MUST Solar Power System

Wherever there is clean energy,
there are MUST products and services

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

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Must Energy Group

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PRODUCT CATALOGUE

Inverter/ Solar Charge Controller

120V/230V

Why Choose MUST?

MUST Renewable

We are proud to have been manufacturing portable power stations, LiFePO4 batteries, inverters, UPS, and solar charge controllers since 1998, with a team of 500 dedicated employees.
MUST integrates the latest and most advanced technology and automation solutions, owning the most complete product line in the industry with reliable quality, high efficiency and stable performance.

Efficient Production, Operation, Quality Control

Intelligent Manufacturing

Comprehensive Professional Test

Lean production

Automatic integrated production line, automatic SMT production line and automatic and digital quality control and management of manufacturing key sections: online AOI inspection, FCT, ATE, Aging test. R&D tests includes Islanding detection etc.

Complete Power Solution

Committed to providing one-stop power solution, including power generation, power conversion, storage, monitoring & management and accessories.

OFF GRID SOLAR INVERTER

HYBRID SOLAR INVERTER

COMMERCIAL & INDUSTRIAL ESS

ALL-IN-ONE SYSTEM

POWER INVERTER

LITHIUM BATTERY

UPS

ON GRID INVERTER

SOLAR CHARGER CONTROL

BALCONY ENERGY STORAGE

MUST®
Solar Power System

230V Series

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

MUST Solar Power System

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

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		PV11-1200 Plus	PV11-2400 Plus
Nominal Battery System Voltage		12VDC	24VDC
NVERTER OUTPUT			
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	
AC INPUT			
Voltage		230VAC	
Selectable Voltage Range	Narrow	170~280VAC	
	Wide	90~280VAC	
Frequency Range		40Hz-70Hz (Auto sensing)	
BATTERY			
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)
SOLAR CHARGER & AC CHARGER			
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)	
BYPASS & PROTECTION			
Nominal Input Frequency		40Hz - 70Hz	
Overload Protection (SMPS Load)		FUSE	
Output Short Circuit Protection		FUSE	
Bypass Fuse Rating		10A	
Max Bypass Current		10Amp	
MECHANICAL SPECIFICATIONS			
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	
OTHER			
Operation Temperature Range		0°C to 50°C	
Audible Noise		50dB MAX	
Warranty		2years	
Display		LED+LCD	

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MUST Solar Power System

HIGH FREQUENCY OFF GRID SOLAR INVERTER

PV1500 Series

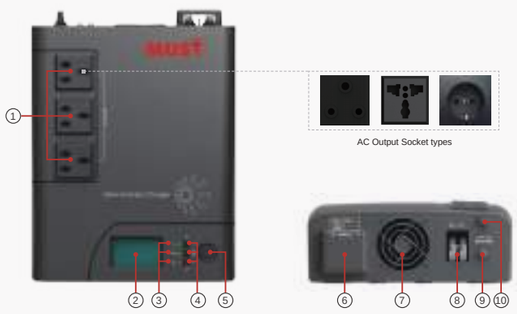
1~2KVA | MPPT 45A | AC 15A/20A

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



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	
NVERTER OUTPUT				
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			
AC INPUT				
Voltage	230VAC			
Voltage Range	170~280VAC (UPS) / 90~280VAC (APL) / 184~258VAC (VDE)			
Frequency Range	50Hz/ 60Hz (auto sensing)			
BATTERY				
Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)				
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)
SOLAR CHARGER & AC CHARGER				
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)	
BYPASS & PROTECTION				
Overload Protection (SMPS Load)	FUSE			
Output Short Circuit Protection	FUSE			
Bypass Fuse Rating	7A		10A	
Max Bypass Current	7A		10A	
MECHANICAL SPECIFICATIONS				
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	
OTHER				
Operation Temperature Range	0°C to 40°C			
Audible Noise	50dB MAX			
Warranty	2years			
Display	LED+LCD			
CERTIFICATION & STANDARDS				
CE				

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

ECO Series

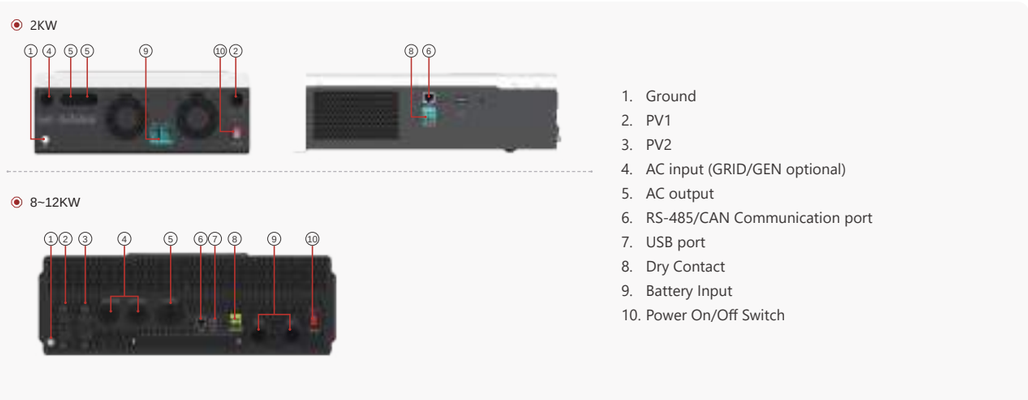
2~12KW | Dual output

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

CE

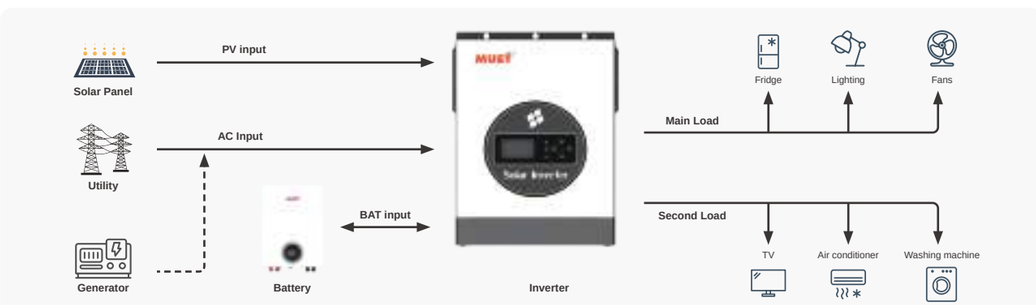
- Provide OEM Services: Appearance and Color
- Complete Solar System for Sale (Optional)
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- Wide PV input voltage range
- Can provide the power to the load without battery
- Combining solar 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



1. Ground
2. PV1
3. PV2
4. AC input (GRID/GEN optional)
5. AC output
6. RS-485/CAN Communication port
7. USB port
8. Dry Contact
9. Battery Input
10. Power On/Off Switch

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
INVERTER OUTPUT								
Rated Power (Main+Second Load)	2000VA/ 2000W	3600VA/ 3600W	4000VA/ 4000W	6000VA/ 6000W	6200VA/ 6200W	8000VA/ 8000W	10000VA/ 10000W	12000VA/ 12000W
Battery Mode (Main+Second Load)	2000VA/ 1600W	3000VA/ 3000W	3500VA/ 3500W	5500VA/ 5500W	6200VA/ 6200W	8000VA/ 8000W	10000VA/ 10000W (Battery current limited)	12000VA/ 12000W (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)							
AC INPUT								
Voltage	230VAC±5%							
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)							
Frequency Range	50Hz / 60Hz(Auto sensing)							
BATTERY								
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
SOLAR CHARGER & AC CHARGER								
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 (40A max)	27A*2 (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
MECHANICAL SPECIFICATIONS								
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
OTHER								
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
CERTIFICATION & STANDARDS								
CE								

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

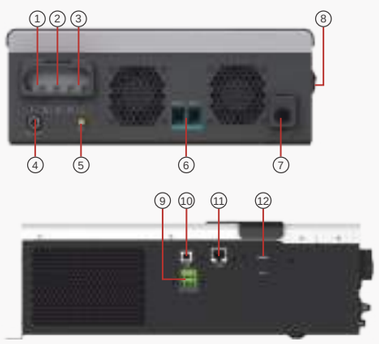
PV1800 PRO Series

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.

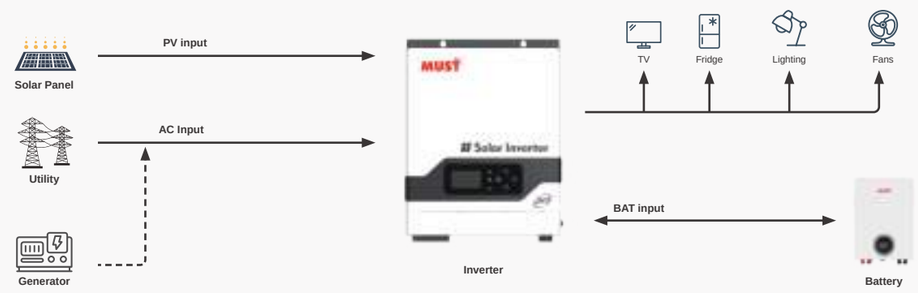
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 400V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep 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



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

Solar system connection



MODEL	PV18-2024 PRO	PV18-3224 PRO
Nominal Battery System Voltage	24VDC	
INVERTER OUTPUT		
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)	
AC INPUT		
Voltage	230VAC±5%	
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)	
Frequency Range	50Hz / 60Hz(Auto sensing)	
BATTERY		
Normal voltage	24VDC	
Floating Charge Voltage	27.4VDC	
Overcharge Protection	30VDC	
SOLAR CHARGER & AC CHARGER		
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
MECHANICAL SPECIFICATIONS		
Machine Dimension (W*H*D)(mm)	290*367*111	
Package Dimension (W*H*D)(mm)	/	
N.W (kg)	/	
G.W (kg)	/	
OTHER		
Humidity	5% to 95% Relative humidity (Non-condensing)	
Operating Temperature	0°C~50°C	
Storage Temperature	-15°C~60°C	
Warranty	2 year	
MECHANICAL SPECIFICATIONS		
CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)		

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

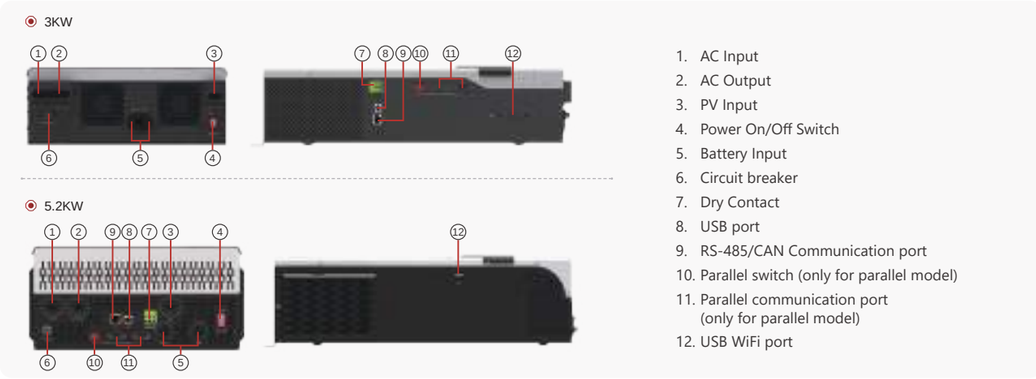
PV1800 PRO Series

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.

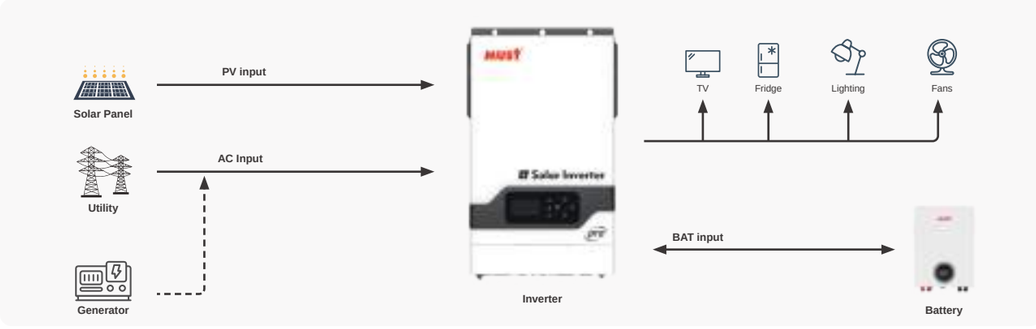
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 450V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep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

Back panel description



1. AC Input
2. AC Output
3. PV Input
4. Power On/Off Switch
5. Battery Input
6. Circuit breaker
7. Dry Contact
8. USB port
9. RS-485/CAN Communication port
10. Parallel switch (only for parallel model)
11. Parallel communication port (only for parallel model)
12. USB WiFi port

Solar system connection



MODEL	PV18-3024 PRO		PV18-5248 PRO	
Nominal Battery System Voltage	24VDC		48VDC	
INVERTER OUTPUT				
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)			
AC INPUT				
Voltage	230VAC±5%			
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)			
Frequency Range	50Hz / 60Hz(Auto sensing)			
BATTERY				
Normal voltage	24VDC		48VDC	
Floating Charge Voltage	27.4VDC		54.8VDC	
Overcharge Protection	30VDC		60VDC	
SOLAR CHARGER & AC CHARGER				
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
MECHANICAL SPECIFICATIONS				
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	
OTHER				
Humidity	5% to 95% Relative humidity (Non-condensing)			
Operating Temperature	0°C~50°C			
Storage Temperature	-15°C~60°C			
Warranty	2years			
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
EN IEC62368-1:2018
Rohs-(2011/65/EUand2015/863/EU)

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

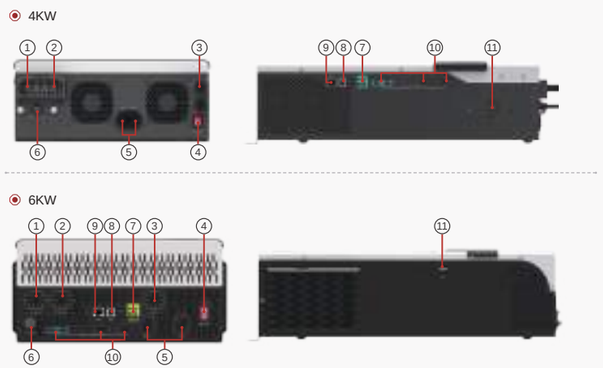
PV1800 PRO II Series

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.

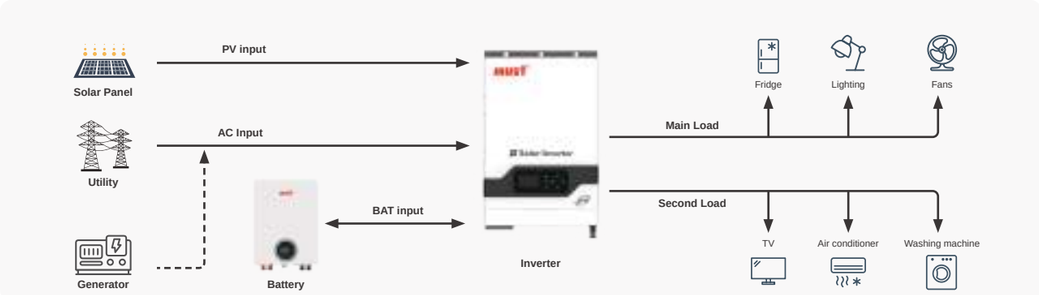
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery 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



1. AC Input
2. AC Output
3. PV Input
4. Power On/Off Switch
5. Battery Input
6. Circuit breaker
7. Dry Contact
8. USB port
9. RS-485/CAN Communication port
10. Parallel communication port (only for parallel model)
11. USB WiFi port

Solar system connection



MODEL	PV18-4024 PRO II	PV18-6048 PRO II
Default Battery System Voltage	24VDC	48VDC
INVERTER OUTPUT		
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)	
AC INPUT		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)	
Frequency Range	50Hz / 60Hz (Auto sensing)	
BATTERY		
Normal voltage	24VDC	48VDC
Floating Charge Voltage	27.4VDC	54.8VDC
Overcharge Protection	30VDC	60VDC
SOLAR CHARGER & AC CHARGER		
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
MECHANICAL SPECIFICATIONS		
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
OTHER		
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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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

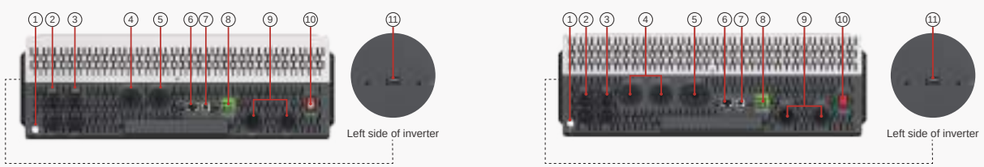
PV1800 PRO II Series

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.

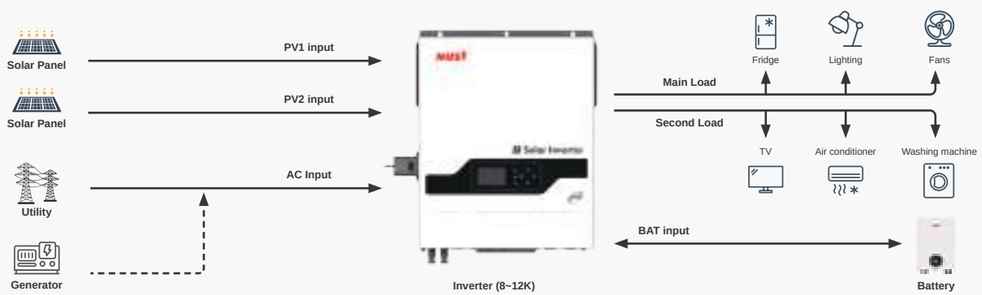
- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V
- Can provide the power to the load without battery
- 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



1. Ground
2. PV1
3. PV2
4. AC input (GRID/GEN optional)
5. AC output
6. RS-485/CAN Communication port
7. USB port
8. Dry Contact
9. Battery Input
10. Power On/Off Switch
11. Wifi port

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				
INVERTER OUTPUT					
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)				
AC INPUT					
Voltage	230VAC				
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)				
Frequency Range	50Hz / 60Hz (Auto sensing)				
BATTERY					
Normal voltage	48VDC				
Floating Charge Voltage	54.8VDC				
Overcharge Protection	60VDC				
SOLAR CHARGER & AC CHARGER					
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
MECHANICAL SPECIFICATIONS					
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
OTHER					
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				
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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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

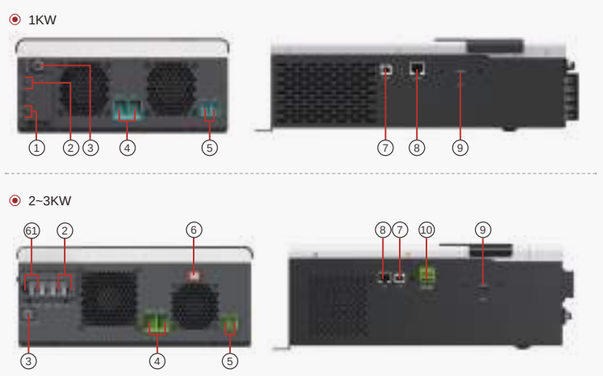
PV1800 VPK Series

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.

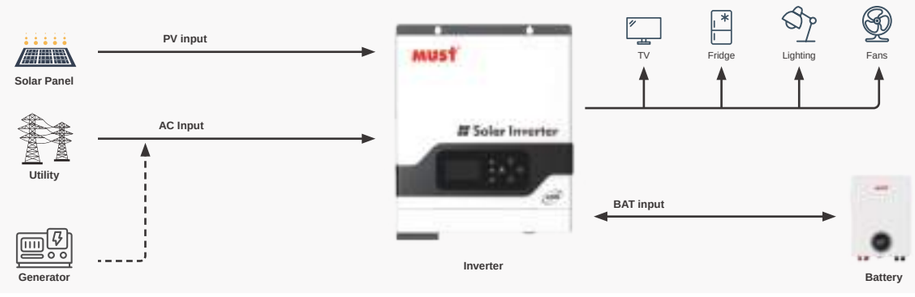
- Smart LCD setting(Working modes, Charge Current, Charge Voltage, etc.)
- Built-in PWM 50A/60A solar charge controller
- New SUB working mode(Solar-Utility-Battery working mode)
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and deep 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



1. AC Input
2. AC Output
3. Circuit breaker
4. Battery Input
5. PV Input
6. Power On/Off Switch
7. USB
8. RS-485 Communication port
9. USB WiFi port
10. Dry Contact

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	
INVERTER OUTPUT					
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)				
AC INPUT					
Voltage	230VAC				
Selectable Voltage Range	170~280VAC(For personal computer) / 90~280VAC(For home appliances) / 184~253VAC(VED4105)				
Frequency Range	50Hz / 60Hz(Auto sensing)				
BATTERY					
Normal voltage	12VDC	24VDC		48VDC	
Floating Charge Voltage	13.7VDC	27.4VDC		54.8VDC	
Overcharge Protection	15.5VDC	30VDC		60VDC	
SOLAR CHARGER & AC CHARGER					
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	
MECHANICAL SPECIFICATIONS					
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)	/	/		/	
OTHER					
Humidity	5% to 95% Relative humidity (Non-condensing)				
Operating Temperature	0°C~50°C				
Storage Temperature	-15˚C ~60˚C				
Warranty	2 year				
CERTIFICATION & STANDARDS					

CE-EMC+LVD (EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011)
CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)
UKCA

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

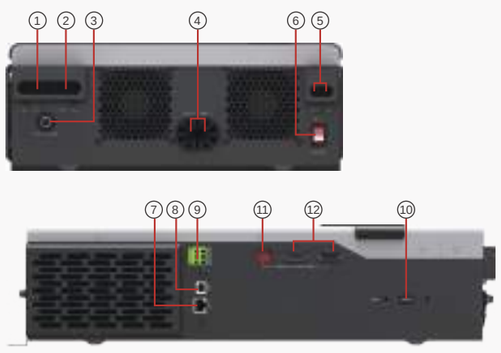
PV1800 VHM Series

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.

