current          | 100A  | 120A             |
| Maximum AC Charge Current             | 80A   | 100A             |
| Maximum Charge Current                | 100A  | 120A             |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |                  |
| Machine Dimension (W*H*D)(mm)         | 322*486*134   | 309*505*147      |
| Package Dimension (W*H*D)(mm)         | 575*229*425   | 603*260*400      |
| N.W (kg)                              | 9.5   | 12.5             |
| G.W (kg)                              | 12  | 13.8             |
| <b>OTHER</b>                          |   |                  |
| Humidity                              | 5% to 95% Relativ Humidity (Non-condensing)                               |                  |
| Operating Temperature                 | 0°C~50°C  |                  |
| Storage Temperature                   | -15°C~60°C  |                  |
| Communication Interface               | USB/ WIFI   |                  |
| Warranty                              | 2 year  |                  |

### CERTIFICATION & STANDARDS

CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)  
 EN IEC62368-1:2020+A11:2020  
 CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)  
 EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011

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## ON/OFF GRID HYBRID SOLAR INVERTER PH1800 PRO II Series

6.2~12KW | PV500V | 120A~150A | Dual output

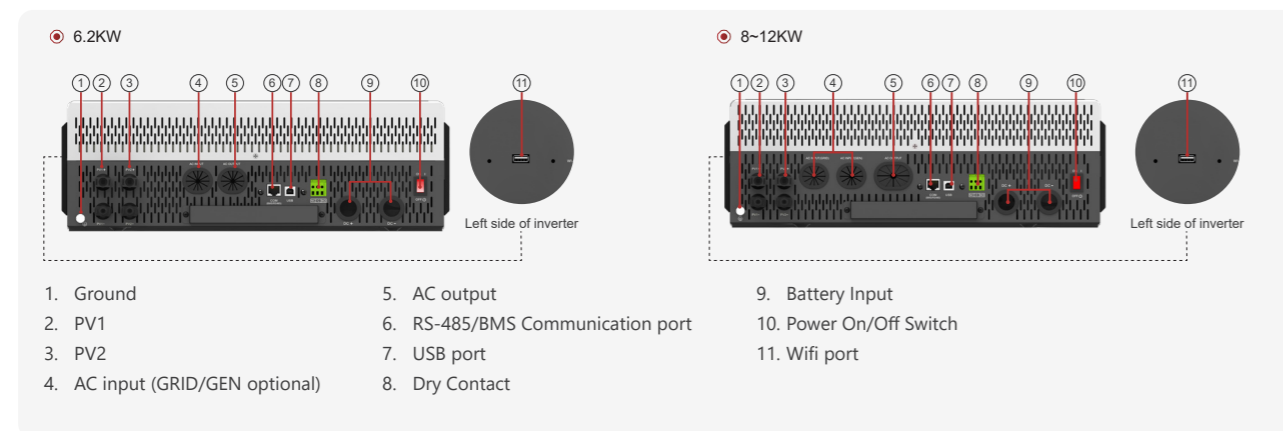


The PH1800 PRO II is a highly versatile inverter/charger that combines an inverter, MPPT solar charge controller, and battery charger in a compact, space-saving design. It delivers reliable, uninterrupted power and supports battery-free operation when sufficient solar energy is available. With a maximum PV input voltage of 500V and an MPPT operating range of 90~430VDC, it features dual built-in MPPT solar charge controllers to ensure optimal solar energy harvesting and efficiency.

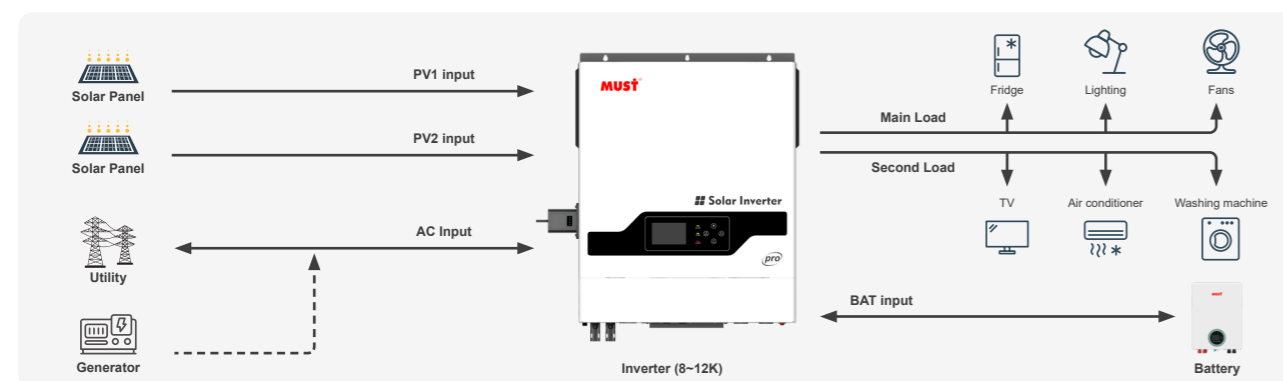


- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc.)
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V
- Can provide the power to the load without battery
- Overload, short circuit and Deep discharge protection
- With BMS lithium battery communication function
- With AC/PV lithium battery activation function
- Support USB, RS485 monitoring function
- Parallel operation up to 6 units (optional)
- Supports export-to-grid operation (optional)
- WIFI remote monitoring (optional)

### Back panel description



### Solar system connection



| MODEL   | PH18-6248 PRO II  | PH18-8048 PRO II | PH18-10048 PRO II | PH18-11048 PRO II | PH18-12048 PRO II |
|---|---|------------------|-------------------|-------------------|-------------------|
| Default Battery System Voltage  | 48VDC   |                  |                   |                   |                   |
| <b>INVERTER OUTPUT</b>  |   |                  |                   |                   |                   |
| Rated Power   | 6200VA/6200W  | 8000VA/8000W     | 10000VA/10000W    | 11000VA/11000W    | 12000VA/12000W    |
| Surge Power   | 12400W  | 16000W           | 20000W            | 22000W            | 24000W            |
| Waveform  | Pure sine wave  |                  |                   |                   |                   |
| AC Voltage Regulation (Batt.Mode)   | 230VAC±5%(Setting)  |                  |                   |                   |                   |
| Inverter Efficiency(Peak)   | 92%   |                  |                   |                   |                   |
| Transfer Time   | 10ms(UPS / VDE4105) / 20ms(APL)                                 |                  |                   |                   |                   |
| <b>AC INPUT</b>   |   |                  |                   |                   |                   |
| Voltage   | 230VAC  |                  |                   |                   |                   |
| Selectable Voltage Range  | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)              |                  |                   |                   |                   |
| Frequency Range   | 50Hz / 60Hz (Auto sensing)                                      |                  |                   |                   |                   |
| <b>BATTERY</b>  |   |                  |                   |                   |                   |
| Normal voltage  | 48VDC   |                  |                   |                   |                   |
| Floating Charge Voltage   | 54.8VDC   |                  |                   |                   |                   |
| Overcharge Protection   | 60VDC   |                  |                   |                   |                   |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>   |   |                  |                   |                   |                   |
| Maximum PV Array Open Circuit Voltage   | 500VDC  |                  |                   |                   |                   |
| Charging Algorithm  | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                  |                   |                   |                   |
| Maximum PV Array Power  | 4000W*2   | 4000W*2          | 5000W*2           | 5500W*2           | 6000W*2           |
| Maximum PV Input Current  | 18A*2   | 18A*2            | 27A*2(40A max)    | 27A*2(40A max)    | 27A*2(40A max)    |
| PV Array MPPT Voltage Range   | 90~430VDC   |                  |                   |                   |                   |
| Maximum Solar Charge Current  | 120A  | 120A             | 150A              | 150A              | 150A              |
| Maximum AC Charge Current   | 100A  | 120A             | 150A              | 150A              | 150A              |
| Maximum Charge Current  | 120A  | 120A             | 150A              | 150A              | 150A              |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |                  |                   |                   |                   |
| Machine Dimension (W*H*D)(mm)   | 425*473*145   | 425*527*145      |                   |                   |                   |
| Package Dimension (W*H*D)(mm)   | /   | /                | /                 | /                 | /                 |
| N.W (kg)  | /   | 17.9             | 17.9              | 18.0              | 18.0              |
| G.W (kg)  | /   | 20.5             | 20.5              | 20.6              | 20.6              |
| <b>OTHER</b>  |   |                  |                   |                   |                   |
| Humidity  | 5% to 95% Relativ Humidity (Non-condensing)                     |                  |                   |                   |                   |
| Operating Temperature Range   | -10°C~50°C  |                  |                   |                   |                   |
| Storage Temperature Range   | -15°C~60°C  |                  |                   |                   |                   |
| Warranty  | 2 year  |                  |                   |                   |                   |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                  |                   |                   |                   |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2020+A11:2020<br>CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011 |   |                  |                   |                   |                   |

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## ON/OFF GRID HYBRID SOLAR INVERTER PH1900 EXP Series



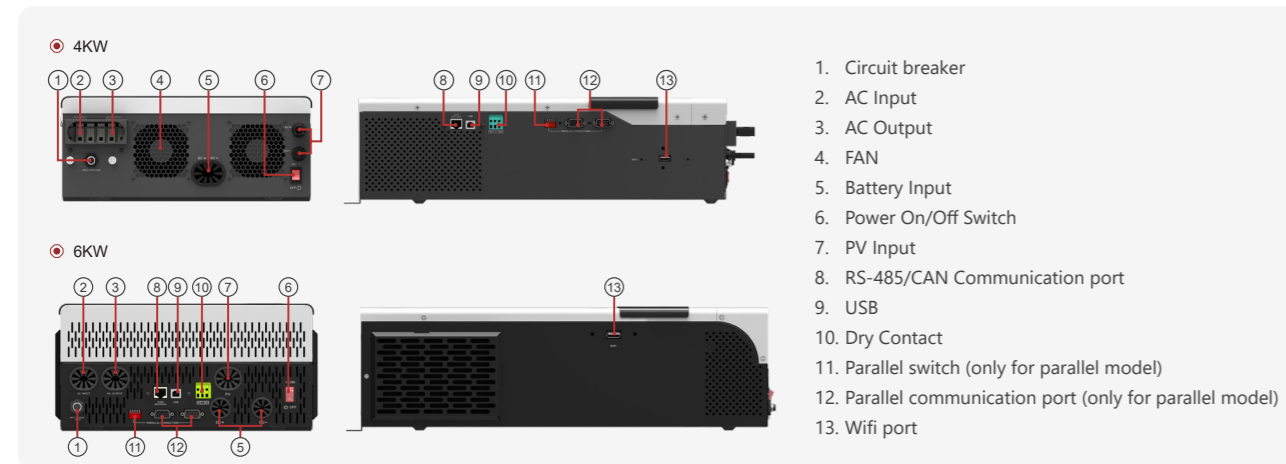
4~6KW | 500V | WiFi | Dual output

PH1900 EXP is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PH1900 EXP Series can run without battery. The Maximum PV array open circuit voltage can reach 500V and MPPT voltage is 90~430V, which can help customers make full use of solar energy.

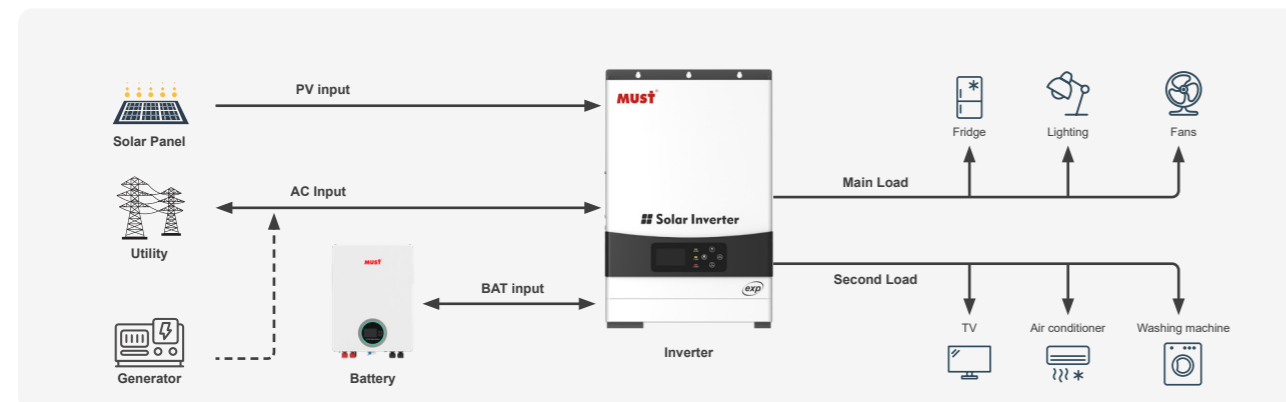


- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 3 units
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function
- With AC/PV lithium battery activation function
- Dual outputs for smart load management

### Back panel description



### Solar system connection



| MODEL  | PH19-4024 EXP   | PH19-6048 EXP |
|--|---|---------------|
| Nominal Battery System Voltage   | 24VDC   | 48VDC         |
| <b>INVERTER OUTPUT</b>   |   |               |
| Rated Power  | 4000VA/4000W  | 6000VA/6000W  |
| Surge Power  | 8000W   | 12000W        |
| Waveform   | Pure sine wave  |               |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |               |
| Inverter Efficiency(Peak)  | 90%   |               |
| Transfer Time  | 10ms (UPS / VDE4105) / 20ms (APL)                               |               |
| <b>AC INPUT</b>  |   |               |
| Voltage  | 230VAC±5%   |               |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)          |               |
| Frequency Range  | 50Hz / 60Hz(Auto sensing)                                       |               |
| <b>BATTERY</b>   |   |               |
| Normal voltage   | 24VDC   | 48VDC         |
| Floating Charge Voltage  | 27.4VDC   | 54.8VDC       |
| Overcharge Protection  | 30VDC   | 60VDC         |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |               |
| Maximum PV Array Open Circuit Voltage  | 500VDC  |               |
| Maximum PV input Current   | 18A   | 27A           |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |               |
| Maximum PV Array Power   | 5000W   | 6000W         |
| PV Array MPPT Voltage Range  | 90~430 VDC  | 120~430 VDC   |
| Maximum Solar Charge Current   | 100A  | 120A          |
| Maximum AC Charge Current  | 80A   | 100A          |
| Maximum Charge Current   | 100A  | 120A          |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |               |
| Machine Dimension (W*H*D)(mm)  | 322*486*134   | 309*505*147   |
| Package Dimension (W*H*D)(mm)  | 600*230*420   | 603*260*400   |
| N.W(kg)  | 10.6  | 12.9          |
| G.W(kg)  | 12  | 13.8          |
| <b>OTHER</b>   |   |               |
| Humidity   | 5% to 95% Relative humidity (Non-condensing)                    |               |
| Operating Temperature  | 0°C~50°C  |               |
| Storage Temperature  | -15°C ~60°C   |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2020+A11:2020<br>EN IEC62368-1:2018<br>Rohs-(2011/65/EUand2015/863/EU) |   |               |

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## ON/OFF GRID HYBRID SOLAR INVERTER PH1900 EXP Series

6.2~12KW | PV500V | 120A~150A | Dual output

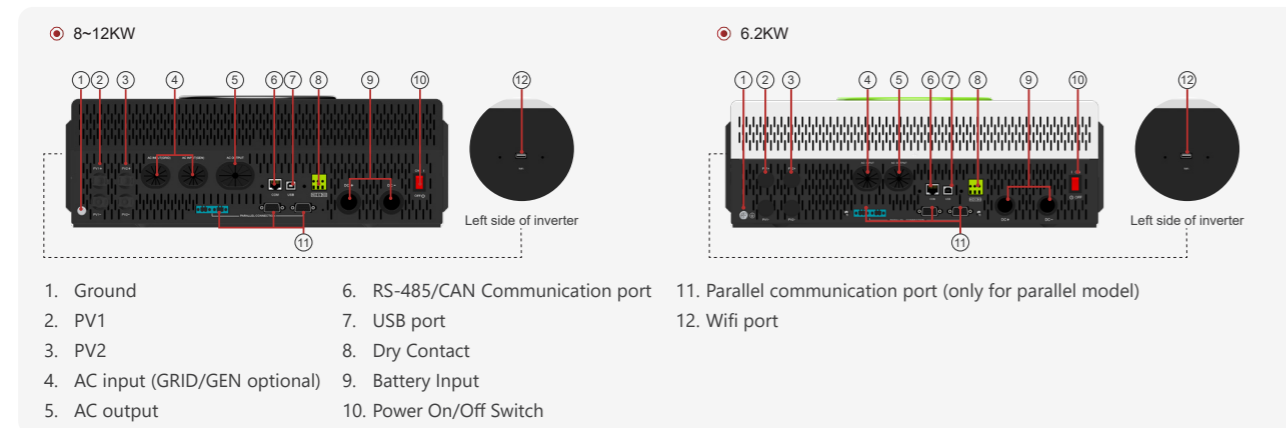


PH1900 EXP is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PH1900 EXP Series can run without battery. The Maximum PV input voltage can reach 500V and MPPT voltage range is 90~450Vdc, built-in two MPPTs solar charge controller, which can help customers make full use of solar energy.

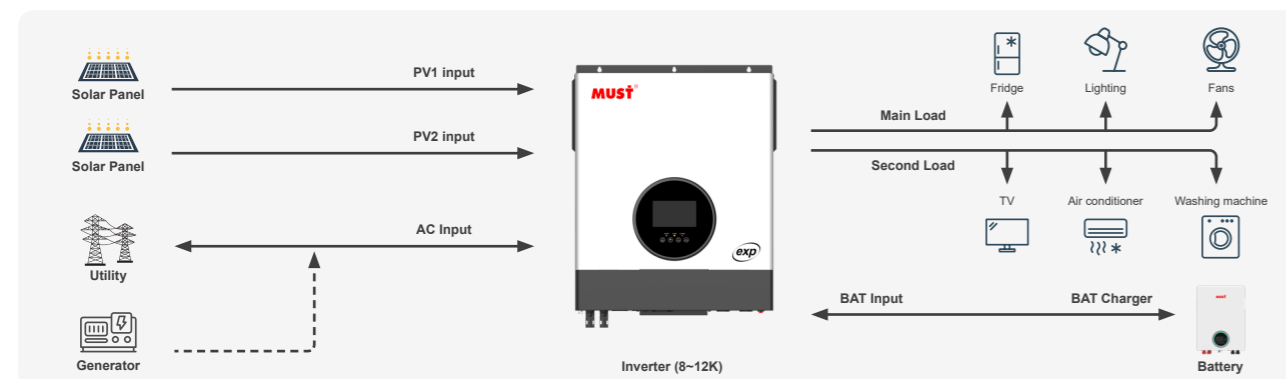


- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- With BMS lithium battery communication function
- With AC/PV lithium battery activation function
- Support USB, RS485 monitoring function
- Parallel operation up to 6 units
- WIFI remote monitoring

### Back panel description



### Solar system connection



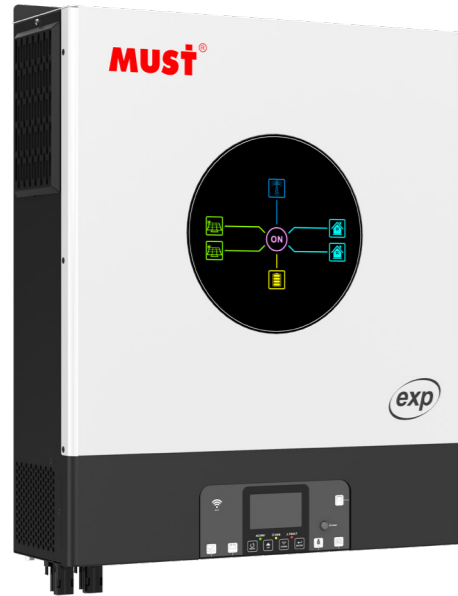
| MODEL                                 | PH19-6248 EXP   | PH19-8048 EXP | PH19-10048 EXP | PH19-11048 EXP | PH19-12048 EXP |
|---------------------------------------|---|---------------|----------------|----------------|----------------|
| Default Battery System Voltage        | 48VDC   |               |                |                |                |
| <b>INVERTER OUTPUT</b>                |   |               |                |                |                |
| Rated Power                           | 6200VA/6200W  | 8000VA/8000W  | 10000VA/10000W | 11000VA/11000W | 12000VA/12000W |
| Surge Power                           | 12400W  | 16000W        | 20000W         | 22000W         | 24000W         |
| Waveform                              | Pure Sine Wave  |               |                |                |                |
| AC Voltage Regulation (Batt.Mode)     | 230VAC±5%(Setting)  |               |                |                |                |
| Inverter Efficiency(Peak)             | 92%   |               |                |                |                |
| Transfer Time                         | 10ms(UPS / VDE4105) / 20ms(APL)                                 |               |                |                |                |
| <b>AC INPUT</b>                       |   |               |                |                |                |
| Voltage                               | 230VAC  |               |                |                |                |
| Max AC Input Voltage                  | 300VAC  |               |                |                |                |
| Selectable Voltage Range              | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)              |               |                |                |                |
| Frequency Range                       | 50Hz / 60Hz (Auto sensing)                                      |               |                |                |                |
| <b>BATTERY</b>                        |   |               |                |                |                |
| Normal voltage                        | 48VDC   |               |                |                |                |
| Floating Charge Voltage               | 54.8VDC   |               |                |                |                |
| Overcharge Protection                 | 60VDC   |               |                |                |                |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |   |               |                |                |                |
| Maximum PV Array Open Circuit Voltage | 500VDC (450V for parallel)                                      |               |                |                |                |
| Charging Algorithm                    | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |               |                |                |                |
| Maximum PV Array Power                | 4000W*2   | 4000W*2       | 5000W*2        | 6000W*2        | 6000W*2        |
| Maximum PV Input Current              | 18A*2   | 18A*2         | 27A*2(40A max) | 27A*2(40A max) | 27A*2(40A max) |
| PV Array MPPT Voltage Range           | 90~450VDC (90~430VDC for parallel)                              |               |                |                |                |
| Min Battery Voltage For PV charge     | 34VDC   |               |                |                |                |
| Maximum Solar Charge Current          | 120A  | 120A          | 150A           | 150A           | 150A           |
| Maximum AC Charge Current             | 100A  | 120A          | 150A           | 150A           | 150A           |
| Maximum Charge Current                | 120A  | 120A          | 150A           | 150A           | 150A           |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |               |                |                |                |
| Machine Dimension (W*H*D)             | 425*473*145mm   |               | 425*527*145mm  |                |                |
| Package Dimension (W*H*D)             | /   |               |                |                |                |
| N.W (kg)                              | /   |               | 17.4           | 17.4           | 17.6           |
| G.W (kg)                              | /   |               |                |                |                |
| <b>OTHER</b>                          |   |               |                |                |                |
| Humidity                              | 5% to 95% Relativ Humidity (Non-condensing)                     |               |                |                |                |
| Operating Temperature Range           | 0°C~50°C  |               |                |                |                |
| Storage Temperature Range             | -15°C~60°C  |               |                |                |                |
| Warranty                              | 2 year  |               |                |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |               |                |                |                |
| CE                                    |   |               |                |                |                |

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## HIGH FREQUENCY SOLAR INVERTER PH1900 EXP II Series

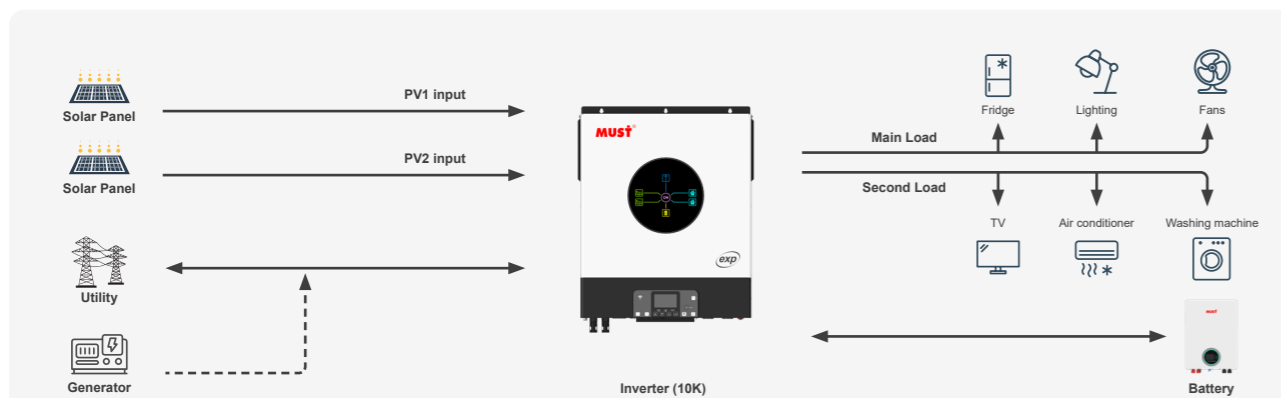
6/10KW | 500V | WIFI | Bluetooth| Dual output | Remote control

PH1900 EXP II series is a compact, multi-function inverter/charger combining inverter, MPPT solar charger, and battery charger. Features a detachable LCD module for flexible installation and remote monitoring, dual smart outputs for load management, battery-free operation, and a 500V max PV input (MPPT 90-430V) for optimal solar utilization.



- Smart color screen with RGB status indicator
- Detachable LCD module, remote control up to 40m
- MAX PV Array Open Circuit Voltage: 500V
- All-round protection: overload, short circuit, deep discharge
- Anti-backflow function (Meter/CT)
- Battery independency
- Parallel operation up to 6 units
- With AC/PV lithium battery activation function
- Dual smart load outputs
- AFCI function (opt)
- Multiple monitoring options: USB, RS485, CAN, WiFi, Bluetooth
- USB OTG for data & updates
- WiFi online upgrade

### Solar system connection



| MODEL  | PH19-6048 EXP II  | PH19-10048 EXP II |
|--|---|-------------------|
| Default Battery System Voltage   | 48VDC   |                   |
| <b>INVERTER OUTPUT</b>   |   |                   |
| Rated Power  | 6000VA/6000W  | 10000VA/10000W    |
| Surge Power  | 12000W  | 20000W            |
| Waveform   | Pure sine wave  |                   |
| AC Voltage Regulation (Batt.Mode)  | 230VAC±5%(Setting)  |                   |
| Inverter Efficiency(Peak)  | 93%   |                   |
| Transfer Time  | 10ms(UPS / VDE4105) / 20ms(APL)                                 |                   |
| <b>AC INPUT</b>  |   |                   |
| Voltage  | 230VAC  |                   |
| Selectable Voltage Range   | 170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)              |                   |
| Frequency Range  | 50Hz / 60Hz (Auto sensing)                                      |                   |
| <b>BATTERY</b>   |   |                   |
| Normal voltage   | 48VDC   |                   |
| Floating Charge Voltage  | 54.8VDC   |                   |
| Overcharge Protection  | 60VDC   |                   |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |   |                   |
| Maximum PV Array Open Circuit Voltage  | 500VDC  |                   |
| Charging Algorithm   | 3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li) |                   |
| Maximum PV Array Power   | 7800W   | 6500W/6500W       |
| Maximum PV input current   | 18A*2   | 27A*2 (MAX)       |
| PV Array MPPT Voltage Range  | 90~430VDC   |                   |
| Maximum Solar Charge Current   | 120A  | 150A              |
| Maximum AC Charge Current  | 100A  | 150A              |
| Maximum Charge Current   | 120A  | 150A              |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                   |
| Machine Dimension (W*H*D) (mm)   | 309*505*147   | 425*527*145       |
| Package Dimension (W*H*D) (mm)   | 603*260*400   | 632*257*548       |
| N.W (kg)   | 12.9  | 18.1              |
| G.W (kg)   | 13.8  | 20.7              |
| <b>OTHER</b>   |   |                   |
| Humidity   | 5% to 95% Relativ Humidity (Non-condensing)                     |                   |
| Operating Temperature Range  | -10°C~50°C  |                   |
| Storage Temperature Range  | -15°C ~60°C   |                   |
| Warranty   | 2 year  |                   |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |                   |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)<br>CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)<br>EN IEC62368-1:2018, EN IEC62109-1:2010, EN IEC62109-2:2011 |   |                   |

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## ON/OFF GRID HYBRID SOLAR INVERTER PH3000 Series

10~12KW | Three-phase | 380VAC | Low Frequency

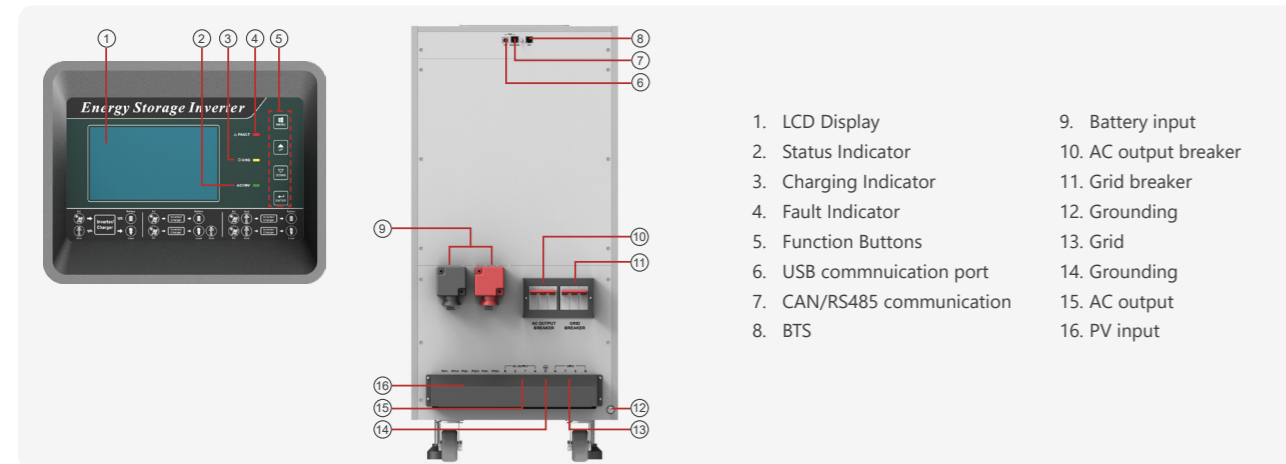
This model PH3000 Three-phase is a flexible and intelligent energy storage inverter which utilizes solar power, utility power, and battery power source to supply continuous power. This is a multi-functional hybrid inverter which can power all kinds of appliances in home or office environment, including motor-type appliances such as tube light, fan, refrigerator and air conditioner. The system generates electricity when it has sufficient sunshine, supplying power to your home and feeding any surplus power back to the Grid.



