



PRODUCT CATALOGUE

EP SERIES + PV SERIES + PHSERIES

High Frequency Power Inverter/Charger
EP1100 Pro Series (1200VA 2400VA)



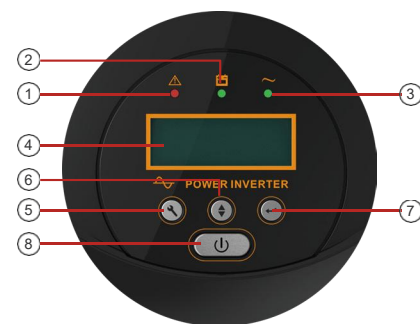
Features

- 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

Introduction

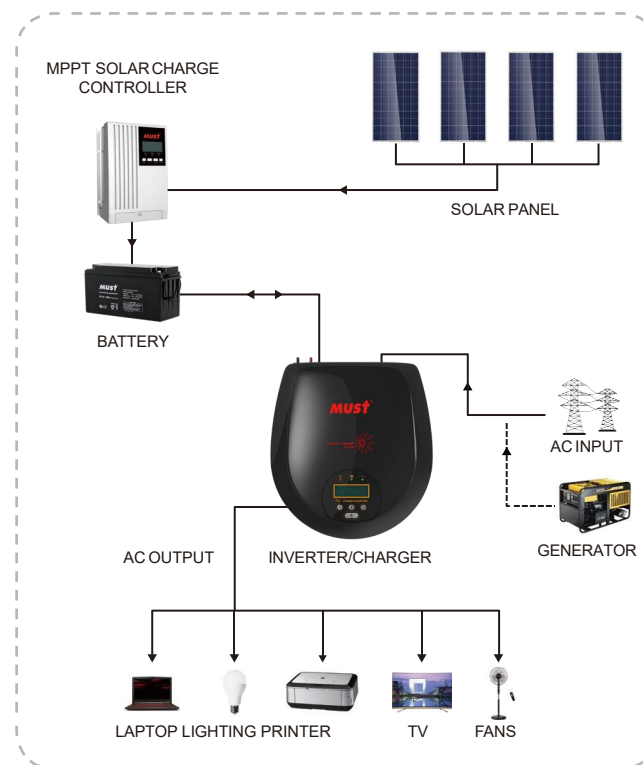
EP1100 Pro 1200VA/2400VA is a modified sine wave inverter applied to TV, stereos, laptops, and desktop computers and other home appliances. It will automatically switch to inverter and provide power when AC is interrupted unexpectedly. It's perfect for the user who need a simple and economical inverter,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

Back panel printing description



- | | | |
|----------------------|-------------|-------------------------------------------|
| 1. Fault LED | 5. SetKey | 9. AC Input |
| 2. Inverter Mode LED | 6. FlipKey | 10. Output Receptacle(s) |
| 3. Line Mode LED | 7. EnterKey | 11. Fan |
| 4. LCD Display | 8. ON / OFF | 12. DC Input Connector (Battery Terminal) |

Solar system connection



Specification

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	Dimensions (W*H*D) (mm)	246*253*87	
	Shipping Dimensions (W*H*D) (mm)	315*368*145	
	Shipping Weight (kg)	2.9	3.1
OTHER	Operation Temperature Range	0°C to 40°C	
	Audible Noise	60dB MAX	
	Display	LED+LCD	
	Standard Warranty	1 year	

High Frequency Power Inverter/Charger
EP1500 Pro Series (600VA 1000VA)



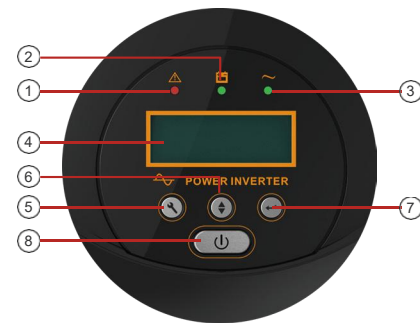
Features

- Rated power 600VA to 1000VA
- Pure sine wave inverter
- Double layers PCB board.
- Support two kinds of batteries include 4 series LiFePO4 Lithium Battery Pack and Lead-acid Battery.
- 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 switch over

Introduction

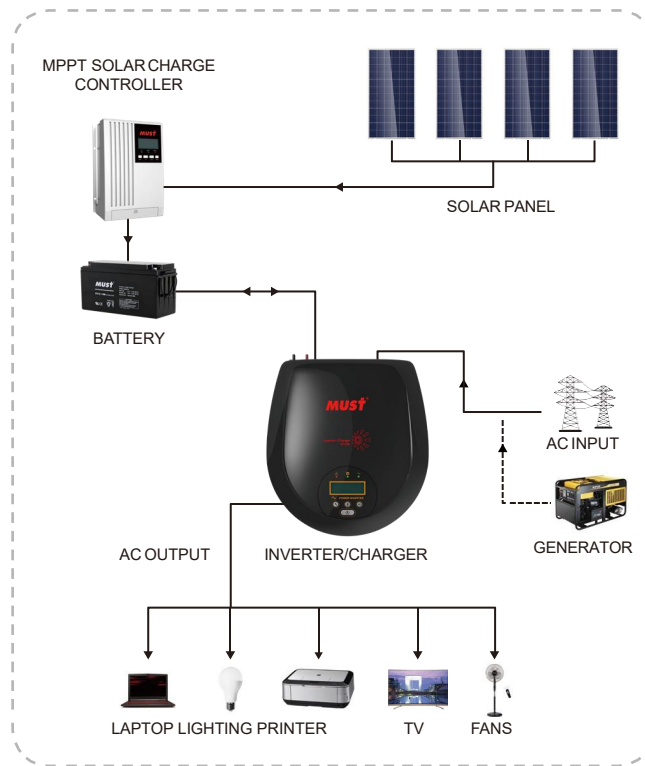
EP1500 series is a pure sine wave inverter applied to TV, stereos, laptops, and desktop computers and other home appliances. It will automatically switch to inverter and provide power when AC is interrupted unexpectedly. It's perfect for the user who need a simple and economical inverter, with user-friendly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

Back panel printing description



- | | | |
|----------------------|-------------|-------------------------------------------|
| 1. Fault LED | 5. SetKey | 9. AC Input |
| 2. Inverter Mode LED | 6. FlipKey | 10. Output Receptacle(s) |
| 3. Line Mode LED | 7. EnterKey | 11. Fan |
| 4. LCD Display | 8. ON / OFF | 12. DC Input Connector (Battery Terminal) |