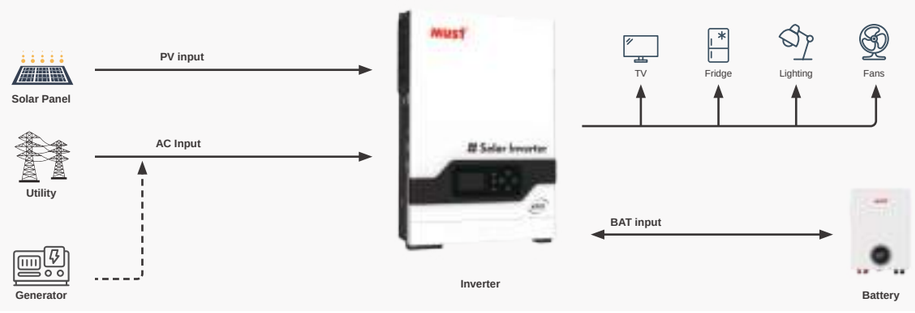
- Rated power : 5KW -5.5KW
- Pure sine wave solar inverter
- Max PV Array Open Circuit Voltage: 250V
- Output power factor 1
- Built-in 80A MPPT solar charger
- Support parallel operation up to 3 units
- Communication CAN/485 port for BMS (optional)
- PV lithium battery activation function
- WIFI remote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

Back panel description



1. AC input
2. AC output
3. Circuit breaker
4. Battery input
5. PV input
6. Power on/off switch
7. RS-485 Communication port
8. USB
9. Dry contact
10. USB wifi port
11. Parallel switch (only for parallel model)
12. Parallel communication port (only for parallel model)

Solar system connection



MODEL	PV18-5048 VHM	PV18-5548 VHM
Nominal Battery System Voltage	48VDC	
INVERTER OUTPUT		
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)	
AC INPUT		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE4105)	
Frequency Range	50Hz / 60Hz(Auto sensing)	
BATTERY		
Normal Voltage	48VDC	
Floating Charge Voltage	54.8VDC	
Overcharge Protection	60VDC	
SOLAR CHARGER & AC CHARGER		
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 Effciency	98%	
Maximum AC Charge Current	60A	
Maximum Charge Current	140A	
MECHANICAL SPECIFICATIONS		
Machine Dimension (W*H*D)(mm)	329*485*134	
Package Dimension (W*H*D)(mm)	/	
N.W (kg)	/	
G.W (kg)	/	
OTHER		
Humidity	5% to 95% Relatiy Humidity (Non-condensing)	
Operating Temperature	0°C~50°C	
Storage Temperature	-15°C ~60°C	
Warranty	2 year	
CERTIFICATION & STANDARDS		
CE-LVD (IEC62109-1:2010, EN IEC62109-2); UKCA		

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

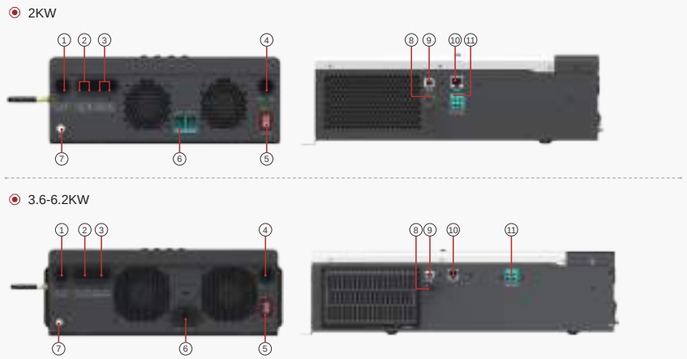
PV1800 PREM Series

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



1. AC Input
2. Main Load
3. Second Load
4. PV Input
5. ON/OFF Switch
6. DC Input
7. Ground
8. WiFi and Bluetooth antenna
9. USB Port
10. RS-485/CAN Communication port
11. Dry contact

Solar system connection

MODEL	PV18-2012 PREM	PV18-3624 PREM	PV18-4024 PREM	PV18-6248 PREM
Nominal Battery System Voltage	12VDC	24VDC	24VDC	48VDC
INVERTER OUTPUT				
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)			
AC INPUT				
Voltage	230VAC±5%			
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)			
Frequency Range	50Hz / 60Hz(Auto sensing)			
BATTERY				
Normal voltage	12VDC	24VDC	24VDC	48VDC
Floating Charge Voltage	13.7VDC	27.4VDC	27.4VDC	54.8VDC
Overcharge Protection	15VDC	30VDC	30VDC	60VDC
SOLAR CHARGER & AC CHARGER				
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
MECHANICAL SPECIFICATIONS				
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
OTHER				
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
CERTIFICATION & STANDARDS				
CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2)				

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MUST®
Solar Power System

HIGH FREQUENCY SOLAR INVERTER

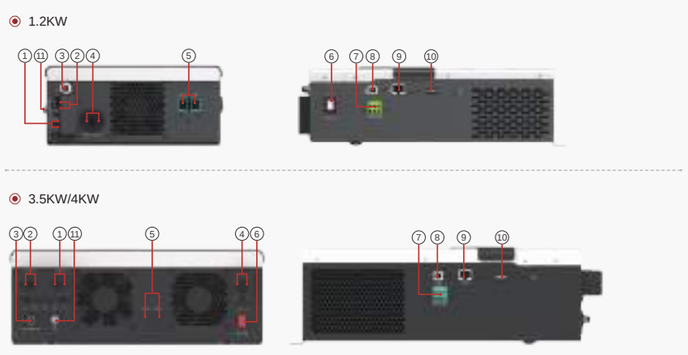
PV1800 VPM II Series

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

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

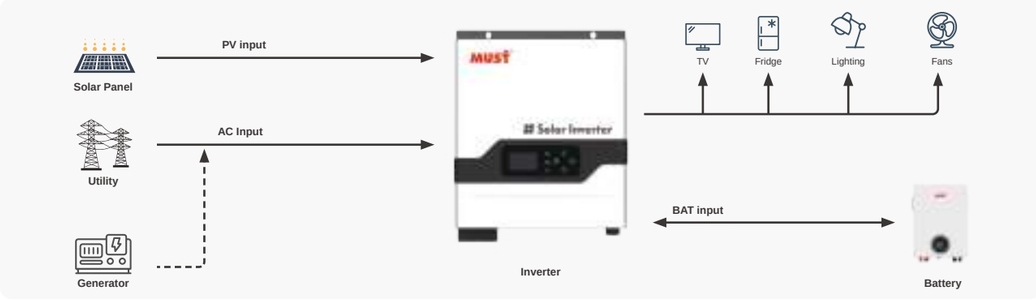
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Bult in MPPT 40A/60A solar charge controller
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, 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. 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
INVERTER OUTPUT									
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)								
AC INPUT									
Voltage	230VAC								
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)								
Frequency Range	50Hz / 60Hz (Auto sensing)								
BATTERY									
Normal voltage	12VDC		24VDC					48VDC	
Floating Charge Voltage	13.8VDC		27.4VDC					54.8VDC	
Overcharge Protection	15VDC		30VDC					60VDC	
SOLAR CHARGER & AC CHARGER									
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	
MECHANICAL SPECIFICATIONS									
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	/	
OTHER									
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								
CERTIFICATION & STANDARDS									
CE-EMC+LVD(EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2)									

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MUST Solar Power System

HIGH FREQUENCY SOLAR INVERTER

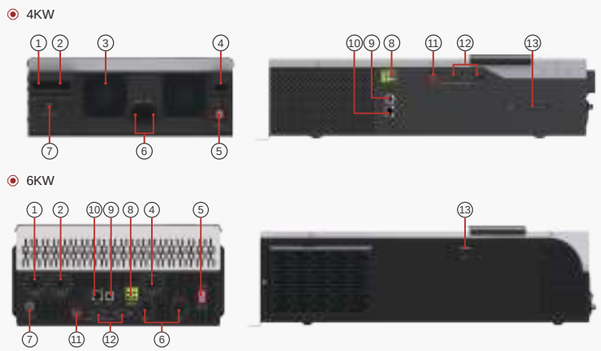
PV1900 EXP Series

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.

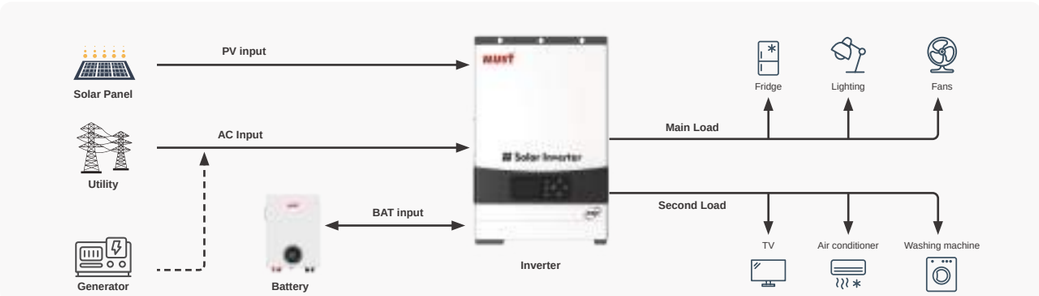
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery 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



1. AC Input
2. AC Output
3. FAN
4. PV Input
5. Power On/Off Switch
6. Battery Input
7. Circuit breaker
8. Dry Contact
9. USB
10. RS-485/CAN Communication port
11. Parallel switch (only for parallel model)
12. Parallel communication port (only for parallel model)
13. Wifi port

Solar system connection



MODEL	PV19-4024 EXP	PV19-6048 EXP
Default Battery System Voltage	24VDC	48VDC
INVERTER OUTPUT		
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)	
AC INPUT		
Voltage	230VAC	
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)	
Frequency Range	50Hz / 60Hz (Auto sensing)	
BATTERY		
Normal voltage	24VDC	48VDC
Floating Charge Voltage	27.4VDC	54.8VDC
Overcharge Protection	30VDC	60VDC
SOLAR CHARGER & AC CHARGER		
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
MECHANICAL SPECIFICATIONS		
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
OTHER		
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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HIGH FREQUENCY SOLAR INVERTER

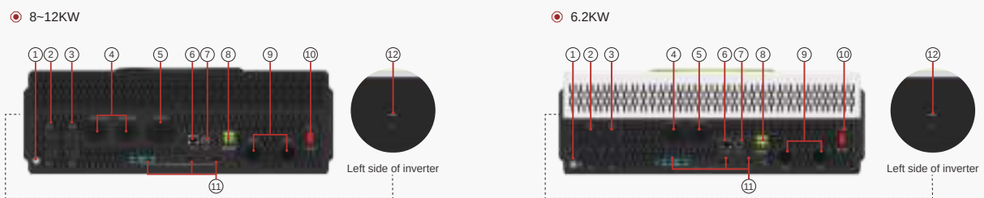
PV1900 EXP Series

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.

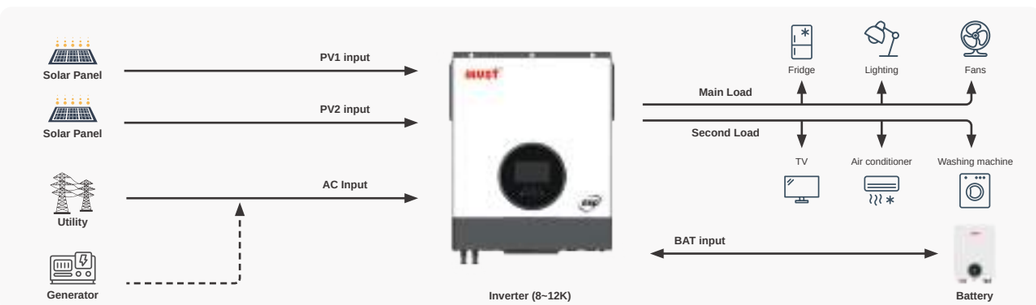
- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V (450V for parallel)
- Can provide the power to the load 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



1. Ground
2. PV1
3. PV2
4. AC input (GRID/GEN optional)
5. AC output
6. RS-485/CAN Communication port
7. USB port
8. Dry Contact
9. Battery Input
10. Power On/Off Switch
11. Parallel communication port (only for parallel model)
12. Wifi port

Solar system connection



MODEL	PV19-6248 EXP	PV19-8048 EXP	PV19-10048 EXP	PV19-11048 EXP	PV19-12048 EXP
Default Battery System Voltage	48VDC				
INVERTER OUTPUT					
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)				
AC INPUT					
Voltage	230VAC				
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)				
Frequency Range	50Hz / 60Hz (Auto sensing)				
BATTERY					
Normal voltage	48VDC				
Floating Charge Voltage	54.8VDC				
Overcharge Protection	60VDC				
SOLAR CHARGER & AC CHARGER					
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
MECHANICAL SPECIFICATIONS					
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
OTHER					
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				
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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MUST Solar Power System

LOW FREQUENCY OFF GRID SOLAR INVERTER

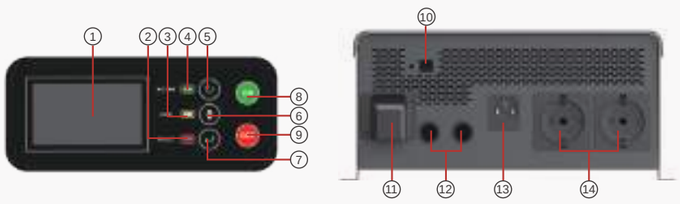
PV2000 PK Series

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.

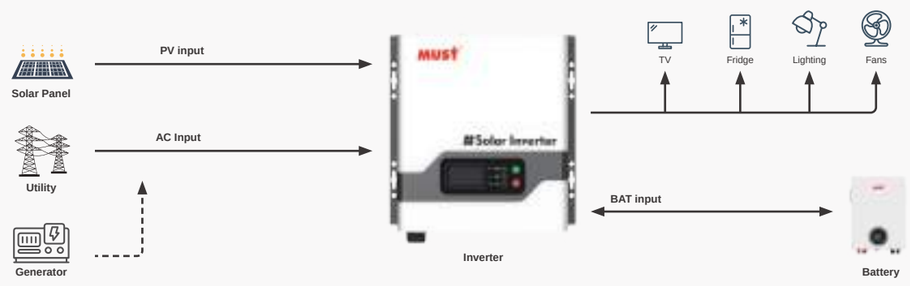
- Pure sine wave output
- Built-in 50A PWM solar charge controller
- Smart LCD setting (frequency , charge voltage, charge current, etc).
- Overload and short-circuit protection
- Deep discharge protection
- Cold start function
- Support USB/RS232 monitoring function

Back panel description



1. LCD display
2. Fault LED
3. Charge LED
4. AC/Inverter LED
5. ESC
6. SEL
7. ENTER
8. POWER ON
9. POWER OFF
10. USB
11. PV Input
12. Battery Input
13. AC Input
14. AC Output

Solar system connection



MODEL	PV20-1012 PK	PV20-1512 PK	PV20-2024 PK
Battery Input Voltage Rating	12VDC		24VDC
INVERTER OUTPUT			
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)		
AC INPUT			
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		
BATTERY			
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
AC CHARGER			
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
BYPASS & PROTECTION			
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	
SOLAR CHARGER			
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		
MECHANICAL SPECIFICATIONS			
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)	/		
OTHER			
Working Environment	0°C~40°C 0~90% Relative humidity (non-condensing)		
Noise	Less than 60db		
Display	LED + LCD		
CERTIFICATION & STANDARDS			
CE-EMC+LVD(EN6100-6-4:2007, EN6100-6-2:2005+EN IEC62109-1:2010, EN IEC62109-2:2011)			

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MUST Solar Power System

LOW FREQUENCY SOLAR INVERTER

PV2900 HP Series

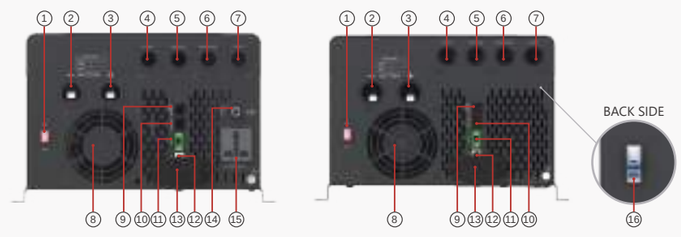
1~6KW | AC 230V | MPPT80A | WIFI | BMS | Dual output

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 optimazed best. it enables inverter to operate with all kinds of home appliances.

CE IEC ISO AFPE/AFCI INMETRO

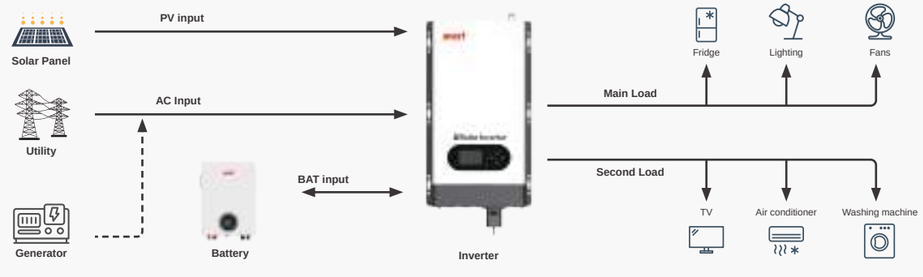
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority /battery priority
- Set utility input wide/narrow voltage range
- Inverter voltage can be 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



1. Power on/off switch
2. BAT -
3. BAT +
4. AC Input
5. Main load
6. Second load
7. PV input
8. Fan
9. Remote port
10. BMS Can Port
11. AGS port
12. USB port
13. WIFI port (optional)
14. AC input protect
15. AC output 10A(max)
16. AC Input breaker

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
INVERTER OUTPUT												
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)											
AC INPUT												
Voltage	230VAC											
Selectable Voltage Range	155~265VAC(For personal computers)											
Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz											
BATTERY												
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)											
CHARGER												
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
PAYPASS & PROTECTION												
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			
SOLAR CHARGER												
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											
MECHANICAL SPECIFICATIONS												
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)	/								/			
OTHER												
Operating Temperature Range	0°C ~ 40°C											
Storage Temperature	-15°C ~ 60°C											
Audible Noise	60dB MAX											
Display	LED+LCD											
Standard Warranty	2 year											
CERTIFICATION & STANDARDS												
CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)												

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MUST Solar Power System

LOW FREQUENCY SOLAR INVERTER

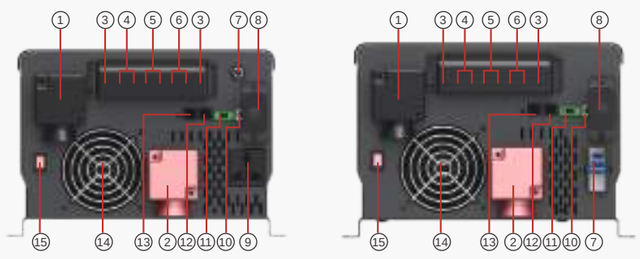
PV3000 VHM Series

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 optimazed best. it enables inverter to operate with all kinds of home appliances.

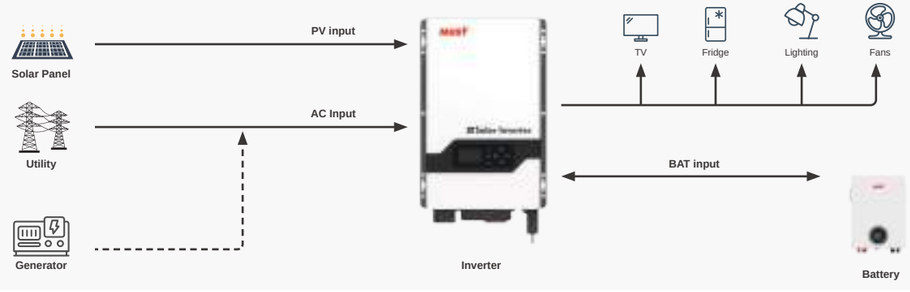
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority /battery priority
- Set utility input wide/narrow voltage range
- Inverter voltage can be 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



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

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
INVERTER OUTPUT												
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)											
AC INPUT												
Voltage	230VAC											
Selectable Voltage Range	155~265VAC(For personal computers)											
Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz											
BATTERY												
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)											
CHARGER												
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
PAYPASS & PROTECTION												
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			
SOLAR CHARGER												
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											
MECHANICAL SPECIFICATIONS												
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)	/								/			
OTHER												
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											
CERTIFICATION & STANDARDS												
CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)												

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

MUST®
Solar Power System

LOW FREQUENCY SOLAR INVERTER/CHARGER

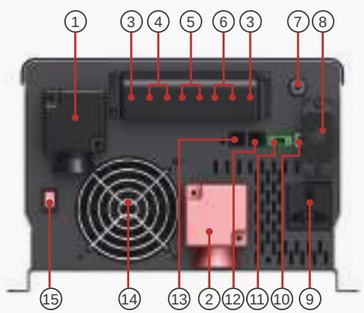
PV3000 VPM Series

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 optimazed best. It enables inverter to operate with all kinds of home appliances.

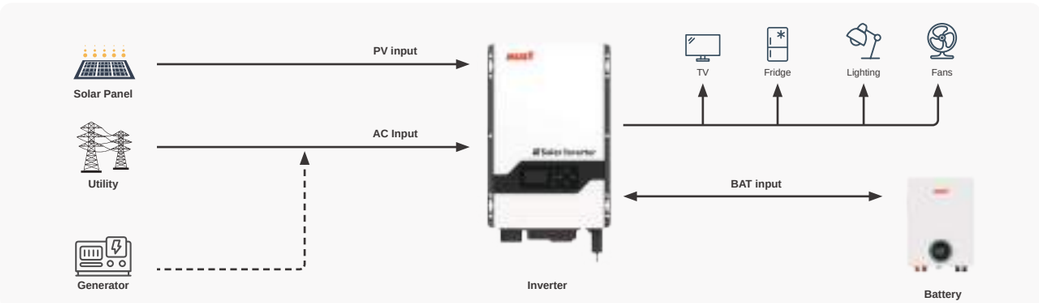
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to 110V/115V/120V 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 -
2. BAT +
3. GND
4. AC Input
5. AC Output
6. PV Input
7. AC Input protect
8. Wifi (optional)
9. AC Output 10A(MAX)
10. USB
11. AGS
12. BAT CAN
13. Remote port
14. FAN
15. Power on/off switch

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
INVERTER OUTPUT								
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)						
AC INPUT								
Voltage		230VAC						
Selectable Voltage Range		75~135VAC; 155~265VAC (For personal computers)						
Frequency Range		50Hz / 60Hz(Auto sensing) 40~80Hz						
BATTERY								
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)						
CHARGER								
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
BYPASS & PROTECTION								
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						
SOLAR CHARGER								
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						
MECHANICAL SPECIFICATIONS								
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)		/						
OTHER								
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						
CERTIFICATION & STANDARDS								
/								

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MUST Solar Power System

LOW FREQUENCY SOLAR INVERTER

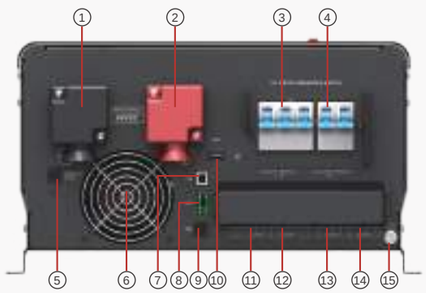
PV3600 PRO Series

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

PV3600 PRO series is a multi-function inverter ,combining functions of inverter and MPPT solar charger 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.

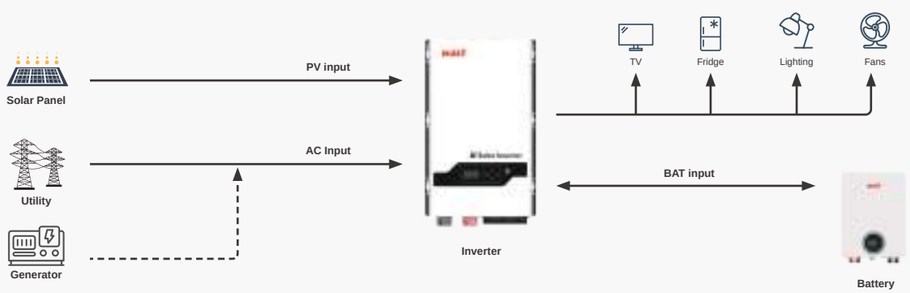
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 140Amp
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI / USB monitoring function (wi-fi optional)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

Back panel description



1. BAT-
2. BAT+
3. AC input breaker
4. AC output breaker
5. Remote control port
6. Fan
7. USB port
8. AGS port
9. BTS port
10. Wifi communication port
11. AC input
12. AC outputr
13. PV2 input
14. PV1 input
15. Ground

Solar system connection



MODEL	PV36-8048 PRO	PV36-10048 PRO	PV36-12048 PRO
Nominal Battery System Voltage	48VDC	48VDC	48VDC
INVERTER OUTPUT			
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 effciency(peak)	>88%		
Line mode efficiency	>95%		
Power factor	1.0		
Typical transfer time	20ms(max)		
AC INPUT			
Voltage	230VAC		
Selectable voltage range	90-280 VAC (APL)		
Frequency range	50Hz / 60Hz		
BATTERY			
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		
AC CHARGER			
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
BTS			
Continuous output power	Yes Variances in charging voltage & S.D. voltage base on the battery temperature		
BYPASS & PROTECTION			
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
SOLAR CHARGER			
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 effciency	>98%		
Standby power consumption	<2W		
MECHANICAL SPECIFICATIONS			
Mounting	Wall mount		
Dimensions (W*H*D)(mm)	402*674*222		
Package Dimensions (W*H*D)(mm)	/		
N.W (kg)	/		
G.W (kg)	/		
OTHER			
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		
CERTIFICATION & STANDARDS			
CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)			

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MUST Solar Power System

LOW FREQUENCY SOLAR INVERTER

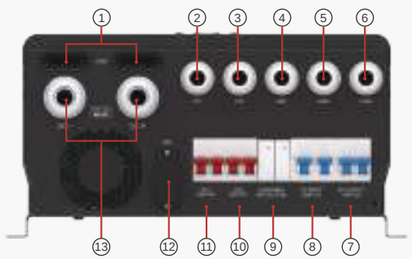
PV3900 Series

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

PV3900 Series is a multi-function inverter ,combining functions of inverter and MPPT solar charger 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.