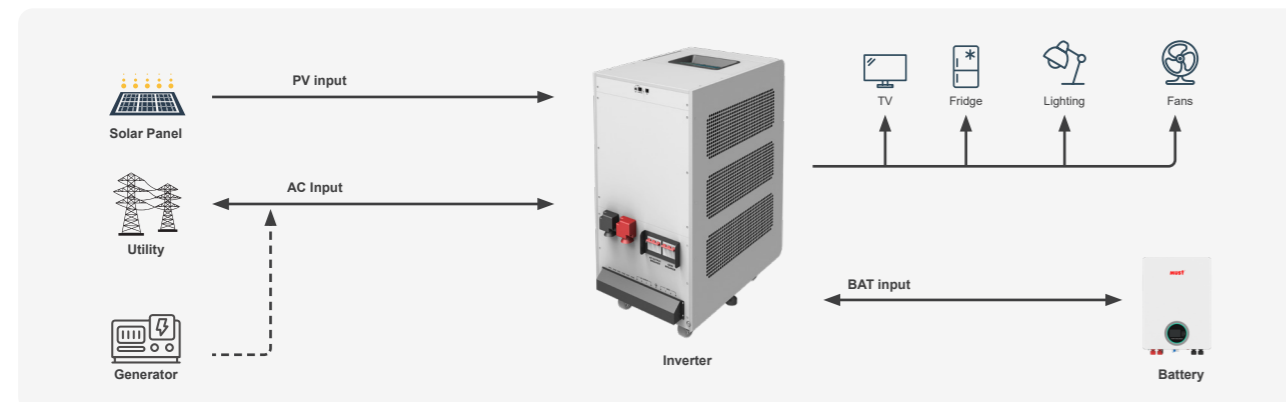
- Rated power 10KW to 12KW
- Smart LCD setting(Working modes, Charge Current, Charge Voltage, etc.)
- Built-in MPPT 180A solar charge controller
- MPPT Efficiency max 98%
- Combining solar system, AC utility, and battery power source to supply continuous power
- Multiple operations: basic Grid-tie, Off-Grid, Grid-Interactive
- Support CAN, RS485 monitoring function



### Back panel description



### Solar system connection



| MODEL   | PH30-10048-T  | PH30-12048-T    |
|---|---|-----------------|
| Nominal Battery System Voltage  | 48VDC   |                 |
| <b>INVERTER OUTPUT</b>  |   |                 |
| Rated output power  | 10000W  | 12000W          |
| Output wave   | Pure sine wave  |                 |
| Nominal output voltage  | 230 VAC (P-N) / 400 VAC (P-P)   |                 |
| Nominal output current  | 14.3A per phase   | 17.4A per phase |
| Nominal output frequency  | 50 Hz / 60 Hz   |                 |
| Rate of wave distortion(THD)(Linearity loads)   | Off grid≤2%; Grid discharge ≤3%; Grid charge ≤3%  |                 |
| Peak efficiency   | ≥93%  |                 |
| Overload capability   | 100% <load ≤ 110%, 30 minutes; 110% <load ≤ 125%, 1 minutes; 125% <load ≤ 150%, 30 seconds; load < 150%, 10 seconds; Short circuit, 5 seconds |                 |
| <b>AC INPUT</b>   |   |                 |
| AC input maximum current  | 26.0A per phase   | 34.8A per phase |
| Nominal frequency   | 50Hz / 60Hz   |                 |
| Acceptable input voltage range  | Defaults 186Vac ~253Vac per phase; Narrow 174Vac ~272Vac per phase; Wide 95Vac ~272Vac per phase  |                 |
| <b>BATTERY</b>  |   |                 |
| Type of Battery   | Lithium battery or lead-acid battery  |                 |
| Nominal Voltage   | 48VDC   |                 |
| Low Voltage Protection Point  | Charger 34.0VDC; Inverter 40.0VDC   |                 |
| Absorption Voltage  | 50.0VDC   |                 |
| Refloat Voltage   | 54.8VDC   |                 |
| Float Voltage   | 57.2VDC   |                 |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>   |   |                 |
| PV Open Circuit Voltage   | 145VDC  |                 |
| Max Solar Charging Current  | 60A per channel   |                 |
| Max AC Charging Current   | 60A per phase   | 80A per phase   |
| Max Charging Current  | 120A per phase  | 140A per phase  |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |                 |
| Mounting  | Floor installation  |                 |
| Machine Dimension (W*H*D)(mm)   | 392*828*629   |                 |
| Package Dimension (W*H*D)(mm)   | 513*1031*700  |                 |
| N.W(kg)   | 128   | 140             |
| G.W(kg)   | 133   | 160             |
| <b>OTHER</b>  |   |                 |
| Communication terminal  | RS485 / CAN bus   |                 |
| Operating Temperature Range   | 0°C ~ +50°C   |                 |
| Environmental Protection Rating   | IP20  |                 |
| Ambient humidity  | 0 -- 90% relative humidity (non-condensing)   |                 |
| Altitude  | ≤2000m  |                 |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                 |
| EN IEC62368-1<br>CE-LVD (EN IEC62109-1, EN IEC62109-2)<br>Rohs-(2011/65/EU and 2015/863/EU)<br>CE-LVD (BS IEC62109-1:2010, BS EN IEC62109-2:2011)<br>UKCA |   |                 |

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## PURE SINE WAVE INVERTER PI1500 Series

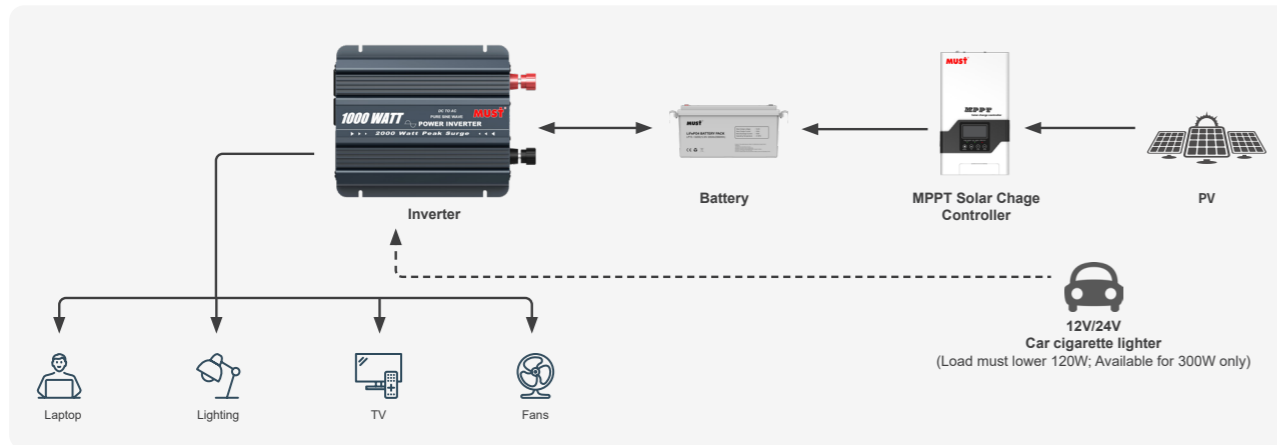
300~2000W | 12V,24V,48V | 230V

PI1500 series is a pure sine wave inverter, high frequency machine solution, the product is small size, the solution is reliable and stable, the main function is to invert the DC 12VDC/ 24VDC/ 48VDC battery to AC 230VAC output, mainly used for emergency use Electricity, car inverter, outdoor electricity and other occasions.



- Input Voltage 12V/ 24V/ 48V DC optional
- Output Voltage 230V AC optional
- Portable power for AC products, AC outlets for connecting multiple loads
- High efficiency converts virtually all of the battery's power to AC
- Mounting brackets for convenient installation
- Overload and over temperature shut down  
Low voltage and over voltage alarm/cut off Short circuit protection

### Solar system connection



### Type



| MODEL   | PI15-0312   | PI15-0324  | PI15-0612   | PI15-0624 | PI15-1012 | PI15-1024 | PI15-1512 | PI15-1524    | PI15-2012 | PI15-2024 | PI15-2048 |         |
|---|---|--|-------------|-----------|-----------|-----------|-----------|--------------|-----------|-----------|-----------|---------|
| <b>BATTERY DC INPUT</b>   |   |  |             |           |           |           |           |              |           |           |           |         |
| Input Voltage   | 12VDC   | 24VDC  | 12VDC       | 24VDC     | 12VDC     | 24VDC     | 12VDC     | 24VDC        | 12VDC     | 24VDC     | 48VDC     |         |
| Low Voltage Protect Delay   | 2 seconds   |  |             |           |           |           |           |              |           |           |           |         |
| Low Voltage Warning   | (PB)  | 10.5VDC  | 21.0VDC     | 10.5VDC   | 21.0VDC   | 10.5VDC   | 21.0VDC   | 10.5VDC      | 21.0VDC   | 10.5VDC   | 21.0VDC   | 42.0VDC |
|   | (LI)  | 10.5VDC  | 21.0VDC     | 11.6VDC   | 23.2VDC   | 11.6VDC   | 23.2VDC   | 11.6VDC      | 23.2VDC   | 11.6VDC   | 23.2VDC   | 46.4VDC |
| Low Voltage Protect   | (PB)  | 11.5VDC  | 23.0VDC     | 11.5VDC   | 23.0VDC   | 11.5VDC   | 23.0VDC   | 11.5VDC      | 23.0VDC   | 11.5VDC   | 23.0VDC   | 46.0VDC |
|   | (LI)  | 11.5VDC  | 23.0VDC     | 12.0VDC   | 24.0VDC   | 12.0VDC   | 24.0VDC   | 12.0VDC      | 24.0VDC   | 12.0VDC   | 24.0VDC   | 48.0VDC |
| Low Voltage Restoring   | (PB)  | 12.5VDC  | 25.0VDC     | 12.5VDC   | 25.0VDC   | 12.5VDC   | 25.0VDC   | 12.5VDC      | 23.0VDC   | 12.5VDC   | 23.0VDC   | 46.0VDC |
|   | (LI)  | 12.5VDC  | 25.0VDC     | 12.8VDC   | 25.6VDC   | 12.8VDC   | 25.6VDC   | 12.8VDC      | 25.6VDC   | 12.8VDC   | 25.6VDC   | 51.2VDC |
| Over Voltage Protect  | (PB)  | 14.7VDC  | 29.4VDC     | 14.7VDC   | 29.4VDC   | 14.7VDC   | 29.4VDC   | 14.7VDC      | 29.4VDC   | 14.7VDC   | 29.4VDC   | 58.8VDC |
|   | (LI)  | 14.7VDC  | 29.4VDC     | 14.5VDC   | 29.0VDC   | 14.5VDC   | 29.0VDC   | 14.5VDC      | 29.0VDC   | 14.5VDC   | 29.0VDC   | 58.0VDC |
| Over Voltage Restoring  | (PB)  | 15.0VDC  | 30.0VDC     | 15.0VDC   | 30.0VDC   | 15.0VDC   | 30.0VDC   | 15.0VDC      | 30.0VDC   | 15.0VDC   | 30.0VDC   | 60.0VDC |
|   | (LI)  | 15.0VDC  | 30.0VDC     | 14.8VDC   | 29.6VDC   | 14.8VDC   | 29.6VDC   | 14.8VDC      | 29.6VDC   | 14.8VDC   | 29.6VDC   | 59.2VDC |
| Parameters: (PB) Lead-acid Battery / (LI) 4 series (12V), 8 series (24V) LiFePO4 Lithium Battery Pack |   |  |             |           |           |           |           |              |           |           |           |         |
| <b>INVERTER AC OUTPUT</b>   |   |  |             |           |           |           |           |              |           |           |           |         |
| Default Power   | 300W  | 600W   | 1000W       | 1500W     | 2000W     |           |           |              |           |           |           |         |
| Peak Power  | 600W  | 1200W  | 2000W       | 3000W     | 4000W     |           |           |              |           |           |           |         |
| Output AC Voltage   | 230V  | 230V   | 230V        | 230V      | 230V      |           |           |              |           |           |           |         |
| Output AC Frequency   | 50Hz  | 50Hz   | 50Hz        | 50Hz      | 50Hz      |           |           |              |           |           |           |         |
| Output Wave   | Pure Sine Wave  |  |             |           |           |           |           |              |           |           |           |         |
| Output Wave THD   | < 3%  |  |             |           |           |           |           |              |           |           |           |         |
| <b>PROTECTION</b>   |   |  |             |           |           |           |           |              |           |           |           |         |
| Battery Input Protection  | Low Voltage Protection, Over Voltage Protection, Reverse Protection |  |             |           |           |           |           |              |           |           |           |         |
| Inverter Output Protection  | Output Overload, Short-Circuit, Over Temperature Protection         |  |             |           |           |           |           |              |           |           |           |         |
| <b>DISPLAY</b>  |   |  |             |           |           |           |           |              |           |           |           |         |
| LED Display   | Red: Error ; Green: System OK                                       |  |             |           |           |           |           |              |           |           |           |         |
| LED Digital Display   | /   | Display Battery Voltage, Output Power, Output Voltage, Error Numbers |             |           |           |           |           |              |           |           |           |         |
| <b>DC OUTPUT</b>  |   |  |             |           |           |           |           |              |           |           |           |         |
| USB   | USB-A type (5V1A)   |  |             |           |           |           |           |              |           |           | NC        |         |
| <b>EFFICIENCY</b>   |   |  |             |           |           |           |           |              |           |           |           |         |
| Peak Conversion efficiency  | 91%   | 91%  | 90%         | 88%       | 90%       | 88%       | 90%       | 88%          | 90%       | 88%       |           |         |
| <b>ENVIRONMENT</b>  |   |  |             |           |           |           |           |              |           |           |           |         |
| Protection Degree   | IP20  | IP20   | IP20        | IP20      | IP20      | IP20      | IP20      | IP20         | IP20      | IP20      | IP20      |         |
| Working Environment   | Indoor Fan cooling  |  |             |           |           |           |           |              |           |           |           |         |
| Environmental temperature   | 0~45°C  |  |             |           |           |           |           |              |           |           |           |         |
| Ambient humidity  | 20%~90%, No condensation  |  |             |           |           |           |           |              |           |           |           |         |
| Altitude  | ≤3000m  |  |             |           |           |           |           |              |           |           |           |         |
| <b>DIMENSIONS</b>   |   |  |             |           |           |           |           |              |           |           |           |         |
| Machine Dimension (W*H*D)(mm)   | 205*125*61  | 242*158*81   | 291*220*83  |           |           |           |           | 380.8*248*90 |           |           |           |         |
| Package Dimension (W*H*D)(mm)   | 228*102*176   | 268*140*205  | 330*147*267 |           |           |           |           | 420*150*300  |           |           |           |         |
| N.W(kg)   | 1   | 1.7  | 2.6         |           |           |           |           | 4.5          |           |           |           |         |
| G.W(kg)   | 9.3 (8pcs)  | 15 (8pcs)  | 23 (8pcs)   |           |           |           |           | 19 (4pcs)    |           |           |           |         |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |  |             |           |           |           |           |              |           |           |           |         |
| CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2) ; CE-LVD(EN 62477-1/A11)             |   |  |             |           |           |           |           |              |           |           |           |         |

## PURE SINE WAVE INVERTER PI1500 Series

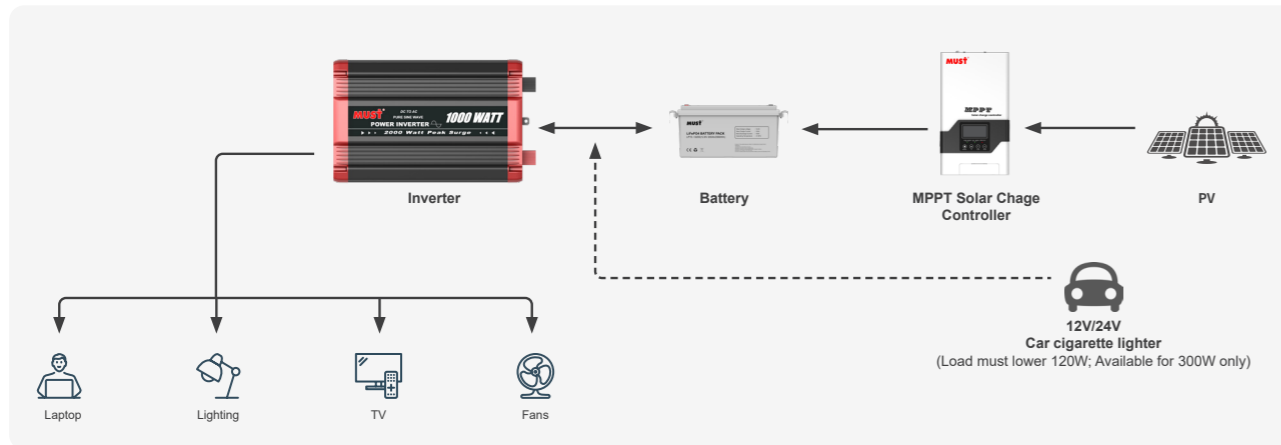
600~2000W | 12V,24V,48V | 230V

PI1500 series is a pure sine wave inverter, high frequency machine solution, the product is small size, the solution is reliable and stable, the main function is to invert the DC 12VDC/ 24VDC/ 48VDC battery to AC 230VAC output, mainly used for emergency use Electricity, car inverter, outdoor electricity and other occasions.



- Input Voltage 12V/ 24V/ 48V DC optional
- Output Voltage 230V AC optional
- Portable power for AC products, AC outlets for connecting multiple loads
- High efficiency converts virtually all of the battery's power to AC
- Mounting brackets for convenient installation
- Overload and over temperature shut down  
Low voltage and over voltage alarm/cut off Short circuit protection

### Solar system connection



### Type



| MODEL                     | PI15-0612 | PI15-0624 | PI15-1012 | PI15-1024 | PI15-1512 | PI15-1524 | PI15-2012 | PI15-2024 | PI15-2048 |         |
|---------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|---------|
| <b>BATTERY DC INPUT</b>   |           |           |           |           |           |           |           |           |           |         |
| Input Voltage             | 12VDC     | 24VDC     | 12VDC     | 24VDC     | 12VDC     | 24VDC     | 12VDC     | 24VDC     | 48VDC     |         |
| Low Voltage Protect Delay | 2 seconds |           |           |           |           |           |           |           |           |         |
| Low Voltage Warning       | (PB)      | 11.5VDC   | 23.0VDC   | 11.5VDC   | 23.0VDC   | 11.5VDC   | 23.0VDC   | 11.5VDC   | 23.0VDC   | 42.0VDC |
|                           | (LI)      | 12.0VDC   | 24.0VDC   | 12.0VDC   | 24.0VDC   | 12.0VDC   | 24.0VDC   | 12.0VDC   | 24.0VDC   | 46.4VDC |
| Low Voltage Protect       | (PB)      | 10.5VDC   | 21.0VDC   | 10.5VDC   | 21.0VDC   | 10.5VDC   | 21.0VDC   | 10.5VDC   | 21.0VDC   | 46.0VDC |
|                           | (LI)      | 11.6VDC   | 23.2VDC   | 11.6VDC   | 23.2VDC   | 11.6VDC   | 23.2VDC   | 11.6VDC   | 23.2VDC   | 48.0VDC |
| Low Voltage Restoring     | (PB)      | 12.5VDC   | 25.0VDC   | 12.5VDC   | 25.0VDC   | 12.5VDC   | 23.0VDC   | 12.5VDC   | 23.0VDC   | 46.0VDC |
|                           | (LI)      | 12.8VDC   | 25.6VDC   | 12.8VDC   | 25.6VDC   | 12.8VDC   | 25.6VDC   | 12.8VDC   | 25.6VDC   | 51.2VDC |
| Over Voltage Protect      | (PB)      | 15.0VDC   | 30.0VDC   | 15.0VDC   | 30.0VDC   | 15.0VDC   | 30.0VDC   | 15.0VDC   | 30.0VDC   | 58.8VDC |
|                           | (LI)      | 14.8VDC   | 29.6VDC   | 14.8VDC   | 29.6VDC   | 14.8VDC   | 29.6VDC   | 14.8VDC   | 29.6VDC   | 58.0VDC |
| Over Voltage Restoring    | (PB)      | 14.7VDC   | 29.4VDC   | 14.7VDC   | 29.4VDC   | 14.7VDC   | 29.4VDC   | 14.7VDC   | 29.4VDC   | 60.0VDC |
|                           | (LI)      | 14.5VDC   | 29.0VDC   | 14.5VDC   | 29.0VDC   | 14.5VDC   | 29.0VDC   | 14.5VDC   | 29.0VDC   | 59.2VDC |

Parameters: (PB) Lead-acid Battery / (LI) 4 series (12V), 8 series (24V) LiFePO4 Lithium Battery Pack

| <b>INVERTER AC OUTPUT</b> |                |       |       |       |
|---------------------------|----------------|-------|-------|-------|
| Default Power             | 600W           | 1000W | 1500W | 2000W |
| Peak Power                | 1200W          | 2000W | 3000W | 4000W |
| Output AC Voltage         | 230V           |       |       |       |
| Output AC Frequency       | 50Hz           |       |       |       |
| Output Wave               | Pure Sine Wave |       |       |       |
| Output Wave THD           | < 3%           |       |       |       |

| <b>PROTECTION</b>          |   |
|----------------------------|---|
| Battery Input Protection   | Low Voltage Protection, Over Voltage Protection, Reverse Protection |
| Inverter Output Protection | Output Overload, Short-Circuit, Over Temperature Protection         |

| <b>DISPLAY</b>      |  |
|---------------------|--|
| LED Digital Display | Display Battery Voltage, Output Power, Output Voltage, Error Numbers |

| <b>DC OUTPUT</b> |                   |    |
|------------------|-------------------|----|
| USB              | USB-A type (5V2A) | NC |

| <b>COMMUNICATION</b> |            |  |
|----------------------|------------|--|
| PC                   | USB-B type |  |

| <b>EFFICIENCY</b>          |     |     |     |     |     |     |     |  |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|--|
| Peak Conversion efficiency | 91% | 90% | 88% | 90% | 88% | 90% | 88% |  |

| <b>ENVIRONMENT</b>        |                          |
|---------------------------|--------------------------|
| Protection Degree         | IP20                     |
| Working Environment       | Indoor Fan cooling       |
| Environmental temperature | 0~45°C                   |
| Ambient humidity          | 20%-90%, No condensation |
| Altitude                  | ≤3000m                   |

| <b>DIMENSIONS</b>                     |                   |                   |                   |
|---------------------------------------|-------------------|-------------------|-------------------|
| Machine Dimension (W*H*D)(mm)         | 261*133*79        | 314*195*80        | 415*220*82        |
| Package Dimension (W*H*D)(mm)(single) | 302*205*140       | 374*267*147       | 450*296*150       |
| Package Dimension (W*H*D) (mm)        | 629*425*295(8pcs) | 773*560*315(8pcs) | 630*495*325(4pcs) |
| N.W(kg) (machine)                     | 1.4               | 2.3               | 4.6               |

| <b>CERTIFICATION &amp; STANDARDS</b> |  |
|--------------------------------------|--|
| Coming soon                          |  |

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

# 120V Series

Off Grid Solar Inverter/ On/Off Grid Hybrid Solar Inverter/ Grid-Tie Solar Inverter/ Off Grid Power Inverter



## OFF GRID SPLIT PHASE SOLAR INVERTER PV1800 TLV Series



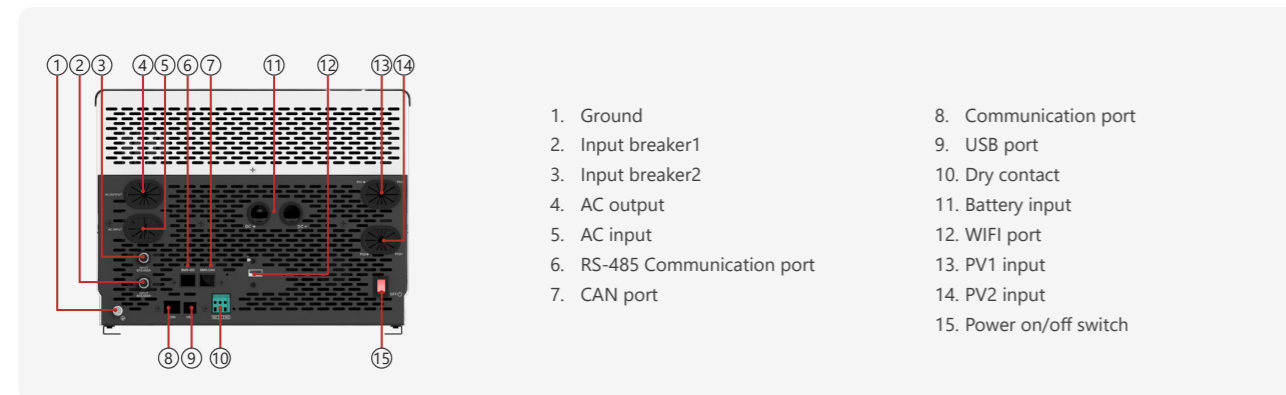
6KW | 120V,240V | Wifi

This split phase solar inverter PV1800 TLV series, capacity 6KW, DC 48V, it's applicable to 110VAC/120VAC markets demands, which has AC output of single phase 110VAC/120V, split phase 220V/240V; In LCD display, you can set output voltage, frequency, charging voltage, charging current to design best use based on different loads applications; meanwhile, it has built-in two 80A MPPT solar charge controllers, you can take use of sunshine freely and save electricity bills.

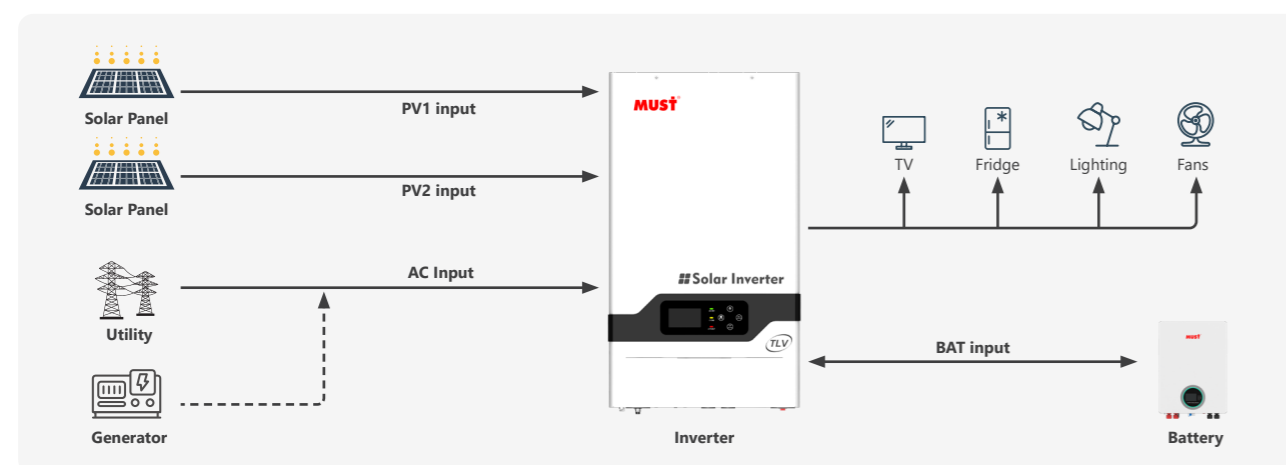


- Pure sine wave solar inverter
- Output power factor 1
- Built-in two 80A MPPT solar charge controllers
- WIFI remote monitoring (optional)
- Acid or Lithium Battery Select
- CAN/RS485 communication for BMS
- Compatible to generator

### Back panel description



### Solar system connection



| MODEL   | PV18-6048 TLV                                |
|---|--|
| Nominal Battery System Voltage  | 48VDC  |
| <b>INVERTER OUTPUT</b>  |  |
| Rated Power   | 6000W  |
| Surge Power   | 12000VA                                      |
| Waveform  | Pure sine wave                               |
| AC Voltage Regulation (Batt.Mode)                                       | 120VAC/240VAC (L1/L2)                        |
| Inverter Efficiency(Peak)   | 90%~93%                                      |
| Transfer Time   | 10ms (UPS / UL) 20ms (APL)                   |
| <b>AC INPUT</b>   |  |
| Voltage   | 240VAC (L1/L2/N)                             |
| Selectable Voltage Range  | 214~264VAC(UL)                               |
| Frequency Range   | 50Hz / 60Hz(Auto sensing)                    |
| <b>BATTERY</b>  |  |
| Normal voltage  | 48VDC  |
| Floating Charge Voltage   | 54.8VDC                                      |
| Overcharge Protection   | 60VDC  |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>                                   |  |
| Maximum PV Array Open Circuit Voltage                                   | 250V   |
| Maximum Solar Charge Current  | 80A/80A                                      |
| PV Array MPPT Voltage Range   | 60~200VDC                                    |
| PV Input Power  | 4000W/4000W                                  |
| Maximum Efficiency  | 98%  |
| Maximum AC Charge Current   | 60A/60A                                      |
| Maximum Charge Current  | 280A   |
| <b>MECHANICAL SPECIFICATIONS</b>  |  |
| Machine Dimension (W*H*D)(mm)   | 318*560*249                                  |
| Package Dimension (W*H*D)(mm)   | 678*345*420                                  |
| N.W(kg)   | 21.5   |
| G.W(kg)   | 24   |
| <b>OTHER</b>  |  |
| Humidity  | 5% to 95% Relative humidity (Non-condensing) |
| Operating Temperature   | -10°C~50°C                                   |
| Storage Temperature   | -15°C~60°C                                   |
| Standard Warranty   | 2 year                                       |
| <b>CERTIFICATION &amp; STANDARDS</b>                                    |  |
| CE-LVD (IEC62109-1, EN IEC62109-2); UKCA-(BS EN 62109-1, BS EN 62109-2) |  |

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## LOW FREQUENCY SPLIT PHASE SOLAR INVERTER PV3300 TLV Series

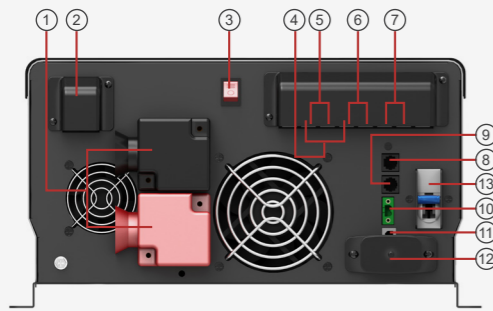
3~6KW | AC110V/220V | MPPT 80A | WiFi | BMS

This split phase solar inverter PV3300 TLV series, capacity range from 3KW-6KW, DC24V/48V, it's applicable to 110VAC/120VAC markets demands, which has AC output of single phase 110VAC/120V, split phase 220V/240V; In LCD display, you can set output voltage, frequency, charging voltage, charging current to design best use based on different loads applications; meanwhile, it has built-in MPPT solar charge controller 80A, you can take use of sunshine freely and save electricity bills.



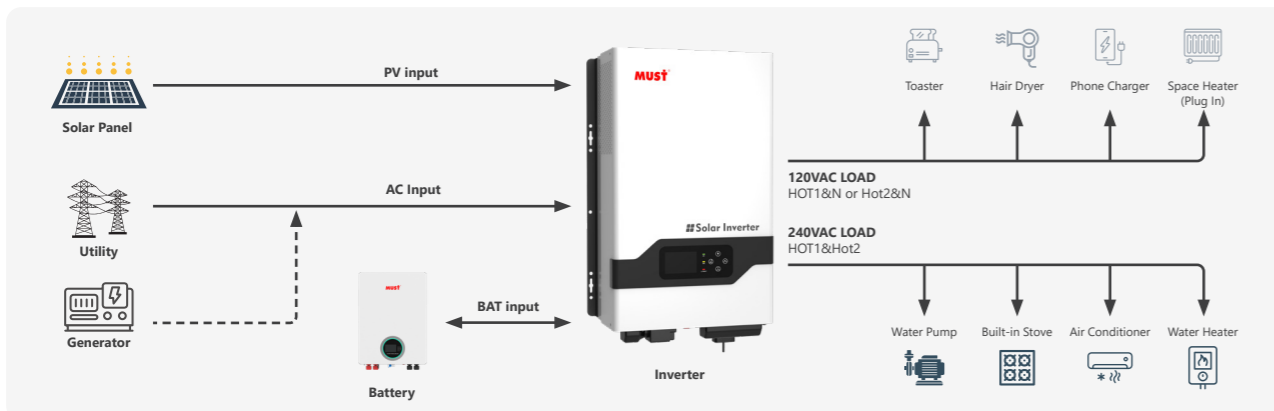
- Friendly user interface; MFD (multi-function display)
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 100/110/120; frequency can be set to 50/60Hz
- Set utility charging on/off switch
- Built-in 80A MPPT charger
- Acid or Lithium Select
- WiFi port (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



1. Battery +/-
2. PV +/-
3. Switch on/off
4. AC Output: HOT1-HOT2 200VAC/220VAC/240VAC
5. AC Output: HOT1-N 100VAC/110VAC/120VAC
6. AC Output: HOT2-N 100VAC/110VAC/120VAC
7. AC Input: HOT1-HOT2 200VAC/220VAC/240VAC
8. Remote Port
9. BAT CAN
10. AGS
11. USB
12. WiFi (optional)
13. AC Input breaker

### Solar system connection



| MODEL  | PV33-3024 TLV   | PV33-3048 TLV | PV33-4024 TLV | PV33-4048 TLV | PV33-5048 TLV  | PV33-6048 TLV |
|--|---|---------------|---------------|---------------|----------------|---------------|
| <b>INVERTER OUTPUT</b>   |   |               |               |               |                |               |
| Rated power  | 3KW   |               | 4KW           |               | 5KW            | 6KW           |
| Power factor   | 1   |               |               |               |                |               |
| Wave form  | Pure sine wave  |               |               |               |                |               |
| Output voltage RMS   | 100V / 110V / 120VAC (200V / 220V / 240VAC) ±10%  |               |               |               |                |               |
| Output frequency   | 50Hz or 60Hz (±0.3Hz)   |               |               |               |                |               |
| Inverter efficiency (peak)                                       | >85%  |               |               |               |                |               |
| Line mode efficiency   | >95%  |               |               |               |                |               |
| Overload   | 100%<Load<110% (alarm 5min then stop output and fault code 07)<br>110%<Load<125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07)                     |               |               |               |                |               |
| Surge rating   | 9000VA  |               | 12000VA       |               | 15000VA        | 18000VA       |
| Capable of starting electric motor                               | 1.5P  |               | 2P            |               | 3P             |               |
| <b>BATTERY</b>   |   |               |               |               |                |               |
| Battery voltage  | 24VDC/48VDC   |               |               |               | 48VDC          |               |
| Minimum start voltage  | 10V/ 10.5V/ 11V/ 11.5V/ 12V±0.5V; 12VDC×2 for 24V; ×4 for 48VAC   |               |               |               |                |               |
| Low battery cut off  | low voltage fault code 04<br>(10V/ 10.5V/ 11V/ 11.5V/ 12V) for 12V model<br>(21V/21V /22V/ 23V/ 24V) for 24V model<br>(40V/ 42V/ 44V/ 46V/ 48V) for 48V model   |               |               |               |                |               |
| Low battery alarm  | Add 0.5/battery: (low battery alarm one second one time)<br>(10V/ 10.5V/ 11V/ 11.5V/ 12V) +0.5VDC for 12V model<br>(21V/ 21V/ 22V/ 23V/ 24V) +1VDC for 24V model<br>(40V/ 42V/ 44V/ 46V/ 48V) +2VDC for 48V model |               |               |               |                |               |
| High voltage alarm   | Add +1V/battery: (high voltage one second one time / after 30s fault 03)<br>(12-14.5V) +1VDC for 12V model<br>(24-29V) +2VDC for 24V model<br>(48-58V) +4VDC for 48V model  |               |               |               |                |               |
| Save mode  | Load ≤40W(110V) / 80W(220V)   |               |               |               |                |               |
| <b>AC INPUT MODE</b>   |   |               |               |               |                |               |
| Input waveform   | Pure sine wave  |               |               |               |                |               |
| Nominal input voltage  | 200Vac / 220Vac / 240Vac  |               |               |               |                |               |
| Max input voltage  | 270Vac MAX  |               |               |               |                |               |
| Input frequency  | 50Hz / 60Hz (auto sensing)  |               |               |               |                |               |
| Efficiency (AC mode)   | > 95% (load, full battery)  |               |               |               |                |               |
| Transfer time AC to DC   | 15ms(typical)   |               |               |               |                |               |
| <b>SOLAR CHARGER</b>   |   |               |               |               |                |               |
| Maximum PV Array Power   | 2500W   | 5000W         | 2500W         | 5000W         | 5000W          | 5000W         |
| Maximum PV Charge Current  | 80A±4A  |               |               |               |                |               |
| DC Voltage   | 24V / 48V   |               |               |               | 24V / 48V      |               |
| MPPT Range @ Operating Voltage                                   | 30~230VDC @ 24V /60~230VDC @48V   |               |               |               | 60~230VDC @48V |               |
| Maximum Solar Input Voltage                                      | 245±2Vdc  |               |               |               | 245±2Vdc       |               |
| Maximum Efficiency   | >98%  |               |               |               |                |               |
| Standby Power Consumption  | <2W   |               |               |               |                |               |
| <b>CHARGE MODE</b>   |   |               |               |               |                |               |
| Max charge current (±5A)   | 12V   | /             | /             | /             | /              | /             |
|  | 24V   | 40A           | 60A           | /             | /              | /             |
|  | 48V   | 20A           | 30A           | 35A           | 40A            | /             |
| Min charge current 10A. Change by every 5A                       |   |               |               |               |                |               |
| <b>DIMENSIONS</b>  |   |               |               |               |                |               |
| Machine Dimension (W*H*D)(mm)                                    | 359.2*443*188   |               |               | 362*544*188   |                |               |
| Package Dimension (W*H*D)(mm)                                    | 598*308*457   |               |               | 698*308*457   |                |               |
| N.W(kg)  | /   |               |               | /             |                |               |
| G.W(kg)  | /   |               |               | /             |                |               |
| Standard Warranty  | 2 year  |               |               |               |                |               |
| <b>CERTIFICATION &amp; STANDARDS</b>                             |   |               |               |               |                |               |
| CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2) |   |               |               |               |                |               |

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## LOW FREQUENCY SPLIT PHASE SOLAR INVERTER PV3600 TLV Series

8~12KW | 245V | 100A, 200A

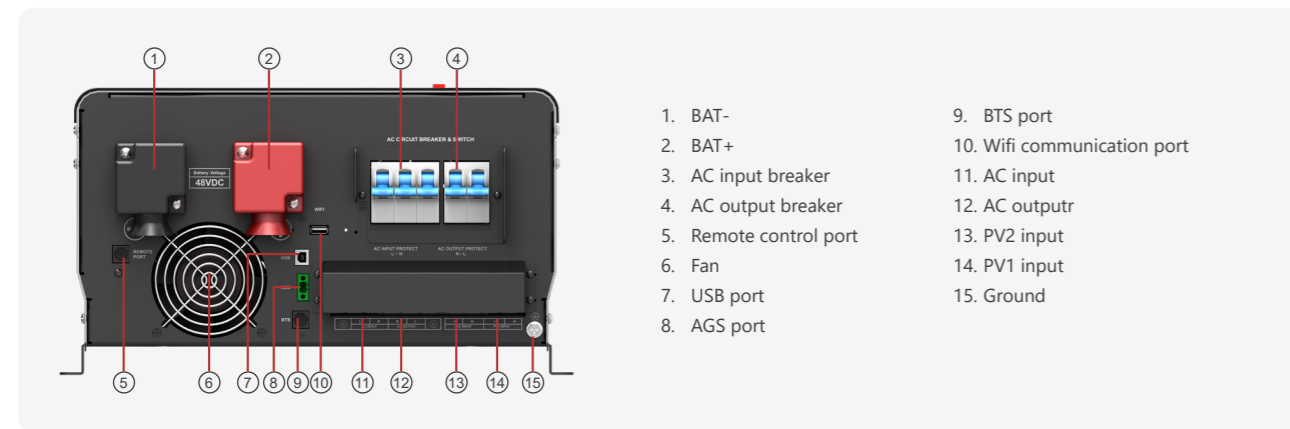
PV3600 TLV series is a multi-function inverter, combining functions of inverter and MPPT solar charge controller, solar charger and battery charger to offer uninterruptible power support. The comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and selectable input voltage based on different applications.