Solar system connection



Specification

MODEL		EP15-0612		EP15-1024	
Nominal Battery System Voltage		12VDC		24VDC	
INVERTER OUTPUT	Rated Power	600VA / 600W		1000VA / 1000W	
	Waveform	Pure Sine Wave			
	Nominal Output Voltage RMS	230V			
	Output Voltage Regulation	+10/-18%			
	Output Frequency	50Hz / 60Hz±0.5Hz			
	Inverter Efficiency (Peak)	>85%			
	Line Mode Efficiency	>95%			
	Typical Transfer Time	<20ms			
	AC INPUT	Voltage	220 / 230 / 240VAC		
Voltage Range		170~280VAC			
Frequency Range		50Hz / 60Hz(Auto sensing)			
Note: Below Parameters (PB) Lead-acid Battery / (LI) 4 series LiFePO4 Lithium Battery Pack					
BATTERY	Nominal Input Voltage	12VDC		24VDC	
	Low Battery Cutoff	10.5VDC(PB)	11.6VDC(LI)	21.0VDC(PB)	23.2VDC(LI)
	Low Battery Alarm	11.5VDC(PB)	12.0VDC(LI)	23.0VDC(PB)	24.0VDC(LI)
	Low Battery Voltage Recover	12.5VDC(PB)	12.8VDC(LI)	25.0VDC(PB)	25.6VDC(LI)
	High Voltage Alarm	14.7VDC(PB)	14.5VDC(LI)	29.4VDC(PB)	29.0VDC(LI)
	High Battery Voltage Recover	15.0VDC(PB)	14.8VDC(LI)	30.0VDC(PB)	29.6VDC(LI)
	CHARGER	Boost Voltage (Vbat<12.5V)	14.3VDC(PB)	14.3VDC(LI)	28.6VDC(PB)
Float Voltage (Vbat>12.5V)		13.8VDC(PB)	14.3VDC(LI)	27.4VDC(PB)	28.6VDC(LI)
Charging Current 10A / 5A		10A±2A @ 12V		5A±2A @ 24V	
Charging Current 15A / 7A		15A±2A @ 12V		7A±2A @ 24V	
Overcharge Protection S.D.		15.5VDC		31VDC	
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	Dimensions (W*H*D) (mm)	246*253*87			
	Shipping Dimensions (W*H*D) (mm)	315*368*145			
	Shipping Weight (kg)	2.9		3.1	
OTHER	Operation Temperature Range	0°C to 40°C			
	Audible Noise	60dB MAX			
	Display	LED+LCD			
	Standard Warranty	1 year			

High Frequency Power Inverter/Charger

EP1800 Series (1KW-5KW)



Features

- 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

Introduction

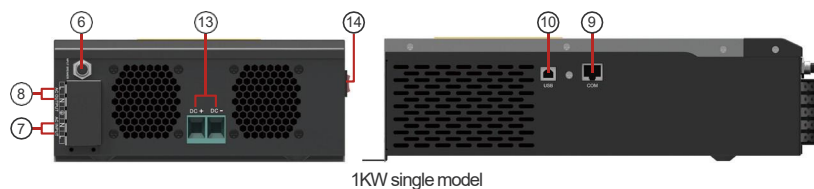
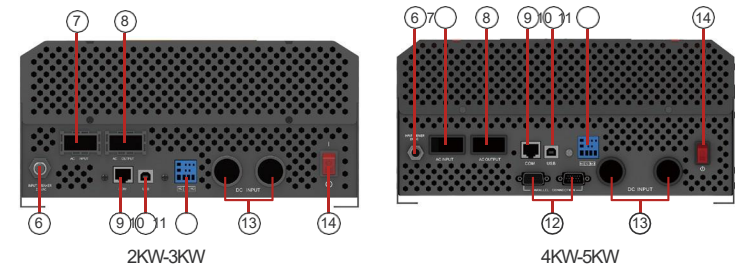
This is a multi-function inverter/charger, combining functions of inverter, solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar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

Back panel printing description



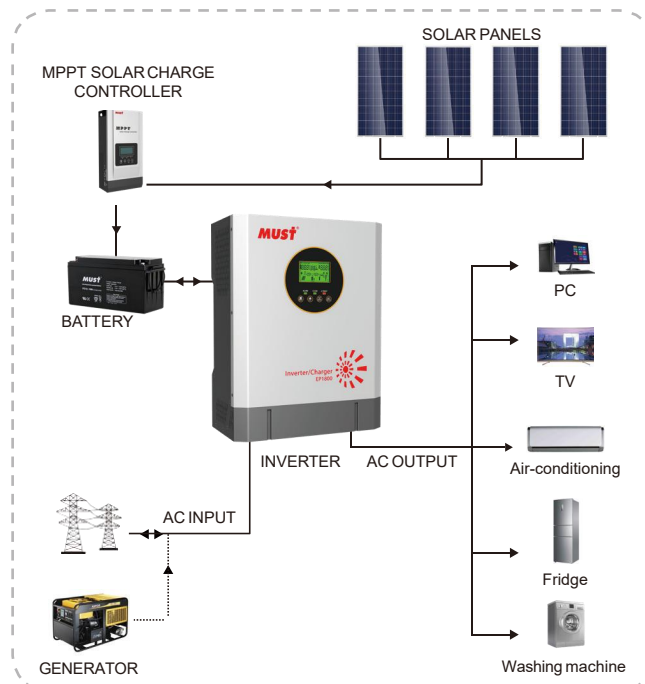
1. LCD display
2. Status indicator
3. Charging indicator
4. Fault indicator
5. Function button

6. Circuit breaker
7. AC input
8. AC output
9. RS485 communication port
10. USB
11. Dry contact
12. Parallel communication port (only for parallel model)
13. Battery input
14. Power on/off switch



1KW single model

Solar system connection



Specification

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	Dimensions (W*H*D) (mm)	240*316*95	272*355*100		297.5*468*125	
	Net Weight (kg)	5	6	6.8	11.5	12
	Shipping Dimensions (W*H*D) (mm)	410*300*178	356*272*135		488*295*141	
	Shipping Weight (kg)	6	7	8.0	10.0	10.5
OTHER	Operation Temperature Range	-10°C to 50°C				
	Storage temperature	-15°C~ 60°C				
	Audible Noise	60dB MAX				
	Display	LED+LCD				
	Standard Warranty	1 year				

Low Frequency Power Inverter/Charger
EP2000 Pro Series (300W-1000W)