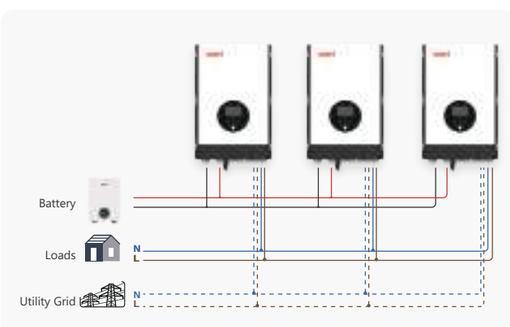
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 200A
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI monitoring function (optional)
- Compatible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

Back panel description

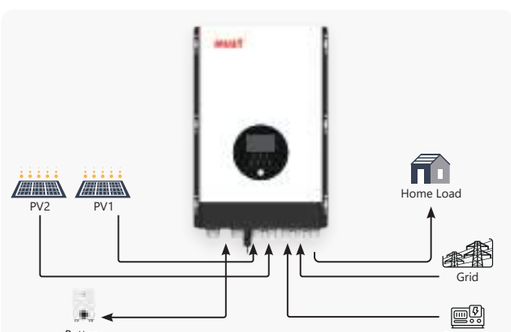


1. Communication port
2. PV1 port
3. PV2 port
4. GEN input port
5. Grid input port
6. AC output port
7. AC output switch
8. AC input switch
9. Lighting protection
10. PV2 Switch
11. PV1 Switch
12. WiFi port
13. Battery -/+

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		
INVERTER OUTPUT			
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)		
AC INPUT			
Voltage	220V/230V/240V		
Selectable voltage range	90-280 VAC (APL)		
Frequency range	50Hz / 60Hz		
BATTERY			
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		
AC CHARGER			
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	10-140A (setting) battery terminal		
BTS			
Continuous output power	Yes Variances in charging voltage & S.D. voltage base on the battery temperature		
BYPASS & PROTECTION			
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		
SOLAR CHARGER			
Maximum PV charge current	100A	200A	200A
DC voltage	48V		
Maximum PV array power	5000W	10000W	10000W
MPPT range @ operating voltage(VDC)	64~235VDC		
Maximum PV array open circuit voltage	250VDC		
Maximum efficiency	>98%		
Standby power consumption	<2W		
MECHANICAL SPECIFICATIONS			
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		
OTHER			
Operating temperature range	0°C to 50°C		
Storage temperature	15°C to 60°C		
Audible noise	60dB MAX		
Communication	WiFi		
Display	LED+LCD		
CERTIFICATION & STANDARDS			
CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)			

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MUST®
Solar Power System

PURE SINE WAVE SOLAR INVERTER

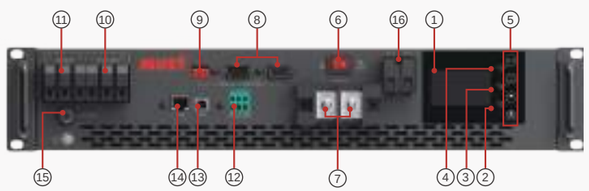
PV5000 Series

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

Solar system connection

MODEL	PV50-3048	PV50-4048	PV50-5048
Nominal Battery System Voltage	48V		
INVERTER OUTPUT			
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)		
AC INPUT			
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		
SOLAR CHARGER & AC CHARGER			
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		
MECHANICAL SPECIFICATIONS			
Machine Dimension (W*H*D)(mm)	468*86.3*400		
Package Dimension (W*H*D)(mm)	/		
N.W (kg)	10		
G.W (kg	/		
OTHER			
Parallel operation	3 units		
Operating Temperature Range	-10°C ~ 40°C		
Storage temperature	-15°C~ 60°C		
CERTIFICATION & STANDARDS			
CE, EN IEC62368-1			

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MUST®
Solar Power System

PURE SINE WAVE SOLAR INVERTER

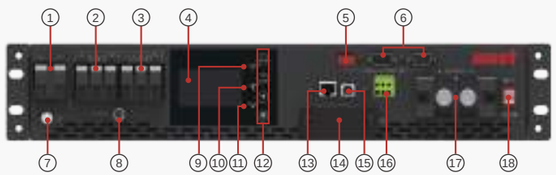
PV5000 PRO Series

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

Solar system connection

MODEL	PV50-3048 PRO	PV50-4048 PRO	PV50-5248 PRO
Nominal Battery System Voltage	48VDC		
INVERTER OUTPUT			
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)		
AC INPUT			
Voltage	230VAC±5%		
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)		
Frequency Range	50Hz / 60Hz(Auto sensing)		
BATTERY			
Normal voltage	48VDC		
Floating Charge Voltage	54.8VDC		
Overcharge Protection	60VDC		
SOLAR CHARGER & AC CHARGER			
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
MECHANICAL SPECIFICATIONS			
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		
OTHER			
Parallel operation	3 units		
Humidity	5% to 95% Relative humidity (Non-condensing)		
Operating Temperature	0°C~50°C		
Storage Temperature	-25°C~60°C		
CERTIFICATION & STANDARDS			
CE/IEC			

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MUST Solar Power System

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 installnation 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

1. Fault LED
2. Inverter Mode LED
3. Line Mode LED
4. LCD Display
5. Set Key
6. Flip Key
7. Enter Key
8. ON / OFF
9. AC Input
10. Output Receptacle(s)
11. Fan
12. DC Input Connector (Battery Terminal)

Solar system connection

MODEL		EP11-1200 PRO	EP11-2400 PRO
Nominal Battery System Voltage		12VDC	24VDC
INVERTER OUTPUT			
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	
AC INPUT			
Voltage		220 / 230 / 240VAC	
Selectable Voltage Range	Narrow	170~280VAC	
	Wide	90~280VAC	
Frequency Range		50Hz / 60Hz(Auto sensing)	
BATTERY			
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
CHARGER			
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
BYPASS & PROTECTION			
Nominal Input Frequency		50Hz or 60Hz	
Overload Protection (SMPS Load)		FUSE	
Output Short Circuit Protection		10A	
Bypass Fuse Rating		10A	
Max Bypass Current		10A	
MECHANICAL SPECIFICATIONS			
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
OTHER			
Operating Temperature Range		0°C to 40°C	
Audible Noise		60dB MAX	
Display		LED+LCD	
Standard Warranty		2 year	
CERTIFICATION & STANDARDS			
IEC60950-1+A1+A2			

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MUST Solar Power System

HIGH FREQUENCY POWER INVERTER/CHARGER

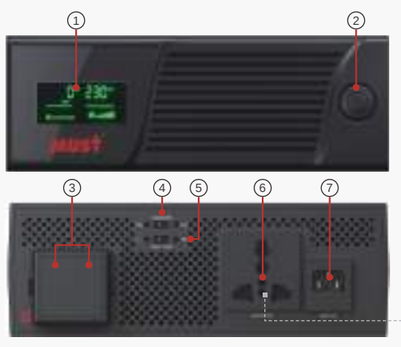
EP1500 Series

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



1. ON / OFF
2. LCD Screen
3. DC Input Connector (Battery Terminal)
4. Charging max current setting switch
5. Battery kind setting switch
6. Output Receptacle(s)
7. AC Input with fuse box

AC Output Socket types

Solar system connection

MODEL	EP15-1012		EP15-1512		EP15-2024	
Nominal Battery System Voltage	12VDC		12VDC		24VDC	
INVERTER OUTPUT						
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					
AC INPUT						
Voltage	230VAC					
Voltage Range	176~278VAC ± 3%					
Frequency Range	45~65Hz ± 2Hz					
BATTERY						
Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)						
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)
CHARGER						
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	
BYPASS & PROTECTION						
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	
MECHANICAL SPECIFICATIONS						
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					
OTHER						
Operation Temperature Range	0°C ~ 40°C					
Audible Noise	60dB MAX					
Display	LED+LCD					
Standard Warranty	2 year					
CERTIFICATION & STANDARDS						
EN IEC62368-1+A11						

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MUST Solar Power System

HIGH FREQUENCY POWER INVERTER/CHARGER

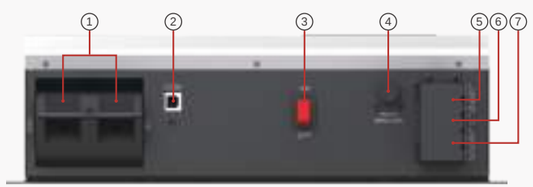
EP1500 PLUS Series

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.

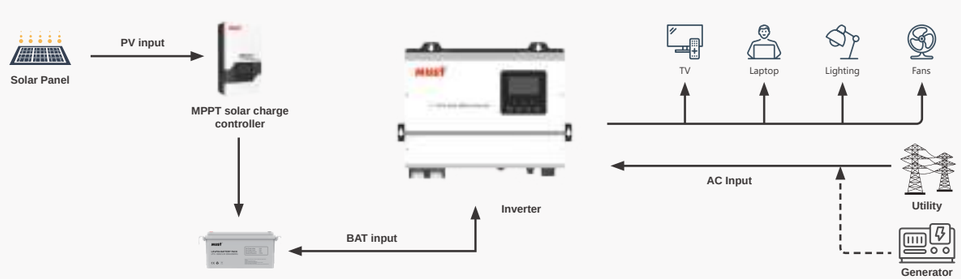
- Pure sine wave inverter
- Low shutdown loss for energy storage system application
- Support two kinds of batteries: Lithium Battery Pack and Lead-acid Battery
- Support fast max charging current setting
- Different charging mode for different kinds of batteries
- Auto restart while AC recovery
- Overload & 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



1. DC Input
2. Communication port
3. Power Switch
4. Input breaker
5. AC Input
6. Ground
7. AC Output

Solar system connection



MODEL	EP15-0612 PLUS		EP15-1012 PLUS		EP15-1224 PLUS	
Nominal Battery System Voltage	12VDC		12VDC		24VDC	
INVERTER OUTPUT						
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					
AC INPUT						
Voltage	230VAC					
Voltage Range	90~280VAC ± 3%					
Frequency Range	45~65Hz ± 2Hz					
BATTERY						
Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)						
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)
CHARGER						
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	
BYPASS & PROTECTION						
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	
MECHANICAL SPECIFICATIONS						
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	
OTHER						
Operating Temperature Range	0°C ~ 45°C					
Audible Noise	60dB MAX					
Display	LED+LCD					
Standard Warranty	2 year					
CERTIFICATION & STANDARDS						
EN IEC62368-1+A11						

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MUST®
Solar Power System

HIGH FREQUENCY POWER INVERTER/CHARGER

EP1800 Series

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

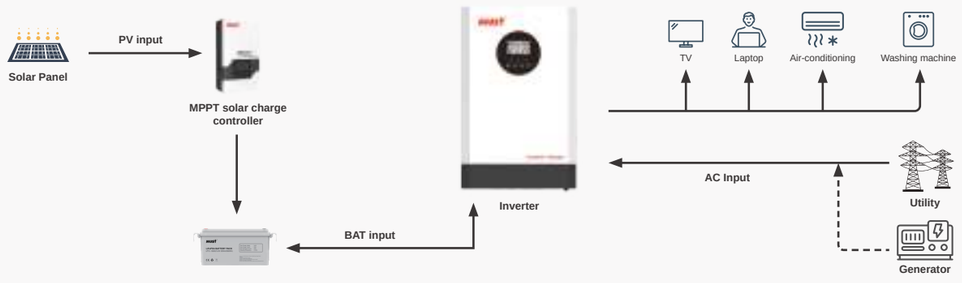
This is a multi-function inverter/charger, combining functions of inverter, battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger priority, and 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
2. AC input
3. AC output
4. RS485 communication port
5. USB port
6. Dry contact
7. Power on/off switch
8. Battery input
9. Parallel communication port (only for parallel model)
10. Parallel switch
11. WiFi port (optional)

Solar system connection



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

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MUST Solar Power System

HIGH FREQUENCY POWER INVERTER/CHARGER

EP1800 PRO Series

5.2KW | 48V | 230V

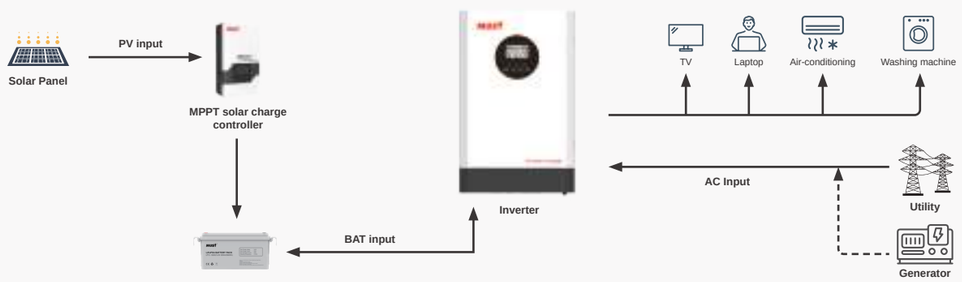
This is a multi-function inverter/charger, combining functions of inverter, battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger priority, and 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
2. AC input
3. AC output
4. RS485 communication port
5. USB port
6. Dry contact
7. Power on/off switch
8. Battery input
9. Parallel communication port (only for parallel model)
10. Parallel switch
11. WiFi port (optional)

Solar system connection



MODEL		EP18-5248 PRO
Rated output power		5200VA/5200W
Surge Power		10400W
AC INPUT		
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%
INVERTER OUTPUT		
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
BATTERY		
Battery voltage		48VDC
Floating voltage		54.8V
Overcharge Protection		60V
CHARGER		
Charging Current(UPS) @Nominal Input Voltage		Default:30A; MAX:80A
Bulk Charging Voltage		56.4Vdc
Floating Charging Voltage		54Vdc
Charging Algorithm		3-Step
GENERAL		
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
MECHANICAL SPECIFICATIONS		
Machine Dimension (W*H*D)(mm)		297.5*468*125
Package Dimension (W*H*D)(mm)		/
N.W(kg)		/
G.W(kg)		/
CERTIFICATION & STANDARDS		
CE		

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MUST Solar Power System

POWER INVERTER/CHARGER

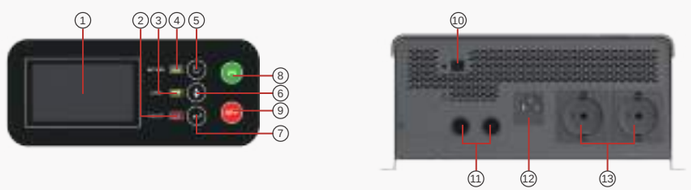
EP2100 PRO Series

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 installnation and setting.Tower and rack design available for different choices.

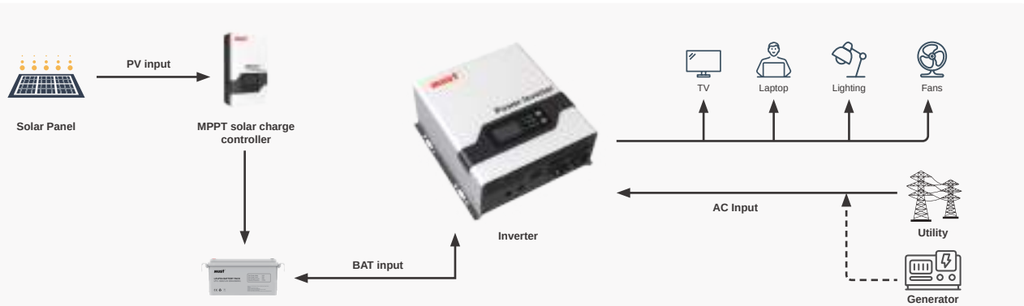
- Rated power 300W to 1000W
- Pure sine wave output
- Smart LCD setting (frequency , charge voltage,charge current, etc).
- 3 steps charging algorithm
- Built in AVR function
- Overload and short-circuit protection
- Battery reverse polarity protection (Optional)
- Deep discharge protection
- Cold start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

Back panel description



1. LCD display
2. Fault LED
3. Charge LED
4. AC/Inverter LED
5. ESC
6. SEL
7. Enter
8. Power on
9. Power off
10. USB
11. Battery input
12. AC input
13. AC output

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		
INVERTER OUTPUT									
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)								
AC INPUT									
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 Frequncy Recover	64 ±5Hz								
Nominal Input Range	50Hz / 60Hz ±5Hz								
AC Auto Restart	YES								
BATTERY									
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)								
AC CHARGE									
Floating Voltage	13.5-14.5VDC						27-29VDC		
Boost Voltage	13.8~14.5VDC						27.6~29VDC		
Maximum Charge Current	300W	400W	500W	600W	800W	1000W	600W	800W	1000W
	10A	10A	15A	20A	25A	30A	10A	15A	15A
BYPASS & PROTECTION									
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								
MECHANICAL SPECIFICATION									
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								

CERTIFICATION & STANDARDS

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

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

MUST Solar Power System

POWER INVERTER/CHARGER

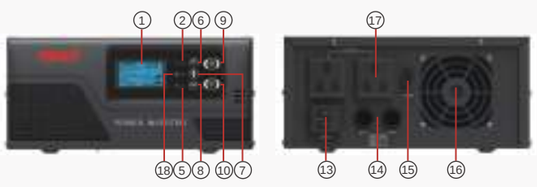
EP2000 PRO Series

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

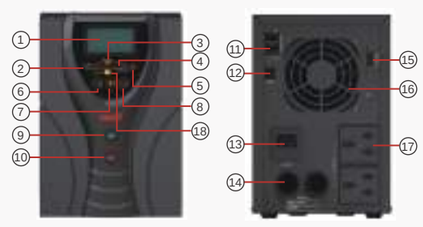
EP2000 PRO series inverter is a cost effective, intelligent with UPS function. The comprehensive LCD offers user-configurable and easy-accessible button adjustment such as battery charge current, battery charge voltage, frequency, buzzer etc. It's perfect for the user who need a simple and economical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



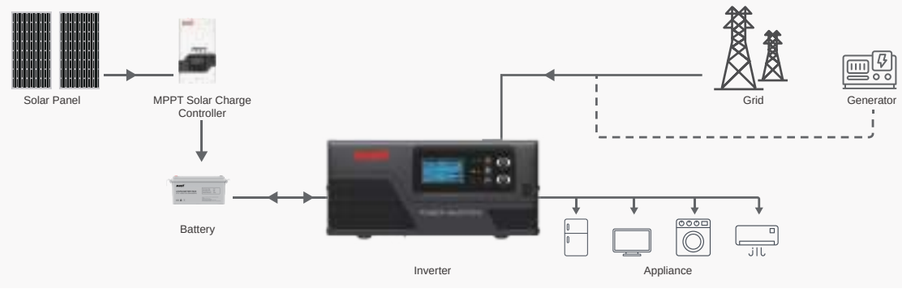
EP2000 PRO (Rack)



EP2000 PRO (Tower)

1. LCD display
2. AC Input LED
3. Bypass LED
4. AC output LED
5. Fault LED
6. ESC
7. SEL
8. ENTER
9. Power On
10. Power Off
11. Fax / Tel
12. USB
13. AC Input
14. Battery input
15. RS232
16. Fan
17. AC output
18. Battery LED

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			
INVERTER OUTPUT								
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)							
AC INPUT								
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 Frequncy Recover	64 ±5Hz							
Nominal Input Range	50Hz / 60Hz ±5Hz							
AC Auto Restart	YES							
BATTERY								
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)							
AC CHARGE								
Floating Voltage	13.5-14.5VDC				27-29VDC			
Boost Voltage	13.8~14.5VDC				27.6~29VDC			
Maximum Charge Current	300W	600W	800W	1000W	300W	600W	800W	1000W
	10A	20A	25A	30A	5A	10A	15A	15A
BYPASS & PROTECTION								
Input Waveform	Pure sine wave							
Input Frequency	50Hz or 60Hz							
Overload Protection	110%~125% Load foult affter 60s; 125%~150% Load foult affter 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							
MECHANICAL SPECIFICATION								
Machine Dimension (W*H*D)(mm)	315*145*210							
N.W(kg)	300W	600W	800W	1000W	300W	600W	800W	1000W
	7.5	10.7	12.5	13.5	7.5	10.7	12.5	13.5
Package Dimension (W*H*D)(mm)	420*280*225							
G.W(kg)	300W	600W	800W	1000W	300W	600W	800W	1000W
	8	11.5	13	14.0	8	11.5	13	14
OTHER								
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							
CERTIFICATION & STANDARDS								

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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MUST Solar Power System

LOW FREQUENCY POWER INVERTER

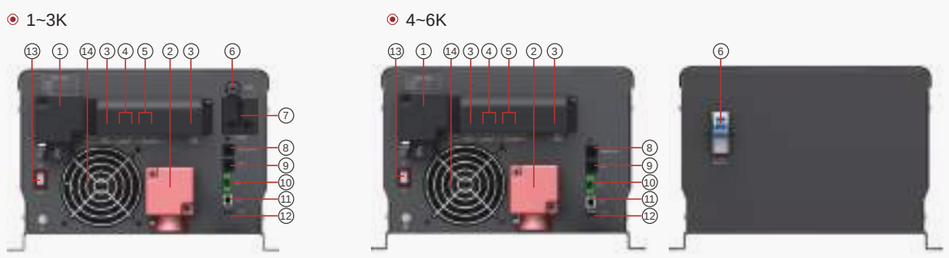
EP3000 PLUS Series

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.

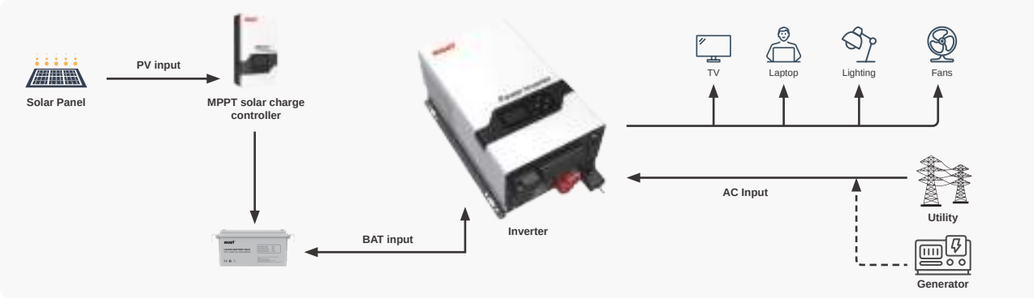
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5V/ 12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to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

Back panel description



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

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
INVERTER OUTPUT												
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)											
AC INPUT												
Voltage	230VAC											
Selectable Voltage Range	155~265VAC(For personal computers)											
Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz											
BATTERY												
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)											
CHARGER												
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
BYPASS & PROTECTION												
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			
MECHANICAL SPECIFICATIONS												
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
OTHER												
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)											
CERTIFICATION & STANDARDS												

CE-EMC+LVD(EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2)
IEC60950-1 A1+A2; CE-EMC+LVD,EN62040-2,EN62040-1

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MUST®
Solar Power System

HIGH FREQUENCY POWER INVERTER

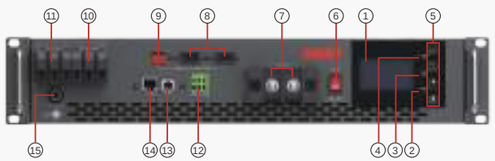
EP5000 Series

3~5KW | 230V | WIFI | BMS

This is a multi-function inve inverter/charger ,combining Functions of inverter, battery charger to offfer 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

Back panel description



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

Solar system connection

MODEL		EP50-3KW	EP50-4KW	EP50-5KW
Rated output power		3000W	4000W	5000W
AC INPUT				
Nominal Input Voltage		230Vac±5%		
Selectable Voltage range		AC 185V~270V		
Frequency Range		50Hz/60Hz (Auto sensing)		
Inverter Efficiency(Peak)		97%		
INVERTER OUTPUT				
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		
BATTERY				
Battery voltage		48VDC (±0.5)		
Floating voltage		54V		
CHARGER				
Charging Current(UPS) @Nominal Input Voltage		Default:30A; MAX:60A		
Bulk Charging Voltage		56.4Vdc		
Floating Charging Voltage		54Vdc		
Charging Algorithm		3-Step		
GENERAL				
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		/		
CERTIFICATION & STANDARDS				
CE				

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MUST®
Solar Power System

HIGH FREQUENCY POWER INVERTER

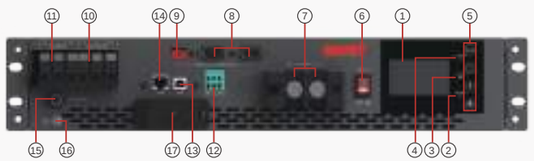
EP5000 PRO Series

5.2KW | 230V | WIFI | BAT-CAN

This is a multi-function inverter/charger ,combining Functions of inverter, battery charger to offfer 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



1. LCD display
2. Status indicator
3. Charging indicator
4. Fault indicator
5. Function buttons
6. Power on/off switch
7. Battery input
8. Parallel communication port (only for parallel model)
9. Parallel switch
10. AC output
11. AC input
12. Dry contact
13. USB
14. RS485 communication port
15. Circuit Breaker
16. ground
17. WiFi port (optional)

Solar system connection

MODEL		EP50-5248 PRO
Rated output power		5200VA/5200W
AC INPUT		
Nominal Input Voltage		230Vac±5%
Selectable Voltage range		170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)
Frequency Range		50Hz/60Hz (Auto sensing)
Inverter Efficiency(Peak)		90%
INVERTER OUTPUT		
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
BATTERY		
Battery voltage		48VDC
Floating voltage		54.8V
Overcharge Protection		60V
CHARGER		
Charging Current(UPS) @Nominal Input Voltage		Default:30A; MAX:80A
Bulk Charging Voltage		56.4Vdc
Floating Charging Voltage		54Vdc
Charging Algorithm		3-Step
GENERAL		
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)		/
CERTIFICATION & STANDARDS		
CE		

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

MUST Solar Power System

HYBRID SOLAR INVERTER

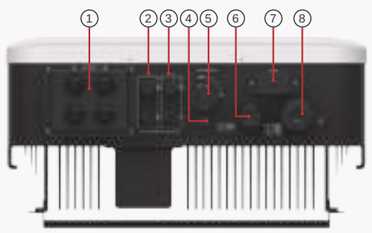
PH1100 PRO Series

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.