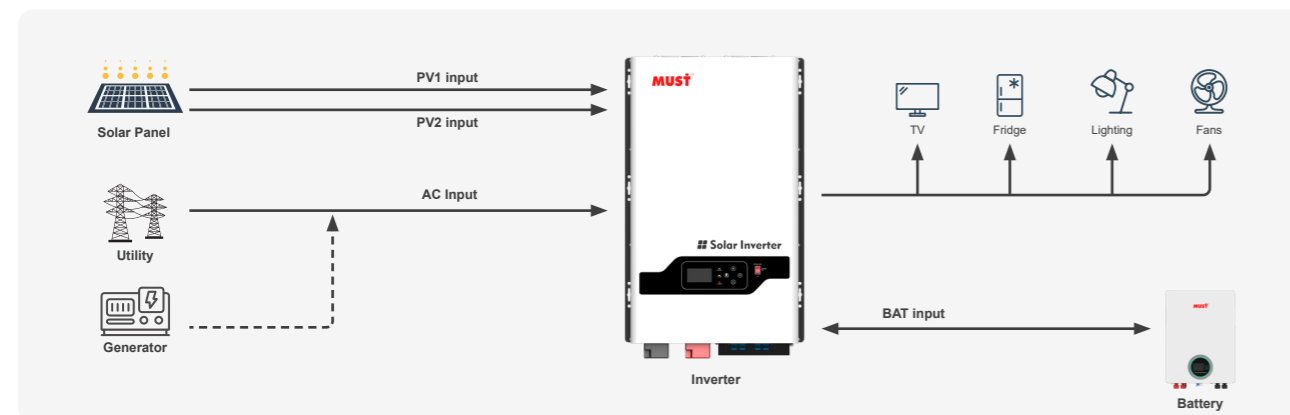
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 140Amp
- Inside BMS function
- DC start & Automatic Self-Diagnostic Function
- WIFI / USB monitoring function (wi-fi optional)
- Supporting AGS, BTS port
- Compatible to generator



### Back panel description



### Solar system connection



| MODEL  | PV36-8048 TLV  | PV36-10048 TLV | PV36-12048 TLV |
|--|--|----------------|----------------|
| Nominal Battery System Voltage               | 48VDC  | 48VDC          | 48VDC          |
| <b>INVERTER OUTPUT</b>                       |  |                |                |
| Rated power                                  | 8.0KW  | 10.0KW         | 12.0KW         |
| Surge rating                                 | 24000VA  | 30000VA        | 36000VA        |
| Capable of starting electric motor           | 4HP  | 5HP            | 6HP            |
| Waveform                                     | Pure sine wave / same as input (bypass mode)                                     |                |                |
| Nominal output voltage RMS                   | 100V/110V/120V/200V/220V/240V  |                |                |
| Output frequency                             | 50Hz / 60Hz ± 0.3Hz  |                |                |
| Inverter efficiency(peak)                    | >88%   |                |                |
| Line mode efficiency                         | >95%   |                |                |
| Power factor                                 | 1.0  |                |                |
| Typical transfer time                        | 20ms(max)  |                |                |
| <b>AC INPUT</b>                              |  |                |                |
| Voltage                                      | 220V/230V/240V   |                |                |
| Selectable voltage range                     | 90-280 VAC (APL)   |                |                |
| Frequency range                              | 50Hz / 60Hz  |                |                |
| <b>BATTERY</b>                               |  |                |                |
| Low battery voltage cutoff                   | 40-48VDC for 48VDC mode  |                |                |
| Low battery voltage recover                  | 42-50VDC for 48VDC mode  |                |                |
| High battery voltage cutoff                  | 60VDC for 48VDC mode   |                |                |
| High battery voltage recover                 | 57VDC for 48VDC mode   |                |                |
| Power saving mode                            | <600W  |                |                |
| <b>AC CHARGER</b>                            |  |                |                |
| Output voltage                               | Depends on battery type  |                |                |
| Charger AC input breaker rating              | 80A  | 80A            | 80A            |
| Overcharge protection S.D.                   | 62.8VDC for 48VDC mode   |                |                |
| Maximum charge current                       | 60A  | 70A            | 80A            |
| <b>BTS</b>                                   |  |                |                |
| Continuous output power                      | Yes Variances in charging voltage & S.D. voltage base on the battery temperature |                |                |
| <b>BYPASS &amp; PROTECTION</b>               |  |                |                |
| Input voltage waveform                       | Sine wave (grid or generator)  |                |                |
| Nominal input frequency                      | 50Hz or 60Hz   |                |                |
| Overload protection (SMPS Load)              | Circuit breaker  |                |                |
| Output short circuit protection              | Circuit breaker  |                |                |
| Bypass breaker rating                        | 63A  | 63A            | 63A            |
| Max bypass current                           | 80A  |                |                |
| <b>SOLAR CHARGER</b>                         |  |                |                |
| Maximum PV charge current                    | 100A/200A  |                |                |
| DC voltage                                   | 48V  |                |                |
| Maximim PV array power                       | 5000W(10000W for 200A optional)  |                |                |
| MPPT range @ operating voltage(VDC)          | 64~235VDC  |                |                |
| Maximum PV array open circuit voltage        | 250VDC   |                |                |
| Maximum efficiency                           | >98%   |                |                |
| Standby power consumption                    | <2W  |                |                |
| <b>MECHANICAL SPECIFICATIONS</b>             |  |                |                |
| Mounting                                     | Wall mount   |                |                |
| Machine Dimension (W*H*D)(mm)                | 402*674*222  |                |                |
| Package Dimension (W*H*D)(mm)                | 818*415*577.5  |                |                |
| N.W(kg)                                      | /  |                |                |
| G.W(kg)                                      | /  |                |                |
| <b>OTHER</b>                                 |  |                |                |
| Operating Temperature Range                  | 0°C to 50°C  |                |                |
| Storage temperature                          | -15°C to 60°C  |                |                |
| Audible noise                                | 60dB MAX   |                |                |
| Display                                      | LED+LCD  |                |                |
| Standard Warranty                            | 2years   |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>         |  |                |                |
| CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011) |  |                |                |

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## LOW FREQUENCY SPLIT PHASE SOLAR INVERTER PV3900 TLV Series

8~12KW | PV 250V | MPPT 200A

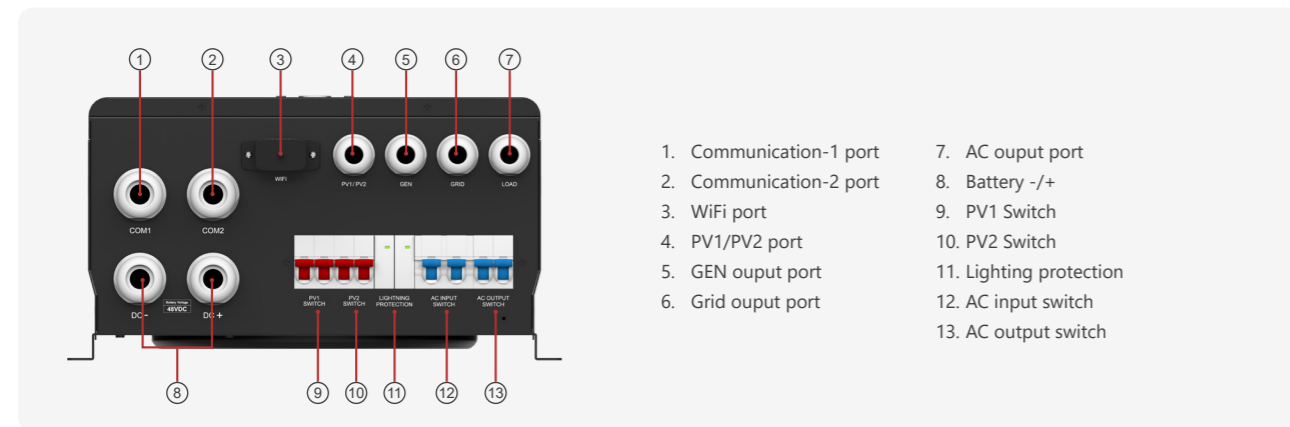
PV3900 TLV series is a multi-function inverter, combining functions of inverter and MPPT solar charge controller, solar charger and battery charger to offer uninterruptible power support. The comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and selectable input voltage based on different applications.



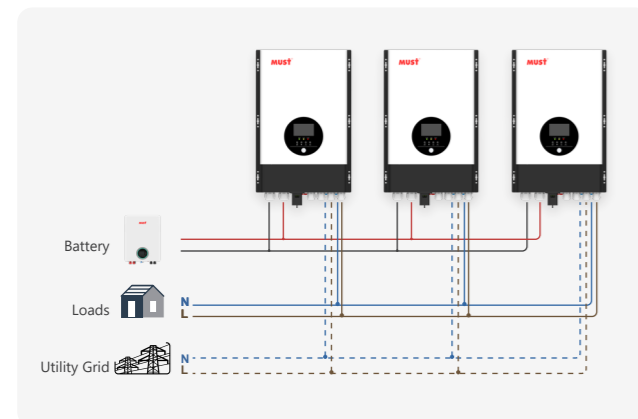
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 200A
- MPPT efficiency max 98%
- Powerful charge rate up to 200A
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI monitoring function (optional)
- Compatible to generator
- Parallel operation with up to 3 units



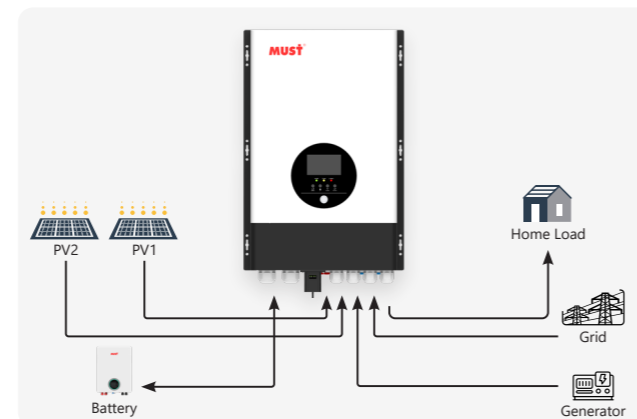
### Back panel description



### Parallel operation



### Solar system connection



| MODEL  | PV39-8048 TLV  | PV39-10048 TLV | PV39-12048 TLV |
|--|--|----------------|----------------|
| Nominal Battery System Voltage                       | 48VDC  |                |                |
| Stand-alone mode                                     | Yes  |                |                |
| Parallel operation                                   | 3 units  |                |                |
| <b>INVERTER OUTPUT</b>                               |  |                |                |
| Rated power  | 8KW  | 10KW           | 12KW           |
| Surge rating   | 24000VA  | 30000VA        | 36000VA        |
| Capable of starting electric motor                   | 4HP  | 5HP            | 6HP            |
| Waveform   | Pure sine wave / same as input (bypass mode)                                     |                |                |
| Nominal output voltage RMS                           | 100V/110V/120V/200V/220V/240V  |                |                |
| Inverter efficiency(peak)                            | >90%   |                |                |
| Line mode efficiency                                 | >95%   |                |                |
| Power factor   | 1.0  |                |                |
| Typical transfer time                                | 10ms(max)  |                |                |
| <b>AC INPUT</b>                                      |  |                |                |
| Voltage  | 220V/230V/240V   |                |                |
| Selectable voltage range                             | 90-280 VAC (APL)   |                |                |
| Frequency range                                      | 50Hz / 60Hz  |                |                |
| <b>BATTERY</b>                                       |  |                |                |
| Low battery voltage cutoff                           | 40-48VDC for 48VDC mode  |                |                |
| Low battery voltage recover                          | 42-50VDC for 48VDC mode  |                |                |
| High battery voltage cutoff                          | 60VDC for 48VDC mode   |                |                |
| High battery voltage recover                         | 57VDC for 48VDC mode   |                |                |
| No-load loss   | <50W   |                |                |
| <b>AC CHARGER</b>                                    |  |                |                |
| Output voltage                                       | Depends on battery type (Supports lead-acid, gel, and lithium batteries)         |                |                |
| Charger AC input breaker rating                      | 100A   |                |                |
| Overcharge protection S.D.                           | 62.8VDC for 48VDC mode   |                |                |
| Maximum charge current                               | 10~100A  | 10~120A        | 10~140A        |
| <b>BTS</b>   |  |                |                |
| Continuous output power                              | Yes Variances in charging voltage & S.D. voltage base on the battery temperature |                |                |
| <b>BYPASS &amp; PROTECTION</b>                       |  |                |                |
| Input voltage waveform                               | Sine wave (grid or generator)  |                |                |
| Nominal input frequency                              | 50Hz or 60Hz   |                |                |
| Overload protection (SMPS Load)                      | Software + Circuit breaker   |                |                |
| Output short circuit protection                      | Software + Circuit breaker   |                |                |
| Bypass breaker rating                                | 63A  |                |                |
| Max bypass current                                   | 80A  |                |                |
| <b>SOLAR CHARGER</b>                                 |  |                |                |
| Maximum PV charge current                            | 200A   |                |                |
| DC voltage   | 48V  |                |                |
| Maximim PV array power                               | 10000W   | 10000W         | 10000W         |
| MPPT range @ operating voltage(VDC)                  | 64~235VDC  |                |                |
| Maximum PV array open circuit voltage                | 250VDC   |                |                |
| Maximum efficiency                                   | >98%   |                |                |
| Standby power consumption                            | <2W  |                |                |
| <b>MECHANICAL SPECIFICATIONS</b>                     |  |                |                |
| Mounting   | Wall mount   |                |                |
| Packing  | Wooden box   |                |                |
| Machine Dimension (W*H*D)(mm)                        | 439*660.5*233.2  |                |                |
| Package Dimension (W*H*D)(mm)                        | 782*314.5*520.5  |                |                |
| N.W(kg)  | 55   | 62             | 69             |
| G.W(kg)  | 73   | 80             | 87             |
| <b>OTHER</b>   |  |                |                |
| Operation temperature range                          | 0°C to 50°C  |                |                |
| Storage temperature                                  | 15°C to 60°C   |                |                |
| Audible noise  | 60dB MAX   |                |                |
| Communication  | WiFi   |                |                |
| Display  | LED+LCD  |                |                |
| Standard Warranty                                    | 2 year   |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>                 |  |                |                |
| CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011); UL1741 |  |                |                |

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## SOLAR INVERTER PV1500 LV Series

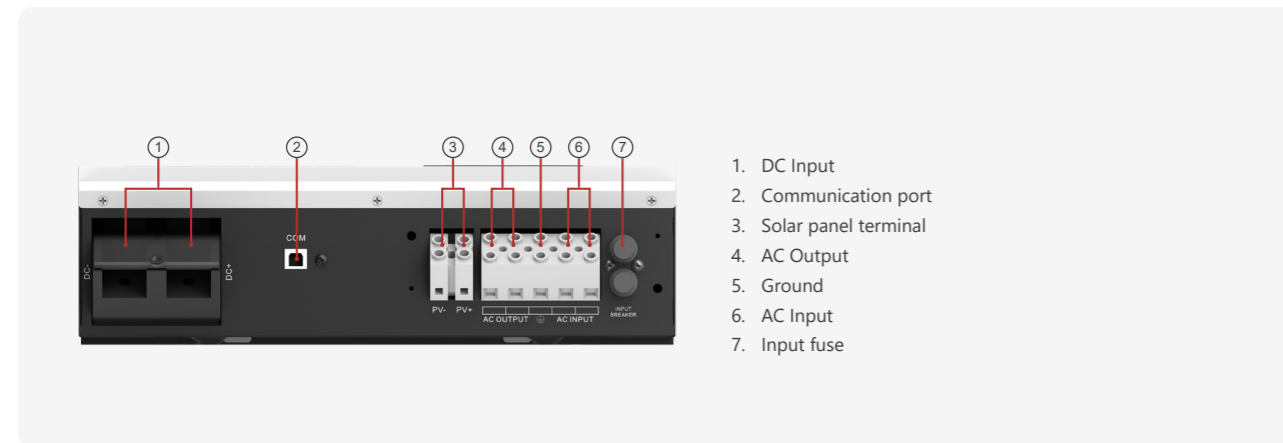
600W-1500W | 120VAC



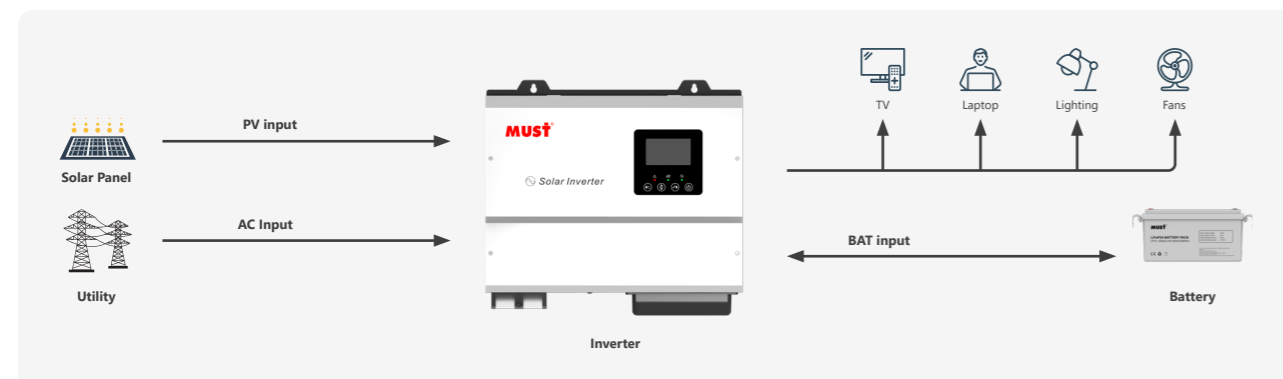
It is a cost effective, intelligent solar inverter which accepts Solar & Utility input at the same time. The comprehensive LCD display offers user-configurable and easy-accessible button adjustment such as battery charging current, AC/solar charger priority and DC priority. When battery voltage is low, it will automatically switch to AC grid to supply continuous power to the loads.

- Built-in 40A MPPT Solar Charge Controller
- 40A@12VDC or 20A@24VDC standard charging current from utility AC
- AC/solar priority for charging via MFD
- Different charging mode for different kinds of batteries
- Overload & short-circuit protection, Battery reverse polarity protection, Deep discharge protection
- Auto restart while AC/solar is recovering Adjustable solar and utility charging current
- Support fast max charging current setting
- Support two kinds of batteries: LiFePO4 Lithium Battery Pack and Lead-acid Battery
- Automatic activate lithium battery pack which is be over discharged no output when AC Grid or PV input is OK

### Back panel description



### Solar system connection



| MODEL  | PV15-0612 LV                                 | PV15-1012 LV   | PV15-1524 LV     |             |
|--|--|----------------|------------------|-------------|
| Nominal Battery System Voltage   | 12VDC  | 12VDC          | 24VDC            |             |
| <b>INVERTER OUTPUT</b>   |  |                |                  |             |
| Rated Power  | 600VA / 600W                                 | 1000VA / 1000W | 1500VA / 1500W   |             |
| Waveform   | Pure Sine Wave                               |                |                  |             |
| Nominal Output Voltage RMS   | 120VAC                                       |                |                  |             |
| Output Voltage Regulation  | +10/-18%                                     |                |                  |             |
| Output Frequency   | 50Hz / 60Hz ± 1Hz                            |                |                  |             |
| Inverter Efficiency (Peak)   | >90%   |                |                  |             |
| Line Mode Efficiency   | >95%   |                |                  |             |
| Typical Transfer Time  | Typical 10ms(UPS,UL) , Typical 20ms(APL,DEF) |                |                  |             |
| <b>AC INPUT</b>  |  |                |                  |             |
| Voltage  | 120VAC                                       |                |                  |             |
| Voltage Range  | 74 ~ 145VAC ± 3%                             |                |                  |             |
| Frequency Range  | 40 ~ 65Hz ± 2Hz                              |                |                  |             |
| <b>BATTERY</b>   |  |                |                  |             |
| <b>Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)</b> |  |                |                  |             |
| Nominal Input Voltage  | 12VDC  |                | 24VDC            |             |
| Low Battery Cutoff   | 10.5VDC(PB)                                  | 11.5VDC(LI)    | 21.0VDC(PB)      | 23.0VDC(LI) |
| Low Battery Alarm  | 11.0VDC(PB)                                  | 12.0VDC(LI)    | 22.0VDC(PB)      | 24.0VDC(LI) |
| Low Battery Voltage Recover  | 12.5VDC(PB)                                  | 12.8VDC(LI)    | 25.0VDC(PB)      | 25.6VDC(LI) |
| High Battery Voltage Recover   | 14.5VDC(PB)                                  | 14.5VDC(LI)    | 29.0VDC(PB)      | 29.0VDC(LI) |
| High Battery Voltage Cutoff  | 15.0VDC(PB)                                  | 15.0VDC(LI)    | 30.0VDC(PB)      | 30.0VDC(LI) |
| Charger Voltage boost  | 14.4VDC(PB)                                  | 14.4VDC(LI)    | 28.8VDC(PB)      | 28.8VDC(LI) |
| Charger Voltage float  | 13.8VDC(PB)                                  | 14.4VDC(LI)    | 27.6VDC(PB)      | 28.8VDC(LI) |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>  |  |                |                  |             |
| Maximum PV Charge Current  | 40A (max)                                    |                |                  |             |
| Maximum PV Array Power   | 600W   |                | 1200W            |             |
| MPPT Operating Voltage Range   | 15 ~ 75VDC                                   |                | 30 ~ 75VDC       |             |
| Maximum PV Array Open Voltage  | 105VDC                                       |                |                  |             |
| Maximum Efficiency   | > 95%  |                |                  |             |
| AC Charging Current Max  | 40A (Can be set)                             |                | 20A (Can be set) |             |
| Maximum Charge Current AC+PV   | 80A (Can be set)                             |                | 60A (Can be set) |             |
| <b>BYPASS &amp; PROTECTION</b>   |  |                |                  |             |
| Output Short Circuit Protection  | FUSE   |                |                  |             |
| Bypass breaker Rating  | 15A  | 20A            | 30A              |             |
| Max Bypass Current   | 15A  | 20A            | 30A              |             |
| Battery Fuse Current   | 50A * 2                                      | 50A * 3        | 40A * 3          |             |
| <b>DIMENSIONS</b>  |  |                |                  |             |
| Machine Dimension (W*H*D)(mm)  | 320*264.5*95                                 |                |                  |             |
| Package Dimension (W*H*D)(mm)  | 390*335*167                                  |                |                  |             |
| N.W(kg)  | 4.5  |                | 4.7              |             |
| G.W(kg)  | 5.4  |                | 5.6              |             |
| <b>OTHER</b>   |  |                |                  |             |
| Operating Temperature Range  | 0°C to 45°C                                  |                |                  |             |
| Audible Noise  | 50dB MAX                                     |                |                  |             |
| Display  | LED+LCD                                      |                |                  |             |
| Standard Warranty  | 2 year                                       |                |                  |             |
| <b>CERTIFICATION &amp; STANDARDS</b>   |  |                |                  |             |
| ////////////////////   |  |                |                  |             |

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## HIGH FREQUENCY OFF GRID SOLAR INVERTER PV1800 LV Series



1~3KW | 120V | Wifi

PV1800 LV Series is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterrupted 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.

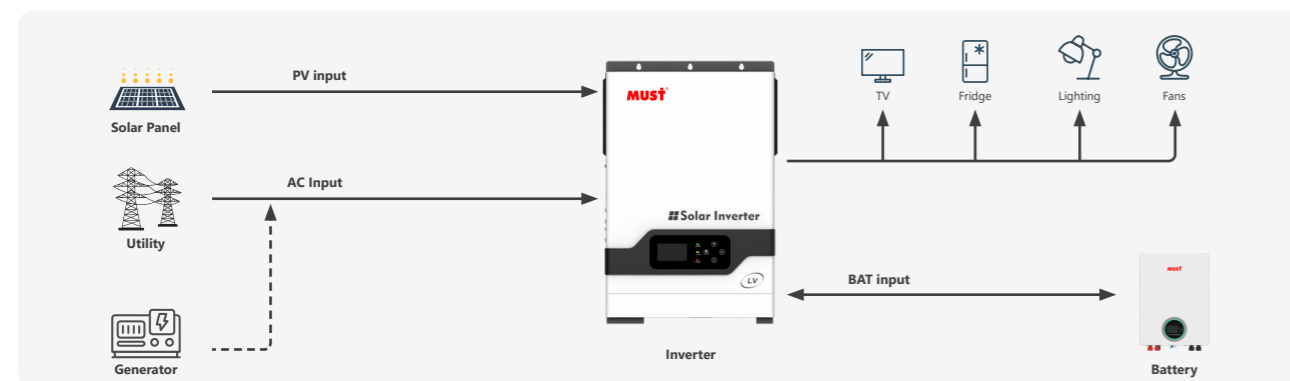


- Pure sine wave solar inverter
- Output power factor 1
- Built-in 80A MPPT solar charger
- 2 units can be wired in parallel to create a split-phase system with 120V and 240V capabilities (only for 3kw)
- Support parallel operation up to 3 units (only for 3kw)
- WIFI remote monitoring (optional)
- CAN/RS485 communication for BMS
- Compatible to generator

### Back panel description



### Solar system connection



| MODEL   | PV18-1012 LV                                 | PV18-1512 LV | PV18-1524 LV    | PV18-2024 LV | PV18-3024 LV | PV18-3048 LV |
|---|--|--------------|-----------------|--------------|--------------|--------------|
| Nominal Battery System Voltage  | 12VDC  | 12VDC        | 24VDC           | 24VDC        | 24VDC        | 48VDC        |
| <b>INVERTER OUTPUT</b>  |  |              |                 |              |              |              |
| Rated Power   | 1000W  | 1500W        | 1500W           | 2000W        | 3000W        | 3000W        |
| Surge Power   | 1000W  | 1500W        | 1500W           | 4000W        | 6000W        | 6000W        |
| Waveform  | Pure sine wave                               |              |                 |              |              |              |
| AC Voltage Regulation (Batt.Mode)                                       | 120VAC ±5%                                   |              |                 |              |              |              |
| Inverter Efficiency(Peak)   | 90%~93%                                      |              |                 |              |              |              |
| Transfer Time   | 10ms (UPS / UL) 20ms (APL)                   |              |                 |              |              |              |
| <b>AC INPUT</b>   |  |              |                 |              |              |              |
| Voltage   | 120VAC                                       |              |                 |              |              |              |
| Selectable Voltage Range  | 107~132VAC(UL)                               |              |                 |              |              |              |
| Frequency Range   | 50Hz / 60Hz(Auto sensing)                    |              |                 |              |              |              |
| <b>BATTERY</b>  |  |              |                 |              |              |              |
| Normal voltage  | 12VDC  | 12VDC        | 24VDC           | 24VDC        | 24VDC        | 48VDC        |
| Floating Charge Voltage   | 13.7VDC                                      | 13.7VDC      | 27.4VDC         | 27.4VDC      | 27.4VDC      | 54.8VDC      |
| Overcharge Protection   | 15VDC  | 15VDC        | 30VDC           | 30VDC        | 30VDC        | 60VDC        |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>                                   |  |              |                 |              |              |              |
| Max. PV Array Open Circuit Voltage                                      | 105V   | 145V         | 160V            | 160V         | 450VDC       | 250VDC       |
| Max. Solar Charge Current   | 60A  | 60A          | 60A             | 60A          | 100A         | 80A          |
| PV Array MPPT Voltage Range   | 15~105VDC                                    | 15~130VDC    | 30~128VDC       | 30~128VDC    | 90-430VDC    | 60-200VDC    |
| PV Input Power  | 750W   | 750W         | 1500W           | 1500W        | 4000W        | 4000W        |
| Maximum Efficiency  | 98%  |              |                 |              |              |              |
| Maximum AC Charge Current   | 10A  | 10A          | 30A             | 40A          | 80A          | 60A          |
| Maximum Charge Current  | 70A  | 70A          | 90A             | 100A         | 100A         | 140A         |
| <b>MECHANICAL SPECIFICATIONS</b>  |  |              |                 |              |              |              |
| Machine Dimension (W*H*D)(mm)   | 224*321*95                                   | 255*321*125  | 254.5*367.4*103 |              | 329*485*134  |              |
| Package Dimension (W*H*D)(mm)   | 410*188*300                                  | 416*216*342  | 436*189*331     |              | 575*425*229  |              |
| N.W(kg)   | 5.0  | 5.5          | 5.4             | 5.5          | 8            | 10           |
| G.W(kg)   | 6.0  | 6.5          | 6.4             | 6.5          | 9.5          | 11.5         |
| <b>OTHER</b>  |  |              |                 |              |              |              |
| Humidity  | 5% to 95% Relative humidity (Non-condensing) |              |                 |              |              |              |
| Operating Temperature   | -10°C~50°C                                   |              |                 |              |              |              |
| Storage Temperature   | -15°C~60°C                                   |              |                 |              |              |              |
| Standard Warranty   | 2 years                                      |              |                 |              |              |              |
| <b>CERTIFICATION &amp; STANDARDS</b>                                    |  |              |                 |              |              |              |
| CE-LVD (IEC62109-1, EN IEC62109-2); UKCA-(BS EN 62109-1, BS EN 62109-2) |  |              |                 |              |              |              |

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## LOW FREQUENCY SOLAR INVERTER PV2900 LHP Series

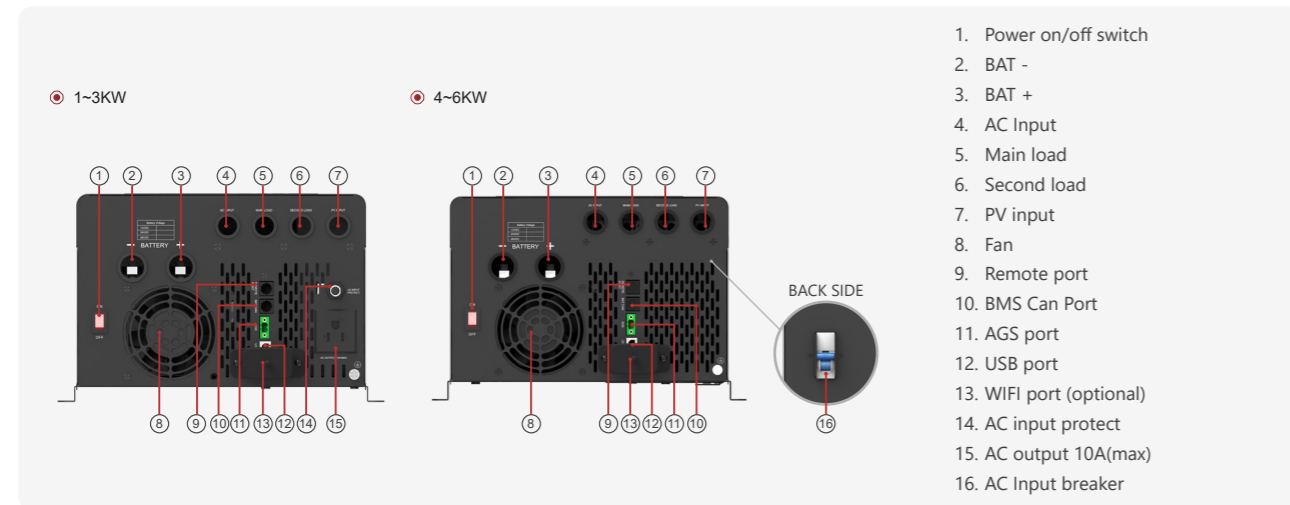
1~6KW | AC 120V | MPPT80A | WIFI | BMS | Dual output

PV2900 LHP series is very economical pure sine wave solar inverter, AC voltage 110V/120V, AC charger inbuilt, from 20A to 60A; MPPT solar charger 80A inbuilt; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is not enough, it enables inverter to operate with all kinds of home appliances, widely selling to Latin America.