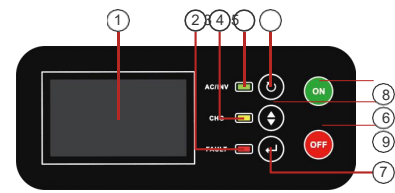
Features

- 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

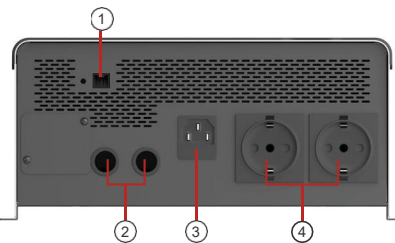
Introduction

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

Back panel printing description

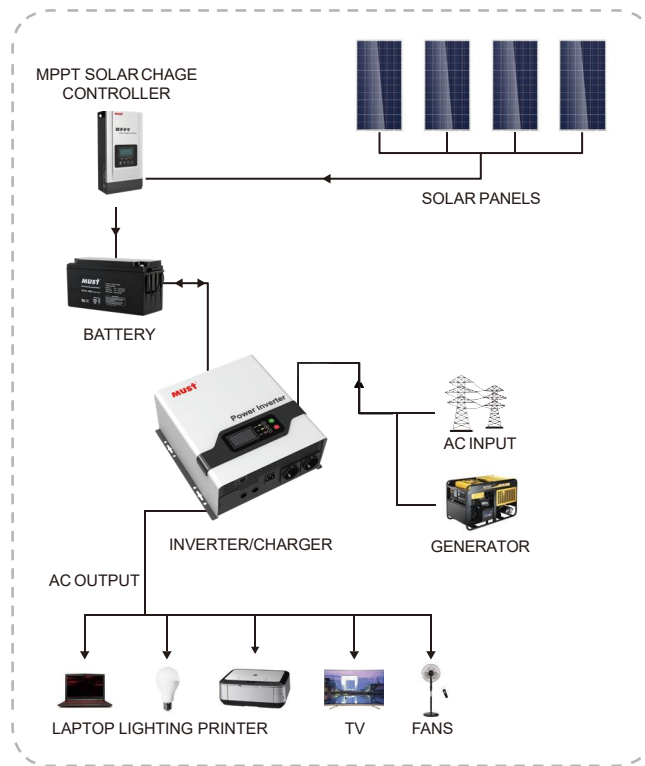


1. LCD display
2. Fault LED
3. Charge LED
4. AC/Inverter LED
5. ESC
6. SEL
7. Enter
8. Power on
9. Power off



1. USB
2. Battery input
3. AC input
4. AC output

Solar system connection



Specification

MODEL		EP20-0312 PRO	EP20-0412 PRO	EP20-0512 PRO	EP20-0612 PRO	EP20-0812 PRO	EP20-1012 PRO	EP20-0624 PRO	EP20-0824 PRO	EP20-1024 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								
	Invert Frequency (Peak)	>75%						>81%		
	Bypass Efficiency	>95%								
	Output Transfer Time	Typical:6ms 10ms(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 Frequency 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+0.5V	
	Low Battery Alarm	Low Battery Voltage Cutoff+0.5V						Low Battery Voltage Cutoff+1.0V		
	Min battery voltage for power on	Shutdown voltage +0.5V						Shutdown voltage +1V		
	Low Battery Cutoff	10-12.0VDC						20.0-24.0VDC		
	High Battery Alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC)								
AC CHARGE	Floating Voltage	13.5-14.5VDC						27-29VDC		
	Boost Voltage	13.8~14.5V								
	Maximum Charge Current	300W 10A	400W 10A	500W 15A	600W 20A	800W 25A	1000W 30A	600W 10A	800W 15A	1000W 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	Dimensions(W*H*D) (mm)	391*325*187								
	(N.W)kg	300W 6.0	400W 8.2	500W 9.5	600W 10.6	800W 12.6	1000W 13.2	600W 10.6	800W 12.6	1000W 13.2
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									

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Low Frequency Pure Sine Wave Inverter
EP3000 PRO Series (8KW/10KW/12KW)



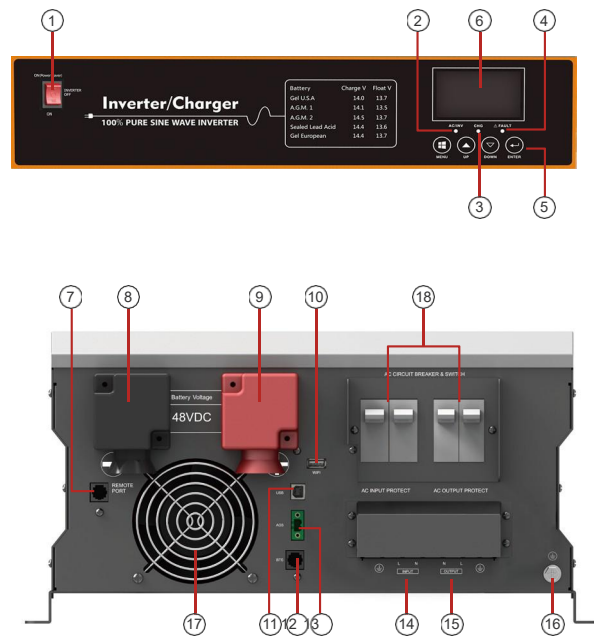
Features

- Rated power 8KW to 12KW
- Pure sine wave output
- Max 140A automatic 3-stage battery charger
- Charger current is Adjustable (0-100%)
- Automatically send signal to start generator
- Supporting USB communication and BTS & AGS port
- Battery/AC priority