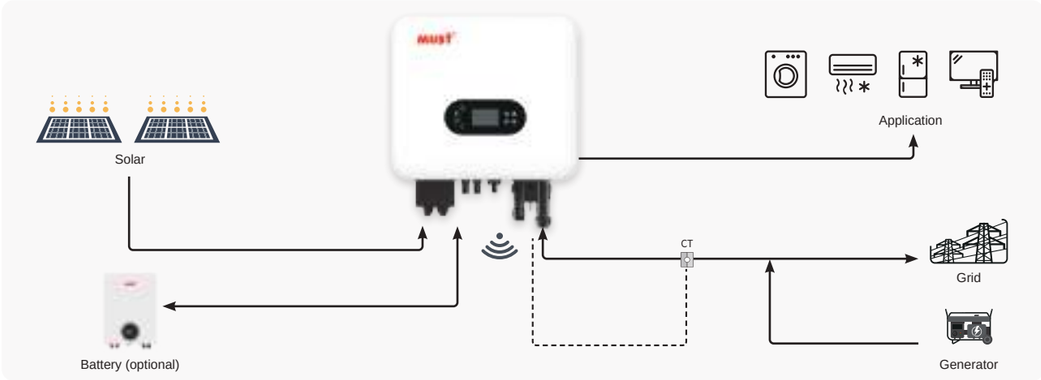
- Multiple operation modes: Grid-tie,off grid with storage backup
- IP66 water-proof and dust-proof
- MPPT voltage range 120-500V
- Support LCD display&Smart LCD setting
- Available Export control CT sensor function
- Multiple communications: RS485,GPRS and wifi etc
- Full protection function:Over-voltage,over-frequency, 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				
PV INPUT(DC)					
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				
INVERTER INPUT/ OUTPUT(AC)					
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				
BATTERY MODE OUTPUT(AC)					
Output Rated Power	3600W	4000W	4600W	5000W	6000W
Nominal output voltage; accuracy range	230±1%				
Output ferequency; 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%				
BATTERY & CHARGER					
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 currernt	75A	85A	95A	100A	125A
EFFICIENCY					
Maximum efficiency	97.1%				
Euro-efficiency	96.5%				
MPPT efficiency	99.8%				
PROTECTION DEVICES					
DC switch rating for each MPPT; Grid monitoring; Output over current protection; Output overvoltage protection-varistor; Ground fault monitoring; Integrated all-pole sensitive leakage current					
GENERAL					
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 codensing)				
Operating temperature range	-25°C+60°C With derating above 45°C				
Cooling concept	Natural				
Altitude	<3000m				
CERTIFICATION & STANDARDS					
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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MUST Solar Power System

HYBRID SOLAR INVERTER

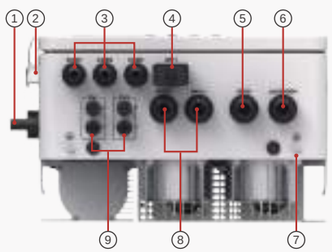
PH1100 EU-G2 Series

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.

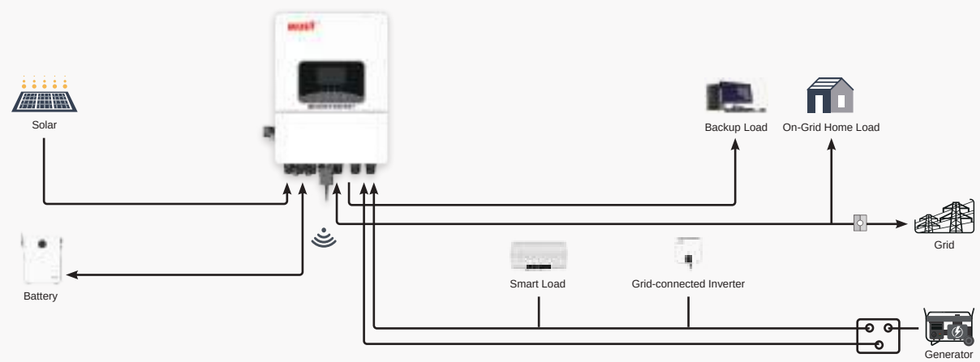
- 4.3-inch Colorful touch LCD
- IP66 protection degree
- AC couple to retrofit existing solar system
- Max. 9 pcs parallel for on-grid and off-grid operation;
- Max. charging/discharging current of 190A
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator
- 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
BATTERY INPUT DATA									
Battery type	Lead-acid battery / Lithium battery								
Battery voltage	48V								
Battery voltage range	40~64V								
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	3000W	3600W	4000W	4600W	5000W	6000W	7000W	7600W	8000W
Maximum charging/discharging current	75A	90A	100A	110A	120A	135A	175A	190A	190A
PV STRING INPUT DATA									
Max. DC Input Power	4500W	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								
AC INPUT/OUTPUT DATA									
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%								
EFFICIENCY									
Max. Efficiency	97.5%								
Euro Efficiency	96.5%								
MPPT Efficiency	>99%								
PROTECTION									
Integrated	Islanding protection, Output overcurrent protection, Output overvoltage protection, PV input polarity reverse protection, DC Switch (optional), Ground Fault Sensing, leakage current monitoringprotection								
Surge Protection	DC Type III/AC Type III								
Overvoltage Category	DC Type II/AC Type III								
GENERAL DATA									
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/ Enternet(optional)								
Display	4.3-inch touch screen								
Protection Degree	IP66								
Installation Style	Wall-mounted								
MECHANICAL SPECIFICATIONS									
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								
CERTIFICATION & STANDARDS									
NBT32004-2013/EN50549									

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

MUST Solar Power System

SINGLE PHASE HYBRID SOLAR INVERTER

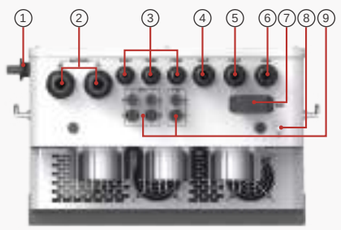
PH1100 EU Series

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.

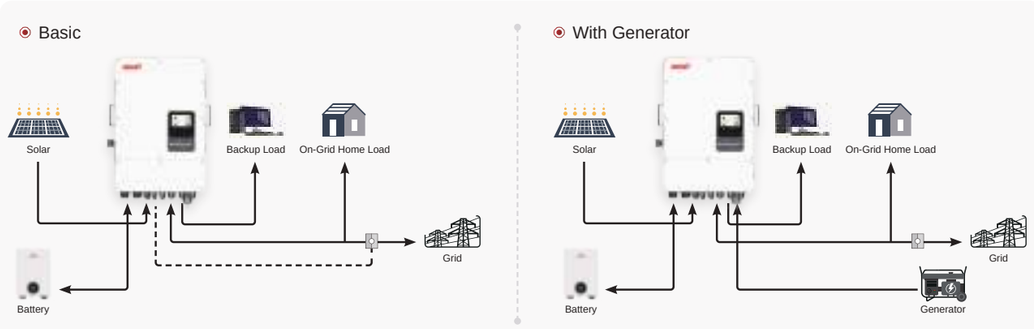
- Colorful touch LCD
- IP66 protection degree
- Max. charging/discharging current of 220A
- Ac coupling to retrofit existing solar system
- Max. 16 pcs parallel for on-grid and off-grid operation
- Support multiple batteries parallel
- 6 time periods for battery charging/discharging
- Support storing 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
BATTERY INPUT DATA				
Battery type	Lead-acid battery / Lithium battery			
Battery voltage	48V			
Battery voltage range	40~60V			
Charging curve	3-stage adaptive with maintenance/Equalization			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
Over-current protection/ Over-temperature protection	Yes / Yes			
Maximum charging/discharging power	5000W	6000W	8000W	10000W
Maximum charging/discharging current	120A	150A	190A	220A
PV STRING INPUT DATA				
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			
AC INPUT/OUTPUT DATA				
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	230VAC			
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%			
EFFICIENCY				
Max. Efficiency	97.5%			
Euro Efficiency	96.5%			
MPPT Efficiency	99.5%			
PROTECTION				
Integrated	Islanding protection, Output overcurrent protection, Output overvoltage protection, PV input polarity reverse protection, DC Switch (optional), Ground Fault Sensing, leakage current monitoringprotection			
Surge Protection	DC Type III/AC Type III			
Overvoltage Category	DC Type II/AC Type III			
GENERAL DATA				
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/ Enternet(optional)			
Display	4.3-inch touch screen			
Protection Degree	IP66			
Installation Style	Wall-mounted			
MECHANICAL SPECIFICATIONS				
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 the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy			
CERTIFICATION & STANDARDS				
NBT32004-2013				

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MUST®
Solar Power System

HYBRID SOLAR INVERTER

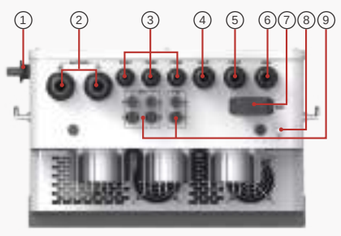
PH1100 EU Series

5~12KW | Three Phase | 380VAC

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.

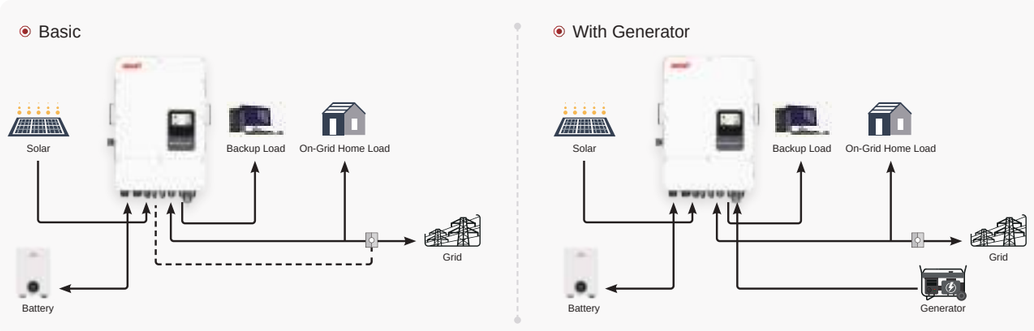
- 100% unbalanced output
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 240A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation 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



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

Solar system connection



MODEL	PH11-5KL3-EU	PH11-6.5KL3-EU	PH11-8KL3-EU	PH11-10KL3-EU	PH11-12KL3-EU
Rated power	5000W	6500W	8000W	10000W	12000W
BATTERY INPUT DATA					
Battery type	Lead-acid battery / Lithium battery				
Battery voltage	48V				
Battery voltage range	40~64V				
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	6500W	8000W	10000W	12000W
Maximum charging/discharging current	120A	150A	190A	210A	240A
PV STRING INPUT DATA					
Max. DC Input Power	6500W	8450W	10400W	13000W	15600W
Rated PV Input Voltage	550V				
Maximum DC voltage	800V				
Start-up Voltage	160V				
Minimum voltage for grid connection	310V				
Full Load DC Voltage Range	350-650V				
Enter high voltage error recovery point	800V				
MPPT voltage range	200~650V				
Maximum input current	15A+15A			13A+26A	
No.of MPP Trackers	2				
No.of Strings per MPP Tracker	1+1			2+1	
AC INPUT/OUTPUT DATA					
Rated AC Input/ Output Power	5000W	6500W	8000W	10000W	12000W
Max AC Input/ Output Power	5500W	7150W	8800W	11000W	13200W
AC Input/ Output Rated Current	7.6/7.2A	9.8/9.42A	12.1/11.6A	15.2/14.5A	18.2/17.4A
Max AC Input/ Output Current	8.4/8A	10.8/10.4A	13.4/12.8A	16.7/15.9A	20/19.1A
Max. Three-phase Unbalanced Output Current	11.4/10.9A	14.7/14.1A	18.2/17.4A	22.7/21.7A	27.3/26.1A
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage	220/380,230/400Vac				
Rated Input/Output Grid Frequency/Range	50/60;45~55/55-65				
Grid Type	Three Phase				
Total Harmonics Current Distortion (THDi)	<3% (of nominal power)				
DC Current Injection	<0.5% In				
EFFICIENCY					
Max. Efficiency	≥97.6%				
Euro Efficiency	97.0%				
PROTECTION					
Integrated	Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection				
Surge Protection	DC Type III/AC Type III				
Overvoltage Category	DC Type II/AC Type III				
GENERAL DATA					
Operating Temperature Range (°C)	-25°C to +60°C, >45°C Derating				
Cooling	Fan cooling				
Noise (dB)	≤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 the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy				
CERTIFICATION & STANDARDS					
CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC 62109-1, EN IEC 62109-2); CE-LVD(EN 62477-1) ; IEC 60529; EN50549-1; Poland Type A, (NC RfG:2016, PSE:2018, PTPiREE:2021)C10/C11; UNE217001-2020; UNE217002-2020, NTS-631 (Type A); G98+G99					

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MUST Solar Power System

HYBRID SOLAR INVERTER

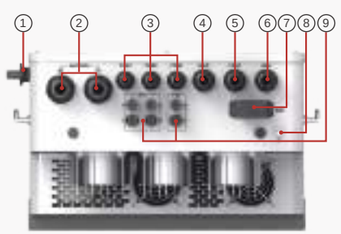
PH1100 EU Series

13~16KW | 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.

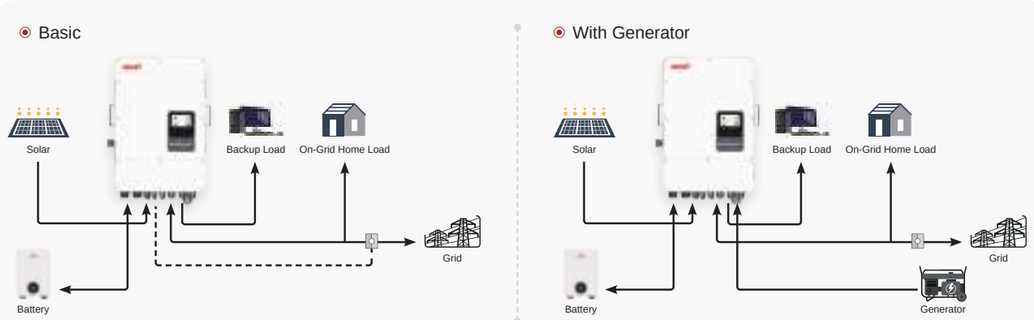
- 100% unbalanced output
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 320A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation 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



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

Solar system connection



MODEL	PH11-13KL3-EU	PH11-14KL3-EU	PH11-15KL3-EU	PH11-16KL3-EU
Rated power	13000W	14000W	15000W	16000W
BATTERY INPUT DATA				
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	13000W	14000W	15000W	16000W
Maximum charging/discharging current	260A	280A	300A	320A
PV STRING INPUT DATA				
Max. DC Input Power	16900W	18200W	19500W	20800W
Rated PV Input Voltage	370V			
Maximum DC voltage	800V			
Start-up Voltage	125V			
Minimum voltage for grid connection	200V			
Full Load DC Voltage Range	352~650V	379~650V	406~650V	433~650V
Enter high voltage error recovery point	800V			
MPPT voltage range	150~800V			
Maximum input current	32A/16A	32A/16A	32A/16A	32A/16A
No.of MPP Trackers	3	3	3	3
Input terminal type	H4/MC4			
AC INPUT/OUTPUT DATA				
Rated AC Input/ Output Power	13000W	14000W	15000W	16000W
Max AC Input/ Output Power	13000W	14000W	15000W	16000W
AC Input/ Output Rated Current	19.7A/18.8A	21.2A/20.3A	22.7A/21.7A	24.2A/23.2A
Max. Three-phase Unbalanced Output Current	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	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)			
DC Current Injection	<0.5% In			
EFFICIENCY				
Max. Efficiency	97.5%			
Euro Efficiency	96.5%			
Euro Efficiency	99.5%			
PROTECTION				
Integrated	Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection			
Surge Protection	DC Type III/AC Type III			
Overvoltage Category	DC Type II/AC Type III			
GENERAL DATA				
Operating Temperature Range (°C)	-25°C to +60°C, >45°C Derating			
Cooling	Fan cooling			
Noise (dB)	≤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			
G.W(kg)	42			
Protection Degree	IP66			
Installation Style	Wall-mounted			
Warranty	5 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy			
CERTIFICATION & STANDARDS				
NBT32004-2013				

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MUST Solar Power System

HIGH VOLTAGE HYBRID SOLAR INVERTER

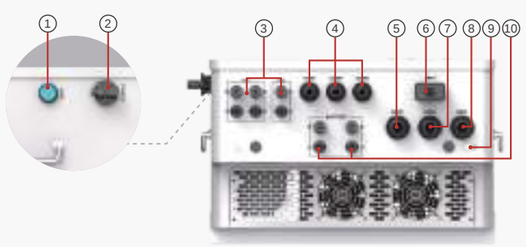
PH1100 EU Series

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.

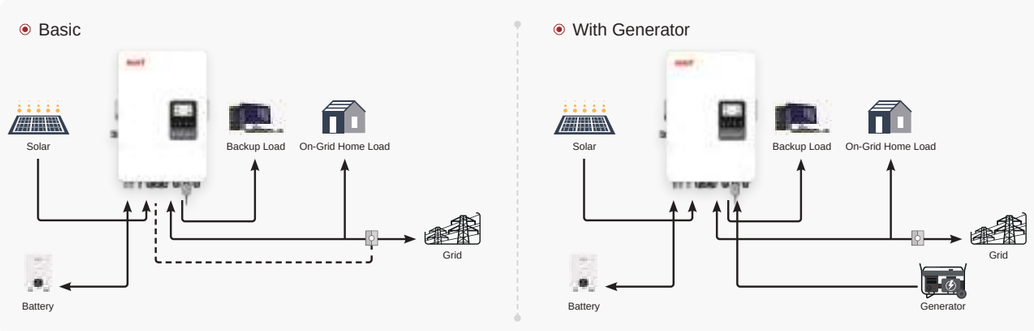
- Supports high-voltage batteries for efficient operation
- Maximum Charge and Discharge up to 50A
- IP65 Indoor & Outdoor use
- Colorful Touch Screen
- Supports Parallel Connection of Multiple Batteries
- Supports Charging and Discharging in 6 Time Periods
- Monitoring & Remote Upgrade with Wifi Module
- 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



1. Power on/off
2. DC switch
3. Battery input connectors
4. Communication terminals 1/2/3
5. Grid
6. WiFi Interface
7. Load
8. Generator input
9. Ground
10. PV input with two MPPT

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
BATTERY INPUT DATA								
Battery type	Lead-acid battery / Lithium battery							
Battery voltage range	160-700V							
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
PV STRING INPUT DATA								
Max. DC Input Power	6500W	7800W	10400W	13000W	15600W	19500W	26000W	32500W
Rated PV Input Voltage	600V							
Maximum DC voltage	1000V							
Start-up Voltage	180V							
Minimum voltage for grid connection	200V							
Full Load DC Voltage Range	162~800V	195~800V	260~800V	325~800V	339~800V	423~800V	565~800V	480~800V
MPPT voltage range	150~800V							
Maximum input current	20A+20A	20A+20A	20A+20A	20A+20A	26A+20A	26A+20A	26A+20A	26A+26A
No.of MPP Trackers	2/4							
Input terminal type	H4/MC4							
AC INPUT/OUTPUT DATA								
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	22.8/212.8A
Power Factor Adjustment Range	0.8 leading to 0.8 lagging							
Rated Input/Output Voltage	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							
EFFICIENCY								
Max. Efficiency	97.5%							
Euro Efficiency	96.5%							
Euro Efficiency	99.5%							
PROTECTION								
Integrated	Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection							
Surge Protection	DC Type III/AC Type III							
Overvoltage Category	DC Type II/AC Type III							
GENERAL DATA								
Operating Temperature Range (°C)	-25°C to +60°C, >45°C Derating							
Cooling	Fan cooling							
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							
CERTIFICATION & STANDARDS								
NBT32004-2013/EN50549								

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

MUST Solar Power System

THREE PHASE HYBRID SOLAR INVERTER

PH1100 EU Series

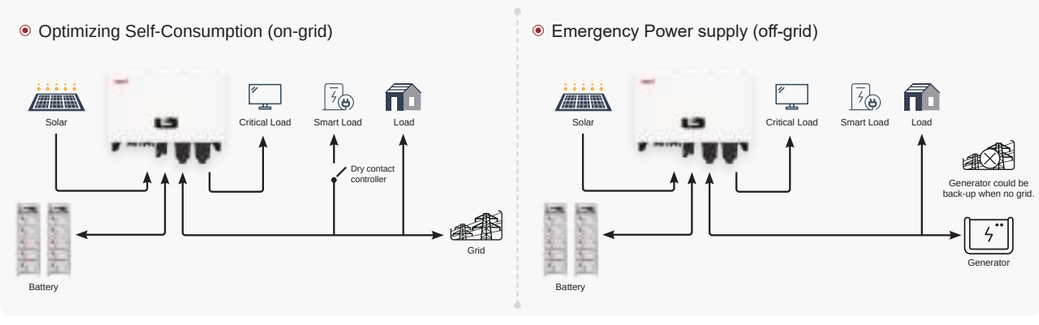
20~50KW | High Voltage | IP66

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
PV INPUT			
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
BATTERY PORT			
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		
AC GRID			
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%		
AC LOAD OUTPUT (BACK-UP)			
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		
EFFICIENCY			
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%
PROTECTION			
Reverse Polarity Protection	Yes		
Over Current/ Voltage Protection	Yes		
Anti-islanding Protection	Yes		
AC Short-ciruit 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		
GENERAL DATA			
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		
CERTIFICATION & STANDARDS			
EN50549-1, IEC62109-1, IEC62109-2, EN61000-6-3			

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

MUST Solar Power System

AC-COUPLED ENERGY STORAGE INVERTER

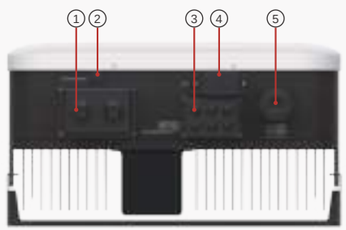
PH1600 PRO Series

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		
INVERTER OUTPUT(AC)			
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		
BATTERY MODE OUTPUT(AC)			
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%		
BATTERY & CHARGER			
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 currernt	85A	105A	125A
EFFICIENCY			
Battery discharge (full load)	94.5%		
Maximum battery charging current efficiency	94.5%		
PROTECTION DEVICES			
Grid monitoring	Yes		
Output over current protection	Yes		
Output overvoltage protection-varistor	Yes		
Ground fault monitoring	Yes		
Integrated all-pole sensitive leakage current	Yes		
GENERAL			
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 codensing)		
Operating temperature range	-20°C+60°C With derating above 45°C		
Cooling concept	Natural		
Noise figure [dB]	≤25		
Altitude	<3000m		
CERTIFICATION & STANDARDS			
CE-EMC+LVD (EN IEC61000-6-3: 2007, ENIEC61000-6-1:2017; EN IEC62477-1:2022)			

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MUST Solar Power System

ON GRID SOLAR INVERTER

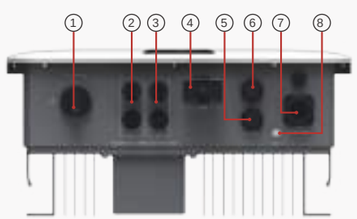
PH5900 M Series

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 send 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.