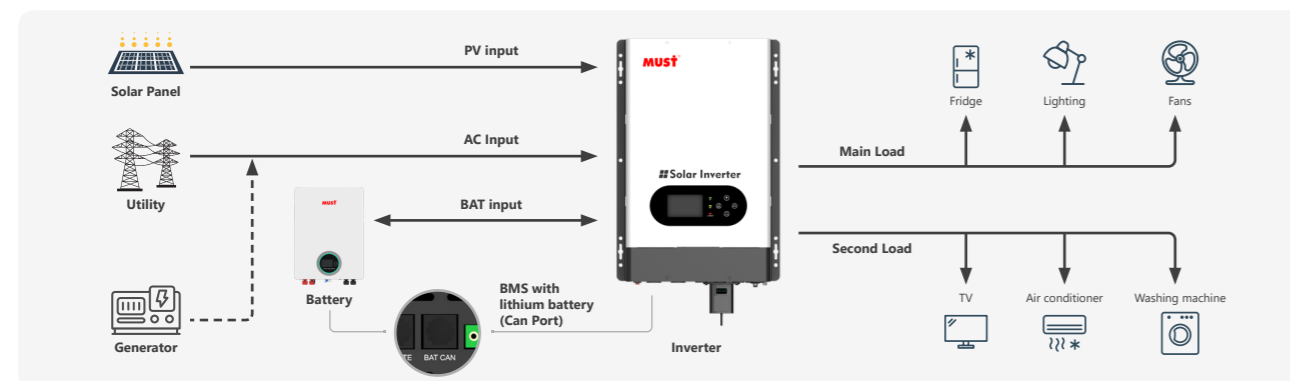


- Pure sine wave output
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 120V:110V/115V/120V
- Inverter frequency can be set to 50/60Hz
- Set utility charging on/off switch
- 80A MPPT charger
- Acid or Lithium Select
- WiFi port (optional)
- With BMS lithium battery communication function (CAN port)
- Dual output for smart load management

### Back panel description



### Solar system connection



| MODEL  | PV29-1012 LHP   | PV29-1024 LHP | PV29-1512 LHP | PV29-1524 LHP | PV29-2012 LHP | PV29-2024 LHP | PV29-3024 LHP                    | PV29-3048 LHP | PV29-4024 LHP | PV29-4048 LHP | PV29-5048 LHP | PV29-6048 LHP |
|--|---|---------------|---------------|---------------|---------------|---------------|----------------------------------|---------------|---------------|---------------|---------------|---------------|
| Nominal Battery System Voltage   | 12VDC   | 24VDC         | 12VDC         | 24VDC         | 12VDC         | 24VDC         | 24VDC                            | 48VDC         | 24VDC         | 48VDC         | 48VDC         | 48VDC         |
| <b>INVERTER OUTPUT</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Rated Power  | 1 KW  |               | 1.5 KW        |               | 2 KW          |               | 3 KW                             |               | 4 KW          |               | 5 KW          | 6 KW          |
| Surge Rating   | 3000VA  |               | 4500VA        |               | 6000VA        |               | 9000VA                           |               | 12000VA       |               | 15000VA       | 18000VA       |
| Capable Of Starting Electric Motor   | 1P  |               | 1P            |               | 1.5P          |               | 2P                               |               |               |               | 3P            |               |
| Waveform   | Pure sine wave / same as input (bypass mode)  |               |               |               |               |               |                                  |               |               |               |               |               |
| Nominal Output Voltage RMS   | 110V / 115V / 120VAC(±10% RMS)  |               |               |               |               |               |                                  |               |               |               |               |               |
| Output Frequency   | 50Hz / 60Hz ±0.3Hz  |               |               |               |               |               |                                  |               |               |               |               |               |
| Inverter Efficiency (Peak)   | >88%  |               |               |               |               |               |                                  |               |               |               |               |               |
| Line Mode Efficiency   | >95%  |               |               |               |               |               |                                  |               |               |               |               |               |
| Power Factor   | 1.0   |               |               |               |               |               |                                  |               |               |               |               |               |
| Typical Transfer Time  | 10ms(max)   |               |               |               |               |               |                                  |               |               |               |               |               |
| Overload   | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |               |               |               |               |               |                                  |               |               |               |               |               |
| <b>AC INPUT</b>  |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Voltage  | 110/120VAC  |               |               |               |               |               |                                  |               |               |               |               |               |
| Selectable Voltage Range   | 75~135VAC (For personal computers)  |               |               |               |               |               |                                  |               |               |               |               |               |
| Frequency Range  | 50Hz / 60Hz(Auto sensing) 40~80Hz   |               |               |               |               |               |                                  |               |               |               |               |               |
| <b>BATTERY</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Minimum Start Voltage  | (10V / 10.5V / 11V / 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |               |               |               |               |               |                                  |               |               |               |               |               |
| Low Battery Alarm  | (10V / 10.5V / 11V / 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |               |               |               |               |               |                                  |               |               |               |               |               |
| Low Battery Cut Off  | 10V / 10.5V / 11V / 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |               |               |               |               |               |                                  |               |               |               |               |               |
| High Voltage Alarm   | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |                                  |               |               |               |               |               |
| High Battery Voltage Recover   | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |               |               |               |               |               |                                  |               |               |               |               |               |
| Idle Consumption-Search Mode   | Load ≤50±20W(120V)/100±20W(220V)  |               |               |               |               |               |                                  |               |               |               |               |               |
| <b>CHARGER</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Output Voltage   | Depends on battery type   |               |               |               |               |               |                                  |               |               |               |               |               |
| Overcharge Protection S.D.   | 15.5VDC for 12VDC mode (*2 for 24VDC mode, *4 for 48VDC mode)   |               |               |               |               |               |                                  |               |               |               |               |               |
| Maximum Charge Current   | 30A   | 20A           | 45A           | 25A           | 60A           | 30A           | 40A                              | 20A           | 60A           | 30A           | 35A           | 40A           |
| <b>PAYPASS &amp; PROTECTION</b>  |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Input Voltage Waveform   | Sine wave (grid or generator)   |               |               |               |               |               |                                  |               |               |               |               |               |
| Nominal Input Frequency  | 50Hz or 60Hz  |               |               |               |               |               |                                  |               |               |               |               |               |
| Overload Protection (SMPS Load)  | Circuit breaker   |               |               |               |               |               |                                  |               |               |               |               |               |
| Output Short Circuit Protection  | Circuit breaker   |               |               |               |               |               |                                  |               |               |               |               |               |
| AC Input Breaker   | 1-3K/40A  |               |               |               |               |               | 4-6K/63A                         |               |               |               |               |               |
| <b>SOLAR CHARGER</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Maximum PV Array Power   | 1250W   | 2500W         | 1250W         | 2500W         | 1250W         | 2500W         | 2500W                            | 5000W         | 2500W         | 5000W         | 5000W         | 5000W         |
| Maximum PV Charge Current  | 80A±4A  |               |               |               |               |               |                                  |               |               |               |               |               |
| DC Voltage   | 12V/ 24V auto work  |               |               |               |               |               | 24V/ 48V auto work               |               |               |               |               |               |
| MPPT Range @ Operating Voltage   | 15~95VDC @ 12V/ 30~230VDC @ 24V   |               |               |               |               |               | 30~230VDC @ 24V/ 60~230VDC @ 48V |               |               |               |               |               |
| Maximum PV Array Open Circuit Voltage  | 245VDC  |               |               |               |               |               |                                  |               |               |               |               |               |
| Standby Power Consumption  | <2W   |               |               |               |               |               |                                  |               |               |               |               |               |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Mounting   | Wall Mount  |               |               |               |               |               |                                  |               |               |               |               |               |
| Machine Dimension (W*H*D) (mm)   | 309*460*196   |               |               |               |               |               | 309*545*200                      |               |               |               |               |               |
| Package Dimension (W*H*D) (mm)   | 610*310*400   |               |               |               |               |               | 695*400*310                      |               |               |               |               |               |
| N.W(kg)  | /   |               |               |               |               |               |                                  |               |               |               |               |               |
| G.W(kg)  | /   |               |               |               |               |               |                                  |               |               |               |               |               |
| <b>OTHER</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| Operating Temperature Range  | 0°C to 40°C   |               |               |               |               |               |                                  |               |               |               |               |               |
| Storage Temperature  | -15°C to 60°C   |               |               |               |               |               |                                  |               |               |               |               |               |
| Audible Noise  | 60dB MAX  |               |               |               |               |               |                                  |               |               |               |               |               |
| Display  | LED+LCD   |               |               |               |               |               |                                  |               |               |               |               |               |
| Standard Warranty  | 2 years   |               |               |               |               |               |                                  |               |               |               |               |               |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |               |               |               |               |               |                                  |               |               |               |               |               |
| CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011) |   |               |               |               |               |               |                                  |               |               |               |               |               |

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## LOW FREQUENCY SOLAR INVERTER PV3000 LVHM Series

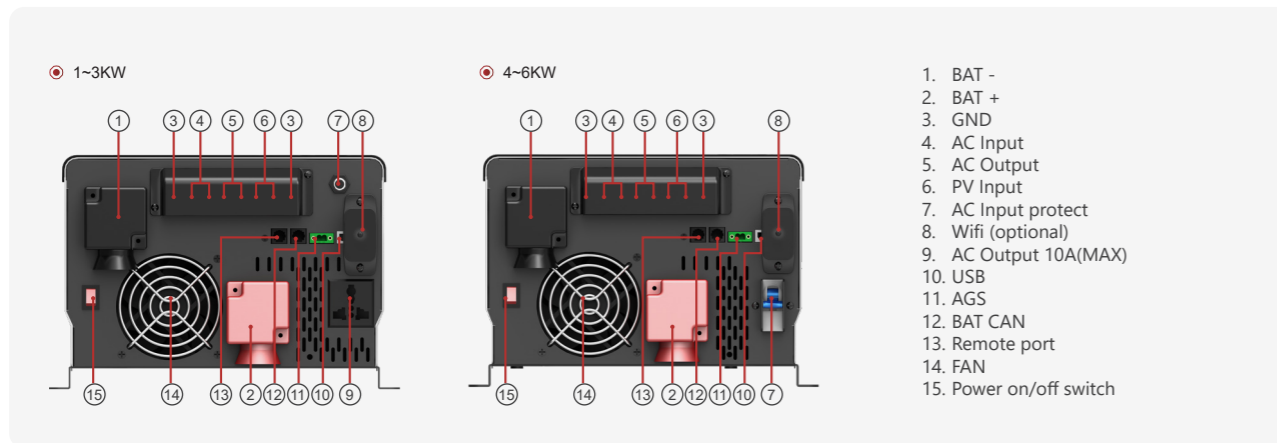
1~6KW | AC120V | MPPT 80A | WIFI | BMS

PV3000 LVHM series is very economical pure sine wave solar inverter, AC voltage 110V/120V, AC charger inbuilt, from 20A to 60A; MPPT solar charger 80A inbuilt; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is not enough, it enables inverter to operate with all kinds of home appliances, widely selling to Latin America.

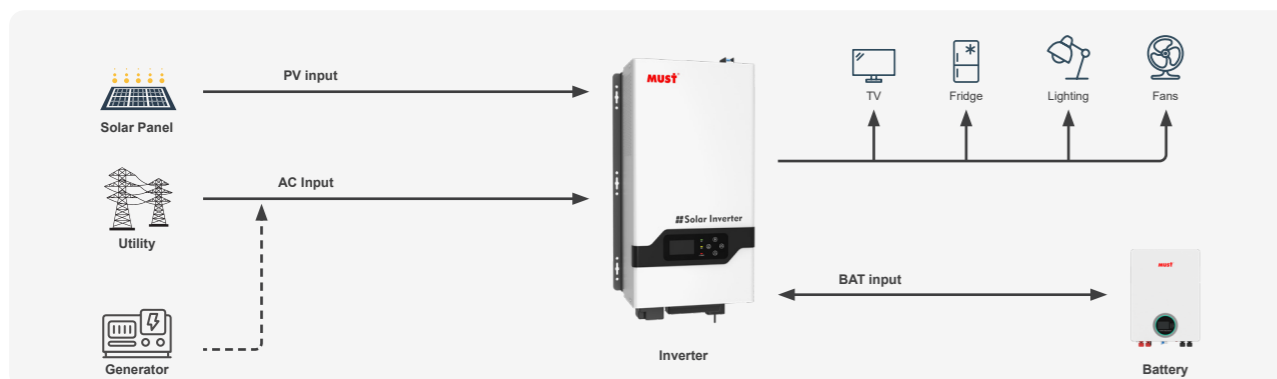


- Pure sine wave output
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 120V:110V/115V/120V
- Inverter frequency can be set to 50/60Hz
- Set utility charging on/off switch
- 80A MPPT charger
- Acid or Lithium Select
- Wifi port (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



### Solar system connection



| MODEL                                 | PV30-1012 LVHM  | PV30-1024 LVHM | PV30-1512 LVHM | PV30-1524 LVHM | PV30-2012 LVHM | PV30-2024 LVHM | PV30-3024 LVHM                    | PV30-3048 LVHM | PV30-4024 LVHM | PV30-4048 LVHM | PV30-5048 LVHM | PV30-6048 LVHM |
|---------------------------------------|---|----------------|----------------|----------------|----------------|----------------|-----------------------------------|----------------|----------------|----------------|----------------|----------------|
| Nominal Battery System Voltage        | 12VDC   | 24VDC          | 12VDC          | 24VDC          | 12VDC          | 24VDC          | 24VDC                             | 48VDC          | 24VDC          | 48VDC          | 48VDC          | 48VDC          |
| <b>INVERTER OUTPUT</b>                |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Rated Power                           | 1 KW  |                | 1.5 KW         |                | 2 KW           |                | 3 KW                              |                | 4 KW           |                | 5 KW           | 6 KW           |
| Surge Rating                          | 3000VA  |                | 4500VA         |                | 6000VA         |                | 9000VA                            |                | 12000VA        |                | 15000VA        | 18000VA        |
| Capable Of Starting Electric Motor    | 1HP   |                | 1HP            |                | 1.5HP          |                | 1.5HP                             |                | 2HP            |                | 3HP            |                |
| Waveform                              | Pure sine wave / same as input (bypass mode)  |                |                |                |                |                |                                   |                |                |                |                |                |
| Nominal Output Voltage RMS            | 110V / 115V / 120VAC(±10% RMS)  |                |                |                |                |                |                                   |                |                |                |                |                |
| Output Frequency                      | 50Hz / 60Hz ±0.3Hz  |                |                |                |                |                |                                   |                |                |                |                |                |
| Inverter Efficiency (Peak)            | >88%  |                |                |                |                |                |                                   |                |                |                |                |                |
| Line Mode Efficiency                  | >95%  |                |                |                |                |                |                                   |                |                |                |                |                |
| Power Factor                          | 1.0   |                |                |                |                |                |                                   |                |                |                |                |                |
| Typical Transfer Time                 | 10ms(max)   |                |                |                |                |                |                                   |                |                |                |                |                |
| Overload                              | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |                |                |                |                |                |                                   |                |                |                |                |                |
| <b>AC INPUT</b>                       |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Voltage                               | 110/120VAC  |                |                |                |                |                |                                   |                |                |                |                |                |
| Selectable Voltage Range              | 75~135VAC (For personal computers)  |                |                |                |                |                |                                   |                |                |                |                |                |
| Frequency Range                       | 50Hz / 60Hz(Auto sensing) 40~80Hz   |                |                |                |                |                |                                   |                |                |                |                |                |
| <b>BATTERY</b>                        |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Minimum Start Voltage                 | (10V/ 10.5V/ 11V/ 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                                   |                |                |                |                |                |
| Low Battery Alarm                     | (10V/ 10.5V/ 11V/ 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                                   |                |                |                |                |                |
| Low Battery Cut Off                   | 10V/ 10.5V/ 11V/ 11.5V/12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |                |                |                |                |                |                                   |                |                |                |                |                |
| High Voltage Alarm                    | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                                   |                |                |                |                |                |
| High Battery Voltage Recover          | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |                |                |                |                |                |                                   |                |                |                |                |                |
| Idle Consumption-Search Mode          | Load ≤50±20W(120V)  |                |                |                |                |                |                                   |                |                |                |                |                |
| <b>CHARGER</b>                        |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Output Voltage                        | Depends on battery type   |                |                |                |                |                |                                   |                |                |                |                |                |
| Overcharge Protection S.D.            | 15.7VDC for 12VDC mode (*2 for 24VDC mode, *4 for 48VDC mode)   |                |                |                |                |                |                                   |                |                |                |                |                |
| Maximum Charge Current                | 30A   | 20A            | 45A            | 25A            | 60A            | 30A            | 40A                               | 20A            | 60A            | 30A            | 35A            | 40A            |
| <b>BYPASS &amp; PROTECTION</b>        |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Input Voltage Waveform                | Sine wave (grid or generator)   |                |                |                |                |                |                                   |                |                |                |                |                |
| Nominal Input Frequency               | 50Hz or 60Hz  |                |                |                |                |                |                                   |                |                |                |                |                |
| Overload Protection (SMPS Load)       | Circuit breaker   |                |                |                |                |                |                                   |                |                |                |                |                |
| Output Short Circuit Protection       | Circuit breaker   |                |                |                |                |                |                                   |                |                |                |                |                |
| AC input breaker                      | 1-2K/30A  |                |                |                | 3K/40A         |                |                                   |                | 4-6K/63A       |                |                |                |
| <b>SOLAR CHARGER</b>                  |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Maximum PV Array Power                | 1250W   | 2500W          | 1250W          | 2500W          | 1250W          | 2500W          | 2500W                             | 5000W          | 2500W          | 5000W          | 5000W          | 5000W          |
| Maximum PV Charge Current             | 80A±4A  |                |                |                |                |                |                                   |                |                |                |                |                |
| DC Voltage                            | 12V / 24V auto work   |                |                |                |                |                | 24V / 48V auto work               |                |                |                |                |                |
| MPPT Range @ Operating Voltage        | 15~95VDC @ 12V<br>30~230VDC @ 24V   |                |                |                |                |                | 30~230VDC @ 24V<br>60~230VDC @48V |                |                | 60~230VDC @48V |                |                |
| Maximum PV Array Open Circuit Voltage | 245VDC  |                |                |                |                |                |                                   |                |                |                |                |                |
| Standby Power Consumption             | <2W   |                |                |                |                |                |                                   |                |                |                |                |                |
| <b>MECHANICAL SPECIFICATIONS</b>      |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Mounting                              | Wall Mount  |                |                |                |                |                |                                   |                |                |                |                |                |
| Machine Dimension (W*H*D)(mm)         | 303*493*200   |                |                |                |                |                | 305*531*202                       |                |                |                |                |                |
| Package Dimension (W*H*D)(mm)         | 615*319*400   |                |                |                |                |                | 688*319*400                       |                |                |                |                |                |
| N.W(kg)                               | /   |                |                |                |                |                | /                                 |                |                |                |                |                |
| G.W(kg)                               | /   |                |                |                |                |                | /                                 |                |                |                |                |                |
| <b>OTHER</b>                          |   |                |                |                |                |                |                                   |                |                |                |                |                |
| Operating Temperature Range           | 0°C to 40°C   |                |                |                |                |                |                                   |                |                |                |                |                |
| Storage Temperature                   | -15°C to 60°C   |                |                |                |                |                |                                   |                |                |                |                |                |
| Audible Noise                         | 60dB MAX  |                |                |                |                |                |                                   |                |                |                |                |                |
| Display                               | LED+LCD   |                |                |                |                |                |                                   |                |                |                |                |                |
| Standard Warranty                     | 2 year  |                |                |                |                |                |                                   |                |                |                |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                |                |                |                |                |                                   |                |                |                |                |                |
| /                                     |   |                |                |                |                |                |                                   |                |                |                |                |                |

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## HIGH FREQUENCY POWER INVERTER/CHARGER EP1800 LV Series

3KW | 24V | 120V

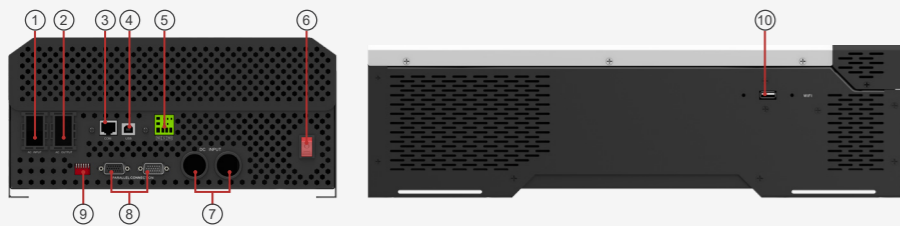


This is a multi-function inverter/charger, combining functions of inverter, battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger priority, and acceptable input voltage based on different applications.



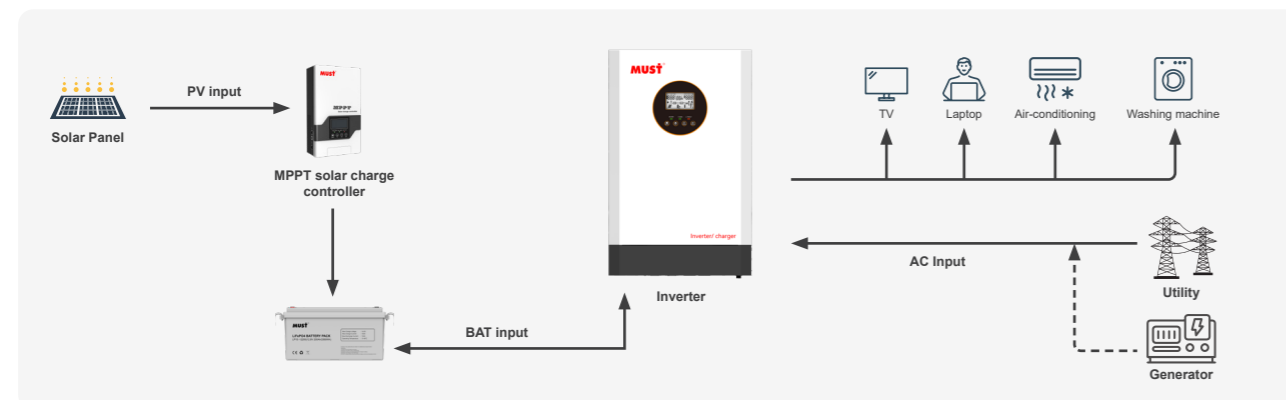
- Pure sine wave inverter
- Configurable input voltage range for home appliances and personal computers via LCD setting
- Configurable battery charging current based on applications via LCD setting
- Configurable AC Charger via LCD setting
- Compatible to mains voltage or generator power
- Auto restart while AC is recovering
- Overload/ Over temperature/ short circuit protection
- Smart battery charger design for optimized battery performance
- Acid or Lithium select
- Parallel operation with up to 3 units
- WIFI remote monitoring (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



- |                             |  |
|-----------------------------|--|
| 1. AC input                 | 6. Power on/off switch                                   |
| 2. AC output                | 7. Battery input   |
| 3. RS485 communication port | 8. Parallel communication port (only for parallel model) |
| 4. USB port                 | 9. Parallel switch                                       |
| 5. Dry contact              | 10. WiFi port (optional)                                 |

### Solar system connection



| MODEL  | EP18-3024 LV   |                     |
|--|--|---------------------|
| Rated output power                               | 3000VA/3000W   |                     |
| Surge Power                                      | 6000W  |                     |
| <b>AC INPUT</b>                                  |  |                     |
| Nominal Input Voltage                            | 120Vac±5%  |                     |
| Selectable Voltage range                         | 90~145VAC(UPS) / 74~145VAC(APL) / 108~132VAC(UL)           |                     |
| Frequency Range                                  | 50Hz/60Hz (Auto sensing)                                   |                     |
| Inverter Efficiency(Peak)                        | 95%  |                     |
| <b>INVERTER OUTPUT</b>                           |  |                     |
| Output voltage waveform                          | Pure sine wave   |                     |
| Output Voltage Regulation                        | 120Vac ± 5%  |                     |
| Output Frequency                                 | 50Hz / 60Hz(Auto sensing)                                  |                     |
| Power Factor                                     | ≈1   |                     |
| Transfer Time                                    | 10ms (UPS / UL) / 20ms (APL) <50ms(For parallel operation) |                     |
| Nominal DC Input Voltage                         | 24VDC  |                     |
| Cold Start Voltage                               | 23VDC  |                     |
| Output Short Circuit Protection                  | Line mode  | Circuit Breaker     |
|  | Battery mode   | Electronic Circuits |
| <b>BATTERY</b>                                   |  |                     |
| Battery voltage                                  | 24VDC  |                     |
| Floating voltage                                 | 27.4V  |                     |
| Overcharge Protection                            | 30V  |                     |
| <b>CHARGER</b>                                   |  |                     |
| Charging Current(UPS) @Nominal Input Voltage     | Default:30A; MAX:80A                                       |                     |
| Bulk Charging Voltage                            | 28.8Vdc  |                     |
| Floating Charging Voltage                        | 27.4Vdc  |                     |
| Charging Algorithm                               | 3-Step   |                     |
| <b>MECHANICAL SPECIFICATIONS</b>                 |  |                     |
| Machine Dimension (W*H*D)(mm)                    | 297.5*468*125  |                     |
| Package Dimension (W*H*D)(mm)                    | /  |                     |
| N.W(kg)  | /  |                     |
| G.W(kg)  | /  |                     |
| <b>GENERAL</b>                                   |  |                     |
| Mounting   | Wall mount   |                     |
| Display  | LED+LCD  |                     |
| Parallel operation                               | 3 units  |                     |
| Operation Temperature Range                      | -10°C to 50°C  |                     |
| Storage Temperature                              | -15°C to 60°C  |                     |
| Standard Warranty                                | 2 years  |                     |
| <b>CERTIFICATION &amp; STANDARDS</b>             |  |                     |
| CE-EMC+LVD (EN6100-6-4,EN6100-6-2+EN IEC62109-1) |  |                     |

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## POWER INVERTER/CHARGER EP2900 LV Series

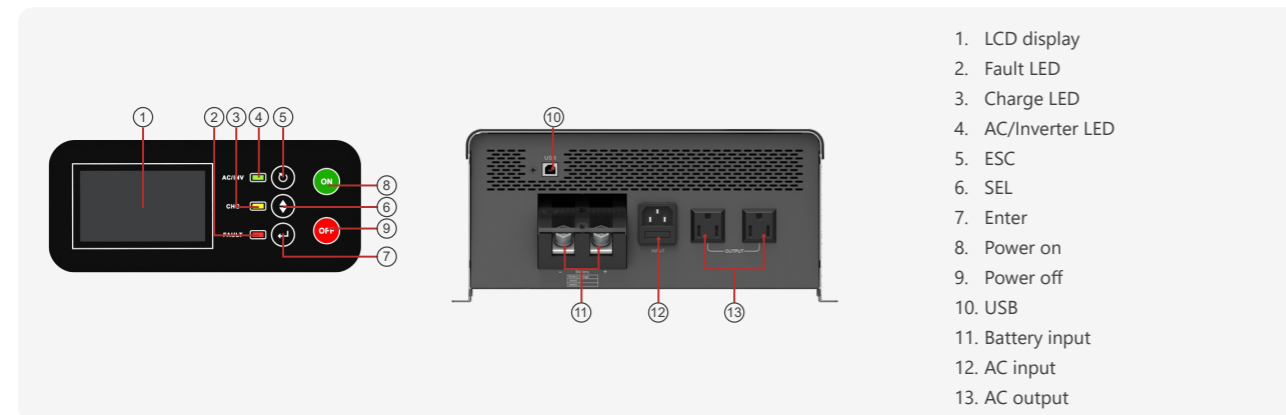
300W~1000W | 12V/24V | 10~30A | AC 120V

EP2900 LV series inverter is a cost effective, intelligent with UPS function. The comprehensive LCD offers user-configurable and easy-accessible button adjustment such as battery charge current, battery charge voltage, frequency, buzzer etc. It's perfect for the user who need a simple and economical inverter, with user-friendly installation and setting.

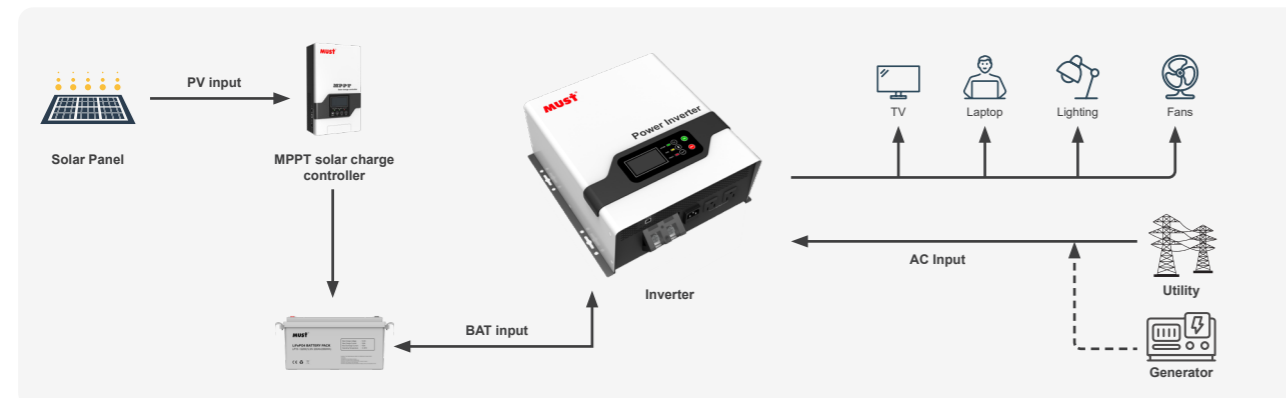


- Sine wave inverter
- Adjustable charging current from utility
- Adjustable battery charging current
- 3 steps charging algorithm
- Friendly user interface
- Multi-function display
- Overload and short-circuit protection
- Battery reverse polarity protection
- Deep discharge protection
- Automatic voltage regulation Communication with PC

### Back panel description



### Solar system connection



| MODEL   | EP29-0312 LV  | EP29-0412 LV | EP29-0512 LV | EP29-0612 LV | EP29-0812 LV | EP29-1012 LV                    | EP29-0624 LV | EP29-0824 LV | EP29-1024 LV |  |
|---|---|--------------|--------------|--------------|--------------|---------------------------------|--------------|--------------|--------------|--|
| Default Battery System Voltage  | 12VDC   |              |              |              |              | 24VDC                           |              |              |              |  |
| <b>INVERTER OUTPUT</b>  |   |              |              |              |              |                                 |              |              |              |  |
| Rated Power   | 300W  | 400W         | 500W         | 600W         | 800W         | 1000W                           | 600W         | 800W         | 1000W        |  |
| Surge Rating  | 900VA   | 1200VA       | 1500VA       | 1800VA       | 2400VA       | 3000VA                          | 1800VA       | 2400VA       | 3000VA       |  |
| Waveform  | Pure sine wave  |              |              |              |              |                                 |              |              |              |  |
| Voltage Regulation  | Battery mode: 110 or 120VAC Line mode: 95~125VAC  |              |              |              |              |                                 |              |              |              |  |
| Output Frequency  | 50Hz / 60Hz   |              |              |              |              |                                 |              |              |              |  |
| Inverter Frequency (Peak)   | >75%  |              |              |              |              |                                 | >81%         |              |              |  |
| Bypass Efficiency   | >95%  |              |              |              |              |                                 |              |              |              |  |
| Output Transfer Time  | 8ms(typical) 12ms(max)  |              |              |              |              |                                 |              |              |              |  |
| <b>AC INPUT</b>   |   |              |              |              |              |                                 |              |              |              |  |
| Voltage   | 110/120VAC  |              |              |              |              |                                 |              |              |              |  |
| Selectable Voltage Range  | 70~140VAC ±5%   |              |              |              |              |                                 |              |              |              |  |
| Low battery voltage alarm   | 70VAC ±5%   |              |              |              |              |                                 |              |              |              |  |
| Low battery voltage recover   | 75VAC ±5%   |              |              |              |              |                                 |              |              |              |  |
| High battery voltage alarm  | 140VAC ±5%  |              |              |              |              |                                 |              |              |              |  |
| High battery voltage recover  | 135VAC ±5%  |              |              |              |              |                                 |              |              |              |  |
| Low Frequency Alarm   | 45 ±5Hz   |              |              |              |              |                                 |              |              |              |  |
| Low Frequency Recover   | 46 ±5Hz   |              |              |              |              |                                 |              |              |              |  |
| High Frequency Alarm  | 65 ±5Hz   |              |              |              |              |                                 |              |              |              |  |
| High Frequency Recover  | 64 ±5Hz   |              |              |              |              |                                 |              |              |              |  |
| Nominal Input Range   | 50Hz / 60Hz ±5Hz  |              |              |              |              |                                 |              |              |              |  |
| AC Auto Restart   | YES   |              |              |              |              |                                 |              |              |              |  |
| <b>BATTERY</b>  |   |              |              |              |              |                                 |              |              |              |  |
| Minimum start voltage   | Low Battery Voltage Cutoff+0.5V   |              |              |              |              | Low Battery Voltage Cutoff+1.0V |              |              |              |  |
| Low battery voltage alarm   | Low Battery Voltage Cutoff+0.5V   |              |              |              |              | Low Battery Voltage Cutoff+1.0V |              |              |              |  |
| Low battery voltage cutoff  | 10-12.0VDC  |              |              |              |              | 20.0-24.0VDC                    |              |              |              |  |
| High battery voltage alarm  | (13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC)   |              |              |              |              |                                 |              |              |              |  |
| <b>AC CHARGE</b>  |   |              |              |              |              |                                 |              |              |              |  |
| Floating Voltage  | 13.5-14.5VDC  |              |              |              |              | 27-29VDC                        |              |              |              |  |
| Boost Voltage   | 13.8~14.5VDC  |              |              |              |              | 27.6~29VDC                      |              |              |              |  |
| Maximum Charge Current  | 300W<br>10A   | 400W<br>10A  | 500W<br>15A  | 600W<br>20A  | 800W<br>25A  | 1000W<br>30A                    | 600W<br>10A  | 800W<br>15A  | 1000W<br>15A |  |
| <b>BYPASS &amp; PROTECTION</b>  |   |              |              |              |              |                                 |              |              |              |  |
| Input Waveform  | Pure sine wave  |              |              |              |              |                                 |              |              |              |  |
| Input Frequency   | 50Hz or 60Hz  |              |              |              |              |                                 |              |              |              |  |
| Overload Protection   | >110%~125% Load fault after 60s; >125%~150% Load fault after 3s; >150% Load fault after 500ms |              |              |              |              |                                 |              |              |              |  |
| Over Temperature Protection   | ≥90°C   |              |              |              |              |                                 |              |              |              |  |
| Bypass Output Protection  | 15A 250VAC  |              |              |              |              |                                 |              |              |              |  |
| Output Circuit Protection   | YES   |              |              |              |              |                                 |              |              |              |  |
| Battery Reverse Protection  | Optional  |              |              |              |              |                                 |              |              |              |  |
| Battery Low Voltage Protection  | YES   |              |              |              |              |                                 |              |              |              |  |
| Battery High Voltage Protection   | YES   |              |              |              |              |                                 |              |              |              |  |
| Bypass Breaker Rating   | 15A   |              |              |              |              |                                 |              |              |              |  |
| Maximum Bypass Current  | 15A   |              |              |              |              |                                 |              |              |              |  |
| <b>MECHANICAL SPECIFICATION</b>   |   |              |              |              |              |                                 |              |              |              |  |
| Machine Dimension (W*H*D)(mm)   | 300.5*319*132.2   |              |              |              |              |                                 |              |              |              |  |
| Package Dimension (W*H*D)(mm)   | 391*187*325   |              |              |              |              |                                 |              |              |              |  |
| N.W(kg)   | /   |              |              |              |              |                                 |              |              |              |  |
| G.W(kg)   | /   |              |              |              |              |                                 |              |              |              |  |
| <b>GENERAL</b>  |   |              |              |              |              |                                 |              |              |              |  |
| Operating Temperature   | 0°C~40°C 0~90% relative humidity (non-condensing)   |              |              |              |              |                                 |              |              |              |  |
| Storage Temperature   | -15°C to 55°C   |              |              |              |              |                                 |              |              |              |  |
| Altitude  | ≤1000M  |              |              |              |              |                                 |              |              |              |  |
| Audible Noise   | ≤60dB   |              |              |              |              |                                 |              |              |              |  |
| Display   | LED+LCD   |              |              |              |              |                                 |              |              |              |  |
| Cooling Mode  | Fan cooling   |              |              |              |              |                                 |              |              |              |  |
| Fan Starting  | >45°C starting, <30°C Closing   |              |              |              |              |                                 |              |              |              |  |
| Communication   | USB   |              |              |              |              |                                 |              |              |              |  |
| Standard Warranty   | 2 year  |              |              |              |              |                                 |              |              |              |  |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |              |              |              |              |                                 |              |              |              |  |
| CE-LVD (EN IEC62109-1:2010, EN IEC62109-2:2011); CE-EMC+LVD (EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011) IEC60950-1:2005A+1:2009+A2:2013; EN IEC62040-1:2019 |   |              |              |              |              |                                 |              |              |              |  |