Introduction

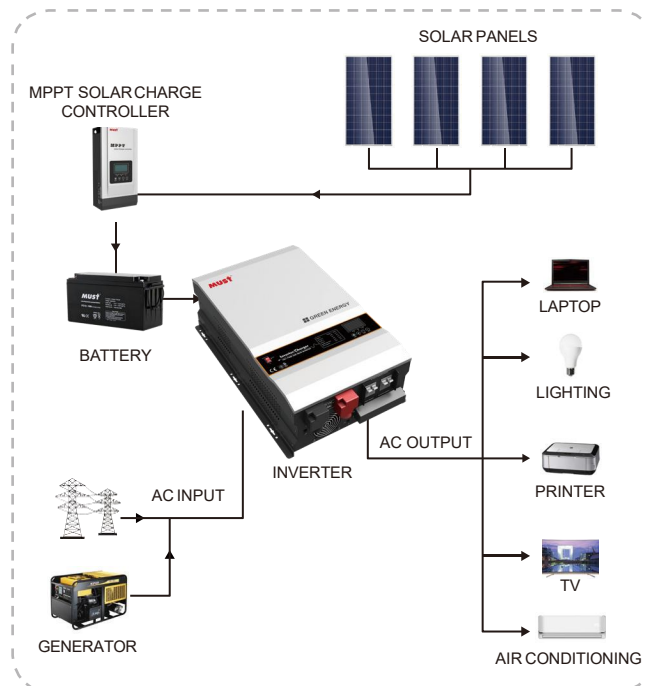
Low frequency pure sine wave combined inverter&A/C charger EP3000 PRO Series 8 -12kw; Quiet,high efficiency operation front panel LED+LCD indicators and adjustable switch selectors selectable settings for flooded lead acid,Gel,or absorbed glass mat(AGM) batteries. Mainly for home and office appliances such as TV, refrigerator, fans lights and computers etc.

Back panel printing description



- | | | |
|------------------------------|----------------------------|----------------------------|
| 1. Power saver on/off switch | 8. BAT- | 15.AC output |
| 2. Inverter indicator | 9. BAT+ | 16.Ground |
| 3. Grid indicator | 10.WIFI Communication port | 17.FAN |
| 4. Fault indicator | 11.USB Communication port | 18.AC input/output breaker |
| 5. Function | 12.BTS Communication port | |
| 6. LCD display | 13.AGS Communication port | |
| 7. Remote panel | 14.AC input | |

Solar system connection



Specification

MODEL		EP30-8KW PRO	EP30-10KW PRO	EP30-12KW PRO
Nominal Battery System Voltage		48VDC	48VDC	48VDC
INVERTER OUTPUT	Continuous output power	8.0KW	10.0KW	12.0KW
	Surge rating	24000VA	30000VA	36000VA
	Capable Of Starting Electric Motor	4HP	5HP	6HP
	Output waveform	Pure sine wave / same as input (bypass mode)		
	Inverter Efficiency(Peak)	>88%		
	Line mode efficiency	>95%		
	Power factor	1.0		
	Nominal output voltage RMS	220V / 230V / 240VAC ±10% (RMS)		
	Output frequency	50Hz		
	Short circuit protection	Yes (1sec after fault)		
	Typical transfer time	10ms(max)		
AC INPUT	Voltage	90-280VAC		
	Selectable Voltage Range	170-280VAC(For Personal Computers)		
	Frequency Range	50Hz / 60Hz		
BATTERY	Minimum start voltage	40.0V±0.6 / 42.0V±0.6		
	Low battery alarm	42-50VDC		
	Low battery Cutoff	40.0V±0.6 / 42.0V±0.6		
	High voltage alarm	60VDC		
	High battery voltage recover	57VDC		
	Idle consumption-search mode	<60W when power saver on		
CHARGER	Output voltage	Depends on battery type		
	Charger AC input breaker rating	80A		
	Max charge power rate	1/3 Rating power		
	Overcharge protection S.D.	62.8VDC		
Maximum Charge Current	100A	120A	140A	
BTS	Temperature rate @25°C	4mv charging voltage descent, per 1°C rise		
BYPASS & PROTECTION	Input voltage waveform	Sine wave (grid or generator)		
	Nominal voltage	220V / 230V / 240VAC		
	Max input AC voltage	300VAC for 230VAC HV mode		
	Nominal input frequency	50Hz or 60Hz		
	Overload protection (SMPS load)	Circuit breaker		
	Output short circuit protection	Circuit breaker		
	Bypass breaker rating	63A		
Max bypass current	63Amp			
MECHANICAL SPECIFICATIONS	Mounting	Wall mount		
	Inverter dimensions (W*H*D) (mm)	670*410*215		
	Inverter weight (solar chg) (kg)	67.5	74	74
	Shipping dimensions (W*H*D) (mm)	802*533*429.5		
	Shipping weight (solar chg) (kg)	87	93.5	93.5
OTHER	Operation Temperature Range	0°C to 40°C		
	Storage Temperature	-15°C to 60°C		
	Audible Noise	60dB MAX		
	Display	LED+LCD		
Loading(20GP/40GP/40HQ)	200pcs / 400pcs / 500pcs			

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

Low Frequency Power Inverter/Charger

EP3000 LV2 Series (1KW-6KW)



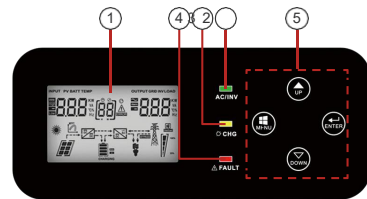
Features

- Pure sine wave output
- Friendly user interface
- 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 10/10.5/11V
- 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

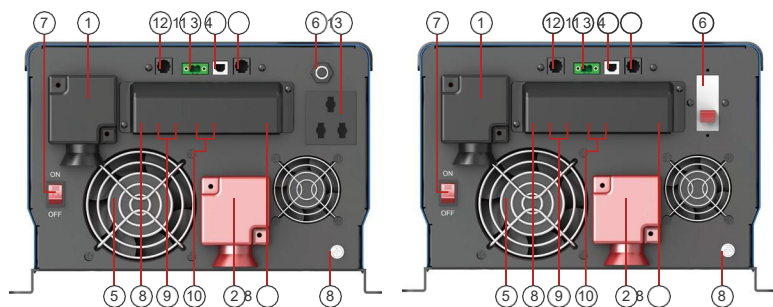
Introduction

EP3000 LV2 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.