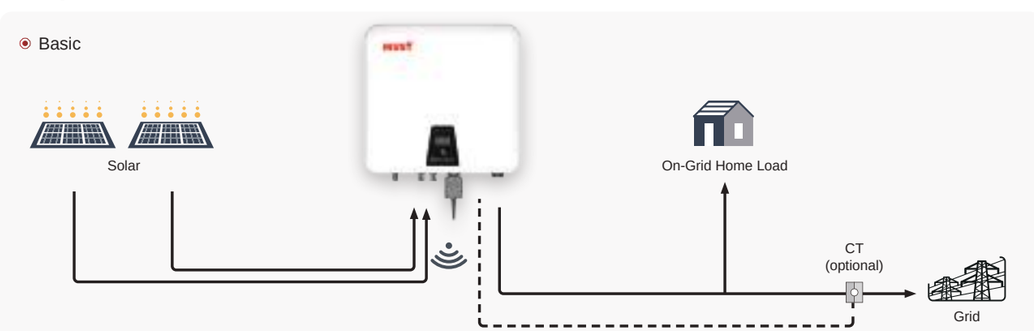
- High Frequency On Grid Solar Inverter
- Rate power: 3-6KW
- MPPT efficiency up to 99.50%
- Multiple communications: WIFI etc
- Monitoring inverters freely via mobile phone APP
- Fanless low-noise design
- IP66 water-proof and dust-proof

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
PV INPUT(DC)						
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					
GRID OUTPUT(AC)						
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					
EFFICIENCY						
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					
PROTECTION DEVICES						
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					
PHYSICAL						
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					
INTERFACE						
DC connection	H4/MC4					
AC connection	Connector					
Display	OLED+LED WIFI+APP					
Communication interfaces	WIFI/RS485/GPRS(opt)					
ENVIRONMENT						
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					
OTHERS						
Topology	Transformerless					
Warranty	Standard 5years/10 years(opt.)					
CERTIFICATION & STANDARDS						

CE-EMC+LVD(EN6100-6-3,2007,EN6100-6-1:2017+EN IEC62109-1:2010,EN IEC62109-2:2011)
IEC60529; EN50549-10; Poland Type A (NC RfG:2016,PSE:2018,PTPiREE:2021); VDE0126.

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MUST Solar Power System

ON GRID SOLAR INVERTER

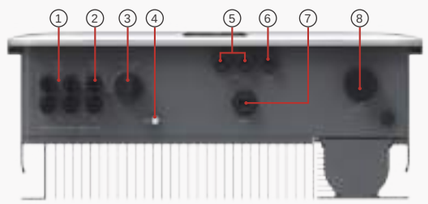
PH5900 TM Series

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 send 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.

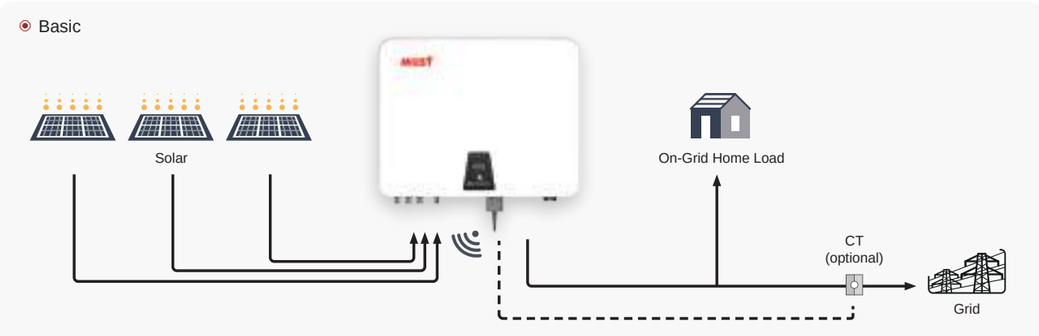
- Wide MPPT voltage range from 200V-1000V
- IP66 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.4%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

Back panel description



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

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
OUTPUT (AC)											
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										
INPUT DATA											
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										
EFFICIENCY											
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										
GENERAL DATA FEATURES											
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%										
FEATURES											
AC connection	Connector										
Display	OLED+LED WIFI+APP										
Communication interfaces	WIFI/RS485/GPRS(opt)										
Warranty	Standard 5 years / 10 years (opt.)										
CERTIFICATION & STANDARDS											

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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MUST Solar Power System

ON GRID SOLAR INVERTER

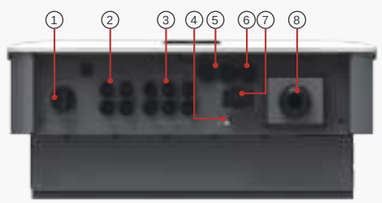
PH5900 TM Series

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 send 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.

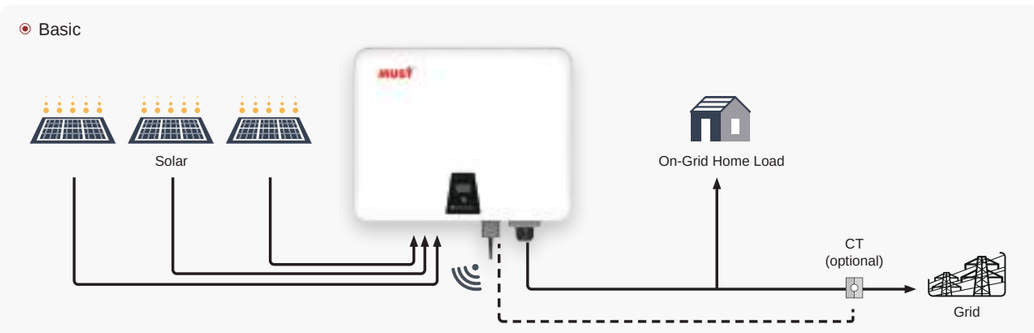
- Wide MPPT voltage range from 200V-1000V
- IP66 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.6%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

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
OUTPUT (AC)									
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								
INPUT DATA									
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								
EFFICIENCY									
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								
GENERAL DATA FEATURES									
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%								
FEATURES									
AC connection	Cable gland + OT terminal								
Display	OLED+LED WIFI+APP								
Communication interfaces	WIFI/RS485/GPRS(opt)								
Warranty	Standard 5 years / 10 years (opt.)								
CERTIFICATION & STANDARDS									

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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MUST Solar Power System

ON/OFF HYBRID SOLAR INVERTER

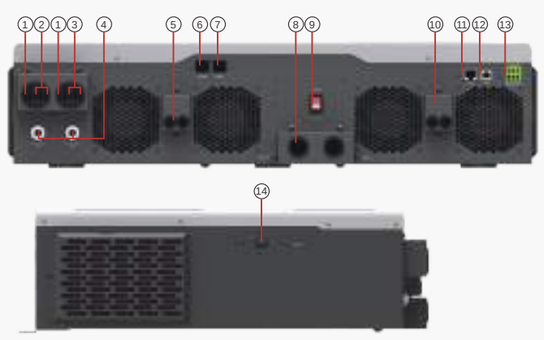
PH1800 PRO Series

8~10KW | 380VAC

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
- CAN/RS485 communication for BMS
- Cold start function
- WiFi remote monitoring (optional)

Back panel description



1. Ground
2. AC Input
3. AC Output
4. AC input breaker
5. PV input
6. COM2
7. BMS communication
8. Battery input
9. Power on/off switch
10. PV input
11. COM1
12. USB
13. Dry contact
14. WiFi port

Solar system connection

MODEL	PH18-8048 PRO	PH18-10048 PRO
Nominal Battery System Voltage	48VDC	
INVERTER OUTPUT		
Rated Power	8000W	10000W
Surge Power	16000W	20000W
Waveform	Pure Sine Wave	
AC Voltage Regulation (Batt.Mode)	230VAC±5%	
Output Frequency	60Hz or 50Hz	
Inverter Efficiency(Peak)	90%	
Transfer Time	10ms (UPS) 20ms (APL)	
AC INPUT		
Nominal Input Voltage	230VAC	
Max AC Input Voltage	300VAC	
Selectable Voltage Range	170~280VAC (UPS) / 90~280VAC (APL) / 184~253VAC(VDE4105)	
Frequency Range	50Hz / 60Hz(Auto detection)	
BATTERY		
Normal Voltage	48VDC	
SOLAR CHARGER & AC CHARGER		
AC Charging Current	2-120A	2-160A
Maximum PV Array Open Circuit Voltage	450VDC	
PV Array Open Circuit Voltage	150-430VDC	
Cold Start Voltage	46VDC	
Solar Charging Current	80A/80A	100A/100A
Default Charging Current	80A/80A	
Maximum Charge Current	160A	200A
Charging Algorithm	3-step (Flooded Battery / AGM / GEL/ LEAD Battery), 4-step(LI)	
GENERAL DATA FEATURES		
Operating Temperature	-10°C~50°C	
Storage Temperature	-15°C ~60°C	
Machine Dimension (W*H*D)(mm)	600*503*141.2	
Package Dimension (W*H*D)(mm)	/	
N.W(kg)	21	
G.W(kg)	/	
Warranty	2 year	

CERTIFICATION & STANDARDS

EN IEC62368-1
CE-LVD (EN IEC62109-1, EN IEC62109-2)
Rohs-(2011/65/EUand2015/863/EU)
CE-LVD (BS IEC62109-1:2010, BS EN IEC62109-2:2011)
UKCA

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MUST Solar Power System

ON/OFF GRID HYBRID SOLAR INVERTER

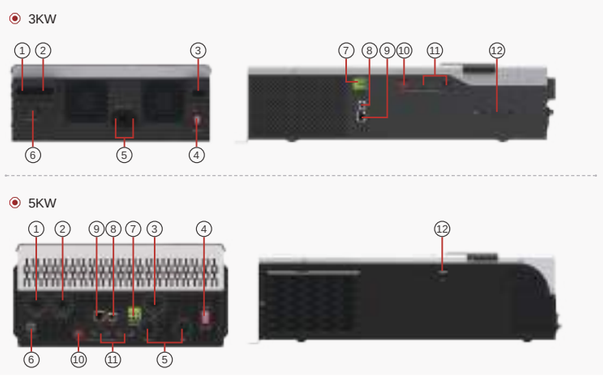
PH1800 PRO Series

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.

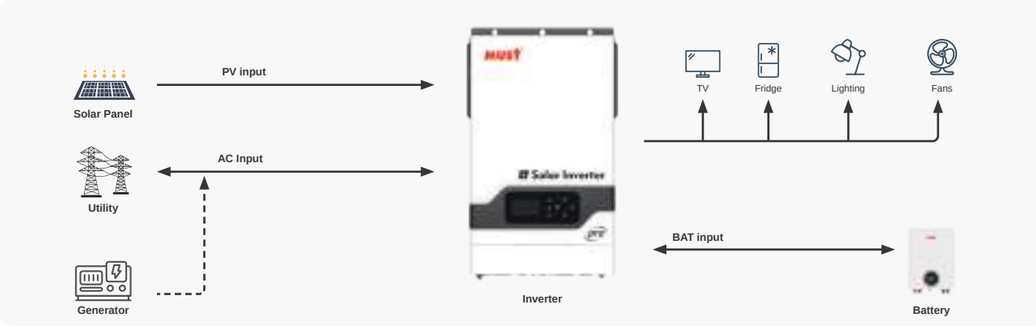
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 450V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep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

Back panel description



1. AC Input
2. AC Output
3. PV Input
4. Power On/Off Switch
5. Battery Input
6. Circuit breaker
7. Dry Contact
8. USB port
9. RS-485/CAN Communication port
10. Parallel switch (only for parallel model)
11. Parallel communication port (only for parallel model)
12. USB WiFi port

Solar system connection



MODEL	PH18-3024 PRO		PH18-5248 PRO	
Nominal Battery System Voltage	24VDC		48VDC	
INVERTER OUTPUT				
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)			
AC INPUT				
Voltage	230VAC±5%			
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)			
Frequency Range	50Hz / 60Hz(Auto sensing)			
BATTERY				
Normal voltage	24VDC		48VDC	
Floating Charge Voltage	27.4VDC		54.8VDC	
Overcharge Protection	30VDC		60VDC	
SOLAR CHARGER & AC CHARGER				
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
MECHANICAL SPECIFICATIONS				
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	
OTHER				
Humidity	5% to 95% Relative humidity (Non-condensing)			
Operating Temperature	0°C~50°C			
Storage Temperature	-15°C~60°C			
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
EN IEC62368-1:2018
Rohs-(2011/65/EUand2015/863/EU)

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MUST Solar Power System

ON/OFF GRID HYBRID SOLAR INVERTER

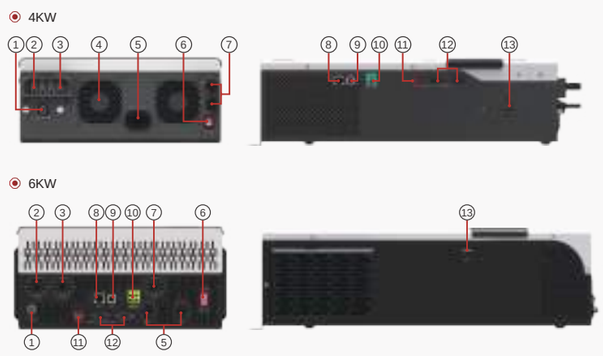
PH1900 EXP Series

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.

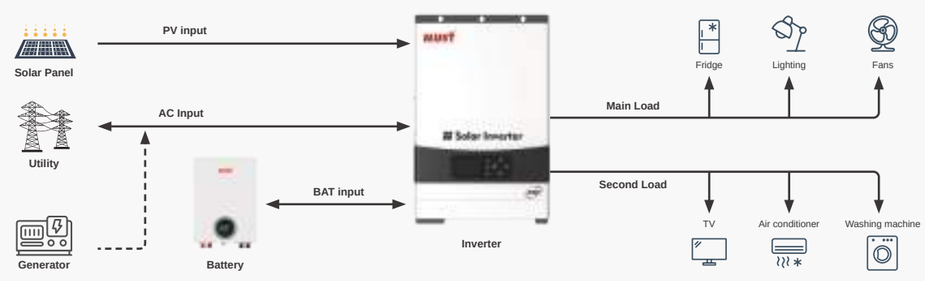
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep 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



1. Circuit breaker
2. AC Input
3. AC Output
4. FAN
5. Battery Input
6. Power On/Off Switch
7. PV Input
8. RS-485/CAN Communication port
9. USB
10. Dry Contact
11. Parallel switch (only for parallel model)
12. Parallel communication port (only for parallel model)
13. Wifi port

Solar system connection



MODEL	PH19-4024 EXP	PH19-6048 EXP
Nominal Battery System Voltage	24VDC	48VDC
INVERTER OUTPUT		
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)	
AC INPUT		
Voltage	230VAC±5%	
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)	
Frequency Range	50Hz / 60Hz(Auto sensing)	
BATTERY		
Normal voltage	24VDC	48VDC
Floating Charge Voltage	27.4VDC	54.8VDC
Overcharge Protection	30VDC	60VDC
SOLAR CHARGER & AC CHARGER		
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
MECHANICAL SPECIFICATIONS		
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
OTHER		
Humidity	5% to 95% Relative humidity (Non-condensing)	
Operating Temperature	0°C~50°C	
Storage Temperature	-15˚C ~60˚C	
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
EN IEC62368-1:2018
Rohs-(2011/65/EUand2015/863/EU)

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MUST Solar Power System

ON/OFF GRID HYBRID SOLAR INVERTER

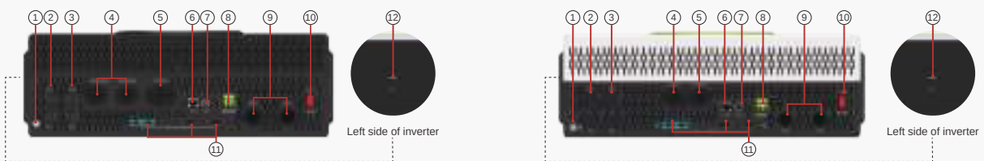
PH1900 EXP Series

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.

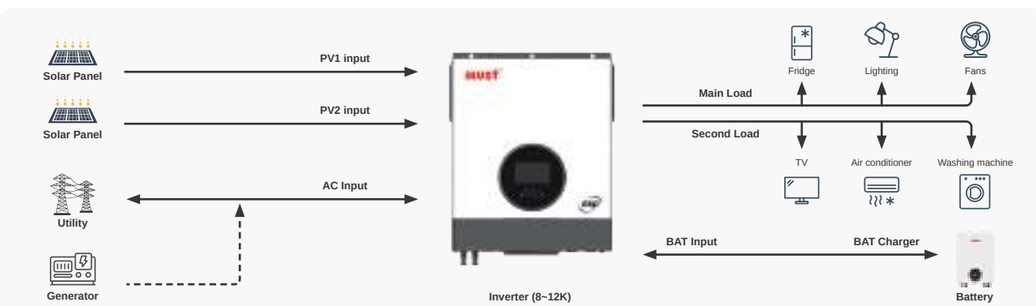
- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V (450V for parallel)
- Can provide the power to the load 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



1. Ground
2. PV1
3. PV2
4. AC input (GRID/GEN optional)
5. AC output
6. RS-485/CAN Communication port
7. USB port
8. Dry Contact
9. Battery Input
10. Power On/Off Switch
11. Parallel communication port (only for parallel model)
12. Wifi port

Solar system connection



MODEL	PH19-6248 EXP	PH19-8048 EXP	PH19-10048 EXP	PH19-11048 EXP	PH19-12048 EXP
Default Battery System Voltage	48VDC				
INVERTER OUTPUT					
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)				
AC INPUT					
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)				
BATTERY					
Normal voltage	48VDC				
Floating Charge Voltage	54.8VDC				
Overcharge Protection	60VDC				
SOLAR CHARGER & AC CHARGER					
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
MECHANICAL SPECIFICATIONS					
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)	/	/	/	/	/
OTHER					
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				
CERTIFICATION & STANDARDS					
CE					

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MUST Solar Power System

ON/OFF GRID HYBRID SOLAR INVERTER

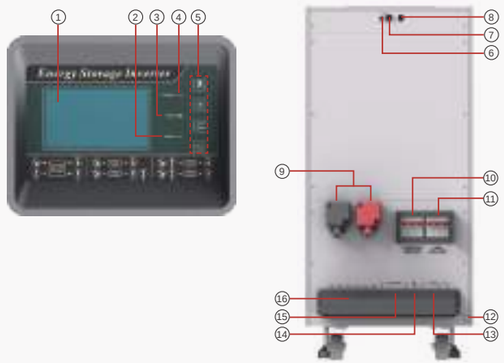
PH3000 Series

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



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons
6. USB commnuication port
7. CAN/RS485 communication
8. BTS
9. Battery input
10. AC output breaker
11. Grid breaker
12. Grounding
13. Grid
14. Grounding
15. AC output
16. PV input

Solar system connection

MODEL	PH30-10048-T	PH30-12048-T
Nominal Battery System Voltage	48VDC	
INVERTER OUTPUT		
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	
AC INPUT		
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	
BATTERY		
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	
SOLAR CHARGER & AC CHARGER		
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
MECHANICAL SPECIFICATIONS		
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
OTHER		
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	
CERTIFICATION & STANDARDS		

EN IEC62368-1
CE-LVD (EN IEC62109-1, EN IEC62109-2)
Rohs-(2011/65/EUand2015/863/EU)
CE-LVD (BS IEC62109-1:2010, BS EN IEC62109-2:2011)
UKCA

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MUST Solar Power System

PURE SINE WAVE INVERTER

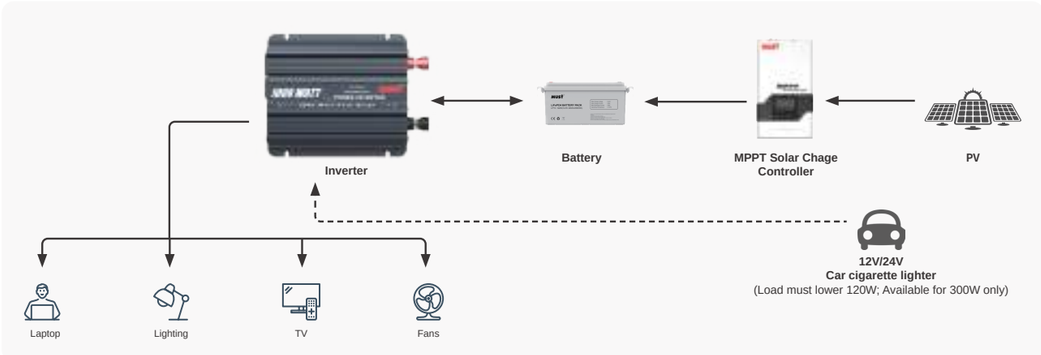
PI1500 Series

300~2000W | 12V,24V | 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 battery or 24VDC battery to AC 230VAC output, mainly used for emergency use Electricity, car inverter, outdoor electricity and other occasions.

- Input Voltage 12V / 24V 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
BATTERY DC INPUT											
Input Voltage		12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
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											
INVERTER AC OUTPUT											
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%									
PROTECTION											
Battery Input Protection		Low Voltage Protection, Over Voltage Protection, Reverse Protection									
Inverter Output Protection		Output Overload, Short-Circuit, Over Temperature Protection									
DISPLAY											
LED Display		Red: Error ; Green: System OK									
LED Digital Display		/		Display Battery Voltage, Output Power, Output Voltage, Error Numbers							
DC OUTPUT											
USB		USB-A type (5V1A)									
EFFICIENCY											
Peak Conversion efficiency		91%		91%		90%		88%	90%	88%	90%
ENVIRONMENT											
Protection Degree		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									
DIMENSIONS											
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)			
CERTIFICATION & STANDARDS											
CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2) CE-LVD(EN 62477-1/A11)											

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

MUST Solar Power System

PURE SINE WAVE INVERTER

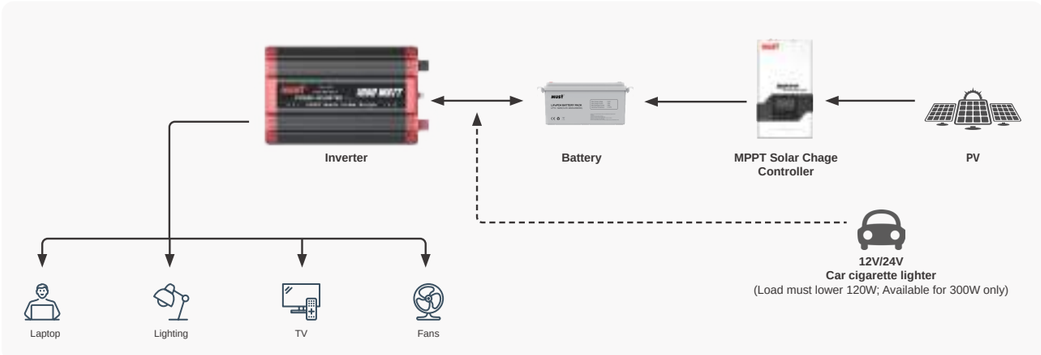
PI1500 Series

600~2000W | 12V,24V | 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 battery or 24VDC battery to AC 230VAC output, mainly used for emergency use Electricity, car inverter, outdoor electricity and other occasions.