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## LOW FREQUENCY POWER INVERTER/CHARGER EP3000 LV Series

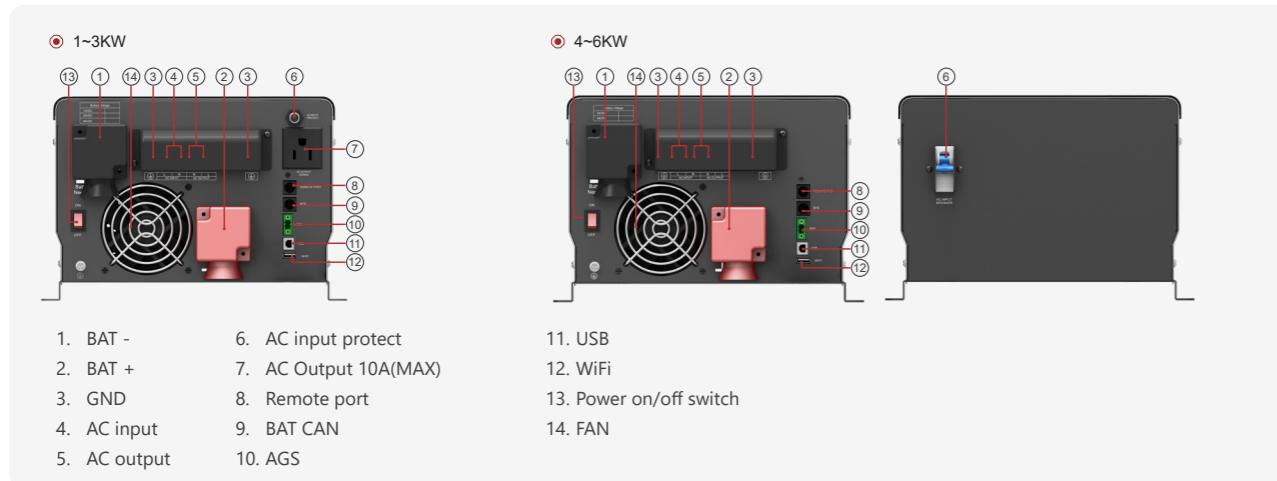
1~6KW | AC120V | WIFI | BAT-CAN

EP3000 LV series is very economical pure sine wave inverter, special in north & south america market, and AC charger from 35A to 70A .Solar/AC priority configurable . When solar priority , in case its charge current lower than inverter's charger from AC , AC will supplement to charge the batteries , to optimize charging. With low frequency transformer ,it enable the inverter to operate with all kinds of home appliances.

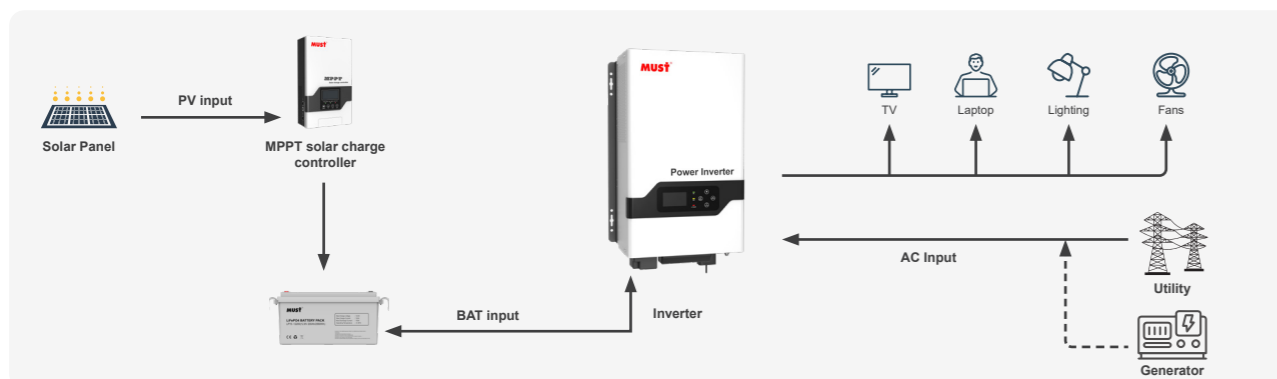


- 3 Steps charging
- MFD (multi-function display)
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 110V/115V/120V
- Inverter frequency can be set to 50/60Hz
- Set utility charging on/off switch
- Acid or Lithium Select
- WIFI monitoring function (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



### Solar system connection



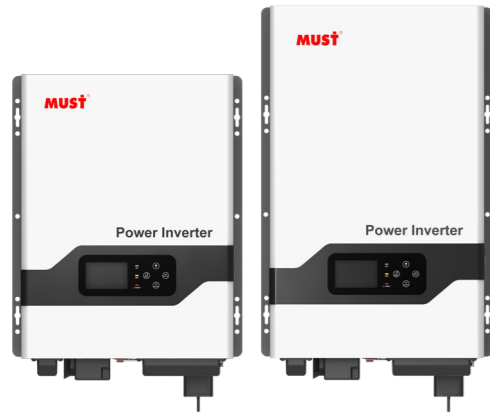
| MODEL                                | EP30-1012 LV  | EP30-1024 LV | EP30-1512 LV | EP30-1524 LV | EP30-2012 LV | EP30-2024 LV | EP30-3024 LV | EP30-3048 LV | EP30-4024 LV | EP30-4048 LV | EP30-5048 LV | EP30-6048 LV |
|--------------------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Nominal Battery System Voltage       | 12VDC   | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 24VDC        | 48VDC        | 24VDC        | 48VDC        | 48VDC        | 48VDC        |
| <b>INVERTER OUTPUT</b>               |   |              |              |              |              |              |              |              |              |              |              |              |
| Reted Power                          | 1.0KW   |              | 1.5KW        |              | 2KW          |              | 3KW          |              | 4KW          |              | 5KW          | 6KW          |
| Surge Rating                         | 3000VA  |              | 4500VA       |              | 6000VA       |              | 9000VA       |              | 12000VA      |              | 15000VA      | 18000VA      |
| Capable Of Starting Electric Motor   |   |              | 1HP          |              |              |              | 2HP          |              |              |              | 3HP          |              |
| Waveform                             | Pure sine wave/ same as input (bypass mode)   |              |              |              |              |              |              |              |              |              |              |              |
| Nominal Output Voltage RMS           | 110V/115V/120VAC ±10% (RMS)   |              |              |              |              |              |              |              |              |              |              |              |
| Output Frequency                     | 50Hz / 60Hz±0.3 Hz  |              |              |              |              |              |              |              |              |              |              |              |
| Inverter Efficiency(Peak)            | >88%  |              |              |              |              |              |              |              |              |              |              |              |
| Line Mode Efficiency                 | >95%  |              |              |              |              |              |              |              |              |              |              |              |
| Power Factor                         | 1.0   |              |              |              |              |              |              |              |              |              |              |              |
| Typical Transfer Time                | 10ms(max)   |              |              |              |              |              |              |              |              |              |              |              |
| Overload                             | 100% < Load < 110% (alarm 5min then stop output and fault code 07)<br>110% < Load < 125% (alarm 60s then stop output and fault code 07)<br>Load > 125% (alarm 10s then stop output and fault code 07) |              |              |              |              |              |              |              |              |              |              |              |
| <b>AC INPUT</b>                      |   |              |              |              |              |              |              |              |              |              |              |              |
| Voltage                              | 120VAC  |              |              |              |              |              |              |              |              |              |              |              |
| Selectable Voltage Range             | 75~135VAC(For Personal Computers)   |              |              |              |              |              |              |              |              |              |              |              |
| Frequency Range                      | 50Hz/60Hz (Auto sensing) 40~80Hz  |              |              |              |              |              |              |              |              |              |              |              |
| <b>BATTERY</b>                       |   |              |              |              |              |              |              |              |              |              |              |              |
| Minimum Start Voltage                | (10V/ 10.5V/ 11V/ 11.5V/ 12V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)  |              |              |              |              |              |              |              |              |              |              |              |
| Low battery voltage alarm            | (10V/ 10.5V/ 11V/ 11.5V/ 12V )+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |              |              |              |              |              |              |
| Low battery voltage cut off          | 10V/ 10.5V/ 11V/ 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |              |              |              |              |              |              |
| High battery voltage alarm           | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |              |              |              |              |              |              |
| High battery voltage recover         | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)   |              |              |              |              |              |              |              |              |              |              |              |
| Energy saving mode                   | Load ≤50±20W(120V)  |              |              |              |              |              |              |              |              |              |              |              |
| <b>CHARGER</b>                       |   |              |              |              |              |              |              |              |              |              |              |              |
| Output Voltage                       | Depends on battery type   |              |              |              |              |              |              |              |              |              |              |              |
| Charger AC Input Breaker Rating      | 1K/30A  |              |              | 3K/40A       |              |              | 4-6KW/63A    |              |              |              |              |              |
| Overcharge Protection S.D.           | 15.7VDC for 12VDC mode (*2 for 24VDC mode, *4 for 48VDC mode)   |              |              |              |              |              |              |              |              |              |              |              |
| Maximum Charge Current               | 30A   | 20A          | 45A          | 25A          | 60A          | 30A          | 40A          | 20A          | 60A          | 30A          | 35A          | 40A          |
| <b>BYPASS &amp; PROTECTION</b>       |   |              |              |              |              |              |              |              |              |              |              |              |
| Input Voltage Waveform               | Sine wave (grid or generator)   |              |              |              |              |              |              |              |              |              |              |              |
| Nominal Input Frequency              | 50Hz or 60Hz  |              |              |              |              |              |              |              |              |              |              |              |
| Overload Protection (SMPS Load)      | Circuit breaker   |              |              |              |              |              |              |              |              |              |              |              |
| Output Short Circuit Protection      | Circuit breaker   |              |              |              |              |              |              |              |              |              |              |              |
| AC Input Breaker                     | 30A   |              |              | 40A          |              |              | 50A / 63A    |              |              |              |              |              |
| <b>MECHANICAL SPECIFICATIONS</b>     |   |              |              |              |              |              |              |              |              |              |              |              |
| Mounting                             | Wall Mount  |              |              |              |              |              |              |              |              |              |              |              |
| Machine Dimension (W*H*D)(mm)        | 303*493*200   |              |              |              |              |              | 305*531*202  |              |              |              |              |              |
| Package Dimension (W*H*D)(mm)        | 615*319*400   |              |              |              |              |              | 686*319*400  |              |              |              |              |              |
| N.W(kg)                              | /   |              |              |              |              |              |              |              |              |              |              |              |
| G.W(kg)                              | /   |              |              |              |              |              |              |              |              |              |              |              |
| <b>OTHER</b>                         |   |              |              |              |              |              |              |              |              |              |              |              |
| Operation Temperature Range          | 0°C to 40°C   |              |              |              |              |              |              |              |              |              |              |              |
| Storage Temperature                  | -15°C to 60°C   |              |              |              |              |              |              |              |              |              |              |              |
| Audible Noise                        | 60dB MAX  |              |              |              |              |              |              |              |              |              |              |              |
| Display                              | LED+LCD   |              |              |              |              |              |              |              |              |              |              |              |
| Standard Warranty                    | 2 year  |              |              |              |              |              |              |              |              |              |              |              |
| <b>CERTIFICATION &amp; STANDARDS</b> |   |              |              |              |              |              |              |              |              |              |              |              |
| /                                    |   |              |              |              |              |              |              |              |              |              |              |              |

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## LOW FREQUENCY SPLIT PHASE POWER INVERTER EP3300 TLV Series

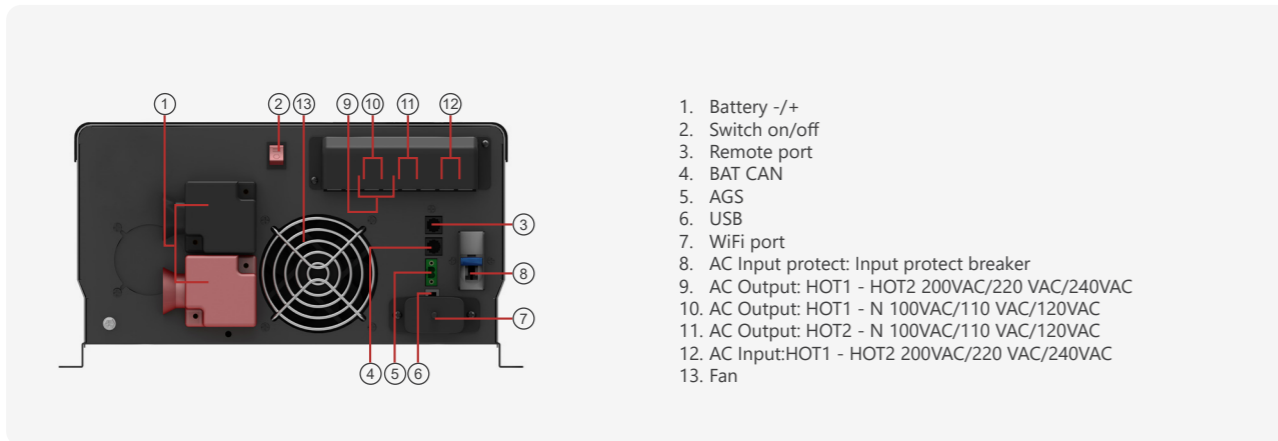
1~6KW | AC110V/220V | WIFI | BAT-CAN

This split phase inverter EP3300 TLV series, capacity from 1KW-6KW, DC 12V/24V/48V, it's applicable to 110VAC/120VAC markets demands, which matches AC 110VAC/120V single phase, or two phase 220V/240V; In LCD display, you can set output voltage, frequency, charging voltage, charging current to design best use based on different loads applications; meanwhile, you can also connect extra solar charge controller to build a solar home system, take use of sunshine freely and save electricity bills.

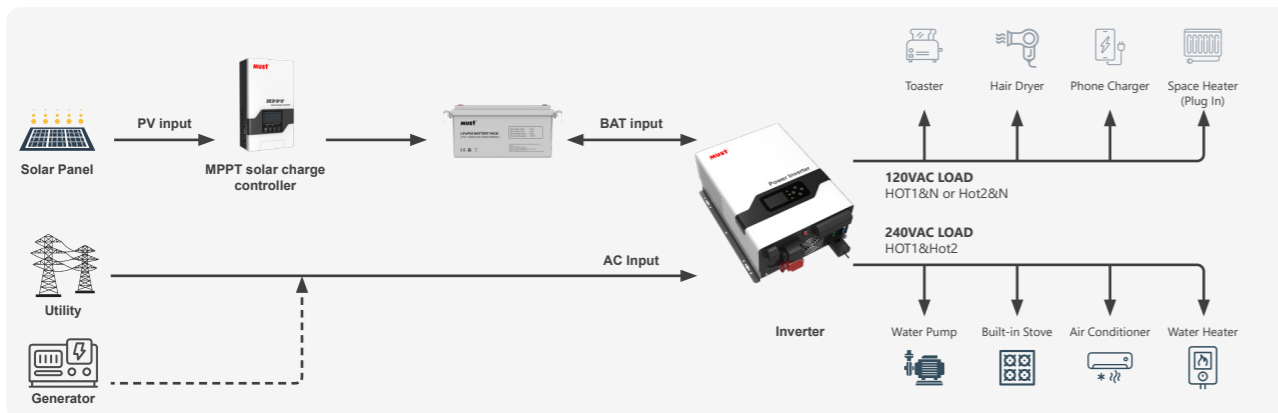


- Pure sine wave output
- 3 steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Power-save mode
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Inverter voltage can be set to 100/110/120V
- Inverter frequency can be set to 50/60Hz
- Acid or Lithium select
- WIFI monitoring function (optional)
- With BMS lithium battery communication function (CAN port)

### Back panel description



### Solar system connection



| MODEL                              | EP33-1012 TLV  | EP33-1024 TLV | EP33-1512 TLV | EP33-1524 TLV | EP33-2012 TLV | EP33-2024 TLV | EP33-3024 TLV | EP33-3048 TLV | EP33-4024 TLV | EP33-4048 TLV | EP33-5048 TLV | EP33-6048 TLV |
|------------------------------------|--|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>INVERTER OUTPUT</b>             |  |               |               |               |               |               |               |               |               |               |               |               |
| Rated power                        | 1KW  | 1.5KW         | 2KW           | 3KW           | 4KW           | 5KW           | 6KW           |               |               |               |               |               |
| Surge rating                       | 3000VA   | 4500VA        | 6000VA        | 9000VA        | 12000VA       | 15000VA       | 18000VA       |               |               |               |               |               |
| Capable of starting electric motor | 1P   | 1P            | 1.5P          | 1.5P          | 2P            | 3P            |               |               |               |               |               |               |
| Power factor                       | 1  |               |               |               |               |               |               |               |               |               |               |               |
| Wave form                          | Pure sine wave / Same as input wave form (bypass mode) |               |               |               |               |               |               |               |               |               |               |               |
| Output voltage RMS                 | 100V / 110V / 120VAC (200V / 220V / 240VAC) ±10%       |               |               |               |               |               |               |               |               |               |               |               |
| Output frequency                   | 50Hz or 60Hz (±0.3Hz) (can be set)                     |               |               |               |               |               |               |               |               |               |               |               |
| Overload protection                | Breaker + software protection                          |               |               |               |               |               |               |               |               |               |               |               |
| Output short circuit               | Breaker + software protection                          |               |               |               |               |               |               |               |               |               |               |               |
| Inverter efficiency (peak)         | >85%   |               |               |               |               |               |               |               |               |               |               |               |

Overload

- 100% < Load < 110% (alarm 5min then stop output and fault code 07)
- 110% < Load < 125% (alarm 60s then stop output and fault code 07)
- Load > 125% (alarm 10s then stop output and fault code 07)

| <b>BATTERY</b>               |  |               |       |
|------------------------------|--|---------------|-------|
| Battery voltage              | 12VDC / 24VDC  | 24VDC / 48VDC | 48VDC |
| Minimum start voltage        | (10V/ 10.5V/ 11V/ 11.5V/ 12V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC) |               |       |
| Low battery voltage cut off  | 10V/ 10.5V/ 11V/ 11.5V/ 12V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)        |               |       |
| Low battery voltage alarm    | (10V/ 10.5V/ 11V/ 11.5V/ 12V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC) |               |       |
| High battery voltage alarm   | (12-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)                      |               |       |
| High Battery Voltage Recover | (12-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)                    |               |       |
| Save mode                    | Load ≤50±20W(120V)/100±20W(220V)   |               |       |

| <b>AC INPUT MODE</b>   |                            |
|------------------------|----------------------------|
| Input waveform         | Pure sine wave             |
| Nominal input voltage  | 200Vac / 220Vac / 240Vac   |
| Max input voltage      | 270Vac MAX                 |
| Input frequency        | 50Hz / 60Hz (auto sensing) |
| Efficiency (AC mode)   | >95% (load, full battery)  |
| Transfer time AC to DC | 15ms(max)                  |
| Transfer time DC to AC | 15ms(max)                  |

| <b>CHARGE MODE</b> |  |     |     |     |     |     |     |
|--------------------|--|-----|-----|-----|-----|-----|-----|
| Boost voltage      | 14.1V(Default) Range of adjustment 12-14.5V / *2 for 24VDC / *4 for 48VDC (Regulation step 0.1V) |     |     |     |     |     |     |
| Float voltage      | 13.5V(Default) Range of adjustment 12-14.5V / *2 for 24VDC / *4 for 48VDC (Regulation step 0.1V) |     |     |     |     |     |     |
| 12V                | 30A  | 45A | 60A | /   | /   | /   | /   |
| 24V                | 20A  | 25A | 30A | 40A | 60A | /   | /   |
| 48V                | /  | /   | /   | 20A | 30A | 35A | 40A |

Min charge current 10A. Change by every 5A

| <b>MECHANICAL SPECIFICATIONS</b> |  |
|----------------------------------|--|
| Machine Dimension (W*H*D)(mm)    | 359.2*443*188                              |
| Package Dimension (W*H*D)(mm)    | 598*308*457                                |
| N.W(kg)                          | /  |
| G.W(kg)                          | /  |
| Standard Warranty                | 1 year (standard), 2 years optional (IP20) |

### CERTIFICATION & STANDARDS

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## SPLIT-PHASE HYBRID SOLAR INVERTER PH1100 US Series



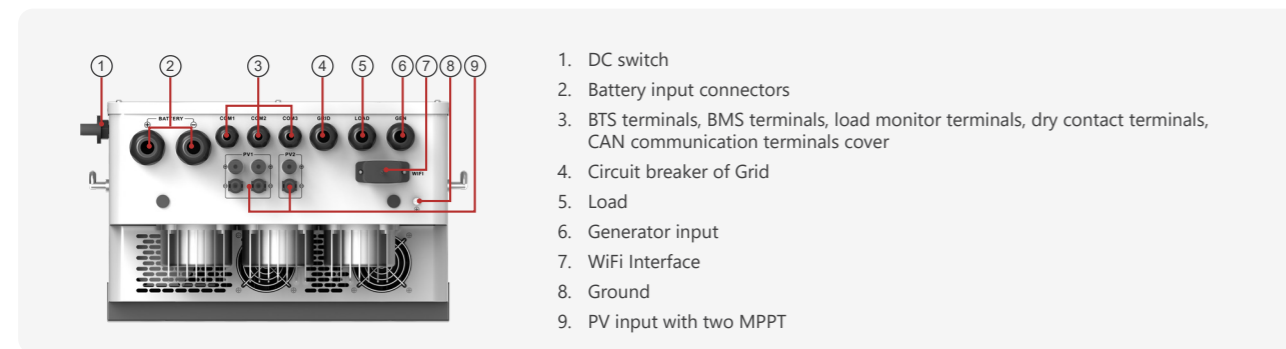
5~10KW | Split Phase | AC 120V/240V | IP66

PH1100 US is brand new split 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 lithium and lead-acid batteries, provides a stable 380V/400V three-phase output, and features remote monitoring and multiple safety protections. It is widely used in home energy storage, small commercial energy storage, smart microgrids, and off-grid power supply in remote areas.

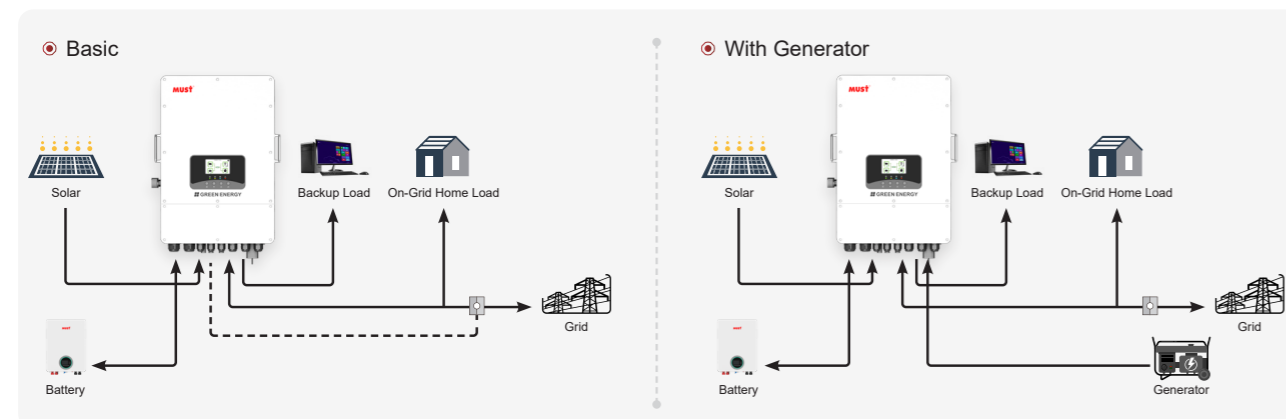


- 100% unbalanced output, each phase max. output up to 50% rated power
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 220A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation design
- IP66 water-proof and dust-proof
- "Time of use" function: a maximum of 6 time segments can be set
- Wifi monitoring

### Back panel description



### Solar system connection



| MODEL  | PH11-5KL2-US   | PH11-6KL2-US | PH11-8KL2-US | PH11-10KL2-US |
|--|--|--------------|--------------|---------------|
| Rated power  | 5000W  | 6000W        | 8000W        | 10000W        |
| <b>BATTERY INPUT DATA</b>                            |  |              |              |               |
| 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  | 6000W        | 8000W        | 10000W        |
| Maximum charging/discharging current                 | 120A   | 150A         | 190A         | 220A          |
| <b>PV STRING INPUT DATA</b>                          |  |              |              |               |
| Max. DC Input Power                                  | 6500W  | 7800W        | 10400W       | 13000W        |
| Maximum DC voltage                                   | 600V   |              |              |               |
| Start-up Voltage                                     | 125V   |              |              |               |
| Full Load DC Voltage Range                           | 150~540V   |              |              |               |
| Rated PV Input Voltage                               | 370V   |              |              |               |
| Minimum voltage for grid connection                  | 150V   |              |              |               |
| Enter high voltage error recovery point              | 600V   |              |              |               |
| Maximum input current                                | 16A/16A  | 16A/16A      | 32A/16A      | 32A/16A       |
| No.of MPP Trackers                                   | 2  | 2            | 2            | 2             |
| Input terminal type                                  | H4/MC4   |              |              |               |
| <b>AC INPUT/OUTPUT DATA</b>                          |  |              |              |               |
| Rated AC Input/Output Active Power                   | 5000W  | 6000W        | 8000W        | 10000W        |
| Max. AC Input/Output Apparent Power                  | 5500VA   | 6600VA       | 8800VA       | 11000VA       |
| Rated AC Input/Output Current                        | 20.8A  | 25A          | 33.3A        | 41.6A         |
| Max. AC Input/Output Current                         | 22.9A  | 27.5A        | 36.6A        | 45.8A         |
| Max. Continuous AC Passthrough (grid to load)        | 31.2A  | 37.5A        | 50A          | 62.5A         |
| Rated Input/Output Voltage/Range                     | 120V/240V:208V   |              |              |               |
| Rated Input/Output Grid Frequency/Range              | 60Hz±5Hz/ 50Hz±5Hz   |              |              |               |
| Rated output power factor                            | 1  |              |              |               |
| Power Factor Adjustment Range                        | 0.8 leading to 0.8 lagging   |              |              |               |
| Total Harmonics Current Distortion (THDi)            | <3%  |              |              |               |
| Grid Type  | Split Phase  |              |              |               |
| DC Current Injection                                 | <0.5%  |              |              |               |
| <b>EFFICIENCY</b>                                    |  |              |              |               |
| Max. Efficiency                                      | 97.5%  |              |              |               |
| Euro Efficiency                                      | 96.5%  |              |              |               |
| MPPT Efficiency                                      | 99.5%  |              |              |               |
| <b>PROTECTION</b>                                    |  |              |              |               |
| Integrated   | Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |              |              |               |
| Surge Protection                                     | AC Type III  |              |              |               |
| Overvoltage Category                                 | AC Type III  |              |              |               |
| <b>GENERAL DATA</b>                                  |  |              |              |               |
| Operating Temperature Range (°C)                     | -25°C~+60°C, >45°C Derating  |              |              |               |
| Cooling  | Fan cooling  |              |              |               |
| Noise (dB)   | ≤50dB  |              |              |               |
| Altitude   | 3000m, >3000mDerating  |              |              |               |
| Topology   | Battery-side transformer isolation, PV-side non-transformer isolation  |              |              |               |
| Communication  | USB/ WiFi/ Ethernet(optional)  |              |              |               |
| Display  | 4.3-inch touch screen  |              |              |               |
| Protection Degree                                    | IP66   |              |              |               |
| Installation Style                                   | Wall-mounted   |              |              |               |
| <b>MECHANICAL SPECIFICATIONS</b>                     |  |              |              |               |
| Machine Dimension (W*H*D)(mm)                        | 446*692*260 (excluding connectors and racks)   |              |              |               |
| Package Dimension (W*H*D)(mm)                        | 816*404*567  |              |              |               |
| N.W(kg)  | 38<br>(Excluding Connectors and Brackets)  |              |              |               |
| G.W(kg)  | 42   |              |              |               |
| Warranty   | 5 Year<br>the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy   |              |              |               |
| <b>CERTIFICATION &amp; STANDARDS</b>                 |  |              |              |               |
| NBT32004-2013  |  |              |              |               |

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## HYBRID SOLAR INVERTER PH1100 US-G2 Series



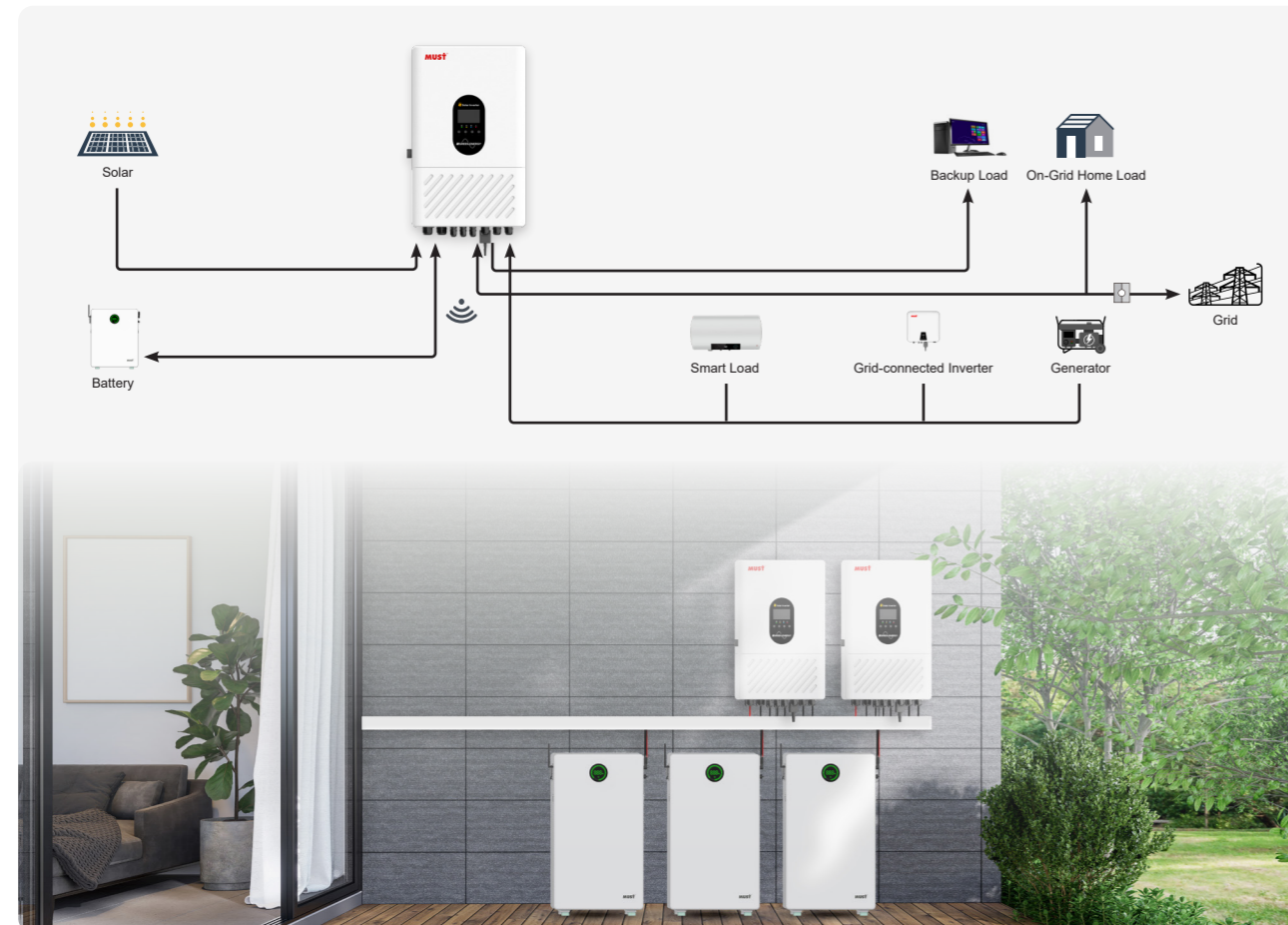
5~12KW | Split Phase | AC 120V/240V | IP66

PH1100 US-G2 is brand new split phase hybrid inverter with low battery voltage 48V, ensuring system safe and reliable. With compact design and high-power density, this series supports 1.5 DC/AC ratio, saving device investment. It supports lithium and lead-acid batteries, provides a stable 120V/240V split phase output, and features remote monitoring and multiple safety protections. It is widely used in home energy storage, small commercial energy storage, smart microgrids, and off-grid power supply in remote areas.