Back panel printing description

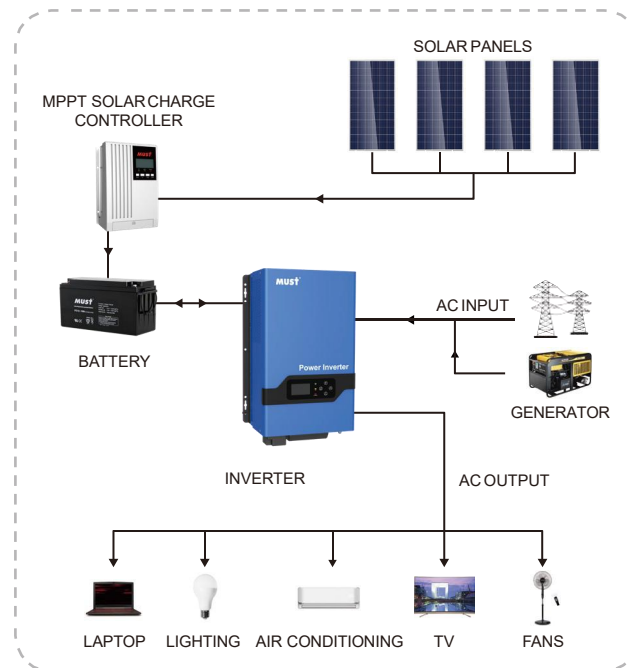


1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



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

Solar system connection



Specification

MODEL	EP30-1KW LV2	EP30-1.5KW LV2	EP30-2KW LV2	EP30-3KW LV2	EP30-4KW LV2	EP30-5KW LV2	EP30-6KW LV2		
Nominal Battery System Voltage	12VDC 24VDC	12VDC 24VDC	12VDC 24VDC	24VDC 48VDC	24VDC 48VDC	48VDC	48VDC		
INVERTER OUTPUT	Rated Power	1.0KW	1.5KW	2KW	3KW	4KW	6KW		
	Surge Rating	3000VA	4500VA	6000VA	9000VA	12000VA	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)							
AC INPUT	Voltage	120VAC							
	Selectable Voltage Range	80~135VAC(For Personal Computers)							
	Frequency Range	50Hz/60Hz (Auto sensing) 40~80Hz							
BATTERY	Minimum Start Voltage	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)							
	Low Battery Alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)							
	Low Battery Cut off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)							
	High Voltage Alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)							
	High Battery Voltage Recover	(13.8-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)							
	Idle Consumption-Search Mode	Load ≤50±20W(120V)							
CHARGER	Output Voltage	Depends on battery type							
	Charger AC Input Breaker Rating	1K/12A	1.5K/16A	2K/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	
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	10A	30A		40A				
	Max Bypass Current	30Amp			40Amp				
MECHANICAL SPECIFICATIONS	Mounting	Wall Mount							
	Dimensions (W*H*D) (mm)	423*247*197				597*247*197			
	Net Weight (Solar CHG) (kg)	16.5	17	21.1	20	24.5	24.8	45	
	Shipping Dimensions(W*H*D) (mm)	585*350*310				758*387*322			
	Shipping Weight (Solar CHG) (kg)	19.3	20	24.1	22.8	27.5	27.5	49.3	
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	1 year							

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

Low Frequency Power Inverter/Charger
EP3000 PLUS Series (1KW-6KW)



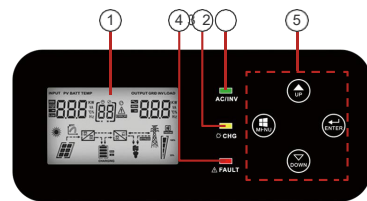
Features

- Pure sine wave output
- Friendly user interface
- 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 10/10.5/11V
- 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

Introduction

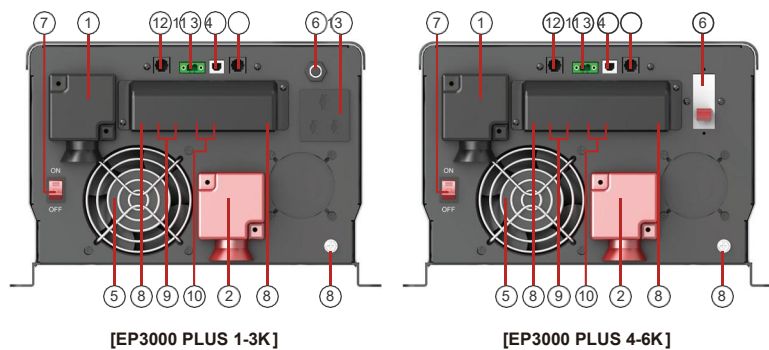
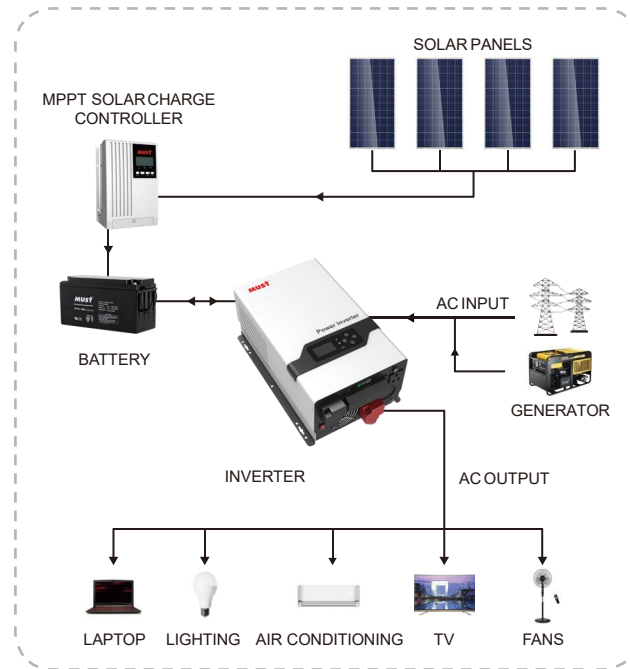
EP3000 PLUS series is a very economical pure sine wave inverter, with AC charger from 20A to 60A; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is too lower . With pure copper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

Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons

Solar system connection



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

Specification

MODEL		EP30-1KW PLUS		EP30-1.5KW PLUS		EP30-2KW PLUS		EP30-3KW PLUS		EP30-4KW PLUS		EP30-5KW PLUS		EP30-6KW 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		2HP		3HP		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)													
AC INPUT	Voltage	230VAC													
	Selectable Voltage Range	96~132VAC 155~280VAC(For personal computers)													
	Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz													
BATTERY	Minimum Start Voltage	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	Low Battery Alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	Low Battery Cut Off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	High Voltage Alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	High Battery Voltage Recover	(13.8-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	Idle Consumption-Search Mode	Load ≤100±20W(220V)													
CHARGER	Output Voltage	Depends on battery type													
	Charge AC Input Breaker Rating	230V	1-1.5K/10A				2-3K/30A				4-6K/40A				
	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	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													
	Bypass Breaker Rating	230V	1-3K/30A				4-6K/40A								
	Max Bypass Current	30A													
MECHANICAL SPECIFICATIONS	Mounting	Wall Mount													
	Dimensions (W*H*D) (mm)	423*247*197										597*247*197			
	Net Weight (Solar CHG)(kg)	16.5	17	21.1	20	24.5	24.8	38.2	35.8	45	45				
	Shipping Dimensions (W*H*D) (mm)	585*387*322										758*387*322			
	Shipping Weight (Solar CHG)(kg)	19.3	20	24.1	22.8	27.5	27.5	42.3	40	49.3	49.3				
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	1 year, 2 or 3 years optional (IP20)													