- Input Voltage 12V / 24V 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
BATTERY DC INPUT									
Input Voltage		12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
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
	(LI)	12.0VDC	24.0VDC	12.0VDC	24.0VDC	12.0VDC	24.0VDC	12.0VDC	24.0VDC
Low Voltage Protect	(PB)	10.5VDC	21.0VDC	10.5VDC	21.0VDC	10.5VDC	21.0VDC	10.5VDC	21.0VDC
	(LI)	11.6VDC	23.2VDC	11.6VDC	23.2VDC	11.6VDC	23.2VDC	11.6VDC	23.2VDC
Low Voltage Restoring	(PB)	12.5VDC	25.0VDC	12.5VDC	25.0VDC	12.5VDC	23.0VDC	12.5VDC	23.0VDC
	(LI)	12.8VDC	25.6VDC	12.8VDC	25.6VDC	12.8VDC	25.6VDC	12.8VDC	25.6VDC
Over Voltage Protect	(PB)	15.0VDC	30.0VDC	15.0VDC	30.0VDC	15.0VDC	30.0VDC	15.0VDC	30.0VDC
	(LI)	14.8VDC	29.6VDC	14.8VDC	29.6VDC	14.8VDC	29.6VDC	14.8VDC	29.6VDC
Over Voltage Restoring	(PB)	14.7VDC	29.4VDC	14.7VDC	29.4VDC	14.7VDC	29.4VDC	14.7VDC	29.4VDC
	(LI)	14.5VDC	29.0VDC	14.5VDC	29.0VDC	14.5VDC	29.0VDC	14.5VDC	29.0VDC
Parameters: (PB) Lead-acid Battery / (LI) 4 series (12V), 8 series (24V) LiFePO4 Lithium Battery Pack									
INVERTER AC OUTPUT									
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%							
PROTECTION									
Battery Input Protection		Low Voltage Protection, Over Voltage Protection, Reverse Protection							
Inverter Output Protection		Output Overload, Short-Circuit, Over Temperature Protection							
DISPLAY									
LED Digital Display		Display Battery Voltage, Output Power, Output Voltage, Error Numbers							
DC OUTPUT									
USB		USB-A type (5V2A)							
COMMUNICATION									
PC		USB-B type							
EFFICIENCY									
Peak Conversion efficiency		91%		90%		88%	90%	88%	90%
ENVIRONMENT									
Protection Degree		IP20							
Working Environment		Indoor Fan cooling							
Environmental temperature		0~45°C							
Ambient humidity		20%-90%, No condensation							
Altitude		≤3000m							
DIMENSIONS									
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			
CERTIFICATION & STANDARDS									
Coming soon									

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MUST®
Solar Power System

120V Series

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

MUST Solar Power System

OFF GRID SPLIT PHASE SOLAR INVERTER

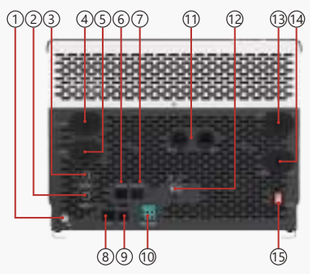
PV1800 TLV Series

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.

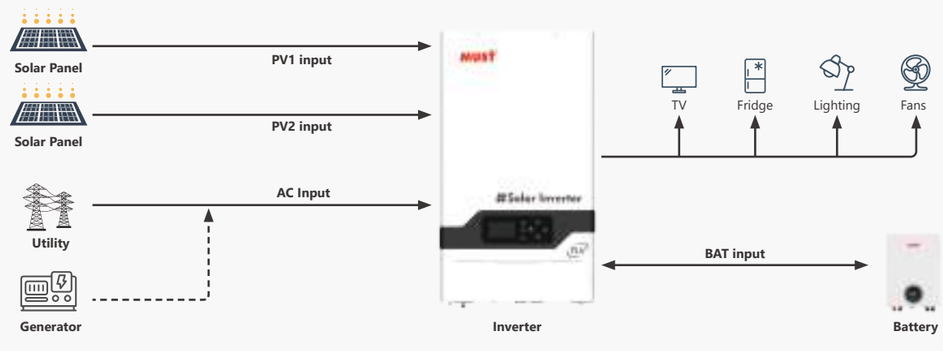
- Pure sine wave solar inverter
- Output power factor 1
- Built-in two 80A MPPT solar charge controllers
- WIFI remote monitoring (optional)
- Acid or Lithium Battery Select
- CAN/RS485 communication for BMS
- Compatible to generator

Back panel description



1. Ground
2. Input breaker1
3. Input breaker2
4. AC output
5. AC input
6. RS-485 Communication port
7. CAN port
8. Communication port
9. USB port
10. Dry contact
11. Battery input
12. WIFI port
13. PV1 input
14. PV2 input
15. Power on/off switch

Solar system connection



MODEL	PV18-6048 TLV
Nominal Battery System Voltage	48VDC
INVERTER OUTPUT	
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)
AC INPUT	
Voltage	240VAC (L1/L2/N)
Selectable Voltage Range	214~264VAC(UL)
Frequency Range	50Hz / 60Hz(Auto sensing)
BATTERY	
Normal voltage	48VDC
Floating Charge Voltage	54.8VDC
Overcharge Protection	60VDC
SOLAR CHARGER & AC CHARGER	
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
MECHANICAL SPECIFICATIONS	
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
OTHER	
Humidity	5% to 95% Relative humidity (Non-condensing)
Operating Temperature	-10°C~50°C
Storage Temperature	-15°C~60°C
Standard Warranty	2 year
CERTIFICATION & STANDARDS	
CE-LVD (IEC62109-1, EN IEC62109-2); UKCA-(BS EN 62109-1, BS EN 62109-2)	

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MUST Solar Power System

LOW FREQUENCY SPLIT PHASE SOLAR INVERTER

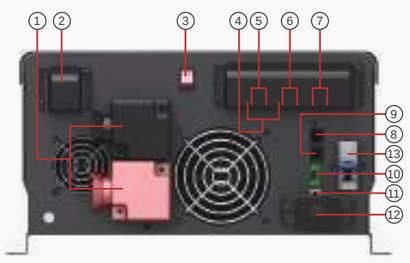
PV3300 TLV Series

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.

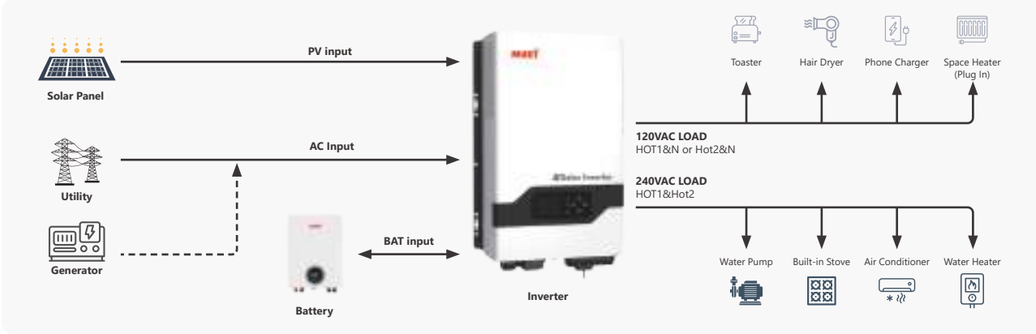
- Friendly user interface; MFD (multi-function display)
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- 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
INVERTER OUTPUT						
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 outputand 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)					
Surge rating	9000VA		12000VA		15000VA	18000VA
Capable of starting electric motor	1.5P		2P		3P	
BATTERY						
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 (10V/ 10.5V/ 11V/ 11.5V/ 12V) for 12V model (21V/21V /22V/ 23V/ 24V) for 24V model (40V/ 42V/ 44V/ 46V/ 48V) for 48V model					
Low battery alarm	Add 0.5/battery: (low battery alarm one second one time) (10V/ 10.5V/ 11V/ 11.5V/ 12V) +0.5VDC for 12V model (21V/ 21V/ 22V/ 23V/ 24V) +1VDC for 24V model (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) (12-14.5V) +1VDC for 12V model (24-29V) +2VDC for 24V model (48-58V) +4VDC for 48V model					
Save mode	Load ≤40W(110V) / 80W(220V)					
AC INPUT MODE						
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)					
SOLAR CHARGER						
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					
CHARGE MODE						
Max charge current (±5A) 12V	/		/		/	/
Max charge current (±5A) 24V	40A		60A		/	/
Max charge current (±5A) 48V	20A		30A		35A	40A
Min charge current 10A. Change by every 5A						
DIMENSIONS						
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					
CERTIFICATION & STANDARDS						
CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2)						

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MUST®
Solar Power System

LOW FREQUENCY SPLIT PHASE SOLAR INVERTER

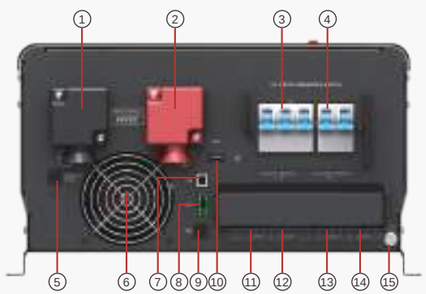
PV3600 TLV Series

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

PV3600 TLV series is a multi-function inverter ,combining functions of inverter and MPPT solar charger 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.

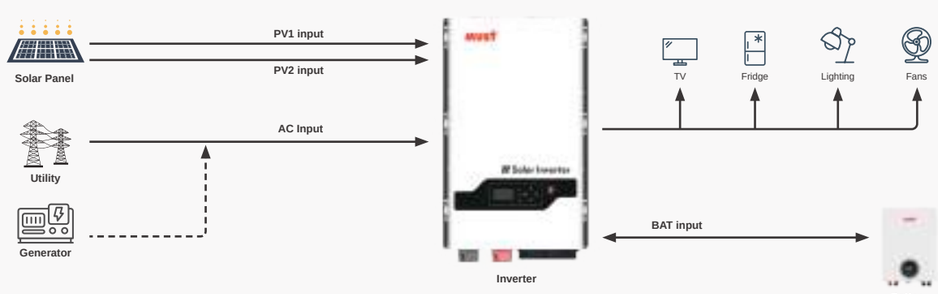
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 140Amp
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI / USB monitoring function (wi-fi optional)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

Back panel description



1. BAT-
2. BAT+
3. AC input breaker
4. AC output breaker
5. Remote control port
6. Fan
7. USB port
8. AGS port
9. BTS port
10. Wifi communication port
11. AC input
12. AC outputr
13. PV2 input
14. PV1 input
15. Ground

Solar system connection



MODEL	PV36-8048 TLV	PV36-10048 TLV	PV36-12048 TLV
Nominal Battery System Voltage	48VDC	48VDC	48VDC
INVERTER OUTPUT			
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 effciency(peak)	>88%		
Line mode efficiency	>95%		
Power factor	1.0		
Typical transfer time	20ms(max)		
AC INPUT			
Voltage	220V/230V/240V		
Selectable voltage range	90-280 VAC (APL)		
Frequency range	50Hz / 60Hz		
BATTERY			
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		
AC CHARGER			
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
BTS			
Continuous output power	Yes Variances in charging voltage & S.D. voltage base on the battery temperature		
BYPASS & PROTECTION			
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		
SOLAR CHARGER			
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 effciency	>98%		
Standby power consumption	<2W		
MECHANICAL SPECIFICATIONS			
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)	/		
OTHER			
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		
CERTIFICATION & STANDARDS			
CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)			

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MUST Solar Power System

LOW FREQUENCY SPLIT PHASE SOLAR INVERTER

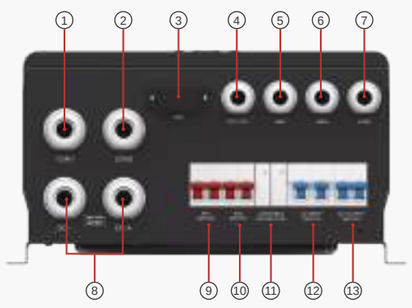
PV3900 TLV Series

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

PV3900 TLV series is a multi-function inverter ,combining functions of inverter and MPPT solar charger 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.

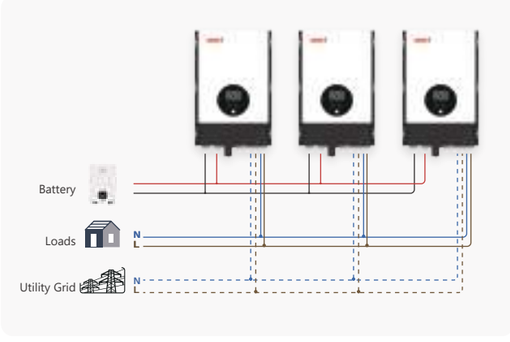
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 200A
- MPPT efficiency max 98%
- Powerful charge rate up to 200A
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI monitoring function (optional)
- Compatible to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

Back panel description

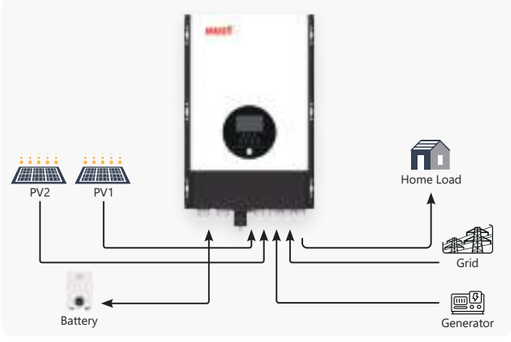


1. Communication-1 port
2. Communication-2 port
3. WiFi port
4. PV1/PV2 port
5. GEN ouput port
6. Grid ouput port
7. AC ouput port
8. Battery -/+
9. PV1 Switch
10. PV2 Switch
11. Lighting protection
12. AC input switch
13. AC output switch

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		
INVERTER OUTPUT			
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 effciency(peak)	>90%		
Line mode efficiency	>95%		
Power factor	1.0		
Typical transfer time	10ms(max)		
AC INPUT			
Voltage	220V/230V/240V		
Selectable voltage range	90-280 VAC (APL)		
Frequency range	50Hz / 60Hz		
BATTERY			
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		
AC CHARGER			
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	10-140A (setting) battery terminal		
BTS			
Continuous output power	Yes Variances in charging voltage & S.D. voltage base on the battery temperature		
BYPASS & PROTECTION			
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		
SOLAR CHARGER			
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 effciency	>98%		
Standby power consumption	<2W		
MECHANICAL SPECIFICATIONS			
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
OTHER			
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		
CERTIFICATION & STANDARDS			
CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011); UL1741			

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MUST Solar Power System

SOLAR INVERTER

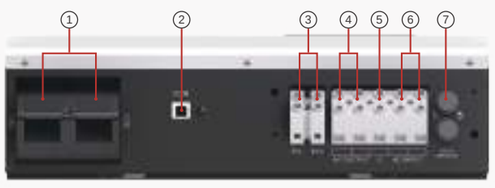
PV1500 LV Series

600W-1500W | 120VAC

It is a cost efective, inteligent solar inverter which accepts Solar & Utility input at the same fime. The comprehensive LCD display ofers user-conigurable and easy-accessible buton adjustment such as batery charging curent, AC/solar charger priority and DC priority,.When battery voltage islow,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 utilitycharging 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



1. DC Input
2. Communication port
3. Solar panel terminal
4. AC Output
5. Ground
6. AC Input
7. Input fuse

Solar system connection

MODEL	PV15-0612 LV	PV15-1012 LV	PV15-1524 LV	
Nominal Battery System Voltage	12VDC	12VDC	24VDC	
NVERTER OUTPUT				
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)			
AC INPUT				
Voltage	120VAC			
Voltage Range	74 ~ 145VAC ± 3%			
Frequency Range	40 ~ 65Hz ± 2Hz			
BATTERY				
Note: Below Parameters (PB) Lead-acid Battery / (LI) LiFePO4 Lithium Battery Pack - 12V(4 Series) 24V(8 Series)				
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)
SOLAR CHARGER & AC CHARGER				
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)	
BYPASS & PROTECTION				
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	
DIMENSIONS				
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		
OTHER				
Operating Temperature Range	0℃ to 45℃			
Audible Noise	50dB MAX			
Display	LED+LCD			
Standard Warranty	2 year			
CERTIFICATION & STANDARDS				
//////////////////				

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

MUST Solar Power System

HIGH FREQUENCY OFF GRID SOLAR INVERTER

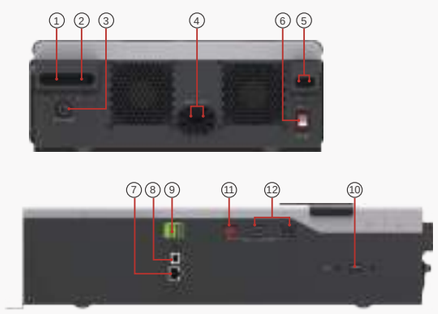
PV1800 LV Series

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 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.

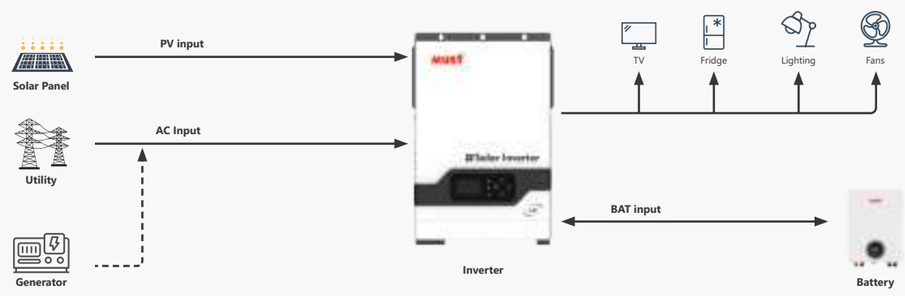
- Pure sine wave solar inverter
- Output power factor 1
- Built-in 80A MPPT solar charger
- 2 units can be wired in parallel to create a split-phase system with 120V and 240V capabilities (only for 3kw)
- Support parallel operation up to 3 units (only for 3kw)
- WIFI remote monitoring (optional)
- CAN/RS485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

Back panel description



1. AC input
2. AC output
3. Circuit breaker
4. Battery input
5. PV input
6. Power on/off switch
7. RS-485 Communication port
8. USB
9. Dry contact
10. USB wifi
11. Parallel switch (only for parallel model)
12. Parallel communication port (only for parallel model)

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
INVERTER OUTPUT						
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)					
AC INPUT						
Voltage	120VAC					
Selectable Voltage Range	107~132VAC(UL)					
Frequency Range	50Hz / 60Hz(Auto sensing)					
BATTERY						
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
SOLAR CHARGER & AC CHARGER						
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
MECHANICAL SPECIFICATIONS						
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
OTHER						
Humidity	5% to 95% Relative humidity (Non-condensing)					
Operating Temperature	-10°C~50°C					
Storage Temperature	-15°C~60°C					
Standard Warranty	2 years					
CERTIFICATION & STANDARDS						
CE-LVD (IEC62109-1, EN IEC62109-2); UKCA-(BS EN 62109-1, BS EN 62109-2)						

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MUST Solar Power System

LOW FREQUENCY SOLAR INVERTER

PV2900 LHP Series

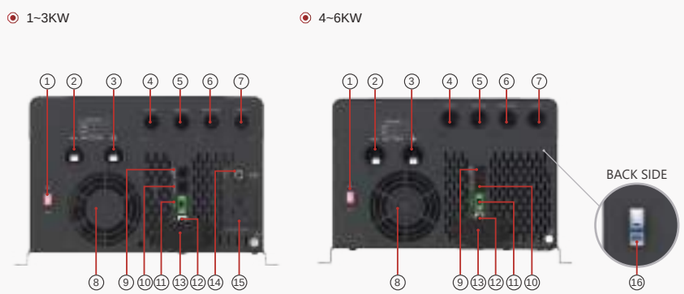
1~6KW | AC 120V | MPPT80A | WIFI | BMS | Dual output

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.

CE IEC ISO AFPE/AFCI INMETRO

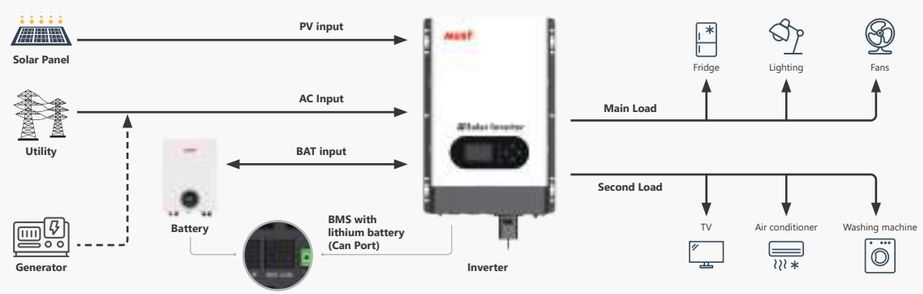
- Pure sine wave output
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter 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



1. Power on/off switch
2. BAT -
3. BAT +
4. AC Input
5. Main load
6. Second load
7. PV input
8. Fan
9. Remote port
10. BMS Can Port
11. AGS port
12. USB port
13. WIFI port (optional)
14. AC input protect
15. AC output 10A(max)
16. AC Input breaker

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
INVERTER OUTPUT												
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)											
AC INPUT												
Voltage	110/120VAC											
Selectable Voltage Range	75~135VAC (For personal computers)											
Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz											
BATTERY												
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)											
Idie Consumption-Search Mode	Load ≤50±20W(120V)/100±20W(220V)											
CHARGER												
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
PAYPASS & PROTECTION												
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			
SOLAR CHARGER												
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											
MECHANICAL SPECIFICATIONS												
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)	/								/			
OTHER												
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											
CERTIFICATION & STANDARDS												
CE-EMC+LVD (EN6100-6-3:2007, EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)												

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MUST®
Solar Power System

LOW FREQUENCY SOLAR INVERTER

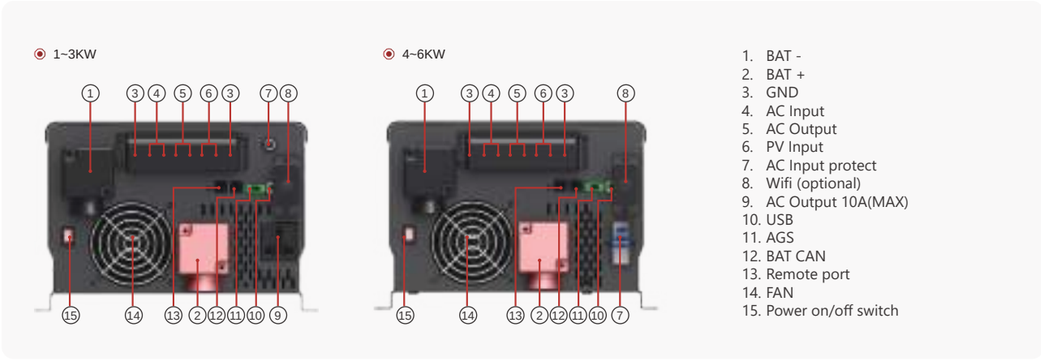
PV3000 LVHM Series

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



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

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
INVERTER OUTPUT												
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)											
AC INPUT												
Voltage	110/120VAC											
Selectable Voltage Range	75~135VAC (For personal computers)											
Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz											
BATTERY												
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)											
Idie Consumption-Search Mode	Load ≤50±20W(120V)											
CHARGER												
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
BYPASS & PROTECTION												
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			
SOLAR CHARGER												
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				60~230VDC @48V	
Maximum PV Array Open Circuit Voltage	245VDC											
Standby Power Consumption	<2W											
MECHANICAL SPECIFICATIONS												
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)	/								/			
OTHER												
Operating Temperature Range	0℃ to 40℃											
Storage Temperature	-15℃ to 60℃											
Audible Noise	60dB MAX											
Display	LED+LCD											
Standard Warranty	2 year											
CERTIFICATION & STANDARDS												
/												

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HIGH FREQUENCY POWER INVERTER/CHARGER

EP1800 LV Series

3KW | 24V | 120V

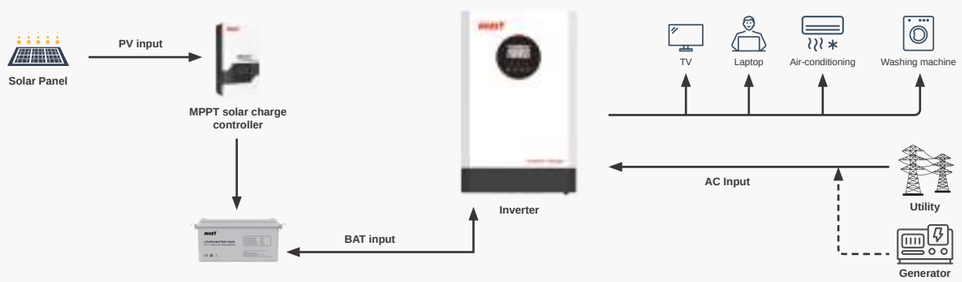
This is a multi-function inverter/charger, combining functions of inverter, battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger priority, and 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
2. AC output
3. RS485 communication port
4. USB port
5. Dry contact
6. Power on/off switch
7. Battery input
8. Parallel communication port (only for parallel model)
9. Parallel switch
10. WiFi port (optional)

Solar system connection



MODEL		EP18-3024 LV
Rated output power		3000VA/3000W
Surge Power		6000W
AC INPUT		
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%
INVERTER OUTPUT		
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
BATTERY		
Battery voltage		24VDC
Floating voltage		27.4V
Overcharge Protection		30V
CHARGER		
Charging Current(UPS) @Nominal Input Voltage		Default:30A; MAX:80A
Bulk Charging Voltage		28.8Vdc
Floating Charging Voltage		27.4Vdc
Charging Algorithm		3-Step
MECHANICAL SPECIFICATIONS		
Machine Dimension (W*H*D)(mm)		297.5*468*125
Package Dimension (W*H*D)(mm)		/
N.W(kg)		/
G.W(kg)		/
GENERAL		
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
CERTIFICATION & STANDARDS		
CE-EMC+LVD (EN6100-6-4,EN6100-6-2+EN IEC62109-1)		

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MUST Solar Power System

POWER INVERTER/CHARGER

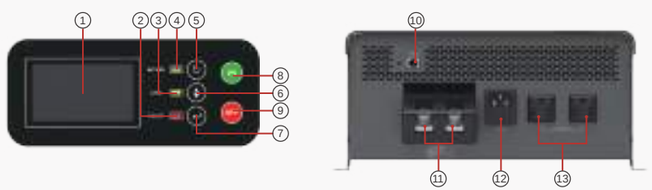
EP2900 LV Series

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 installnation and setting.