- 120V/240V split-phase pure sine wave inverter
- 100% unbalanced output
- Max. 10 pcs parallel for on-grid and off-grid operation
- Support storing energy from diesel generator
- IP66 water-proof and dust-proof
- AC couple to retrofit existing solar system
- Peak shifting and valley filling applications can be carried out according to time
- Wifi monitoring
- Multiple operating modes available: household load, battery storage, grid-connected power supply, etc.
- Settable anti-back flow function

### Solar system connection



| MODEL  | PH11-5KL2-US-G2   | PH11-6KL2-US-G2 | PH11-7.6KL2-US-G2 | PH11-8KL2-US-G2 | PH11-10KL2-US-G2 | PH11-12KL2-US-G2 |
|--|---|-----------------|-------------------|-----------------|------------------|------------------|
| Rated power  | 5000W   | 6000W           | 7600W             | 8000W           | 10000W           | 12000W           |
| <b>BATTERY INPUT DATA</b>  |   |                 |                   |                 |                  |                  |
| Battery type   | Lead-acid battery / Lithium battery   |                 |                   |                 |                  |                  |
| Battery voltage  | 48V   |                 |                   |                 |                  |                  |
| Battery voltage range  | 40~64V  |                 |                   |                 |                  |                  |
| Charging curve   | 4-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   | 6000W           | 7600W             | 8000W           | 10000W           | 12000W           |
| Maximum charging/discharging current   | 120A  | 135A            | 190A              | 190A            | 220A             | 250A             |
| <b>PV STRING INPUT DATA</b>  |   |                 |                   |                 |                  |                  |
| Max. DC Input Power  | 7500W   | 9000W           | 11400W            | 12000W          | 15000W           | 18000W           |
| Maximum DC Input Power of each   | 7500W   | 9000W           | 11400W            | 12000W          | 12000W           | 12000W           |
| Maximum DC voltage   | 600V  |                 |                   |                 |                  |                  |
| Start-up Voltage   | 125V  |                 |                   |                 |                  |                  |
| Full Load DC Voltage Range   | 187~540V  | 225~540V        | 220~540V          | 230~540V        | 192~540V         | 230~540V         |
| Rated PV Input Voltage   | 370V  |                 |                   |                 |                  |                  |
| PV Maximum Input Current   | 20A+20A   |                 | 26A+26A           |                 | 26A+26A+26A      |                  |
| PV Maximum Short Circuit Current   | 44A+44A   |                 | 44A+44A           |                 | 44A+44A+44A      |                  |
| MPPT quantity  | 2   |                 | 2                 |                 | 2                |                  |
| Number Of MPPT Strings Per Channel   |   |                 | 2+2               |                 | 2+2+2            |                  |
| <b>AC INPUT/OUTPUT DATA</b>  |   |                 |                   |                 |                  |                  |
| Rated AC Input/output active power   | 5000W   | 6000W           | 7600W             | 8000W           | 10000W           | 12000W           |
| Max. AC Input/output apparent power  | 5500VA  | 6600VA          | 8360VA            | 8800VA          | 11000VA          | 13200VA          |
| Rated AC Input/output current  | 20.9A   | 25A             | 31.7A             | 33.4A           | 41.7A            | 50A              |
| Max. AC Input/output current   | 22.9A   | 27.5A           | 34.8A             | 36.7A           | 45.8A            | 55A              |
| Max. Continuous AC passthrough (grid to load)                                  | 35A   | 40A             | 50A               | 50A             | 60A              | 60A              |
| Rated Input/output voltage/ range  | 120V/240V:208V  |                 |                   |                 |                  |                  |
| Rated Input/output grid frequency/ range                                       | 60Hz±5Hz/ 50Hz±5Hz  |                 |                   |                 |                  |                  |
| Rated output power factor  | 1   |                 |                   |                 |                  |                  |
| Power factor adjustment range  | 0.8 leading to 0.8 lagging  |                 |                   |                 |                  |                  |
| Total Harmonics Current Distortion (THDi)                                      | <3%   |                 |                   |                 |                  |                  |
| Grid Type  | Split Phase   |                 |                   |                 |                  |                  |
| DC Current Injection   | <0.5%   |                 |                   |                 |                  |                  |
| <b>PROTECTION</b>  |   |                 |                   |                 |                  |                  |
| Integrated   | Islanding protection, Output overcurrent protection, Output overvoltage protection, PV input polarity reverse protection, DC Switch (optional), Ground Fault Sensing, leakage current monitoring protection |                 |                   |                 |                  |                  |
| Surge Protection   | DC Type III/ AC Type III  |                 |                   |                 |                  |                  |
| Overvoltage Category   | DC Type II/ AC Type III   |                 |                   |                 |                  |                  |
| <b>GENERAL DATA</b>  |   |                 |                   |                 |                  |                  |
| Operating Temperature Range (°C)   | -25°C~+60°C, >45°C Derating   |                 |                   |                 |                  |                  |
| Cooling  | Intelligence Fan  |                 |                   |                 |                  |                  |
| Noise (dB)   | ≤52dB   |                 |                   |                 |                  |                  |
| Altitude   | 3000m, >3000m Derating  |                 |                   |                 |                  |                  |
| Topology   | Battery-side transformer isolation, PV-side non-transformer isolation   |                 |                   |                 |                  |                  |
| Communication  | USB/ WiFi/ Ethernet(optional)   |                 |                   |                 |                  |                  |
| Display  | 4.3-inch touch screen   |                 |                   |                 |                  |                  |
| Protection Degree  | IP66  |                 |                   |                 |                  |                  |
| Installation Style   | Wall-mounted  |                 |                   |                 |                  |                  |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |                 |                   |                 |                  |                  |
| Machine Dimension (W*H*D)(mm)  | 482*770*288 (excluding connectors and racks)  |                 |                   |                 |                  |                  |
| Package Dimension (W*H*D)(mm)  | 816*404*567   |                 |                   |                 |                  |                  |
| N.W(kg)  | 38  |                 |                   |                 |                  |                  |
| G.W(kg)  | 42  |                 |                   |                 |                  |                  |
| Warranty   | 5 year<br>(the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy)  |                 |                   |                 |                  |                  |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |                 |                   |                 |                  |                  |
| Rohs; CE-EMC; CE-LVD (62109-1/-2); INMETRO(Brazil); NBT32004-2013; UL1741; FCC |   |                 |                   |                 |                  |                  |

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## HYBRID SOLAR INVERTER PH1100 LV Series

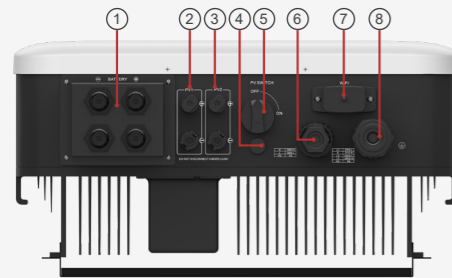
3.6~4KW | Single Phase | 120VAC | IP66

This is a flexible and intelligent energy storage solar inverter with a wide range of MPPT Voltage. Combining functions of off grid and on grid. This hybrid solar inverter can power all kinds of appliances in home or office, and can also be used in power stations.



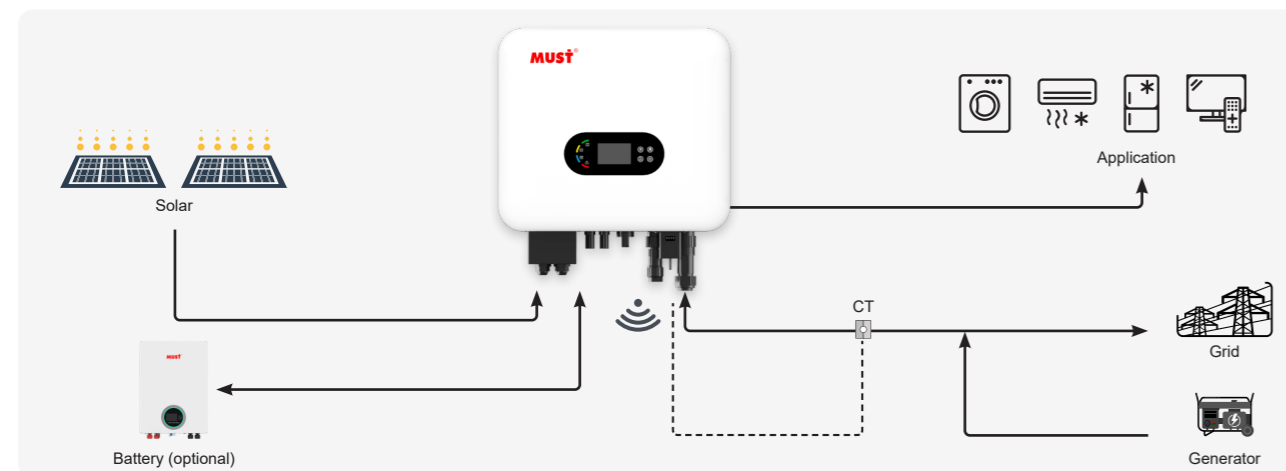
- Multiple operation modes: Grid-tie, off grid with storage backup
- IP66 water-proof and dust-proof
- MPPT voltage range 120-500V
- Support LCD display & Smart LCD setting
- Available Export control CT sensor function
- Multiple communications: RS485, GPRS and wifi etc
- Full protection function: Over-voltage, over-frequency, over-current, over-temperature, and AC short-circuit automatic protection
- Intelligent BMS battery management function
- Fanless low-noise design
- Wifi monitoring

### Back panel description



1. Battery input terminals and cover
2. PV1 input terminals
3. PV2 input terminals
4. Breather valve
5. PV input switch
6. BTS terminals, BMS terminals, load monitor terminals, dry contact terminals, CAN communication terminals and cover
7. Wi-Fi com module
8. AC input & output terminals and cover

### Solar system connection



| MODEL  | PH11-3648 LV  | PH11-4048 LV |
|--|---|--------------|
| Rated Power  | 3600W   | 4000W        |
| Nominal Battery System Voltage   | 48V   |              |
| <b>PV INPUT(DC)</b>  |   |              |
| Maximum recommended DC power   | 4700W   | 5200W        |
| Nominal DC operating voltage   | 360V  |              |
| Maximum DC voltage   | 500V  |              |
| MPPT voltage range   | 120V~500V   |              |
| Maximum input current  | 15A / 15A   |              |
| No. of MPP tracker   | 2   |              |
| Strings per MPP tracker  | 1   |              |
| <b>INVERTER INPUT/ OUTPUT(AC)</b>  |   |              |
| Nominal AC input/ output power   | 3600W   | 4000W        |
| Nominal input/ output voltage; range   | 110/120/130V; 90~140V                                 |              |
| AC grid frequency; range   | 50/60Hz; 45~55/55-65Hz                                |              |
| Nominal input/ output current  | 30A   | 34A          |
| Maximum input/ output current  | 33A   | 36A          |
| Inrush current (spike/duration)  | 72A/5.2us   |              |
| Total harmonic distortion i(THDi)  | <3%   |              |
| Power factor at rated power  | 1   |              |
| Displacement power factor  | 0.8leading ~ 0.8lagging                               |              |
| Grid type  | Single phase  |              |
| <b>BATTERY MODE OUTPUT(AC)</b>   |   |              |
| Output Rated Power   | 3600W   | 4000W        |
| Nominal output voltage; accuracy range   | 120±1%  |              |
| Output frequency; accuracy range   | 50/60Hz (optional)±0.2%                               |              |
| Output rated current   | 30A   | 34A          |
| Output waveform  | Pure sine wave  |              |
| Peak power   | 5400W,10s   | 6000W,10s    |
| Total harmonic distortion v (linear load)  | <3%   |              |
| <b>BATTERY &amp; CHARGER</b>   |   |              |
| Battery type   | Lead-acid battery / Lithium battery                   |              |
| Battery voltage  | 48V   |              |
| Battery voltage range  | 40~60V  |              |
| Charging curve   | 4-stage adaptive with maintenance                     |              |
| Protection   | Over-current protection / Over-temperature protection |              |
| Maximum charging power   | 3600W   | 4000W        |
| Maximum charging current   | 75A   | 85A          |
| <b>EFFICIENCY</b>  |   |              |
| Maximum efficiency   | 97.1%   |              |
| Euro-efficiency  | 96.5%   |              |
| MPPT efficiency  | 99.8%   |              |
| <b>PROTECTION DEVICES</b>  |   |              |
| Islanding protection, Output overcurrent protection, Output overvoltage protection, DC switch rating for each MPPT, Grid monitoring, Output over current protection, Grid overvoltage protection-varistor, Integrated all-pole sensitive leakage current, ISO monitoring, over temperature protection. |   |              |
| <b>MECHANICAL SPECIFICATIONS</b>   |   |              |
| Machine Dimension (W*H*D)(mm)  | 420*480*215   |              |
| Package Dimension (W*H*D)(mm)  | 610*324*595   |              |
| N.W(kg)  | 30  |              |
| G.W(kg)  | 32  |              |
| <b>GENERAL</b>   |   |              |
| DC connection  | H4 / MC4  |              |
| AC connection  | Terminal Block  |              |
| Display  | LED+LCD   |              |
| Communication interfaces   | Wi-Fi / USB / GPRS / RS485                            |              |
| Ingress protection rating  | IP66  |              |
| Humidity   | 0~95% RH (No condensing)                              |              |
| Operating temperature range  | -25°C+60°C With derating above 45°C                   |              |
| Cooling concept  | Natural   |              |
| Altitude   | <3000m  |              |
| Standard Warranty  | 5 year  |              |
| <b>CERTIFICATION &amp; STANDARDS</b>   |   |              |
| CE-EMC+LVD (EN6100-6-3: 2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011); CE-LVD(EN62477-1:2022) IEC60529; EN50549-1:2019; Poland Type A, (NC RfG:2016, PSE:2018, PTPIREE:2021) C10/C11; UNE217001-2020; UNE217002-2020, NTS-631:2021 (Type A); G98+G99                                   |   |              |

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## AC-COUPLED ENERGY STORAGE INVERTER PH1600 LV Series

3~4KW | Single Phase | 120VAC

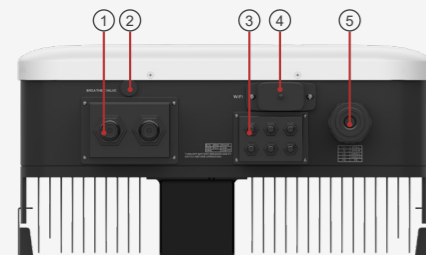


The PH1600 LV Series is designed for retrofitting PV systems, including power classes ranging from 3kw to 4kw. It can be installed with existing PV inverters, forming an AC coupling system. Capable of being grid-interactive, it allows users to store surplus power and sell it back to the grid when demand peaks and the price of electricity is at its highest. It runs reliably under even the most extreme conditions with metal aluminium housing with IP66 protection.



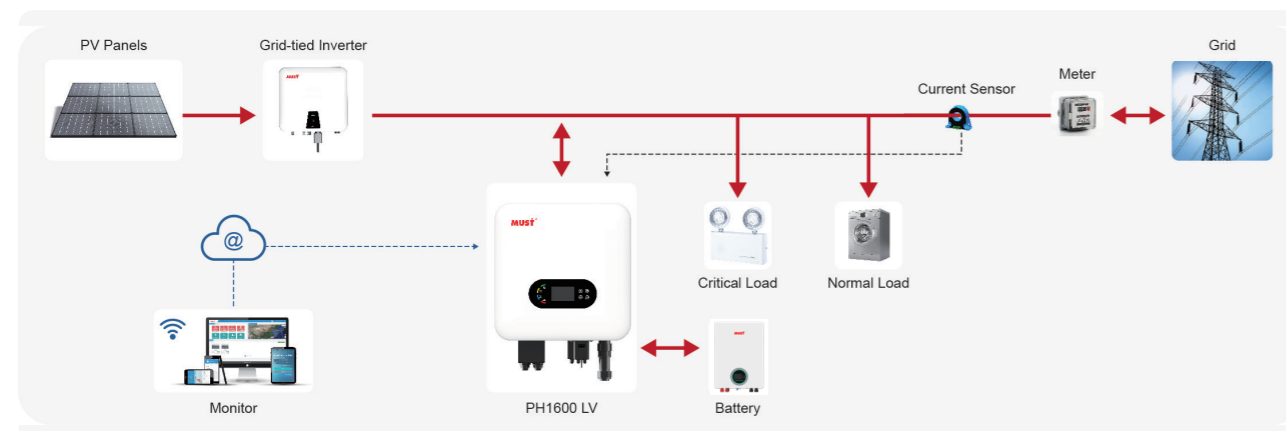
- LCD+LED – user friendly interface
- IP66 design for outdoor
- Compatible with other brands of inverter
- Various work mode for different application scenarios
- Natural cooling without external fan
- BMS Function
- Wifi monitoring
- UPS level switching time <10 ms
- Retrofit any on-grid systems to be able to run battery

### Back panel description



1. Battery input terminals and cover
2. Breather valve
3. BTS terminals, BMS terminals, load monitor terminals, dry contact terminals, CAN communication terminals, USB terminal and cover
4. Wi-Fi commodule
5. AC output terminals and cover

### Solar system connection



| MODEL   | PH16-3048 LV  | PH16-3548 LV | PH16-4048 LV |
|---|---|--------------|--------------|
| Rated Power   | 3000W   | 3500W        | 4000W        |
| Nominal Battery System Voltage                              | 48V   | 48V          | 48V          |
| <b>INVERTER OUTPUT(AC)</b>                                  |   |              |              |
| Nominal AC output power                                     | 3000W   | 3500W        | 4000W        |
| Nominal output voltage range                                | 110/120,90~140 ±5VAC                                  |              |              |
| AC grid frequency range                                     | 60Hz; 55-65Hz   |              |              |
| Nominal output current                                      | 25A   | 29.1A        | 33.3A        |
| Maximum output current                                      | 36.36A  |              |              |
| Inrush current (spike/duration)                             | 57.5A/5.2us   |              |              |
| Total harmonic distortion i(THDi) @Nominal Output           | <3%   |              |              |
| Power factor at rated power                                 | ≈1  |              |              |
| Displacement power factor                                   | Adjustable from 0.8 leading to 0.8 lagging            |              |              |
| Grid type   | Single phase  |              |              |
| <b>BATTERY MODE OUTPUT(AC)</b>                              |   |              |              |
| Output Rated Power  | 3000W   | 3500W        | 4000W        |
| Nominal output voltage; accuracy range                      | 120±1%  |              |              |
| Output frequency; accuracy range                            | 60Hz±0.2%   |              |              |
| Output rated current  | 25A   | 29.1A        | 33.3A        |
| Output waveform   | Pure sine wave  |              |              |
| Peak power  | 3000VA, 10S   | 3500VA, 10S  | 4000VA, 10S  |
| Total harmonic distortion v (linear load)                   | <3%   |              |              |
| <b>BATTERY &amp; CHARGER</b>                                |   |              |              |
| Battery type  | Lead-acid battery / Lithium battery                   |              |              |
| Battery voltage   | 48V ±0.3  |              |              |
| Battery voltage range                                       | 40~60V ±0.3   |              |              |
| Charging curve  | 3-stage adaptive with maintenance                     |              |              |
| Protection  | Over-current protection / Over-temperature protection |              |              |
| Maximum charging power                                      | 3000W   | 3500W        | 4000W        |
| Maximum charging current                                    | 80A   |              |              |
| <b>EFFICIENCY</b>   |   |              |              |
| Battery discharge (full load)                               | ≥92%  |              |              |
| Maximum battery charging current efficiency                 | ≥92%  |              |              |
| <b>PROTECTION DEVICES</b>                                   |   |              |              |
| Grid monitoring   | Yes   |              |              |
| Output over current protection                              | Yes   |              |              |
| Output overvoltage protection-varistor                      | Yes   |              |              |
| Ground fault monitoring                                     | Yes   |              |              |
| Integrated all-pole sensitive leakage current               | Yes   |              |              |
| <b>MECHANICAL SPECIFICATIONS</b>                            |   |              |              |
| Machine Dimension (W*H*D)(mm)                               | 420*420*215   |              |              |
| Package Dimension (W*H*D)(mm)                               | /   |              |              |
| N.W(kg)   | 25  |              |              |
| G.W(kg)   | /   |              |              |
| <b>GENERAL</b>  |   |              |              |
| AC connection   | Terminal Block  |              |              |
| Display   | LED+LCD   |              |              |
| Communication interfaces                                    | Wi-Fi/USB/GPRS/RS485/CAN                              |              |              |
| Ingress protection rating                                   | IP66  |              |              |
| Humidity  | 0~95% RH(No condensing)                               |              |              |
| Operating temperature range                                 | -20°C+60°C With derating above 45°C                   |              |              |
| Cooling concept   | Natural   |              |              |
| Noise figure [dB]   | ≤25   |              |              |
| Altitude  | <3000m  |              |              |
| Standard Warranty   | 5years  |              |              |
| <b>CERTIFICATION &amp; STANDARDS</b>                        |   |              |              |
| CE-EMC+LVD (EN IEC61000-6-3, ENIEC61000-6-1; EN IEC62477-1) |   |              |              |

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## ON GRID SOLAR INVERTER PH5900 ML Series

3~6KW | Split Phase | 120V/240V

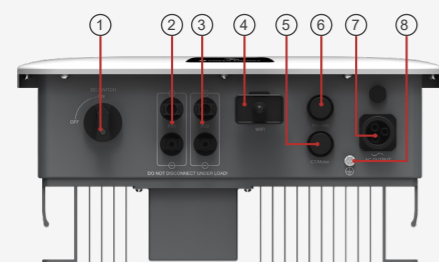


PH5900 ML series PV inverters fully considers the needs of end customers. It is used to convert the DC generated by photovoltaic panels into AC, which is sent to the grid in a split-phase mode. The product has excellent performance. The OLED is used for the status display of inverter, which can effectively improve human-computer interaction. Using high precision DSP digital control, could afford wide sampling range, to achieve the significance of all-directional protection. High quality IP66 structural model, which maximizes the benefits of the product and improve the reliability of the product.



- High Frequency On Grid Solar Inverter
- Rate power: 3-6KW
- MPPT efficiency up to 99.50%
- Multiple communications: WIFI etc
- Monitoring inverters freely via mobile phone APP
- Fanless low-noise design
- IP66 water-proof and dust-proof

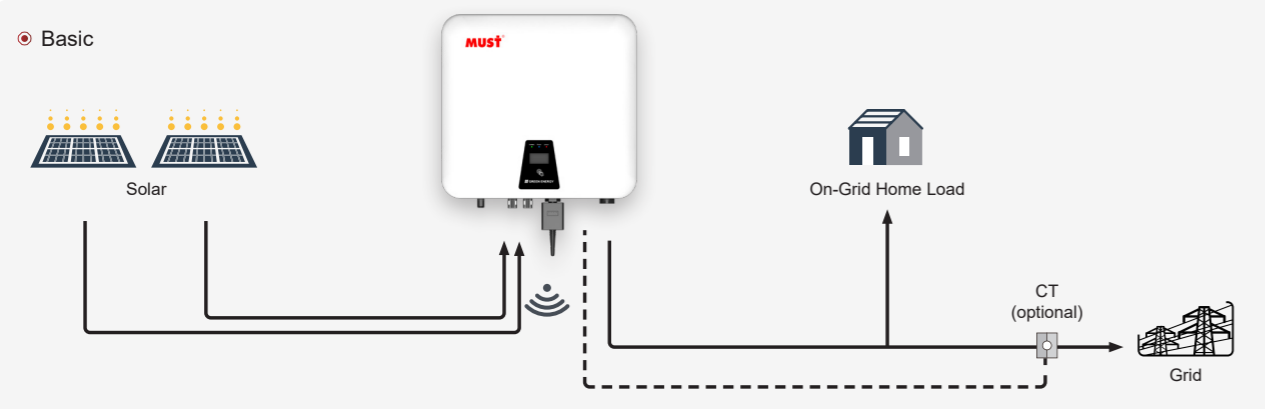
### Back panel description



1. DC switch
2. PV1 input
3. PV2 input
4. WIFI connector
5. CT/Meter port
6. RS-485 connector
7. AC output
8. Ground

### Solar system connection

Basic



| MODEL   | PH59-3000 ML                          | PH59-3600 ML | PH59-4200 ML | PH59-4600 ML | PH59-5000 ML | PH59-6000 ML |
|---|---------------------------------------|--------------|--------------|--------------|--------------|--------------|
| Rated AC output power   | 3000W                                 | 3600W        | 4200W        | 4600W        | 5000W        | 6000W        |
| <b>PV INPUT(DC)</b>   |                                       |              |              |              |              |              |
| Maximum recommended DC power                                  | 4200W                                 | 5040W        | 5880W        | 6440W        | 7000W        | 8400W        |
| Nominal DC operating voltage                                  | 360V                                  |              |              |              |              |              |
| Maximum DC voltage  | 600V                                  |              |              |              |              |              |
| Start voltage   | 50V                                   |              |              |              |              |              |
| MPPT voltage range  | 40~550V                               |              |              |              |              |              |
| Maximum input current   | 16A/16A                               |              |              |              |              |              |
| No.of MPP tracker/ strings per MPP tracker                    | 2/1                                   |              |              |              |              |              |
| DC connection   | H4/MC4                                |              |              |              |              |              |
| <b>GRID OUTPUT(AC)</b>  |                                       |              |              |              |              |              |
| Max. AC output power  | 3300VA                                | 3960VA       | 4620VA       | 5060VA       | 5500VA       | 6600VA       |
| AC grid frequency   | 50/60Hz ±5Hz                          |              |              |              |              |              |
| Maximum output current  | 14.3A                                 | 17.2A        | 20A          | 22A          | 23.9A        | 28.6A        |
| AC nominal voltage (L-N/L1-L2)                                | 120V/240V                             |              |              |              |              |              |
| Total harmonic distortion (THDi)                              | <3%                                   |              |              |              |              |              |
| Rate power factor   | >0.99                                 |              |              |              |              |              |
| Power factor adjustable range                                 | 0.8 leading ~ 0.8 lagging             |              |              |              |              |              |
| AC grid connection type                                       | L1+L2+N                               |              |              |              |              |              |
| <b>EFFICIENCY</b>   |                                       |              |              |              |              |              |
| Maximum efficiency  | 98.0%                                 | 98.0%        | 98.1%        | 98.1%        | 98.2%        | 98.2%        |
| Euro-efficiency   | 96.8%                                 | 96.8%        | 97.0%        | 97.0%        | 97.2%        | 97.2%        |
| MPPT efficiency   | 99.5%                                 |              |              |              |              |              |
| Self-Consumption night  | <1W                                   |              |              |              |              |              |
| <b>PROTECTION DEVICES</b>                                     |                                       |              |              |              |              |              |
| Output over current protection                                | Yes                                   |              |              |              |              |              |
| Output AC overvoltage protection                              | Yes                                   |              |              |              |              |              |
| DC reverse polarity protection                                | Yes                                   |              |              |              |              |              |
| DC switch   | Yes                                   |              |              |              |              |              |
| Ground fault monitoring                                       | Yes                                   |              |              |              |              |              |
| Integrated all-pole sensitive leakage current monitoring unit | Yes                                   |              |              |              |              |              |
| <b>PHYSICAL</b>   |                                       |              |              |              |              |              |
| Machine Dimension (W*H*D)(mm)                                 | 402*378*195                           |              |              |              |              |              |
| Package Dimension (W*H*D)(mm)                                 | 493*315*468                           |              |              |              |              |              |
| N.W(kg)   | 15.5                                  |              |              |              |              |              |
| G.W(kg)   | 19.1                                  |              |              |              |              |              |
| <b>INTERFACE</b>  |                                       |              |              |              |              |              |
| DC connection   | H4/MC4                                |              |              |              |              |              |
| AC connection   | Connector                             |              |              |              |              |              |
| Display   | OLED+LED WIFI+APP                     |              |              |              |              |              |
| Communication interfaces                                      | WIFI/RS485/GPRS(opt)                  |              |              |              |              |              |
| <b>ENVIRONMENT</b>  |                                       |              |              |              |              |              |
| Ingress protection rating                                     | IP66                                  |              |              |              |              |              |
| Humidity  | 0-100%                                |              |              |              |              |              |
| Operating temperature range                                   | -25°C~ +60°C With derating above 45°C |              |              |              |              |              |
| Cooling concept   | Natural                               |              |              |              |              |              |
| Noise emission(typical)[dB]                                   | ≤35dB(A)                              |              |              |              |              |              |
| Self-consumption night  | <1W                                   |              |              |              |              |              |
| Altitude  | 4000m                                 |              |              |              |              |              |
| <b>OTHERS</b>   |                                       |              |              |              |              |              |
| Topology  | Transformerless                       |              |              |              |              |              |
| Warranty  | Standard 5years/10 years(opt.)        |              |              |              |              |              |
| <b>CERTIFICATION &amp; STANDARDS</b>                          |                                       |              |              |              |              |              |
| UL1741; FCC   |                                       |              |              |              |              |              |

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## ON GRID SOLAR INVERTER PH5900 TML Series

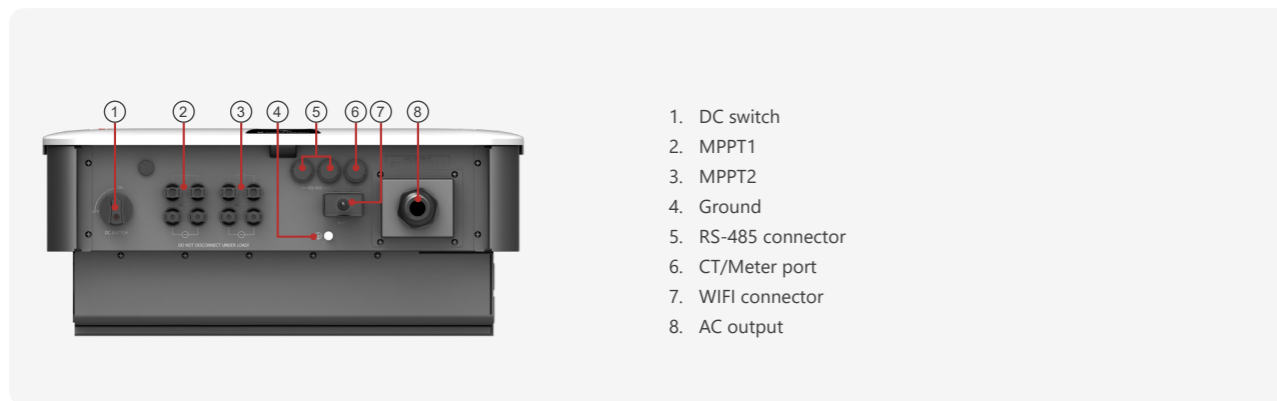
10~12KW | Three-phase | 133V/230VAC | IP66

PH5900 TML series PV inverters fully considers the needs of end customers. It is used to convert the DC generated by photovoltaic panels into AC, which is sent to the grid in a three-phase mode. The product has excellent performance. The OLED is used for the status display of inverter, which can effectively improve human-computer interaction. Using high precision DSP digital control, could afford wide sampling range, to achieve the significance of all-directional protection. High quality IP66 structural model, which maximizes the benefits of the product and improve the reliability of the product.