Low Frequency Pure Sine Wave Split Phase Inverter Charger

EP3300 TLV Series (1KW-6KW)



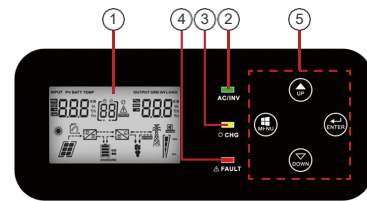
Features

- Pure sine wave output, split phase HOT1+ N + HOT2 available, 120VAC/220VAC
- MFD (multi-function display) & Friendly user interface
- 3 Steps optimizing charge for battery pack
- Overload and short-circuit protection
- Settable: charging/charging current, utility/Battery priority, utility input wide/narrow range
- Inverter voltage can be set to 100V/110V/120V
- Inverter frequency can be set to 50/60Hz

Introduction

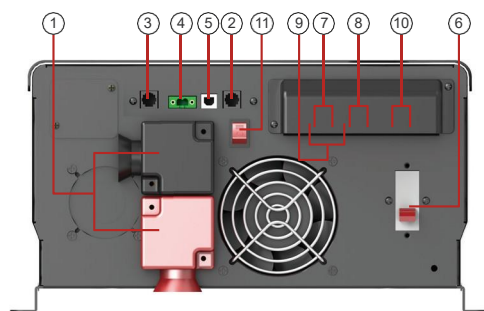
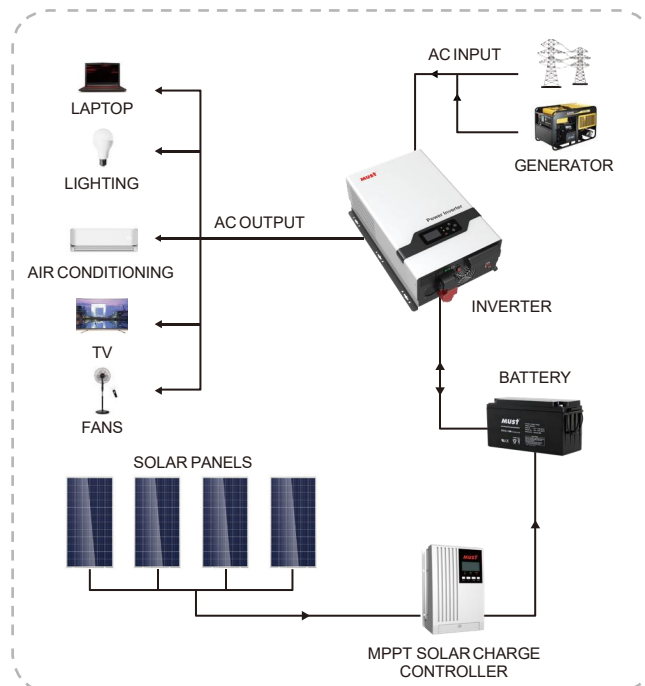
This split phase inverter EP3300 TLV series, capacity from 1KW-6KW, DC 12V/24V/48V, it's applicable to 110VAC/120VAC markets demands, which matches AC 110VAC/120V single phase, or two phase 220V/240V; In LCD display, you can set output voltage, frequency, charging voltage, charging current to design 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.

Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons

Solar system connection



[EP3300 TLV 4-6K]

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

Specification

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)	>80%											
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)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)											
	Low battery voltage cut off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)											
	Low battery voltage alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)											
	High battery voltage alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)											
	High Battery Voltage Recover	(13.8-14.5V)+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 13.8-14.5V / *2 for 24VDC / *4 for 48VDC (Regulation step 0.1V)											
	Float voltage	13.5V(Default) Range of adjustment 13.5-13.7V / *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													
Dimensions	Dimensions (W*H*D) (mm)	277*196*466mm						277*186*621mm					
	Ship Dimensions (W*H*D) (mm)	381*316*597mm						381*306*752mm					
	Warranty	One year (standard), 2 years optional (IP20)											

High Frequency Pure sine Wave Power inverter

EP5000 Series (3KW-5KW)



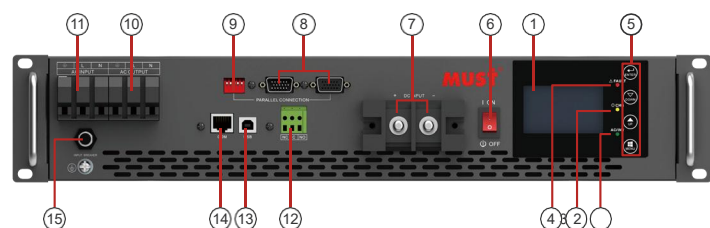
Features

- 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

Introduction

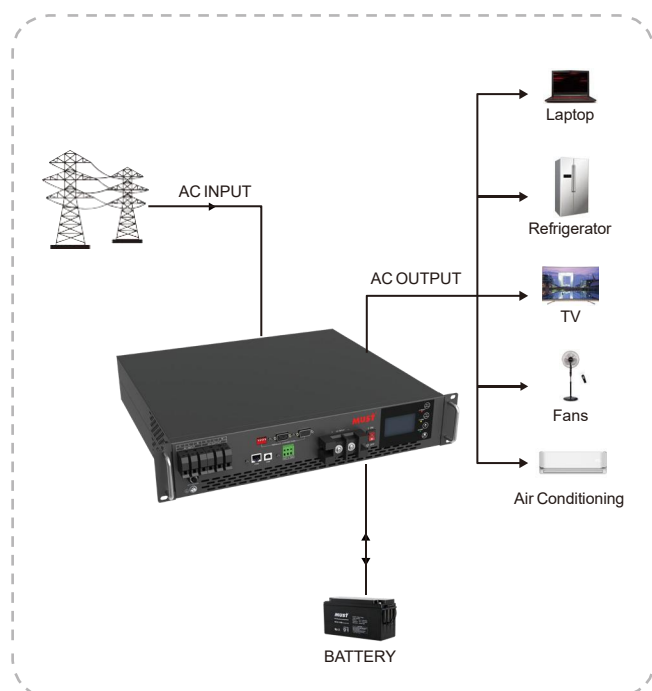
This is a multi-function inverter/charger, combining Functions of inverter, battery charger to offer uninterruptible power with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC charger, and acceptable input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