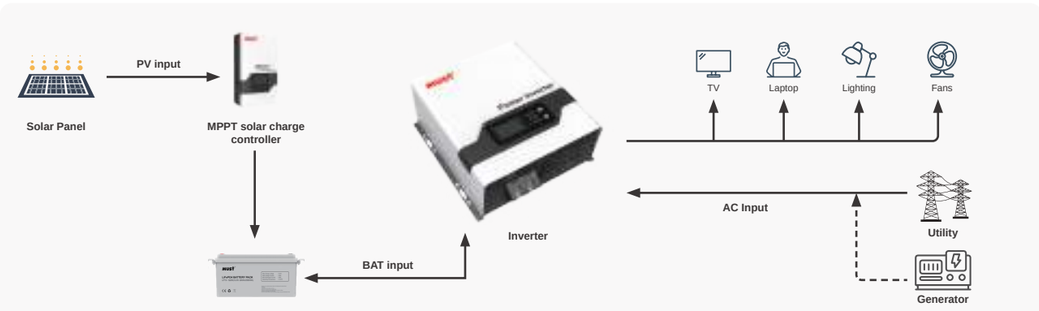
- Sine wave inverter
- Adjustable charging current from utility
- Adjustable battery charging current
- 3 steps charging algorithm
- Friendly user interface
- Multi-function display
- Overload and short-circuit protection
- Battery reverse polarity protection
- Deep discharge protection
- Automatic voltage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

Back panel description



1. LCD display
2. Fault LED
3. Charge LED
4. AC/Inverter LED
5. ESC
6. SEL
7. Enter
8. Power on
9. Power off
10. USB
11. Battery input
12. AC input
13. AC output

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		
INVERTER OUTPUT									
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)								
AC INPUT									
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 Frequncy Recover	64 ±5Hz								
Nominal Input Range	50Hz / 60Hz ±5Hz								
AC Auto Restart	YES								
BATTERY									
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)								
AC CHARGE									
Floating Voltage	13.5-14.5VDC						27-29VDC		
Boost Voltage	13.8~14.5VDC						27.6~29VDC		
Maximum Charge Current	300W	400W	500W	600W	800W	1000W	600W	800W	1000W
	10A	10A	15A	20A	25A	30A	10A	15A	15A
BYPASS & PROTECTION									
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								
MECHANICAL SPECIFICATION									
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)	/								
GENERAL									
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°Cstarting, <30°C Closing								
Communication	USB								
Standard Warranty	2 year								
CERTIFICATION & STANDARDS									

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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MUST Solar Power System

LOW FREQUENCY POWER INVERTER/CHARGER

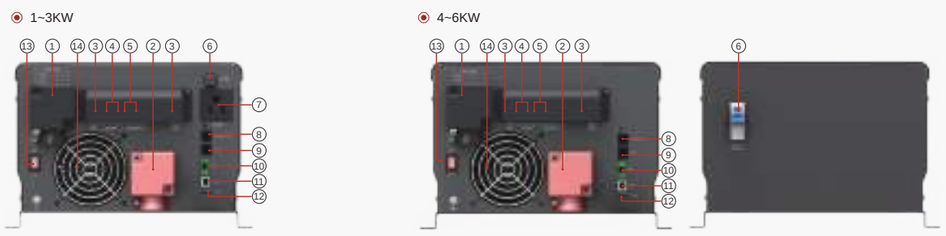
EP3000 LV Series

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.

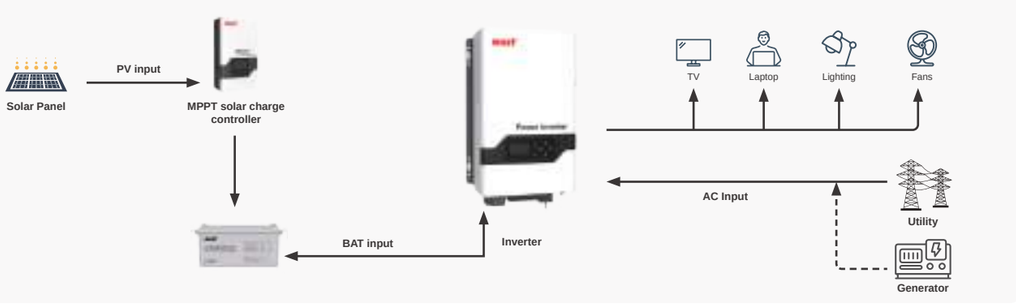
- 3 Steps charging
- MFD (multi-function display)
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- 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



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

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
INVERTER OUTPUT												
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) 110% < Load < 125% (alarm 60s then stop output and fault code 07) Load > 125% (alarm 10s then stop output and fault code 07)											
AC INPUT												
Voltage	120VAC											
Selectable Voltage Range	75~135VAC(For Personal Computers)											
Frequency Range	50Hz/60Hz (Auto sensing) 40~80Hz											
BATTERY												
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)											
CHARGER												
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
BYPASS & PROTECTION												
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			
MECHANICAL SPECIFICATIONS												
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)	/											
OTHER												
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											
CERTIFICATION & STANDARDS												
/												

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MUST Solar Power System

LOW FREQUENCY SPLIT PHASE POWER INVERTER

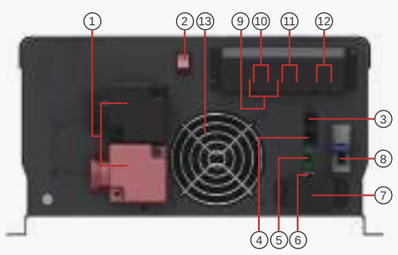
EP3300 TLV Series

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.

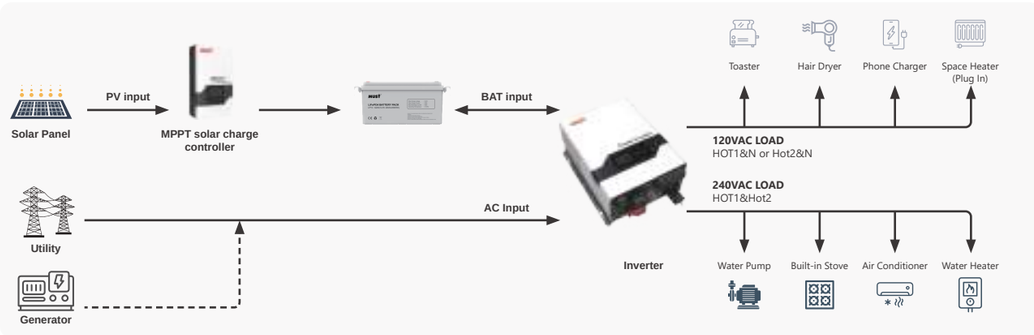
- Pure sine wave output
- 3 steps charging
- Overlord and short- circuit protection
- Set charging voltage/charging current
- Power-save mode
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Inverter voltage can be set to 100/110/120V
- Inverter frequency can be set to 50/60Hz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

Back panel description



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

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
INVERTER OUTPUT												
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)											
BATTERY												
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)											
AC INPUT MODE												
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)											
CHARGE MODE												
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												
MECHANICAL SPECIFICATIONS												
Machine Dimension (W*H*D)(mm)	359.2*443*188								361.8*543.5*188.5			
Package Dimension (W*H*D)(mm)	598*308*457								698*308*407			
N.W(kg)	/											
G.W(kg)	/											
Standard Warranty	1 year (standard), 2 years optional (IP20)											
CERTIFICATION & STANDARDS												
/												

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MUST Solar Power System

SPLIT-PHASE HYBRID SOLAR INVERTER

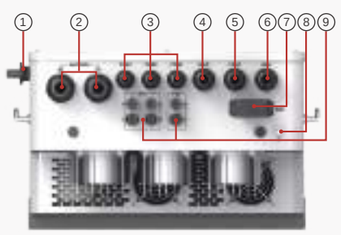
PH1100 US Series

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.

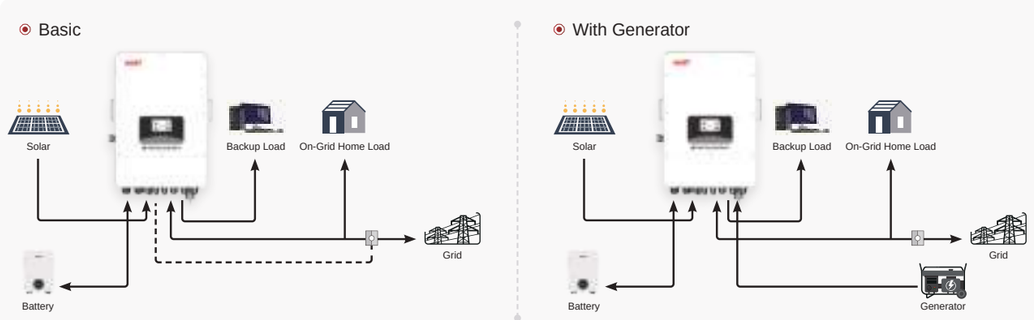
- 100% unbalanced output, each phase max. output up to 50% rated power
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofifit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 220A
- Support storing energy from diesel generator
- 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



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	PH11-5KL2-US	PH11-6KL2-US	PH11-8KL2-US	PH11-10KL2-US
Rated power	5000W	6000W	8000W	10000W
BATTERY INPUT DATA				
Battery type	Lead-acid battery / Lithium battery			
Battery voltage	48V			
Battery voltage range	40~60V			
Charging curve	3-stage adaptive with maintenance/Equalization			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
Over-current protection/ Over-temperature protection	Yes / Yes			
Maximum charging/discharging power	5000W	6000W	8000W	10000W
Maximum charging/discharging current	120A	150A	190A	220A
PV STRING INPUT DATA				
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			
AC INPUT/OUTPUT DATA				
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%			
EFFICIENCY				
Max. Efficiency	97.5%			
Euro Efficiency	96.5%			
MPPT Efficiency	99.5%			
PROTECTION				
Integrated	Islanding protection, Output overcurrent protection, Output overvoltage protection, PV input polarity reverse protection, DC Switch (optional), Ground Fault Sensing, leakage current monitoringprotection			
Surge Protection	DC Type III/AC Type III			
Overvoltage Category	DC Type II/AC Type III			
GENERAL DATA				
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/ Enternet(optional)			
Display	4.3-inch touch screen			
Protection Degree	IP66			
Installation Style	Wall-mounted			
MECHANICAL SPECIFICATIONS				
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 the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy			
CERTIFICATION & STANDARDS				
NBT32004-2013				

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MUST Solar Power System

HYBRID SOLAR INVERTER

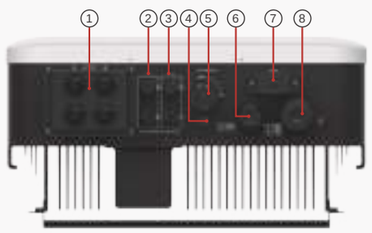
PH1100 LV Series

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.

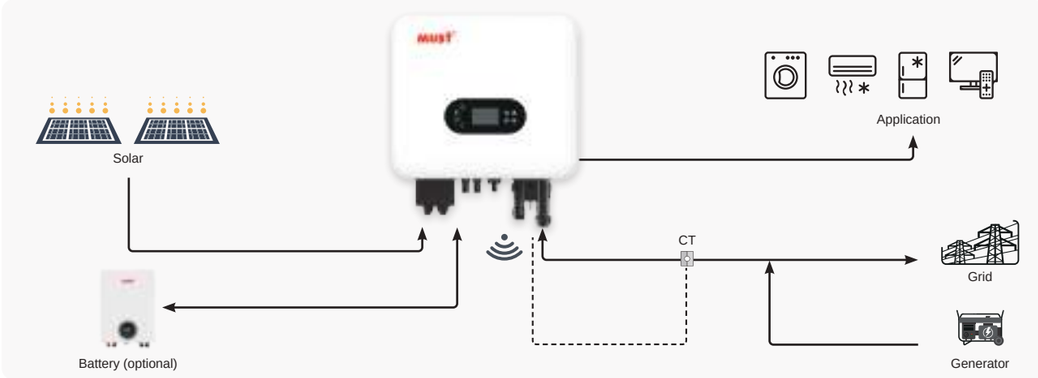
- Multiple operation modes: Grid-tie,off grid with storage backup
- IP66 water-proof and dust-proof
- MPPT voltage range 120-500V
- Support LCD display&Smart LCD setting
- Available Export control CT sensor function
- Multiple communications: RS485,GPRS and wifi etc
- Full protection function:Over-voltage,over-frequency, 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	
PV INPUT(DC)		
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	
INVERTER INPUT/ OUTPUT(AC)		
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	
BATTERY MODE OUTPUT(AC)		
Output Rated Power	3600W	4000W
Nominal output voltage; accuracy range	120±1%	
Output ferequency; 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%	
BATTERY & CHARGER		
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 currernt	75A	85A
EFFICIENCY		
Maximum efficiency	97.1%	
Euro-efficiency	96.5%	
MPPT efficiency	99.8%	
PROTECTION DEVICES		
DC switch rating for each MPPT; Grid monitoring; Output over current protection; Output overvoltage protection-varistor; Ground fault monitoring; Integrated all-pole sensitive leakage current		
MECHANICAL SPECIFICATIONS		
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	
GENERAL		
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 codensing)	
Operating temperature range	-25°C+60°C With derating above 45°C	
Cooling concept	Natural	
Altitude	<3000m	
Standard Warranty	5 year	
CERTIFICATION & STANDARDS		
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		

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

MUST Solar Power System

AC-COUPLED ENERGY STORAGE INVERTER

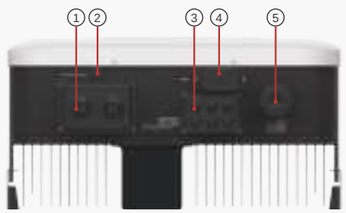
PH1600 LV Series

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.

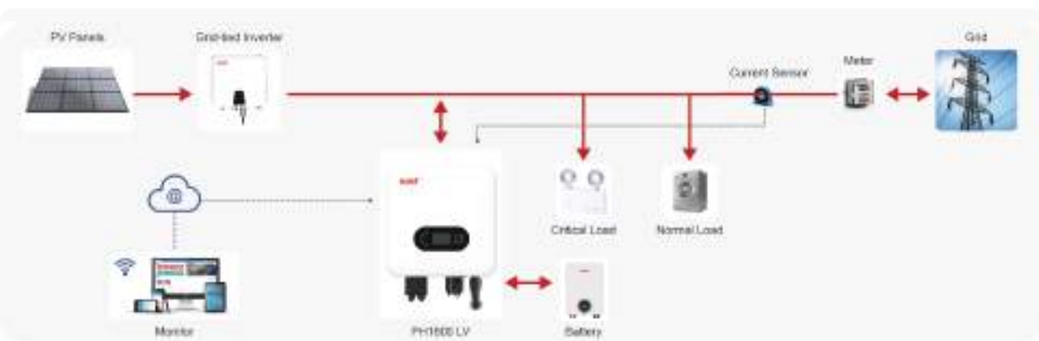
- LCD+LED – user friendly interface
- IP66 design for outdoor
- Compatible with other brands of inverter
- Various work mode for different application scenarios
- Natural cooling without external fan
- BMS Function
- Wifi monitoring
- UPS level switching time <10 ms
- Retrofit any on-grid systems to 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
INVERTER OUTPUT(AC)			
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		
BATTERY MODE OUTPUT(AC)			
Output Rated Power	3000W	3500W	4000W
Nominal output voltage; accuracy range	120±1%		
Output ferequency; 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%		
BATTERY & CHARGER			
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 currernt	80A		
EFFICIENCY			
Battery discharge (full load)	≥92%		
Maximum battery charging current efficiency	≥92%		
PROTECTION DEVICES			
Grid monitoring	Yes		
Output over current protection	Yes		
Output overvoltage protection-varistor	Yes		
Ground fault monitoring	Yes		
Integrated all-pole sensitive leakage current	Yes		
MECHANICAL SPECIFICATIONS			
Machine Dimension (W*H*D)(mm)	420*420*215		
Package Dimension (W*H*D)(mm)	/		
N.W(kg)	25		
G.W(kg)	/		
GENERAL			
AC connection	Terminal Block		
Display	LED+LCD		
Communication interfaces	Wi-Fi/USB/GPRS/RS485/CAN		
Ingress protection rating	IP66		
Humidity	0~95% RH(No codensing)		
Operating temperature range	-20°C+60°C With derating above 45°C		
Cooling concept	Natural		
Noise figure [dB]	≤25		
Altitude	<3000m		
Standard Warranty	5years		
CERTIFICATION & STANDARDS			
CE-EMC+LVD (EN IEC61000-6-3, ENIEC61000-6-1; EN IEC62477-1)			

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MUST Solar Power System

ON GRID SOLAR INVERTER

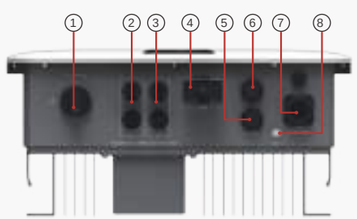
PH5900 ML Series

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 send 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.

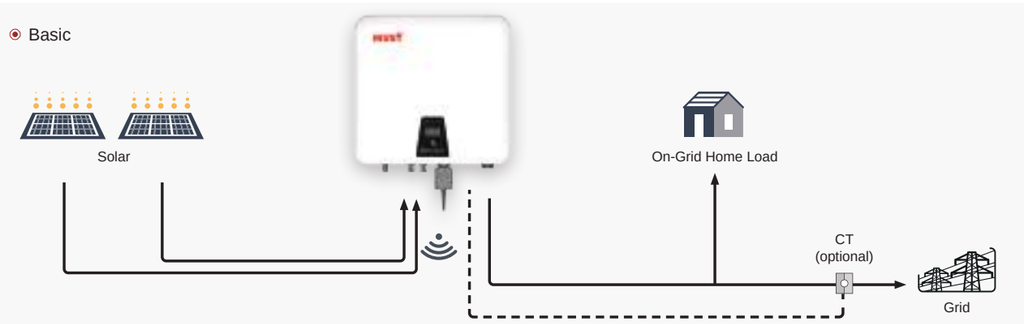
- High Frequency On Grid Solar Inverter
- Rate power: 3-6KW
- MPPT efficiency up to 99.50%
- Multiple communications: WIFI etc
- Monitoring inverters freely via mobile phone APP
- Fanless low-noise design
- IP66 water-proof and dust-proof

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



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
PV INPUT(DC)						
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					
GRID OUTPUT(AC)						
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					
EFFICIENCY						
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					
PROTECTION DEVICES						
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					
PHYSICAL						
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					
INTERFACE						
DC connection	H4/MC4					
AC connection	Connector					
Display	OLED+LED WIFI+APP					
Communication interfaces	WIFI/RS485/GPRS(opt)					
ENVIRONMENT						
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					
OTHERS						
Topology	Transformerless					
Warranty	Standard 5years/10 years(opt.)					
CERTIFICATION & STANDARDS						
UL1741; FCC						

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MUST Solar Power System

ON GRID SOLAR INVERTER

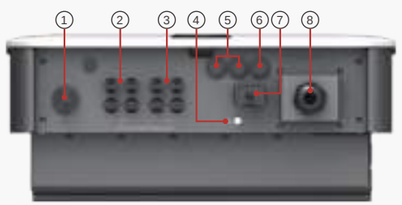
PH5900 TML Series

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 send 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.

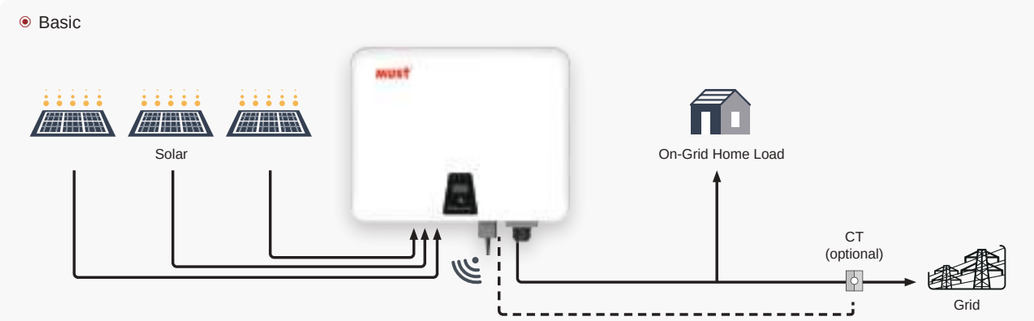
- Wide MPPT voltage range from 200V-800V
- IP66 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.6%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

Back panel description



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	PH59-10000 TML	PH59-11000 TML	PH59-12000 TML
Rated AC output power	10000W	11000W	12000W
OUTPUT (AC)			
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		
INPUT DATA			
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		
EFFICIENCY			
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		
GENERAL DATA FEATURES			
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%		
FEATURES			
AC connection	Cable gland + OT terminal		
Display	OLED+LED WIFI+APP		
Communication interfaces	WIFI/RS485/GPRS(opt)		
Warranty	Standard 5 years / 10 years (opt.)		
CERTIFICATION & STANDARDS			
UL1741; FCC			

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MUST Solar Power System

HIGH FREQUENCY ON/OFF GRID SOLAR INVERTER

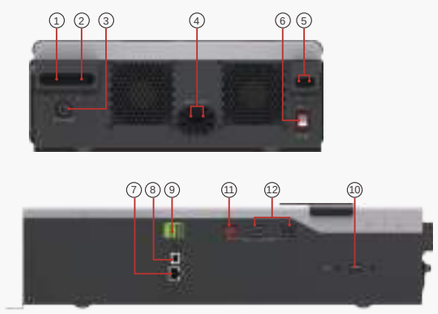
PH1800 LV Series

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 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.