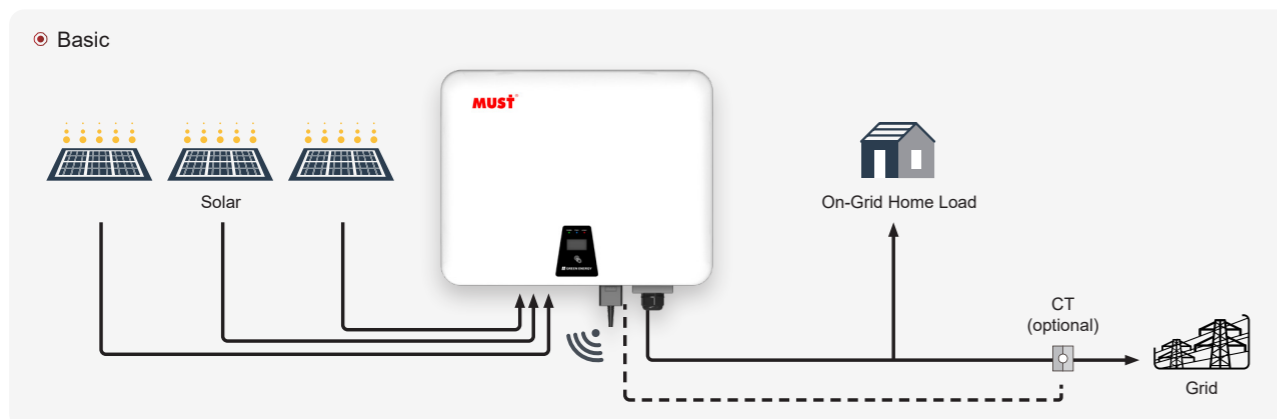


- Wide MPPT voltage range from 200V-800V
- IP66 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.6%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

### Back panel description



### Solar system connection



| MODEL  | PH59-10000 TML   | PH59-11000 TML | PH59-12000 TML |
|--|--|----------------|----------------|
| Rated AC output power  | 10000W   | 11000W         | 12000W         |
| <b>OUTPUT (AC)</b>   |  |                |                |
| Max.AC apparent power  | 11000W   | 12100W         | 13200W         |
| Max.output current   | 27.5A  | 30.3A          | 33A            |
| Nominal AC Voltage(L-N/L-L)                                  | 133V/230V  |                |                |
| AC grid frequency range                                      | 50/60Hz±5Hz  |                |                |
| Power factor at Rated power                                  | >0.99  |                |                |
| Adjustable displacement power factor                         | 0.8leading...0.8lagging  |                |                |
| Total harmonic distortion (THDi)                             | < 3%   |                |                |
| AC grid connection type                                      | 3W+N+PE  |                |                |
| <b>INPUT DATA</b>  |  |                |                |
| Max.recommended PV power                                     | 15000W   | 16500W         | 18000W         |
| Max.DC voltage   | 800V   |                |                |
| Start voltage  | 250V   |                |                |
| Nominal voltage  | 360V   |                |                |
| MPPT voltage range   | 200V-800V  |                |                |
| Max. short-circuit current                                   | 32.5A/32.5A  |                |                |
| Max.input current  | 26A/26A  |                |                |
| Number of independent MPP trackers / strings per MPP tracker | 2/2  | 2/2            | 2/2            |
| DC connection  | H4 / MC4   |                |                |
| <b>EFFICIENCY</b>  |  |                |                |
| Max. efficiency  | 98.6%  |                |                |
| Euro weighted efficiency                                     | 98.3%  |                |                |
| MPPT efficiency  | 99.5%  |                |                |
| Protection devices   | Island protection, DC reverse polarity protection , Output over current protection, Output overvoltage protection-varistor, Integrated DC switch, Ground fault monitoring, Integrated all-pole sensitive leakage current monitoring unit, DC Surge protection, AC Surge protection |                |                |
| <b>GENERAL DATA FEATURES</b>                                 |  |                |                |
| Machine Dimension (W*H*D)(mm)                                | 540*426*234  |                |                |
| Package Dimension (W*H*D)(mm)                                | 650*338*542  |                |                |
| N.W(kg)  | 28.6   |                |                |
| G.W(kg)  | 32.5   |                |                |
| Operation temperature range                                  | -25°C- +60°C with derating above 45°C  |                |                |
| Noise emission(typical)                                      | ≤40dB(A)   |                |                |
| Altitude   | 3000m  |                |                |
| Self-consumption (night)                                     | < 1W   |                |                |
| Topology   | Transformerless  |                |                |
| Cooling  | Smart air cooling  |                |                |
| Environmental protection Rating                              | IP66   |                |                |
| Relative humidity  | 0~100%   |                |                |
| <b>FEATURES</b>  |  |                |                |
| AC connection  | Cable gland + OT terminal  |                |                |
| Display  | OLED+LED WIFI+APP  |                |                |
| Communication interfaces                                     | WIFI/RS485/GPRS(opt)   |                |                |
| Warranty   | Standard 5 years / 10 years (opt.)   |                |                |
| <b>CERTIFICATION &amp; STANDARDS</b>                         |  |                |                |
| UL1741; FCC  |  |                |                |

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## HIGH FREQUENCY ON/OFF GRID SOLAR INVERTER PH1800 LV Series

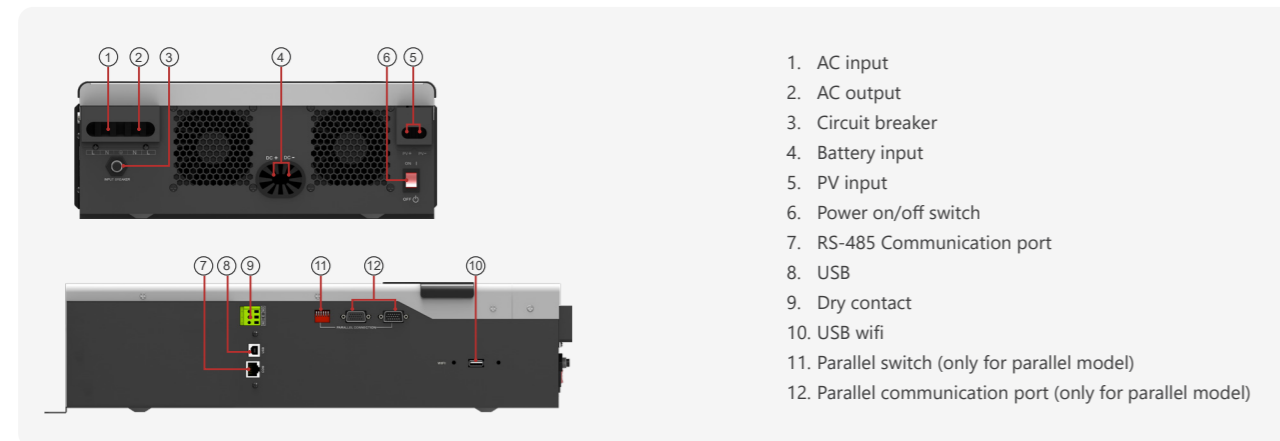


3~6KW | 120V | Wifi

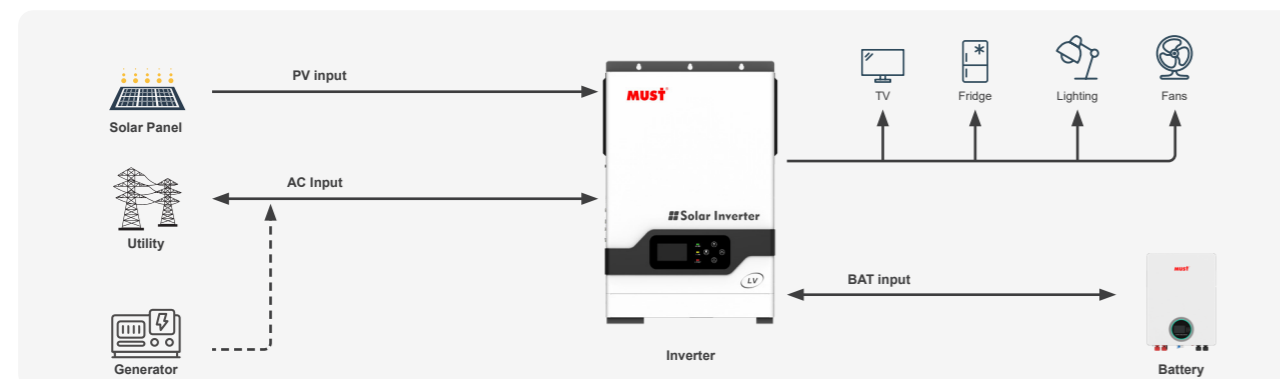
PH1800 LV Series is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterrupted power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and acceptable input voltage based on different applications.

- Pure sine wave solar inverter
- Output power factor 1
- Built-in 80A MPPT solar charger
- 2 units can be wired in parallel to create a split-phase system with 120V and 240V capabilities
- Support parallel operation up to 3 units
- WIFI remote monitoring (optional)
- CAN/RS485 communication for BMS
- Compatible to generator

### Back panel description



### Solar system connection



| MODEL                                 | PH18-3024 LV                                 | PH18-3048 LV | PH18-6048 LV     |
|---------------------------------------|--|--------------|------------------|
| Nominal Battery System Voltage        | 24VDC  | 48VDC        |                  |
| <b>INVERTER OUTPUT</b>                |  |              |                  |
| Rated Power                           | 3000W  | 3000W        | 6000W            |
| Surge Power                           | 6000W  | 6000W        | 12000W           |
| Waveform                              | Pure sine wave                               |              |                  |
| AC Voltage Regulation (Batt.Mode)     | 120VAC ±5%                                   | 120VAC ±5%   | 240VAC ±5% (L-L) |
| Inverter Efficiency(Peak)             | 90%  |              |                  |
| Transfer Time                         | 10ms (UPS / UL) 20ms (APL)                   |              |                  |
| <b>AC INPUT</b>                       |  |              |                  |
| Voltage                               | 120VAC                                       | 120VAC       | 240VAC           |
| Selectable Voltage Range              | 107~132VAC(UL)                               |              | 214~264VAC(UL)   |
| Frequency Range                       | 50Hz / 60Hz(Auto sensing)                    |              |                  |
| <b>BATTERY</b>                        |  |              |                  |
| Normal voltage                        | 24VDC  | 48VDC        | 48VDC            |
| Floating Charge Voltage               | 27.4VDC                                      | 54.8VDC      | 54.8VDC          |
| Overcharge Protection                 | 30VDC  | 60VDC        | 60VDC            |
| <b>SOLAR CHARGER &amp; AC CHARGER</b> |  |              |                  |
| Maximum PV Array Open Circuit Voltage | 450VDC                                       | 250VDC       | 250VDC           |
| Maximum Solar Charge Current          | 100A   | 80A          | 80A/ 80A         |
| PV Array MPPT Voltage Range           | 90-430VDC                                    | 60-200VDC    | 60-200VDC        |
| PV Input Power                        | 4000W  | 4000W        | 4000W/ 4000W     |
| Maximum Efficiency                    | 98%  |              |                  |
| Maximum AC Charge Current             | 80A  | 60A          | 60A              |
| Maximum Charge Current                | 100A   | 140A         | 160A             |
| <b>MECHANICAL SPECIFICATIONS</b>      |  |              |                  |
| Machine Dimension (W*H*D)(mm)         | 329*485*134                                  | 329*485*134  | 315*500*235      |
| Package Dimension (W*H*D)(mm)         | 575*229*425                                  | 575*229*425  | /                |
| N.W(kg)                               | 12   | 12           | 20               |
| G.W(kg)                               | 13.5   | 13.5         | 22               |
| <b>OTHER</b>                          |  |              |                  |
| Humidity                              | 5% to 95% Relative humidity (Non-condensing) |              |                  |
| Operating Temperature                 | -10°C~50°C                                   |              |                  |
| Storage Temperature                   | -15°C~60°C                                   |              |                  |
| Standard Warranty                     | 2years                                       |              |                  |
| <b>CERTIFICATION &amp; STANDARDS</b>  |  |              |                  |
| ////////////////////                  |  |              |                  |

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## HIGH FREQUENCY ON/OFF GRID HYBRID SOLAR INVERTER PH1800 TLV Series

6KW | 120V,240V | Wifi

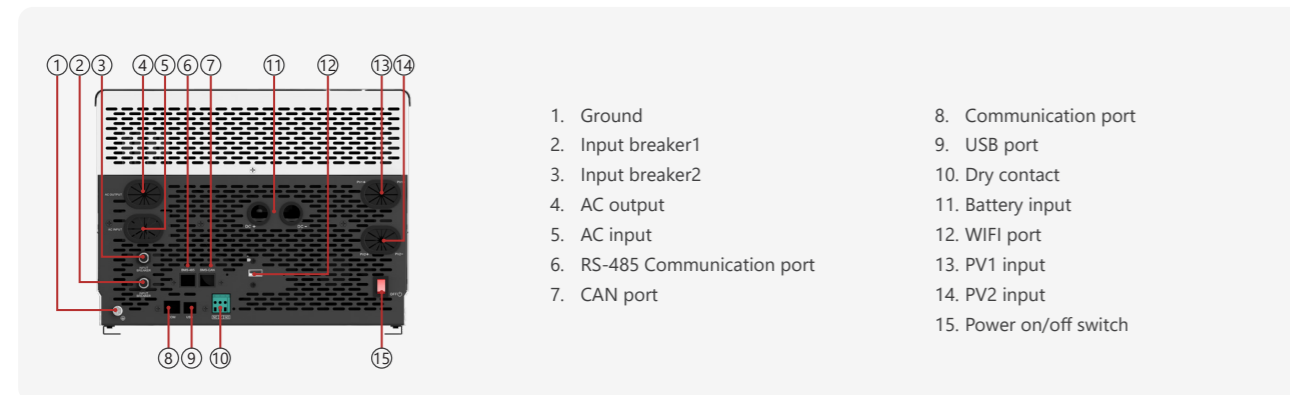
This split phase solar inverter PH1800 TLV series, capacity 6KW, DC 48V, it's applicable to 110VAC/120VAC markets demands, which has AC output of single phase 110VAC/120V, split phase 220V/240V; In LCD display, you can set output voltage, frequency, charging voltage, charging current to design best use based on different loads applications; meanwhile, it has built-in two 80A MPPT solar charge controllers, you can take use of sunshine freely and save electricity bills.



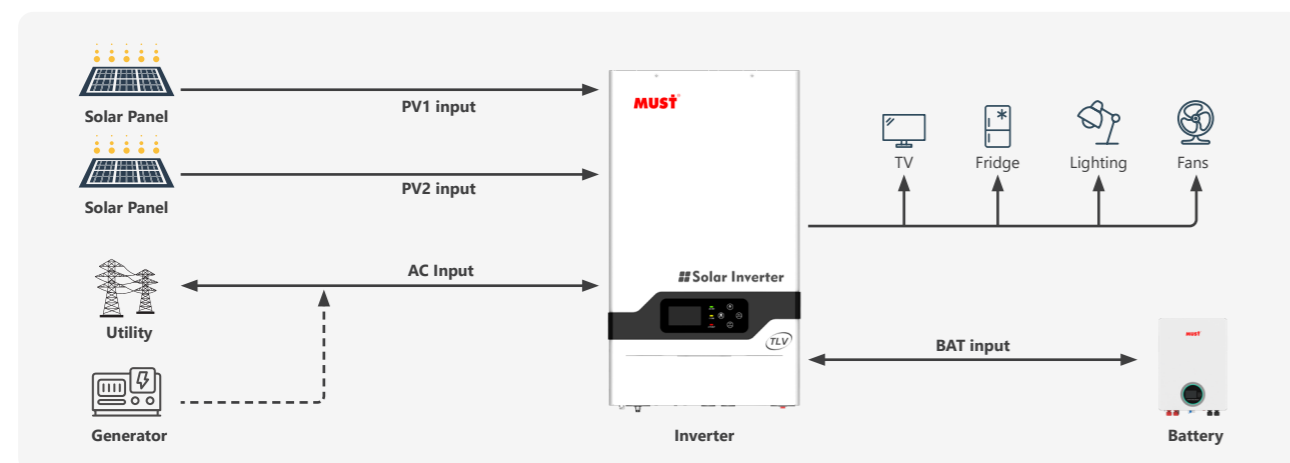
- Pure sine wave solar inverter
- Output power factor 1
- Built-in two 80A MPPT solar charge controllers
- WIFI remote monitoring (optional)
- Acid or Lithium Battery Select
- CAN/RS485 communication for BMS
- Compatible to generator



### Back panel description



### Solar system connection



| MODEL   | PH18-6048 TLV                                |
|---|--|
| Nominal Battery System Voltage  | 48VDC  |
| <b>INVERTER OUTPUT</b>  |  |
| Rated Power   | 6000W  |
| Surge Power   | 12000VA                                      |
| Waveform  | Pure sine wave                               |
| AC Voltage Regulation (Batt.Mode)                                       | 120VAC/240VAC (L1/L2)                        |
| Inverter Efficiency(Peak)   | 90%~93%                                      |
| Transfer Time   | 10ms (UPS / UL) 20ms (APL)                   |
| <b>AC INPUT</b>   |  |
| Voltage   | 240VAC (L1/L2/N)                             |
| Selectable Voltage Range  | 214~264VAC(UL)                               |
| Frequency Range   | 50Hz / 60Hz(Auto sensing)                    |
| <b>BATTERY</b>  |  |
| Normal voltage  | 48VDC  |
| Floating Charge Voltage   | 54.8VDC                                      |
| Overcharge Protection   | 60VDC  |
| <b>SOLAR CHARGER &amp; AC CHARGER</b>                                   |  |
| Maximum PV Array Open Circuit Voltage                                   | 250V   |
| Maximum Solar Charge Current  | 80A/80A                                      |
| PV Array MPPT Voltage Range   | 60~200VDC                                    |
| PV Input Power  | 4000W/4000W                                  |
| Maximum Efficiency  | 98%  |
| Maximum AC Charge Current   | 60A/60A                                      |
| Maximum Charge Current  | 280A   |
| <b>MECHANICAL SPECIFICATIONS</b>  |  |
| Machine Dimension (W*H*D)(mm)   | 318*560*249                                  |
| Package Dimension (W*H*D)(mm)   | 678*345*420                                  |
| N.W(kg)   | 21.5   |
| G.W(kg)   | 24   |
| <b>OTHER</b>  |  |
| Humidity  | 5% to 95% Relative humidity (Non-condensing) |
| Operating Temperature   | -10°C~50°C                                   |
| Storage Temperature   | -15°C~60°C                                   |
| Standard Warranty   | 2 year                                       |
| <b>CERTIFICATION &amp; STANDARDS</b>                                    |  |
| CE-LVD (IEC62109-1, EN IEC62109-2); UKCA-(BS EN 62109-1, BS EN 62109-2) |  |

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## PURE SINE WAVE INVERTER PI1500 LV Series

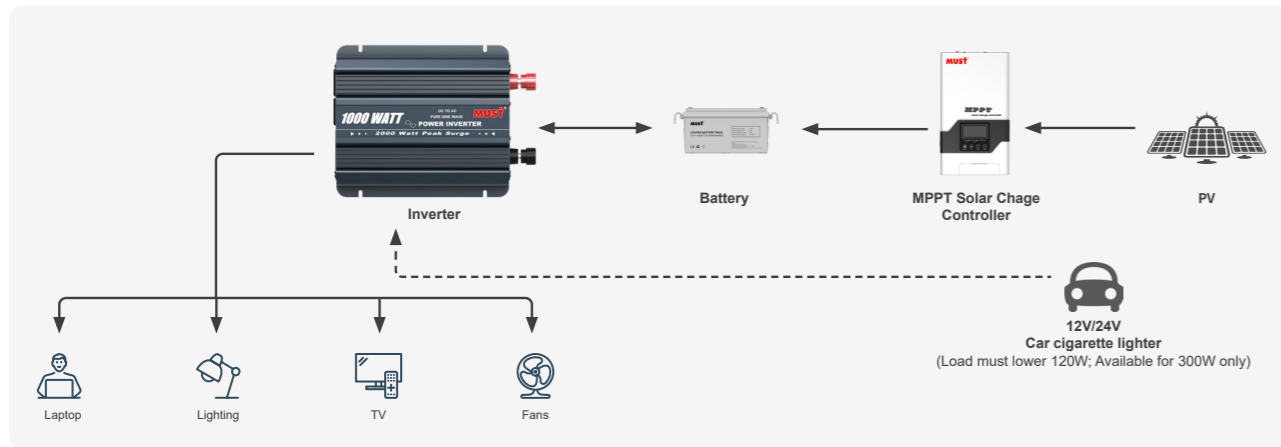
300~2000W | 12V,24V,48V | 120V

The PI1500 LV series is a high-frequency pure sine wave inverter featuring a compact design and a reliable, stable solution. It converts 12VDC, 24VDC, or 48VDC DC input into 120VAC AC output. This series is ideal for emergency power supply, vehicle inverters, outdoor power use, and other similar applications.



- Input Voltage 12V/ 24V/ 48V optional
- Output Voltage 120V AC optional
- Portable power for AC products, AC outlets for connecting multiple loads
- High efficiency converts virtually all of the battery's power to AC
- Mounting brackets for convenient installation
- Overload and over temperature shut down
- Low voltage and over voltage alarm/cut off
- Short circuit protection

### Solar system connection



### Type



| MODEL                     | PI15-0312 LV | PI15-0324 LV | PI15-0612 LV | PI15-0624 LV | PI15-1012 LV | PI15-1024 LV | PI15-1512 LV | PI15-1524 LV | PI15-2012 LV | PI15-2024 LV | PI15-2048 LV |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>BATTERY DC INPUT</b>   |              |              |              |              |              |              |              |              |              |              |              |
| Input Voltage             | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 48VDC        |
| Low Voltage Protect Delay | 2 seconds    |              |              |              |              |              |              |              |              |              |              |
| Low Voltage Warning       | (PB)         | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      |
|                           | (LI)         | 10.5VDC      | 21.0VDC      | 11.6VDC      | 23.2VDC      | 11.6VDC      | 23.2VDC      | 11.6VDC      | 23.2VDC      | 11.6VDC      | 23.2VDC      |
| Low Voltage Protect       | (PB)         | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      |
|                           | (LI)         | 11.5VDC      | 23.0VDC      | 12.0VDC      | 24.0VDC      | 12.0VDC      | 24.0VDC      | 12.0VDC      | 24.0VDC      | 12.0VDC      | 24.0VDC      |
| Low Voltage Restoring     | (PB)         | 12.5VDC      | 25.0VDC      | 12.5VDC      | 25.0VDC      | 12.5VDC      | 25.0VDC      | 12.5VDC      | 23.0VDC      | 12.5VDC      | 23.0VDC      |
|                           | (LI)         | 12.5VDC      | 25.0VDC      | 12.8VDC      | 25.6VDC      | 12.8VDC      | 25.6VDC      | 12.8VDC      | 25.6VDC      | 12.8VDC      | 25.6VDC      |
| Over Voltage Protect      | (PB)         | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      |
|                           | (LI)         | 14.7VDC      | 29.4VDC      | 14.5VDC      | 29.0VDC      | 14.5VDC      | 29.0VDC      | 14.5VDC      | 29.0VDC      | 14.5VDC      | 29.0VDC      |
| Over Voltage Restoring    | (PB)         | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      |
|                           | (LI)         | 15.0VDC      | 30.0VDC      | 14.8VDC      | 29.6VDC      | 14.8VDC      | 29.6VDC      | 14.8VDC      | 29.6VDC      | 14.8VDC      | 29.6VDC      |

Parameters: (PB) Lead-acid Battery / (LI) 4 series (12V), 8 series (24V) LiFePO4 Lithium Battery Pack

| <b>INVERTER AC OUTPUT</b> |                |       |       |       |       |
|---------------------------|----------------|-------|-------|-------|-------|
| Default Power             | 300W           | 600W  | 1000W | 1500W | 2000W |
| Peak Power                | 600W           | 1200W | 2000W | 3000W | 4000W |
| Output AC Voltage         | 120V           | 120V  | 120V  | 120V  | 120V  |
| Output AC Frequency       | 60Hz           | 60Hz  | 60Hz  | 60Hz  | 60Hz  |
| Output Wave               | Pure Sine Wave |       |       |       |       |
| Output Wave THD           | < 3%           |       |       |       |       |

| <b>PROTECTION</b>          |   |
|----------------------------|---|
| Battery Input Protection   | Low Voltage Protection, Over Voltage Protection, Reverse Protection |
| Inverter Output Protection | Output Overload, Short-Circuit, Over Temperature Protection         |

| <b>DISPLAY</b>      |  |
|---------------------|--|
| LED Display         | Red: Error ; Green: System OK  |
| LED Digital Display | / Display Battery Voltage, Output Power, Output Voltage, Error Numbers |

| <b>DC OUTPUT</b> |                   |    |
|------------------|-------------------|----|
| USB              | USB-A type (5V1A) | NC |

| <b>EFFICIENCY</b>          |     |     |     |     |     |     |     |     |  |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Peak Conversion efficiency | 91% | 91% | 90% | 88% | 90% | 88% | 90% | 88% |  |

| <b>MECHANICAL SPECIFICATIONS</b> |             |             |             |              |
|----------------------------------|-------------|-------------|-------------|--------------|
| Machine Dimension (W*H*D)(mm)    | 205*125*61  | 242*158*81  | 291*220*83  | 380.8*248*90 |
| Package Dimension (W*H*D)(mm)    | 228*102*176 | 268*140*205 | 330*147*267 | 420*150*300  |
| N.W(kg)                          | 1           | 1.7         | 2.6         | 4.5          |
| G.W(kg)                          | 9.3 (8pcs)  | 15 (8pcs)   | 23 (8pcs)   | 19 (4pcs)    |

| <b>OTHER</b>              |                          |      |      |      |      |      |      |      |      |      |      |
|---------------------------|--------------------------|------|------|------|------|------|------|------|------|------|------|
| Protection Degree         | IP20                     | IP20 | IP20 | IP20 | IP20 | IP20 | IP20 | IP20 | IP20 | IP20 | IP20 |
| Working Environment       | Indoor Fan cooling       |      |      |      |      |      |      |      |      |      |      |
| Environmental temperature | 0~45°C                   |      |      |      |      |      |      |      |      |      |      |
| Ambient humidity          | 20%-90%, No condensation |      |      |      |      |      |      |      |      |      |      |
| Altitude                  | ≤3000m                   |      |      |      |      |      |      |      |      |      |      |
| Standard Warranty         | 2 year                   |      |      |      |      |      |      |      |      |      |      |

| <b>CERTIFICATION &amp; STANDARDS</b>   |  |  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|--|--|
| CE-EMC +LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2) ; CE-LVD(EN 62477-1/A11) |  |  |  |  |  |  |  |  |  |  |  |

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## PURE SINE WAVE INVERTER PI1500 LV Series

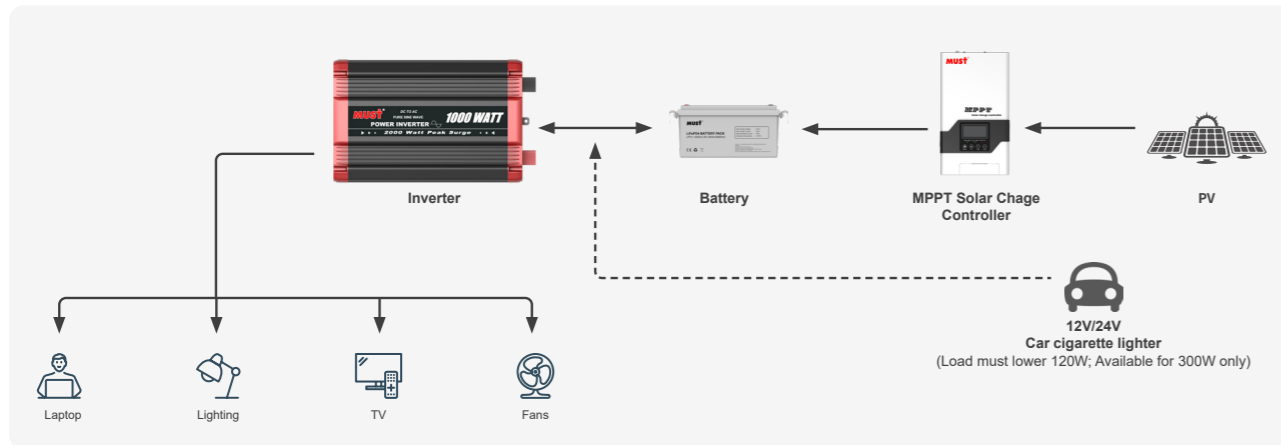
600~2000W | 12V,24V,48V | 120V

The PI1500 LV series is a high-frequency pure sine wave inverter featuring a compact design and a reliable, stable solution. It converts 12VDC, 24VDC, or 48VDC DC input into 120VAC AC output. This series is ideal for emergency power supply, vehicle inverters, outdoor power use, and other similar applications.



- Input Voltage 12V / 24V/ 48V optional
- Output Voltage 120VAC optional
- Portable power for AC products, AC outlets for connecting multiple loads
- High efficiency converts virtually all of the battery's power to AC
- Mounting brackets for convenient installation
- Overload and over temperature shut down
- Low voltage and over voltage alarm/cut off
- Short circuit protection

### Solar system connection



### Type



| MODEL                     | PI15-0612 LV | PI15-0624 LV | PI15-1012 LV | PI15-1024 LV | PI15-1512 LV | PI15-1524 LV | PI15-2012 LV | PI15-2024 LV | PI15-2048 LV |         |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------|
| <b>BATTERY DC INPUT</b>   |              |              |              |              |              |              |              |              |              |         |
| Input Voltage             | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 12VDC        | 24VDC        | 48VDC        |         |
| Low Voltage Protect Delay | 2 seconds    |              |              |              |              |              |              |              |              |         |
| Low Voltage Warning       | (PB)         | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      | 11.5VDC      | 23.0VDC      | 42.0VDC |
|                           | (LI)         | 12.0VDC      | 24.0VDC      | 12.0VDC      | 24.0VDC      | 12.0VDC      | 24.0VDC      | 12.0VDC      | 24.0VDC      | 46.4VDC |
| Low Voltage Protect       | (PB)         | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      | 10.5VDC      | 21.0VDC      | 46.0VDC |
|                           | (LI)         | 11.6VDC      | 23.2VDC      | 11.6VDC      | 23.2VDC      | 11.6VDC      | 23.2VDC      | 11.6VDC      | 23.2VDC      | 48.0VDC |
| Low Voltage Restoring     | (PB)         | 12.5VDC      | 25.0VDC      | 12.5VDC      | 25.0VDC      | 12.5VDC      | 23.0VDC      | 12.5VDC      | 23.0VDC      | 46.0VDC |
|                           | (LI)         | 12.8VDC      | 25.6VDC      | 12.8VDC      | 25.6VDC      | 12.8VDC      | 25.6VDC      | 12.8VDC      | 25.6VDC      | 51.2VDC |
| Over Voltage Protect      | (PB)         | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      | 15.0VDC      | 30.0VDC      | 58.8VDC |
|                           | (LI)         | 14.8VDC      | 29.6VDC      | 14.8VDC      | 29.6VDC      | 14.8VDC      | 29.6VDC      | 14.8VDC      | 29.6VDC      | 58.0VDC |
| Over Voltage Restoring    | (PB)         | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      | 14.7VDC      | 29.4VDC      | 60.0VDC |
|                           | (LI)         | 14.5VDC      | 29.0VDC      | 14.5VDC      | 29.0VDC      | 14.5VDC      | 29.0VDC      | 14.5VDC      | 29.0VDC      | 59.2VDC |

Parameters: (PB) Lead-acid Battery / (LI) 4 series (12V), 8 series (24V) LiFePO4 Lithium Battery Pack

| <b>INVERTER AC OUTPUT</b> |                |       |       |       |
|---------------------------|----------------|-------|-------|-------|
| Default Power             | 600W           | 1000W | 1500W | 2000W |
| Peak Power                | 1200W          | 2000W | 3000W | 4000W |
| Output AC Voltage         | 120V           |       |       |       |
| Output AC Frequency       | 60Hz           |       |       |       |
| Output Wave               | Pure Sine Wave |       |       |       |
| Output Wave THD           | < 3%           |       |       |       |

| <b>PROTECTION</b>          |   |
|----------------------------|---|
| Battery Input Protection   | Low Voltage Protection, Over Voltage Protection, Reverse Protection |
| Inverter Output Protection | Output Overload, Short-Circuit, Over Temperature Protection         |

| <b>DISPLAY</b>      |  |
|---------------------|--|
| LED Digital Display | Display Battery Voltage, Output Power, Output Voltage, Error Numbers |

| <b>DC OUTPUT</b> |                   |    |
|------------------|-------------------|----|
| USB              | USB-A type (5V2A) | NC |

| <b>COMMUNICATION</b> |            |
|----------------------|------------|
| PC                   | USB-B type |

| <b>EFFICIENCY</b>          |     |     |     |     |     |     |     |     |
|----------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Peak Conversion efficiency | 91% | 90% | 88% | 90% | 88% | 90% | 88% | 88% |

| <b>ENVIRONMENT</b>        |                          |
|---------------------------|--------------------------|
| Protection Degree         | IP20                     |
| Working Environment       | Indoor Fan cooling       |
| Environmental temperature | 0~45°C                   |
| Ambient humidity          | 20%-90%, No condensation |
| Altitude                  | ≤3000m                   |

| <b>DIMENSIONS</b>                  |                   |                   |                   |
|------------------------------------|-------------------|-------------------|-------------------|
| Machine Dimension (W*H*D) (mm)     | 261*133*79        | 314*195*80        | 415*220*82        |
| Package Dimension (W*H*D) (single) | 302*205*140       | 374*267*147       | 450*296*150       |
| Package Dimension (W*H*D)          | 629*425*295(8pcs) | 773*560*315(8pcs) | 630*495*325(4pcs) |
| N.W(kg) (machine)                  | 1.4               | 2.3               | 4.6               |

| <b>CERTIFICATION &amp; STANDARDS</b> |  |
|--------------------------------------|--|
| Coming soon                          |  |

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

## MPPT SOLAR CHARGE CONTROLLER PC1800F Series

60~100A | 12V,24V,36V,48V | 145V

MPPT (Maximum Power Point Tracking) Solar Charge Controller offer an efficient, safe, multi-stage recharging process that prolongs battery life and assures peak performance from a solar array. Each Charge Controller allows customized battery recharging.