Back panel printing 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

Solar system connection



Specification

MODEL		EP50-3KW	EP50-4KW	EP50-5KW	
Rated output power		3000W	4000W	5000W	
AC INPUT	Nominal Input Voltage	220Vac			
	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			
	Safety Certification	CE			
	Operation Temperature Range	0°C to 40°C			
	Storage Temperature	-15°C to 60°C			
	Dimensions (W*H*D)(mm)	400×468×86.3			
	Net Weight (kg)	10.0			

High Frequency Off Grid Solar Inverter

PV1300 Series (1KVA-1.5KVA)



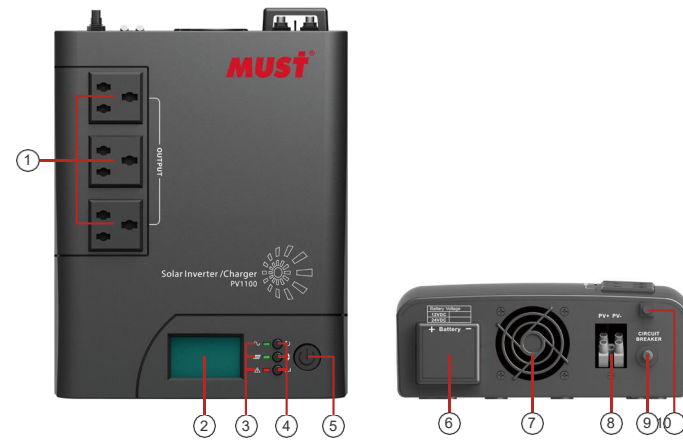
Features

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

Introduction

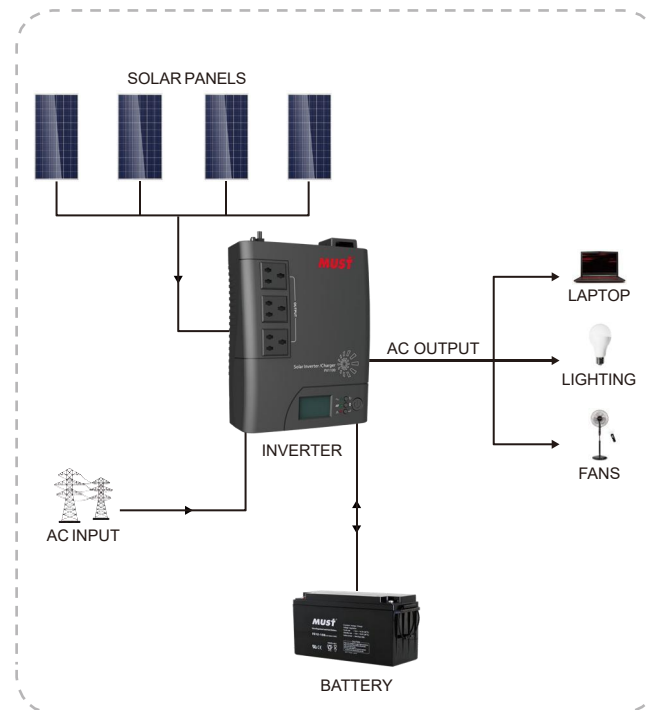
PV1300 is a cost effective , intelligent hybrid off grid solar inverter with power range 1000VA 1500VA. The LCD display offers friendly user-configurable button adjustment such as input voltage setting, AC/solar charger priority , mute setting. When battery voltage is low, it's will automatically switch to AC grid to supply continuous power to the loads. It suitable for personal home use.

Back panel printing 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



Specification

MODEL		PV13-1012	PV13-1512	PV13-1024	PV13-1524
Nominal Battery System Voltage		12VDC	12VDC	24VDC	24VDC
INVERTER OUTPUT	Rated Power	1000VA/600W	1500VA/1000W	1000VA/600W	1500VA/1000W
	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 6~8ms 10ms max			
	AC INPUT	Voltage	230VAC		
Selectable Voltage Range		Narrow	175~260VAC		
		Wide	140~270VAC		
Frequency Range	40Hz-70Hz (Auto sensing)				
BATTERY	Nominal Input Voltage	12VDC		24VDC	
	Minimum Start Voltage	10.5VDC		21.0VDC	
	Low Battery Alarm	10.5VDC		21VDC	
	Low Battery Cutoff	10.0VDC		20.0VDC	
	High Voltage Cutoff	15.5VDC (max)		31.0VDC (max)	
SOLAR CHARGER & AC CHARGER	Maximum PV Charge Current	50A (max)			
	Maximum PV Array Power	450W/750W		900W/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			
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 Dimensions (W*H*D)	231*290*92mm			
	Package Dimensions (W*H*D)	595*375*315mm			
	Net Weight (kg)	2.8		4	
	Gross Weight (kg)	3.5		4.7	
OTHER	Operation Temperature Range	0°C~50°C			
	Audible Noise	50dB MAX			
	Display	LED+LCD			
	Loading(20GP/40GP/40HQ)	1700pcs / 4100pcs			

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

Hybrid Solar Inverter
PV1800 Series (8KW-10KW)



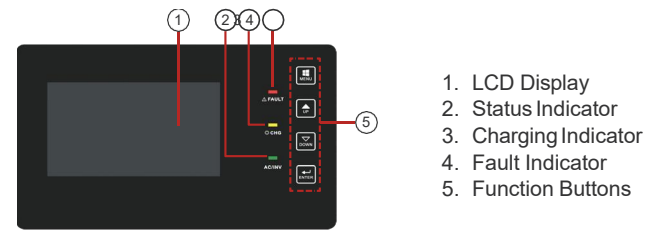
Features

- 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

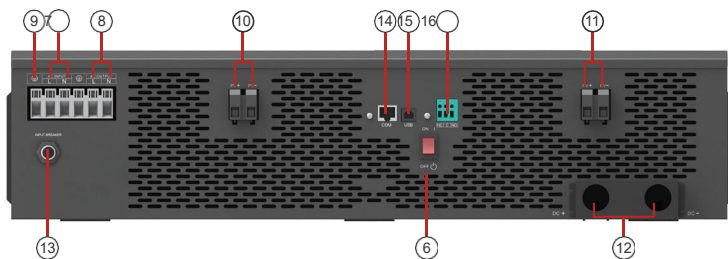
Introduction

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.