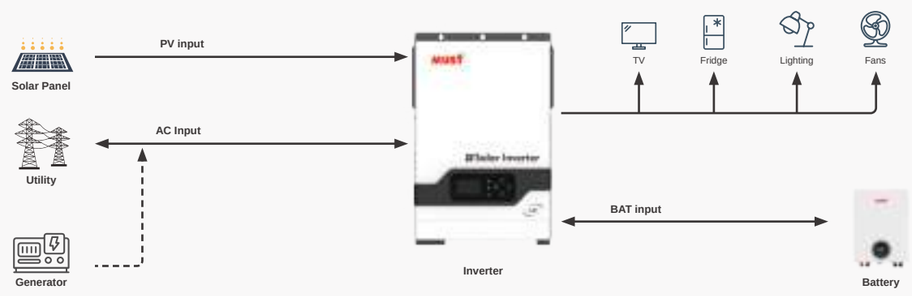
- Pure sine wave solar inverter
- Output power factor 1
- Built-in 80A MPPT solar charger
- 2 units can be wired in parallel to create a split-phase system with 120V and 240V capabilities
- Support parallel operation up to 3 units
- WIFI remote monitoring (optional)
- CAN/RS485 communication for BMS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

Back panel description



1. AC input
2. AC output
3. Circuit breaker
4. Battery input
5. PV input
6. Power on/off switch
7. RS-485 Communication port
8. USB
9. Dry contact
10. USB wifi
11. Parallel switch (only for parallel model)
12. Parallel communication port (only for parallel model)

Solar system connection



MODEL	PH18-3024 LV	PH18-3048 LV	PH18-6048 LV
Nominal Battery System Voltage	24VDC	48VDC	
INVERTER OUTPUT			
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)		
AC INPUT			
Voltage	120VAC	120VAC	240VAC
Selectable Voltage Range	107~132VAC(UL)		214~264VAC(UL)
Frequency Range	50Hz / 60Hz(Auto sensing)		
BATTERY			
Normal voltage	24VDC	48VDC	48VDC
Floating Charge Voltage	27.4VDC	54.8VDC	54.8VDC
Overcharge Protection	30VDC	60VDC	60VDC
SOLAR CHARGER & AC CHARGER			
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
MECHANICAL SPECIFICATIONS			
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
OTHER			
Humidity	5% to 95% Relative humidity (Non-condensing)		
Operating Temperature	-10°C~50°C		
Storage Temperature	-15°C~60°C		
Standard Warranty	2years		
CERTIFICATION & STANDARDS			

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MUST Solar Power System

HIGH FREQUENCY ON/OFF GRID HYBRID SOLAR INVERTER

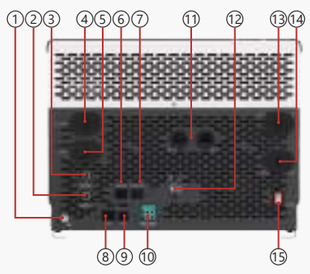
PH1800 TLV Series

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.

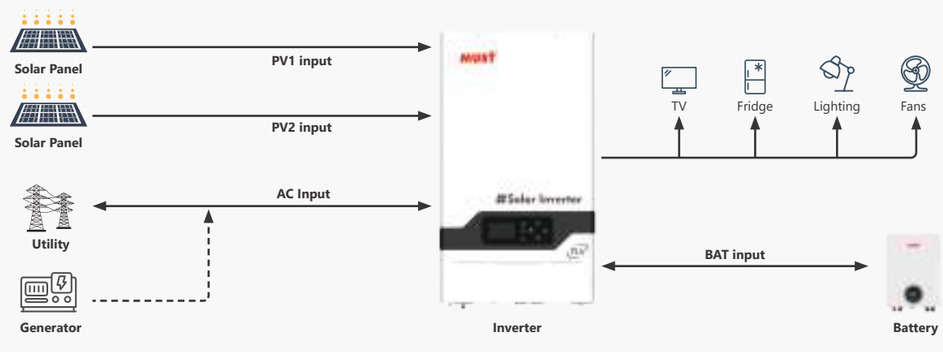
- Pure sine wave solar inverter
- Output power factor 1
- Built-in two 80A MPPT solar charge controllers
- WIFI remote monitoring (optional)
- Acid or Lithium Battery Select
- CAN/RS485 communication for BMS
- Compatible to generator

Back panel description



1. Ground
2. Input breaker1
3. Input breaker2
4. AC output
5. AC input
6. RS-485 Communication port
7. CAN port
8. Communication port
9. USB port
10. Dry contact
11. Battery input
12. WIFI port
13. PV1 input
14. PV2 input
15. Power on/off switch

Solar system connection



MODEL	PH18-6048 TLV
Nominal Battery System Voltage	48VDC
INVERTER OUTPUT	
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)
AC INPUT	
Voltage	240VAC (L1/L2/N)
Selectable Voltage Range	214~264VAC(UL)
Frequency Range	50Hz / 60Hz(Auto sensing)
BATTERY	
Normal voltage	48VDC
Floating Charge Voltage	54.8VDC
Overcharge Protection	60VDC
SOLAR CHARGER & AC CHARGER	
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
MECHANICAL SPECIFICATIONS	
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
OTHER	
Humidity	5% to 95% Relative humidity (Non-condensing)
Operating Temperature	-10°C~50°C
Storage Temperature	-15°C~60°C
Standard Warranty	2 year
CERTIFICATION & STANDARDS	
CE-LVD (IEC62109-1, EN IEC62109-2); UKCA-(BS EN 62109-1, BS EN 62109-2)	

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MUST Solar Power System

PURE SINE WAVE INVERTER

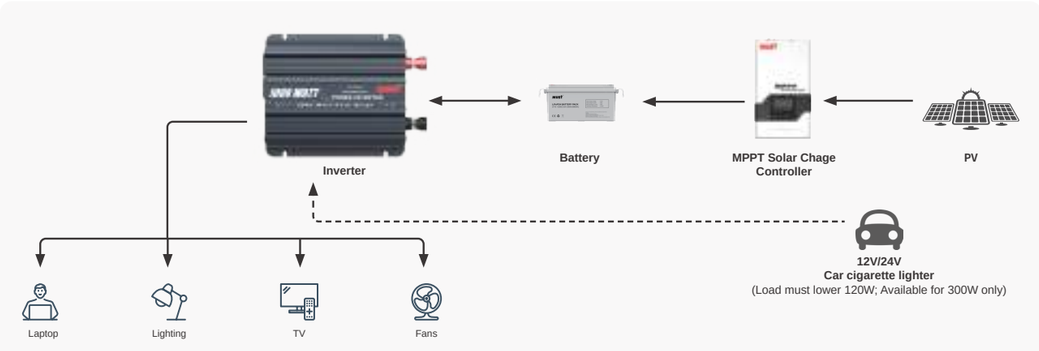
PI1500 LV Series

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

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 battery or 24VDC battery to AC 120VAC output, mainly used for emergency use Electricity, car inverter, outdoor electricity and other occasions.

- Input Voltage 12V / 24V DC 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
BATTERY DC INPUT											
Input Voltage		12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
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											
INVERTER AC OUTPUT											
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%									
PROTECTION											
Battery Input Protection		Low Voltage Protection, Over Voltage Protection, Reverse Protection									
Inverter Output Protection		Output Overload, Short-Circuit, Over Temperature Protection									
DISPLAY											
LED Display		Red: Error ; Green: System OK									
LED Digital Display		/		Display Battery Voltage, Output Power, Output Voltage, Error Numbers							
DC OUTPUT											
USB		USB-A type (5V1A)									
EFFICIENCY											
Peak Conversion efficiency		91%		91%		90%		88%	90%	88%	90%
MECHANICAL SPECIFICATIONS											
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)			
OTHER											
Protection Degree		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									
CERTIFICATION & STANDARDS											

CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC62109-1, EN IEC62109-2)
CE-LVD(EN 62477-1/A11)

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

MUST Solar Power System

PURE SINE WAVE INVERTER

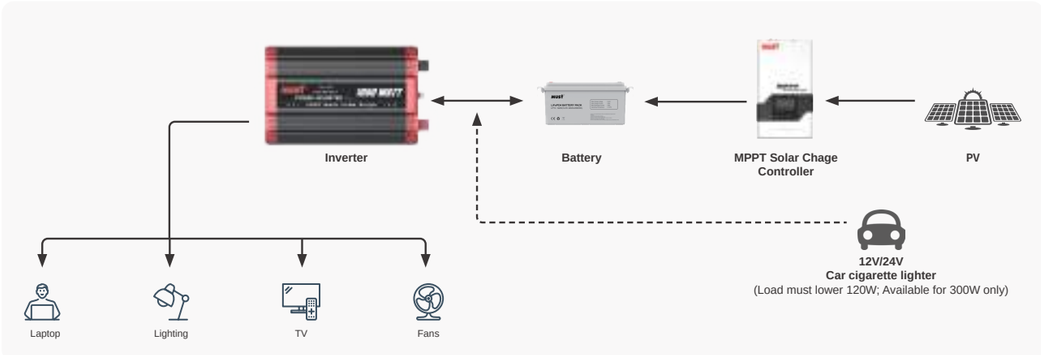
PI1500 LV Series

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

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 battery or 24VDC battery to AC 120VAC output, mainly used for emergency use Electricity, car inverter, outdoor electricity and other occasions.

- Input Voltage 12V / 24V DC 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
BATTERY DC INPUT									
Input Voltage		12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	12VDC	24VDC
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
	(LI)	12.0VDC	24.0VDC	12.0VDC	24.0VDC	12.0VDC	24.0VDC	12.0VDC	24.0VDC
Low Voltage Protect	(PB)	10.5VDC	21.0VDC	10.5VDC	21.0VDC	10.5VDC	21.0VDC	10.5VDC	21.0VDC
	(LI)	11.6VDC	23.2VDC	11.6VDC	23.2VDC	11.6VDC	23.2VDC	11.6VDC	23.2VDC
Low Voltage Restoring	(PB)	12.5VDC	25.0VDC	12.5VDC	25.0VDC	12.5VDC	23.0VDC	12.5VDC	23.0VDC
	(LI)	12.8VDC	25.6VDC	12.8VDC	25.6VDC	12.8VDC	25.6VDC	12.8VDC	25.6VDC
Over Voltage Protect	(PB)	15.0VDC	30.0VDC	15.0VDC	30.0VDC	15.0VDC	30.0VDC	15.0VDC	30.0VDC
	(LI)	14.8VDC	29.6VDC	14.8VDC	29.6VDC	14.8VDC	29.6VDC	14.8VDC	29.6VDC
Over Voltage Restoring	(PB)	14.7VDC	29.4VDC	14.7VDC	29.4VDC	14.7VDC	29.4VDC	14.7VDC	29.4VDC
	(LI)	14.5VDC	29.0VDC	14.5VDC	29.0VDC	14.5VDC	29.0VDC	14.5VDC	29.0VDC
Parameters: (PB) Lead-acid Battery / (LI) 4 series (12V), 8 series (24V) LiFePO4 Lithium Battery Pack									
INVERTER AC OUTPUT									
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%							
PROTECTION									
Battery Input Protection		Low Voltage Protection, Over Voltage Protection, Reverse Protection							
Inverter Output Protection		Output Overload, Short-Circuit, Over Temperature Protection							
DISPLAY									
LED Digital Display		Display Battery Voltage, Output Power, Output Voltage, Error Numbers							
DC OUTPUT									
USB		USB-A type (5V2A)							
COMMUNICATION									
PC		USB-B type							
EFFICIENCY									
Peak Conversion efficiency		91%		90%		88%	90%	88%	90%
ENVIRONMENT									
Protection Degree		IP20							
Working Environment		Indoor Fan cooling							
Environmental temperature		0~45°C							
Ambient humidity		20%-90%, No condensation							
Altitude		≤3000m							
DIMENSIONS									
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			
CERTIFICATION & STANDARDS									
Coming soon									

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MUST Solar Power System

MPPT SOLAR CHARGE CONTROLLER

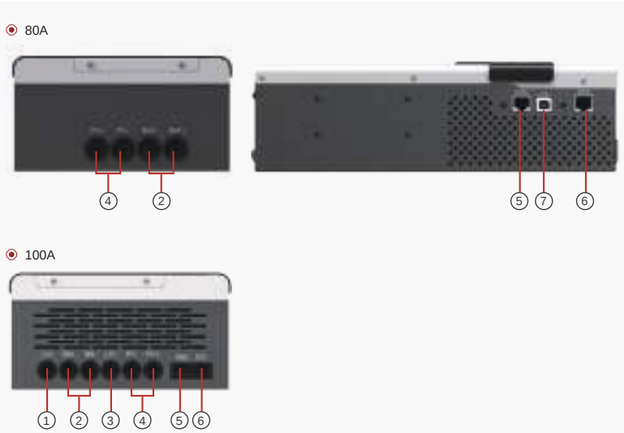
PC1800F Series

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.

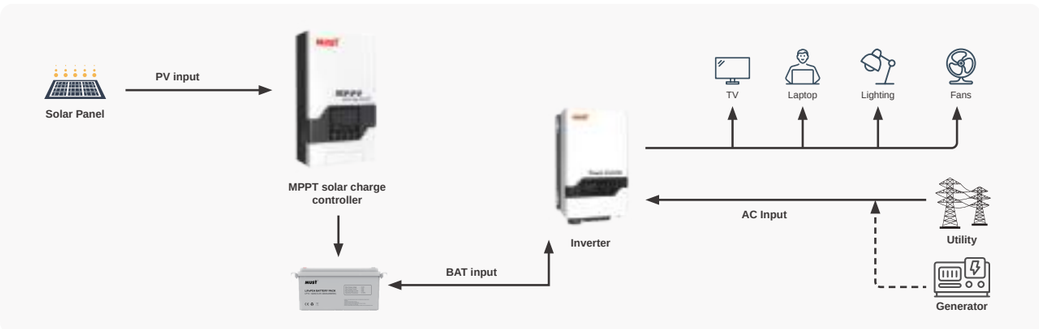
- LCD display , easy to operate on LCD screen
- Multi stage charging
  (3-stage charging , parallel charging and equalized charging function)
- Maximum Solar Input Voltage: 145V
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB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

Back panel description



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)		
CONTROLLER INPUT					
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
BATTERY					
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
DISPLAY & PROTECTION					
Protections			Solar high voltage disconnect/ Solar high voltage reconnect/ Battery high voltage disconnect Battery high voltage reconnect/ High temperature disconnect/ High temperature reconnect		
MECHANICAL SPECIFICATIONS					
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)			/		/
OTHER					
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		
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)

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MUST Solar Power System

MPPT SOLAR CHARGE CONTROLLER

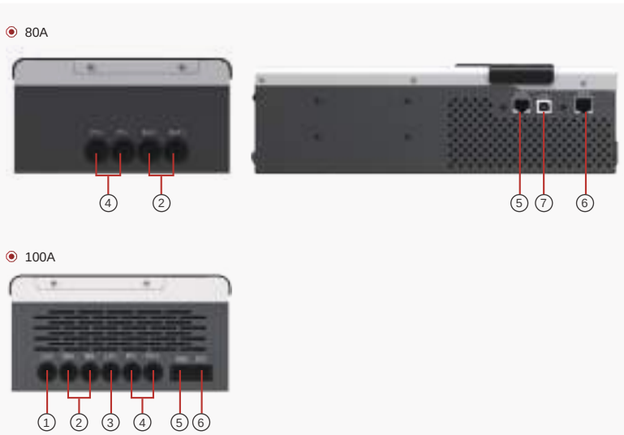
PC1800F Series

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.

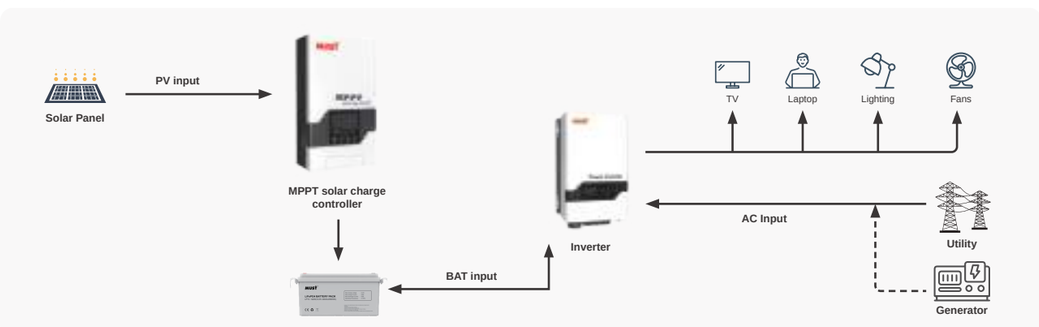
- LCD display , easy to operate on LCD screen
- Multi stage charging
  (3-stage charging , parallel charging and equalized charging function)
- Maximum Solar Input Voltage: 245V
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB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

Back panel description



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)		
CONTROLLER INPUT					
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
BATTERY					
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°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
DISPLAY & PROTECTION					
Protections			Solar high voltage disconnect/ Solar high voltage reconnect/ Battery high voltage disconnect Battery high voltage reconnect/ High temperature disconnect/ High temperature reconnect		
MECHANICAL SPECIFICATIONS					
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)			/		/
OTHER					
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		
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)

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MUST Solar Power System

MPPT SOLAR CHARGE CONTROLLER

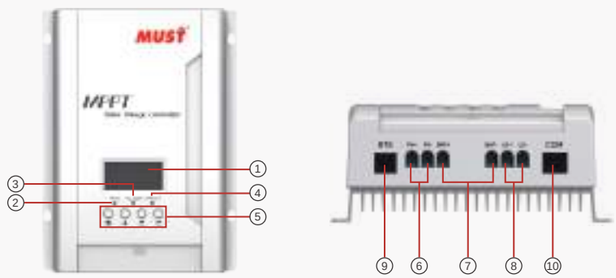
PC1800A Series

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.

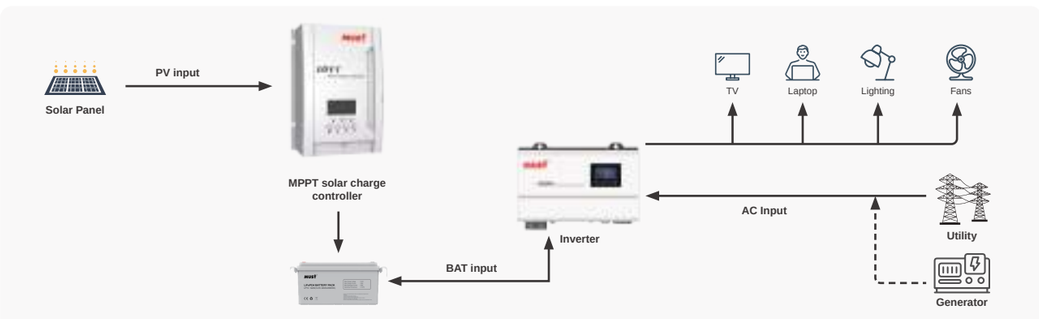
- Intelligent Maximum Power Point Tracking technology increases efficiency 25%~30%
- Compatible for PV systems in 12V,or24V
- Three-stage charging optizes battery performance
- Maximum charging current up to 30A/40A
- Advanced MPPT technology,with efficient no less than 99%
- Maximum DC- DC conversion 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



1. LCD Display
2. Charging Indicator
3. Fault and waming indicator
4. Wiring fault indicator
5. Operation button
6. PV connectors
7. Battery connectors
8. Load connectors
9. Battery temperature sensor terminal
10. RS485 communication port

Solar system connection



MODEL			PC18-3015A	PC18-4015A
Nominal Battery System Voltage			12V / 24V (Auto detection)	
CONTROLLER INPUT				
Battery Voltage			12V/ 24V	
Open circuit voltage			145V	
PV Array MPPT Voltage Range			60-130VDC	
Maximum Input Power		12V	432W	576W
		24V	864W	1152W
BATTERY				
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
GENERAL SPECIFICATION				
Radiating Mode			Automatic cooling	
Protections			Solar high voltage disconnect/ Solar high voltage reconnect/ Battery high voltage disconnect Battery high voltage reconnect/ High temperature disconnect/ High temperature reconnect	
MECHANICAL SPECIFICATIONS				
Mounting			Wall mount	
Machine Dimension (W*H*D)(mm)			187*255*72mm	
Package Dimension (W*H*D)(mm)			/	
N.W(kg)			/	
G.W(kg)			/	
OTHER				
Environmental Rating			Indoor	
Enclosure			IP30	
Operating Temperature Range			-10~50°C	
Ambient Humidity			0~90% relative humidity (non-condensing)	
Altiude			≤3000m	
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)

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MUST Solar Power System

MPPT SOLAR CHARGE CONTROLLER

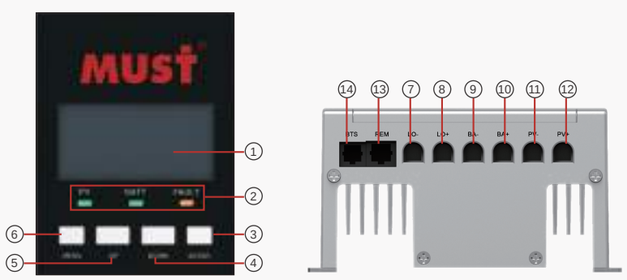
PC1600A Series

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.

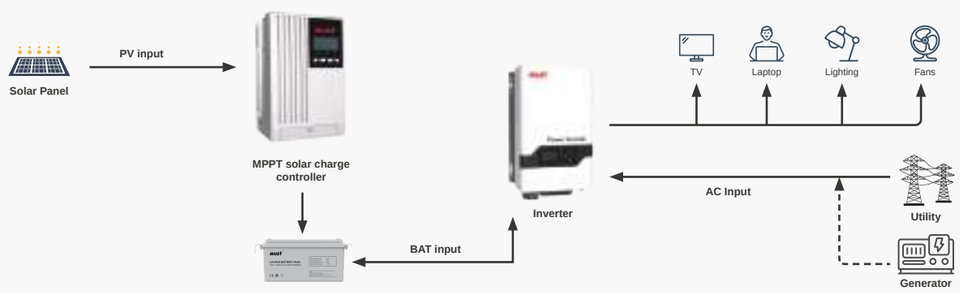
- LCD display , easy to operate on LCD screen
- Multi stage charging
  (3-stage charging , parallel charging and equalized charging function)
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV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

Solar system connection



MODEL		PC16-2015A	PC16-3015A	PC16-4015A
Nominal Battery System Voltage		12VDC / 24VDC (Auto Detection)		
CONTROLLER INPUT				
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
BATTERY				
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		
DC OUTPUT				
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		
DISPLAY & PROTECTION				
LED Indication		Systematic operation, LV indication, LV protection, Over charge protection 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 protrction		
		Output short circuit protection		
		Low voltage protection for storage battery		
MECHANICAL SPECIFICATIONS				
Mounting		Wall mount		
Machine Dimension (W*H*D)(mm)		154*236*88		
Package Dimension (W*H*D)(mm)		/	/	/
N.W(kg)		/		
G.W(kg)		/	/	/
OTHER				
Environmental Rating		Indoor		
Radiating Mode		Automatic cooling		
Operating Temperature Range		0°C~ 55°C		
Loading (20GP/40GP/40HQ)		2500pcs / 5000pcs / 5800pcs		
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)

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MUST Solar Power System

MPPT SOLAR CHARGE CONTROLLER

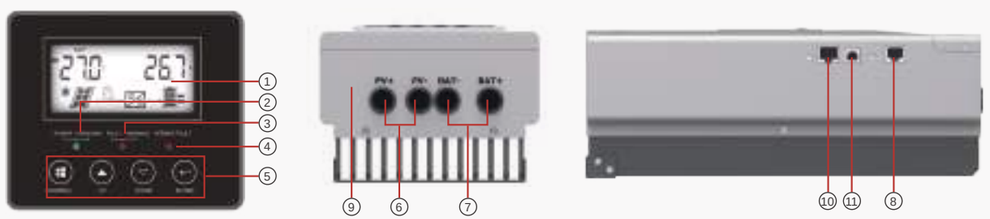
PC1800A Series

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.

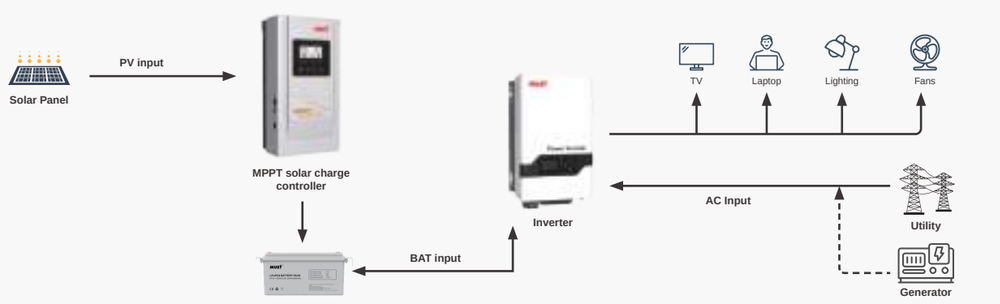
- LCD display , easy to operate on LCD screen
- Multi stage charging
  (3-stage charging , parallel charging and equalized charging function)
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV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

Back panel description



1. LCD display
2. Power ON/Charging indicator
3. Fault and warning indicator
4. Wiring fault indicator
5. Operation button
6. PV connextors
7. Battery connectors
8. Battery temperature sensor terminal
9. Wiring box cover
10. RS485 communication port
11. USB

Solar system connection



MODEL			PC18-6015A	PC18-8015A
Nominal Battery System Voltage			12V / 24V / 48VDC (Auto detection); 36V (Setting)	
ELECTRICAL SPECIFICATIONS				
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	
BATTERY CHARGING				
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	
MECHANICAL & ENVIRONMENT				
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)

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