- LCD display , easy to operate on LCD screen
- Multi stage charging (3-stage charging , parallel charging and equalized charging function)
- Maximum Solar Input Voltage: 145V
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV array short circuit, PV reverse polarity, Battery reverse polarity, Over charging, Output short circuit



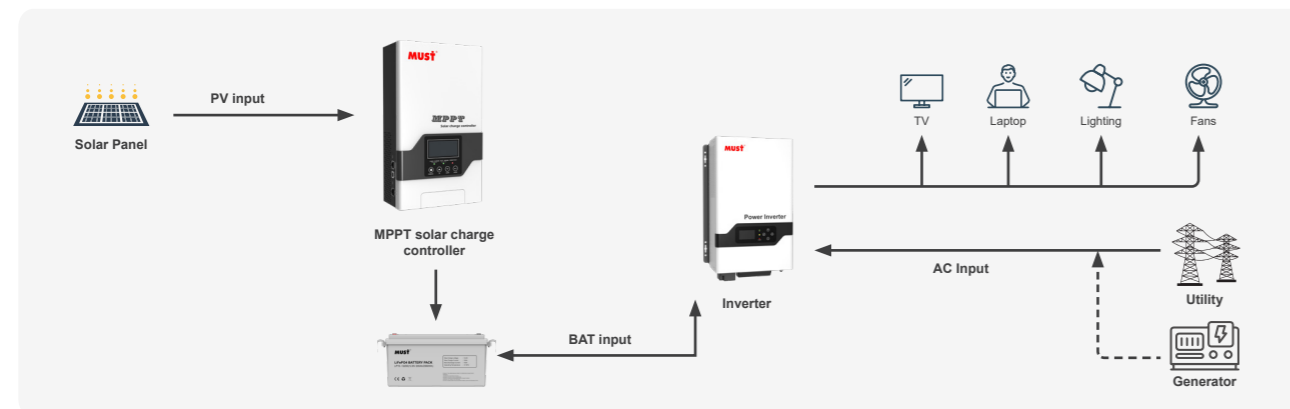
### Back panel description

80A

100A

1. The load positive terminal
2. Battery connectors
3. The load negative terminal
4. PV connectors
5. Communication port
6. Battery temperature sensor terminal
7. USB port

### Solar system connection



| MODEL   | PC18-6015F  | PC18-8015F                       | PC18-10015F                       |       |
|---|---|----------------------------------|-----------------------------------|-------|
| Nominal Battery System Voltage  | 12V / 24V / 48VDC (Auto detection); 36V (Setting)   |                                  |                                   |       |
| <b>CONTROLLER INPUT</b>   |   |                                  |                                   |       |
| Battery Voltage   | 12V / 24V / 36V / 48V   |                                  |                                   |       |
| Maximum Solar Input Voltage   | 12V (VBAT)  | 100V                             |                                   |       |
|   | 24V (VBAT)  | 145V                             |                                   |       |
|   | 36V (VBAT)  | 145V                             |                                   |       |
|   | 48V (VBAT)  | 145V                             |                                   |       |
| PV Array MPPT Voltage Range   | 12V (VBAT)  | 15-95V                           |                                   |       |
|   | 24V (VBAT)  | 30~130V                          |                                   |       |
|   | 36V (VBAT)  | 45~130V                          |                                   |       |
|   | 48V (VBAT)  | 60~130V                          |                                   |       |
| Maximum Input Power   | 12V (VBAT)  | 940W                             | 1250W                             | 1560W |
|   | 24V (VBAT)  | 1880W                            | 2500W                             | 3120W |
|   | 36V (VBAT)  | 2820W                            | 3750W                             | 4680W |
|   | 48V (VBAT)  | 3760W                            | 5000W                             | 6250W |
| <b>BATTERY</b>  |   |                                  |                                   |       |
| Charging Set Points   | Flooded Battery   | Absorption Stage                 | 14.2V / 28.4V / 42.6V / 56.8V     |       |
|   |   | Float Stage                      | 13.7V / 27.4V / 41.1V / 54.8V     |       |
|   | AGM (Default)   | Absorption Stage                 | 14.4V / 28.8V / 43.2V / 57.6V     |       |
|   |   | Float Stage                      | 13.7V / 27.4V / 41.1V / 54.8V     |       |
| Over-charging Voltage   | 15.5V / 30.0V / 45.0V / 60.0V   |                                  |                                   |       |
| Over-charging Comeback Voltage  | 14.5V / 29.5V / 44.5V / 59.0V   |                                  |                                   |       |
| Battery Defect Voltage  | 10.0V / 17.0V / 25.5V / 34.0V   |                                  |                                   |       |
| Temperature Compensation Conefficient   | -5mv / °C /cell (25°Cvef)   |                                  |                                   |       |
| Peak Conversion Efficiency  | 98% (MPPT Efficiency 99%)   |                                  |                                   |       |
| Maximum Battery Current   | 60A   | 80A                              | 100A                              |       |
| Maximum DC load current   | /   | /                                | 100A                              |       |
| Max Charging Current  | 60amps continuous @ 40°C ambient  | 80amps continuous @ 40°C ambient | 100amps continuous @ 40°C ambient |       |
| <b>DISPLAY &amp; PROTECTION</b>   |   |                                  |                                   |       |
| Protections   | Solar high voltage disconnect/ Solar high voltage reconnect/ Battery high voltage disconnect/ Battery high voltage reconnect/ High temperature disconnect/ High temperature reconnect |                                  |                                   |       |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |                                  |                                   |       |
| Machine Dimension (W*H*D)(mm)   | 163.6*306.6*94.9  |                                  | 165*284*97                        |       |
| Package Dimension (W*H*D)(mm)   | /   |                                  | /                                 |       |
| N.W(kg)   | 3   |                                  | 4                                 |       |
| G.W(kg)   | /   |                                  | /                                 |       |
| <b>OTHER</b>  |   |                                  |                                   |       |
| Mounting  | Wall mount  |                                  |                                   |       |
| Environmental Rating  | Indoor  |                                  |                                   |       |
| Enclosure   | IP20  |                                  |                                   |       |
| Radiating Mode  | Fan cooling   |                                  |                                   |       |
| Operating Temperature Range   | -10~55°C  |                                  |                                   |       |
| Ambient Humidity  | 0~90% relative humidity (non-condensing)  |                                  |                                   |       |
| Altiude   | ≤3000m  |                                  |                                   |       |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                                  |                                   |       |
| UKCA (BS IEC62109-1:2010)+CE-LVD(EN IEC62109-1:2010)<br>CE-E-EMC+LVD (EN6100-6-3:2007+A1:2011,EN6100-6-1:2019+EN IEC62109-1:2010) |   |                                  |                                   |       |

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## MPPT SOLAR CHARGE CONTROLLER PC1800F Series

60~100A | 12V,24V,36V,48V | 245V

MPPT (Maximum Power Point Tracking) Solar Charge Controller offer an efficient, safe, multi-stage recharging process that prolongs battery life and assures peak performance from a solar array. Each Charge Controller allows customized battery recharging.



- LCD display , easy to operate on LCD screen
- Multi stage charging (3-stage charging , parallel charging and equalized charging function)
- Maximum Solar Input Voltage: 245V
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV array short circuit, PV reverse polarity, Battery reverse polarity, Over charging, Output short circuit



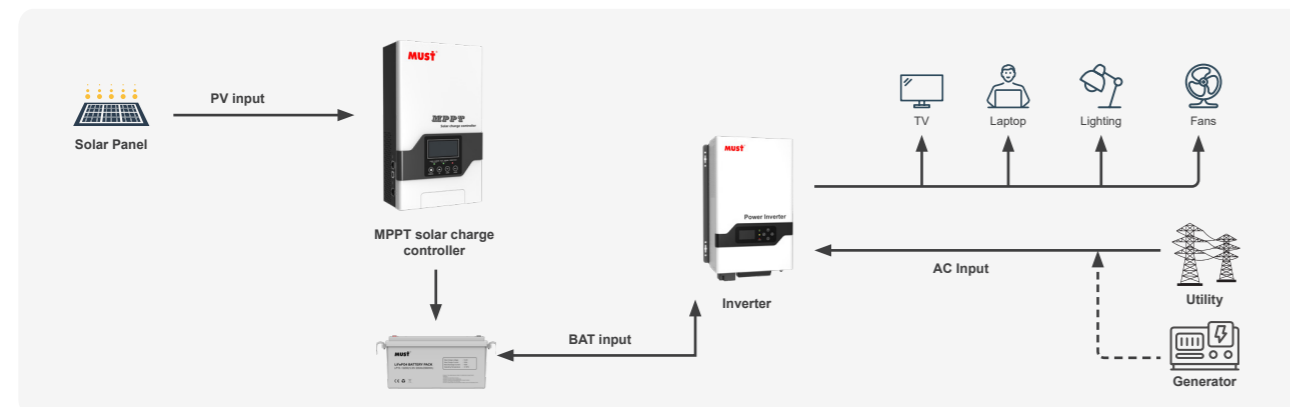
### Back panel description

80A

100A

1. The load positive terminal
2. Battery connectors
3. The load negative terminal
4. PV connectors
5. Communication port
6. Battery temperature sensor terminal
7. USB port

### Solar system connection



| MODEL   | PC18-6025F  | PC18-8025F                       | PC18-10025F                       |       |
|---|---|----------------------------------|-----------------------------------|-------|
| Nominal Battery System Voltage  | 12V / 24V / 48VDC (Auto detection); 36V (Setting)   |                                  |                                   |       |
| <b>CONTROLLER INPUT</b>   |   |                                  |                                   |       |
| Battery Voltage   | 12V / 24V / 36V / 48V   |                                  |                                   |       |
| Maximum Solar Input Voltage   | 12V (VBAT)  | 100V                             |                                   |       |
|   | 24V (VBAT)  | 245V                             |                                   |       |
|   | 36V (VBAT)  | 245V                             |                                   |       |
|   | 48V (VBAT)  | 245V                             |                                   |       |
| PV Array MPPT Voltage Range   | 12V (VBAT)  | 15-95V                           |                                   |       |
|   | 24V (VBAT)  | 30~230V                          |                                   |       |
|   | 36V (VBAT)  | 45~230V                          |                                   |       |
|   | 48V (VBAT)  | 60~230V                          |                                   |       |
| Maximum Input Power   | 12V (VBAT)  | 940W                             | 1250W                             | 1560W |
|   | 24V (VBAT)  | 1880W                            | 2500W                             | 3120W |
|   | 36V (VBAT)  | 2820W                            | 3750W                             | 4680W |
|   | 48V (VBAT)  | 3760W                            | 5000W                             | 6250W |
| <b>BATTERY</b>  |   |                                  |                                   |       |
| Charging Set Points   | Flooded Battery   | Absorption Stage                 | 14.2V / 28.4V / 42.6V / 56.8V     |       |
|   |   | Float Stage                      | 13.7V / 27.4V / 41.1V / 54.8V     |       |
|   | AGM (Default)   | Absorption Stage                 | 14.4V / 28.8V / 43.2V / 57.6V     |       |
|   |   | Float Stage                      | 13.7V / 27.4V / 41.1V / 54.8V     |       |
| Over-charging Voltage   | 15.5V / 30.0V / 45.0V / 60.0V   |                                  |                                   |       |
| Over-charging Comeback Voltage  | 14.5V / 29.5V / 44.5V / 59.0V   |                                  |                                   |       |
| Battery Defect Voltage  | 10.0V / 17.0V / 25.5V / 34.0V   |                                  |                                   |       |
| Temperature Compensation Coefficient  | -5mv / °C /cell (25°C vef)  |                                  |                                   |       |
| Peak Conversion Efficiency  | 98% (MPPT Efficiency 99%)   |                                  |                                   |       |
| Maximum Battery Current   | 60A   | 80A                              | 100A                              |       |
| Maximum DC load current   | /   | /                                | 100A                              |       |
| Max Charging Current  | 60amps continuous @ 40°C ambient  | 80amps continuous @ 40°C ambient | 100amps continuous @ 40°C ambient |       |
| <b>DISPLAY &amp; PROTECTION</b>   |   |                                  |                                   |       |
| Protections   | Solar high voltage disconnect/ Solar high voltage reconnect/ Battery high voltage disconnect/ Battery high voltage reconnect/ High temperature disconnect/ High temperature reconnect |                                  |                                   |       |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |                                  |                                   |       |
| Machine Dimension (W*H*D)(mm)   | 163.6*306.6*94.9  |                                  | 165*284*97                        |       |
| Package Dimension (W*H*D)(mm)   | /   |                                  | /                                 |       |
| N.W(kg)   | 3   |                                  | 4                                 |       |
| G.W(kg)   | /   |                                  | /                                 |       |
| <b>OTHER</b>  |   |                                  |                                   |       |
| Mounting  | Wall mount  |                                  |                                   |       |
| Environmental Rating  | Indoor  |                                  |                                   |       |
| Enclosure   | IP20  |                                  |                                   |       |
| Radiating Mode  | Fan cooling   |                                  |                                   |       |
| Operating Temperature Range   | -10~55°C  |                                  |                                   |       |
| Ambient Humidity  | 0~90% relative humidity (non-condensing)  |                                  |                                   |       |
| Altiude   | ≤3000m  |                                  |                                   |       |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                                  |                                   |       |
| UKCA (BS IEC62109-1:2010)+CE-LVD(EN IEC62109-1:2010)<br>CE-EMC+LVD (EN6100-6-3:2007+A1:2011,EN6100-6-1:2019+EN IEC62109-1:2010) |   |                                  |                                   |       |

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

## MPPT SOLAR CHARGE CONTROLLER PC1800A Series

30A, 40A | 12V,24V

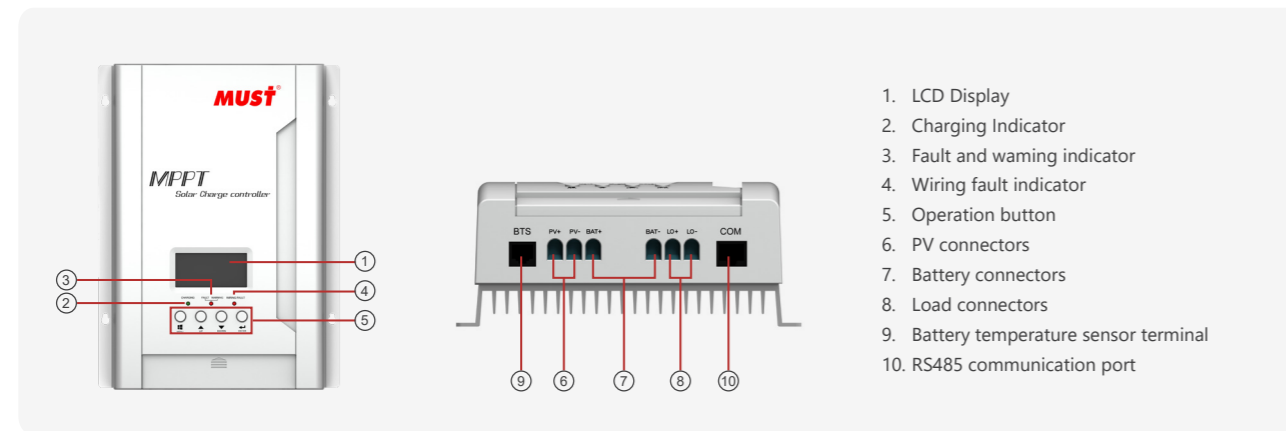
This solar charge controller is an advanced solar charger with maximum power point tracking. Applying intelligent MPPT algorithm, it allows solar charge controller to extract maximum power from solar arrays by finding the maximum power point of the array.

The MPPT battery charging process has been optimized for long battery life and improved system performance. Self-diagnostics and electronic error protections prevent damage when installation errors or system faults occur.

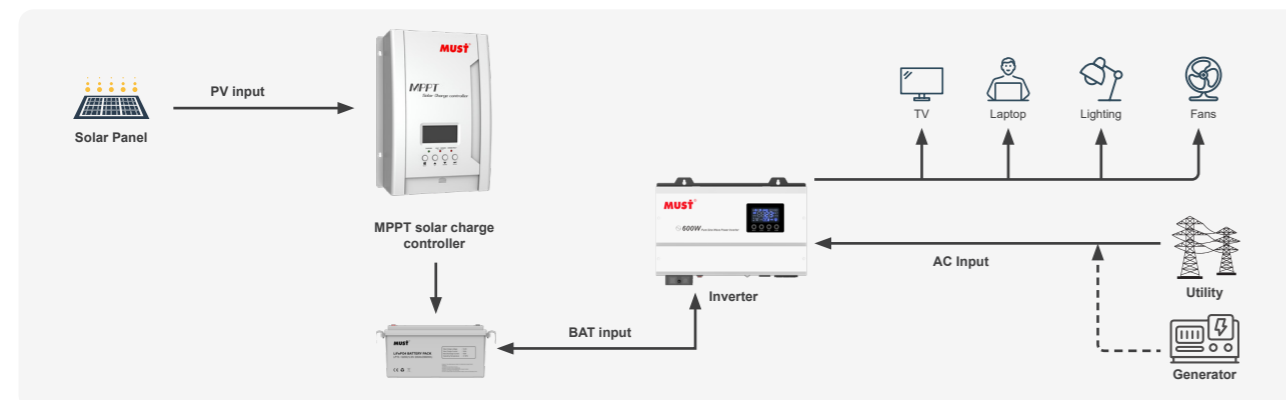


- Intelligent Maximum Power Point Tracking technology increases efficiency 25%~30%
- Compatible for PV systems in 12V,or24V
- Three-stage charging optimizes battery performance
- Maximum charging current up to 30A/40A
- Advanced MPPT technology,with efficient no less than 99%
- Maximum DC- DC conversion efficiency of 98%
- Battery temperature sensor(BTS) automatically provides temperature compensation Automatic battery voltage detection
- Integrated intelligent slot compatible with 485 communication

### Back panel description



### Solar system connection



| MODEL   | PC18-3015A  | PC18-4015A                       |             |
|---|---|----------------------------------|-------------|
| Nominal Battery System Voltage  | 12V / 24V (Auto detection)  |                                  |             |
| <b>CONTROLLER INPUT</b>   |   |                                  |             |
| Battery Voltage   | 12V/ 24V  |                                  |             |
| Open circuit voltage  | 145V  |                                  |             |
| PV Array MPPT Voltage Range   | 60-130VDC   |                                  |             |
| Maximum Input Power   | 12V   | 432W                             | 576W        |
|   | 24V   | 864W                             | 1152W       |
| <b>BATTERY</b>  |   |                                  |             |
| Charging Set Points   | Flooded Battery   | Absorption Stage                 | 14.2V/28.4V |
|   |   | Float Stage                      | 13.7V/27.4V |
|   | AGM/GEL/LEAD (Default)  | Absorption Stage                 | 14.4V/28.8V |
|   |   | Float Stage                      | 13.7V/27.4V |
| Over-charging Voltage   | 15.5V / 30.0V   |                                  |             |
| Over-charging Comeback Voltage  | 14.5V / 29.5V   |                                  |             |
| Battery Defect Voltage  | 10.0V / 17.0V   |                                  |             |
| Temperature Compensation Coefficient  | -5mv / °C /cell (25°C vef)  |                                  |             |
| Peak Conversion Efficiency  | 98% (MPPT Efficiency 99%)   |                                  |             |
| Maximum Battery Current   | 30A   | 40A                              |             |
| Max Charging Current  | 30amps continuous @ 40°C ambient  | 40amps continuous @ 40°C ambient |             |
| <b>GENERAL SPECIFICATION</b>  |   |                                  |             |
| Radiating Mode  | Automatic cooling   |                                  |             |
| Protections   | Solar high voltage disconnect/ Solar high voltage reconnect/ Battery high voltage disconnect<br>Battery high voltage reconnect/ High temperature disconnect/ High temperature reconnect |                                  |             |
| <b>MECHANICAL SPECIFICATIONS</b>  |   |                                  |             |
| Mounting  | Wall mount  |                                  |             |
| Machine Dimension (W*H*D)(mm)   | 187*255*72mm  |                                  |             |
| Package Dimension (W*H*D)(mm)   | /   |                                  |             |
| N.W(kg)   | /   |                                  |             |
| G.W(kg)   | /   |                                  |             |
| <b>OTHER</b>  |   |                                  |             |
| Environmental Rating  | Indoor  |                                  |             |
| Enclosure   | IP30  |                                  |             |
| Operating Temperature Range   | -10~50°C  |                                  |             |
| Ambient Humidity  | 0~90% relative humidity (non-condensing)  |                                  |             |
| Altitude  | ≤3000m  |                                  |             |
| <b>CERTIFICATION &amp; STANDARDS</b>  |   |                                  |             |
| UKCA (BS IEC62109-1:2010)+CE-LVD(EN IEC62109-1:2010)<br>CE-EMC+LVD (EN6100-6-3:2007+A1:2011,EN6100-6-1:2019+EN IEC62109-1:2010) |   |                                  |             |

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## MPPT SOLAR CHARGE CONTROLLER PC1600A Series

20A, 30A, 40A | 12V,24V

MPPT (Maximum Power Point Tracking) Solar Charge Controller offer an efficient, safe, multi-stage recharging process that prolongs battery life and assures peak performance from a solar array. Each Charge Controller allows customized battery recharging.



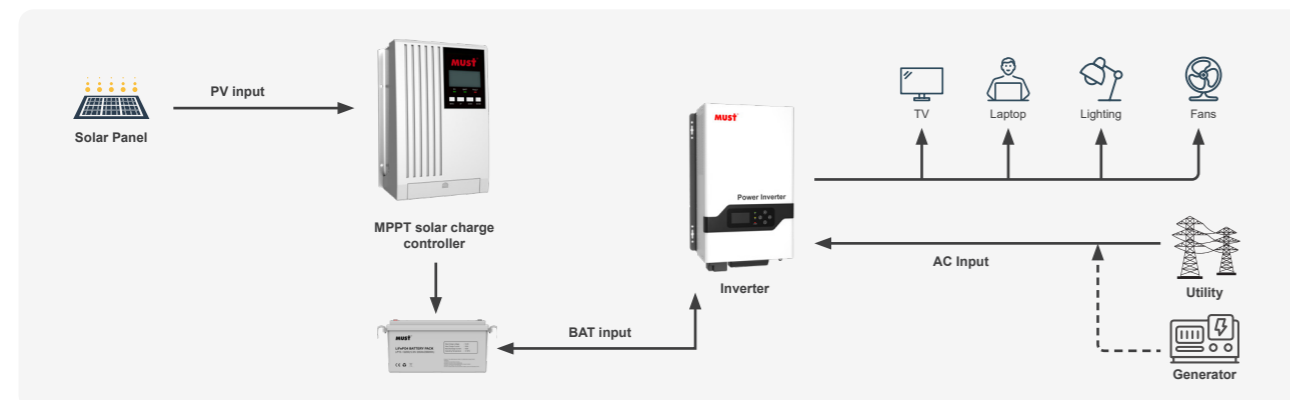
- LCD display , easy to operate on LCD screen
- Multi stage charging (3-stage charging , parallel charging and equalized charging function)
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV array short circuit, PV reverse polarity, Battery reverse polarity, Over charging, Output short circuit



### Back panel description

1. LCD Display
2. LED Indicator
3. Confirm the selection in setting mode
4. Decrease the setting data
5. Increase the setting data
6. Enter or exit setting mode
7. The load negative terminal
8. The load positive terminal
9. The battery negative terminal
10. The battery positive terminal
11. PV array negative terminal
12. PV array positive terminal
13. Communication network terminal
14. Remote external temperature terminal

### Solar system connection



| MODEL   | PC16-2015A   | PC16-3015A         | PC16-4015A         |       |
|---|--|--------------------|--------------------|-------|
| Nominal Battery System Voltage  | 12VDC / 24VDC (Auto Detection)   |                    |                    |       |
| <b>CONTROLLER INPUT</b>   |  |                    |                    |       |
| PV Open Circuit Voltage   | 12V  | 100VDC             |                    |       |
|   | 24V  | 145VDC             |                    |       |
| PV Array MPPT Voltage Range   | 12V  | 16VDC~100VDC       |                    |       |
|   | 24V  | 32VDC~130VDC       |                    |       |
| Max PV Input Power  | 12V  | 300W               | 450W               | 600W  |
|   | 24V  | 600W               | 900W               | 1200W |
| <b>BATTERY</b>  |  |                    |                    |       |
| Absorption Voltage  | 12V  | 12.5VDC            |                    |       |
|   | 24V  | 25.0VDC            |                    |       |
| Refloat Voltage   | 12V  | 13.7VDC            |                    |       |
|   | 24V  | 27.4VDC            |                    |       |
| Float Voltage   | 12V  | 14.3VDC            |                    |       |
|   | 24V  | 28.6VDC            |                    |       |
| Low Voltage Protection Point  | 12V  | 10.0VDC            |                    |       |
|   | 24V  | 20.0VDC            |                    |       |
| <b>DC OUTPUT</b>  |  |                    |                    |       |
| Output Voltage  | 12V  | 10.0~14.5VDC       |                    |       |
|   | 24V  | 20.0~29.0VDC       |                    |       |
| Peak Conversion Efficiency  | 98%(MPPT Efficiency 99%)   |                    |                    |       |
| Max Charging Current  | 20 amps continuous   | 30 amps continuous | 40 amps continuous |       |
| Max Output Current  | 20 amps continuous   | 20 amps continuous | 20 amps continuous |       |
| Low Voltage alarm   | 12V  | 10.25VDC           |                    |       |
|   | 24V  | 20.5VDC            |                    |       |
| Low Voltage cut off   | 12V  | 10.0VDC            |                    |       |
|   | 24V  | 20.0 VDC           |                    |       |
| Low Voltage Recovery  | 12V  | 11.0VDC            |                    |       |
|   | 24V  | 22.0VDC            |                    |       |
| <b>DISPLAY &amp; PROTECTION</b>   |  |                    |                    |       |
| LED Indication  | Systematic operation, LV indication, LV protection, Over charge protection<br>Loads protection, Short circuit protection |                    |                    |       |
| LED Display   | Charge Voltage, Charge Current, Voltage of storage battery, Capacity of storage battery, Output current                  |                    |                    |       |
| Alarm Protections   | PV array short circuit, PV reverse polarity  |                    |                    |       |
|   | Battery reverse polarity, Over charging prtction   |                    |                    |       |
|   | Output short circuit protection  |                    |                    |       |
|   | Low voltage protection for storage battery   |                    |                    |       |
| <b>MECHANICAL SPECIFICATIONS</b>  |  |                    |                    |       |
| Mounting  | Wall mount   |                    |                    |       |
| Machine Dimension (W*H*D)(mm)   | 154*236*88   |                    |                    |       |
| Package Dimension (W*H*D)(mm)   | /  | /                  | /                  |       |
| N.W(kg)   | /  |                    |                    |       |
| G.W(kg)   | /  | /                  | /                  |       |
| <b>OTHER</b>  |  |                    |                    |       |
| Environmental Rating  | Indoor   |                    |                    |       |
| Radiating Mode  | Automatic cooling  |                    |                    |       |
| Operating Temperature Range   | 0°C~ 55°C  |                    |                    |       |
| Loading (20GP/40GP/40HQ)  | 2500pcs / 5000pcs / 5800pcs  |                    |                    |       |
| <b>CERTIFICATION &amp; STANDARDS</b>  |  |                    |                    |       |
| UKCA (BS IEC62109-1:2010)+CE-LVD(EN IEC62109-1:2010)<br>CE-EMC+LVD (EN6100-6-3:2007+A1:2011,EN6100-6-1:2019+EN IEC62109-1:2010) |  |                    |                    |       |

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## MPPT SOLAR CHARGE CONTROLLER PC1800A Series

60A,80A | 12V,24V,48V

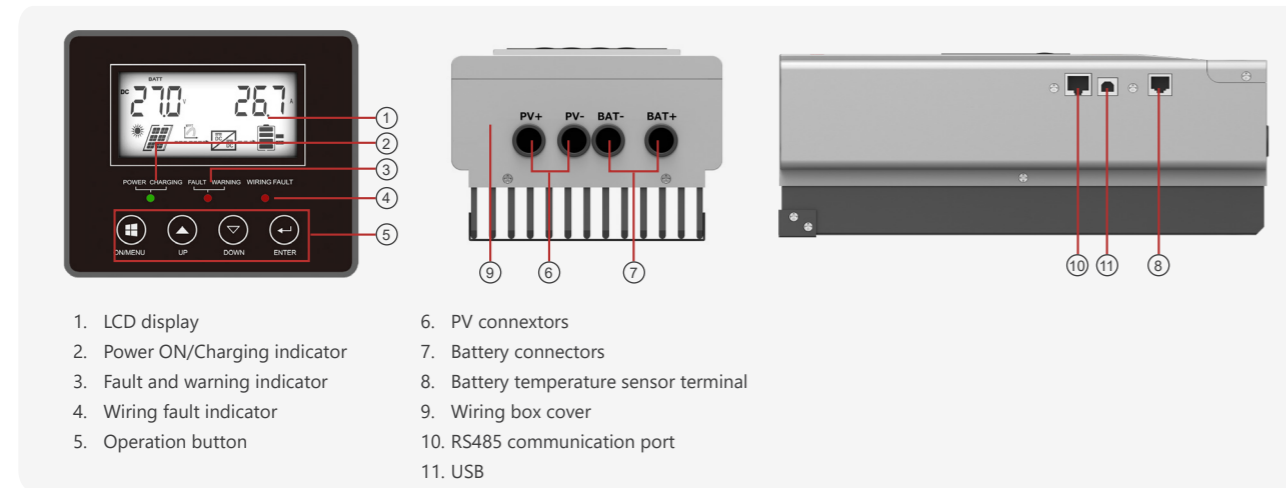
MPPT (Maximum Power Point Tracking) Solar Charge Controller offer an efficient, safe, multi-stage recharging process that prolongs battery life and assures peak performance from a solar array. Each Charge Controller allows customized battery recharging.



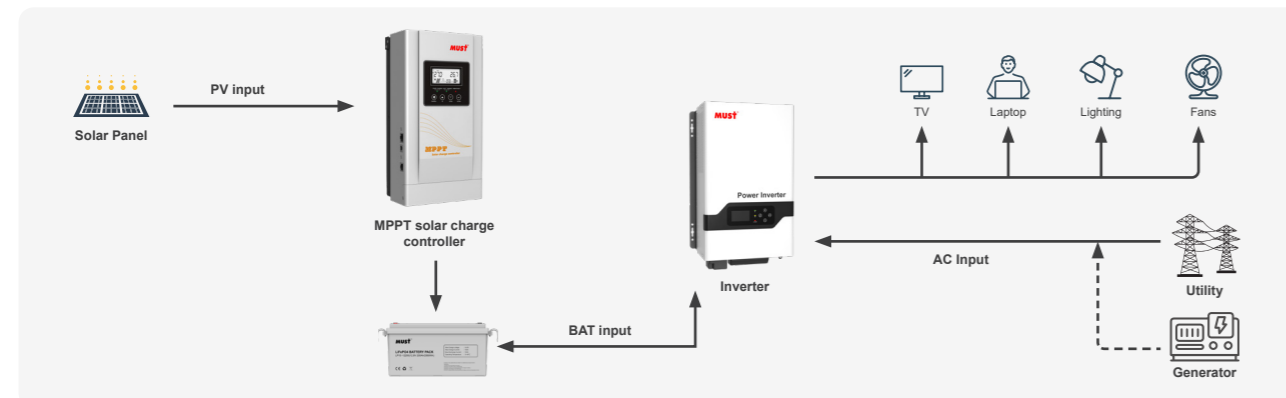
- LCD display , easy to operate on LCD screen
- Multi stage charging (3-stage charging , parallel charging and equalized charging function)
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV array short circuit, PV reverse polarity, Battery reverse polarity, Over charging, Output short circuit



### Back panel description



### Solar system connection



| MODEL                            | PC18-6015A  | PC18-8015A |       |
|----------------------------------|---|------------|-------|
| Nominal Battery System Voltage   | 12V / 24V / 48VDC (Auto detection); 36V (Setting) |            |       |
| <b>ELECTRICAL SPECIFICATIONS</b> |   |            |       |
| Maximum Battery Current          | 60Amps  | 80Amps     |       |
| Battery Voltage                  | 12V/ 24V/ 36V/ 48V                                |            |       |
| Maximum Solar Input Voltage      | 12V (VBAT)  | 100V       |       |
|                                  | 24V (VBAT)  | 145V       |       |
|                                  | 36V (VBAT)  | 145V       |       |
|                                  | 48V (VBAT)  | 145V       |       |
| PV Array MPPT Voltage Range      | 12V (VBAT)  | 15~95V     |       |
|                                  | 24V (VBAT)  | 30~130V    |       |
|                                  | 36V (VBAT)  | 45~130V    |       |
|                                  | 48V (VBAT)  | 60~130V    |       |
| Maximum Input Power              | 12V (VBAT)  | 940W       | 1250W |
|                                  | 24V (VBAT)  | 1880W      | 2500W |
|                                  | 36V (VBAT)  | 2820W      | 3750W |
|                                  | 48V (VBAT)  | 3760W      | 5000W |

Protections: Solar high voltage disconnect; Solar high voltage reconnect; Battery high voltage disconnect; Battery high voltage reconnect; High temperature disconnect; High temperature reconnect

| <b>BATTERY CHARGING</b>              |                                  |                  |                            |
|--------------------------------------|----------------------------------|------------------|----------------------------|
| Charging Algorithm                   | 3-Step or 4-Step (Li)            |                  |                            |
| Temperature Compensation Coefficient | -5mV / °C/ cell (25°C ref.)      |                  |                            |
| Temperature Compensation Set Points  | Absorption, Float                |                  |                            |
| Charging Set Points                  | Flooded Battery                  | Absorption Stage | 14.2V/ 28.4V/ 42.6V/ 56.8V |
|                                      |                                  | Float Stage      | 13.7V/ 27.4V/ 41.1V/ 54.8V |
|                                      | AGM/ GEL/ LEAD Battery (Default) | Absorption Stage | 14.4V/ 28.8V/ 43.2V/ 57.6V |
|                                      |                                  | Float Stage      | 13.7V/ 27.4V/ 41.1V/ 54.8V |
| Over-charging Voltage                | 15.5V / 30.0V / 45.0V / 60.0V    |                  |                            |
| Over-charging Comeback Voltage       | 14.5V / 29.5V / 44.5V / 59.0V    |                  |                            |
| Battery Defect Voltage               | 10.0V / 17.0V / 25.5V / 34.0V    |                  |                            |

| <b>MECHANICAL &amp; ENVIRONMENT</b> |                           |
|-------------------------------------|---------------------------|
| Machine Dimension (W*H*D)(mm)       | 315*160*135               |
| Package Dimension (W*H*D)(mm)       | /                         |
| N.W(kg)                             | /                         |
| G.W(kg)                             | /                         |
| Operating Temperature Range         | -10°Cto 55°C              |
| Storage Temperature                 | -40°Cto 75°C              |
| Humidity                            | 0%~90% RH (No condensing) |
| Enclosure                           | IP20                      |

### CERTIFICATION & STANDARDS

UKCA (BS IEC62109-1:2010)+CE-LVD(EN IEC62109-1:2010)  
CE-EMC+LVD (EN6100-6-3:2007+A1:2011,EN6100-6-1:2019+EN IEC62109-1:2010)

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