Back panel printing description

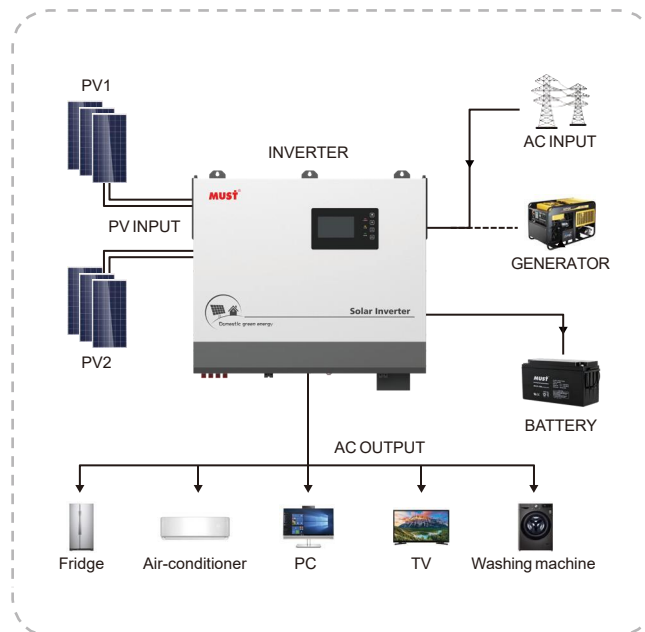


1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



6. Power On/Off Switch
7. AC Input
8. AC Output
9. Ground
10. PV1 Input
11. PV2 Input
12. Battery Input
13. Circuit breaker
14. RS-485 Communication port
15. USB
16. Dry Contact

Solar system connection



Specification

MODEL		PV18-8048	PV18-10048
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)	93%	
	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	Charging Current	2-120A	
	Maximum PV Array Open Circuit Voltage	145VDC	
	PV Array Open Circuit Voltage	60-130VDC	
	Cold Start Voltage	46.0VDC	
	Solar Charging Current	160A	
	Default Charging Current	160A	
	Maximum Charge Current	280A	
	Charging Algorithm	3-step (Flooded Battery / AGM / GEL/ LEAD Battery), 4-step(LI)	
MECHANICAL SPECIFICATIONS	Machine Dimensions(W*H*D)(mm)	503*600*141.2	
	Net Weight(kg)	21.0	
OTHER	Safety Certification	CE	
	Operating Temperature	0°C~50°C	
	Storage Temperature	-15°C ~60°C	

Pure Sine wave High Frequency solar Inverter(450V)

PV1800 PRO Series (3KW-5.2KW)



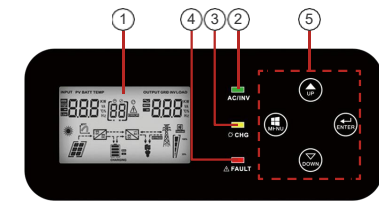
Features

- 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
- 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
- WIFI remote monitoring (optional)

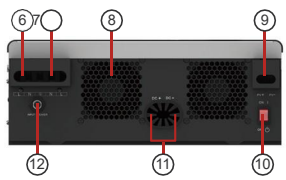
Introduction

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.

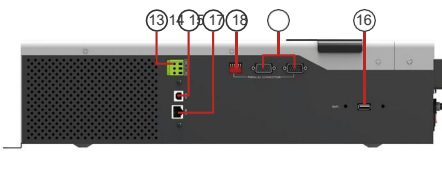
Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



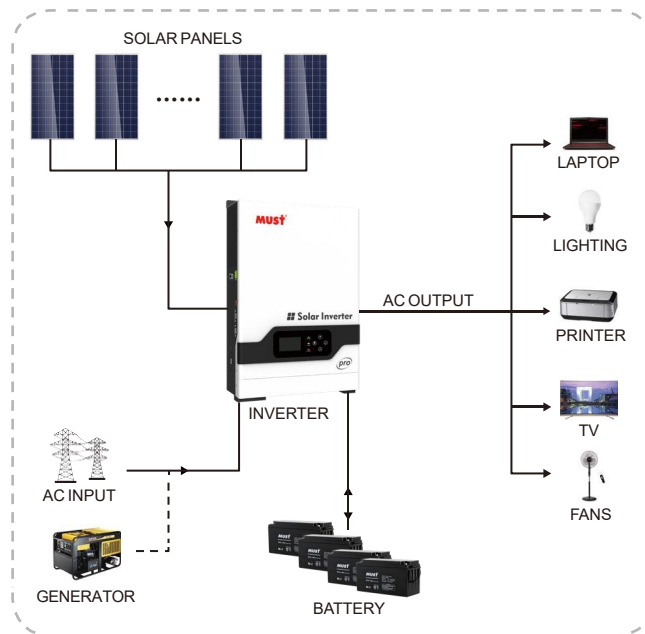
[PV1800 PRO 3K]



[PV1800 PRO 5K]

6. AC Input
7. AC Output
8. FAN
9. PV Input
10. Power On/Off Switch
11. Battery Input
12. Circuit breaker
13. Dry Contact
14. USB
15. RS-485 Communication port
16. USB WiFi
17. Parallel switch
18. Parallel communication port

Solar system connection



Specification

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)	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	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 current	18A	
	PV Array MPPT Voltage Range	150~430 VDC	
	Maximum Solar Charge Current	80Amp	
	Maximum AC Charge Current	60Amp	
	Maximum Charge Current	80Amp	
MECHANICAL SPECIFICATIONS	Machine Dimensions (W*H*D)(mm)	272*355*100	295*528*121
	Package Dimensions (W*H*D)(mm)	540*395*241	628*425*251
	Net Weight(kg)	11	14
	Gross Weight(kg)	12	15
OTHER	Humidity	5% to 95% Relative humidity (Non-condensing)	
	Operating Temperature	0°C~50°C	
	Storage Temperature	-15°C ~60°C	

High Frequency Solar Inverter

PV1800 VPK Series (1KW-5KW)



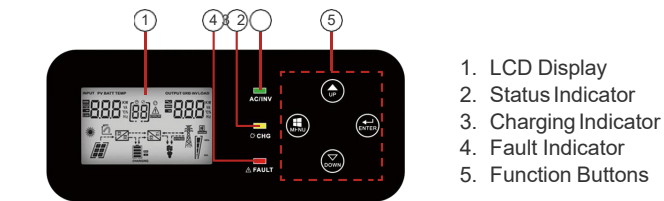
Features

- Pure sine wave output
- 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

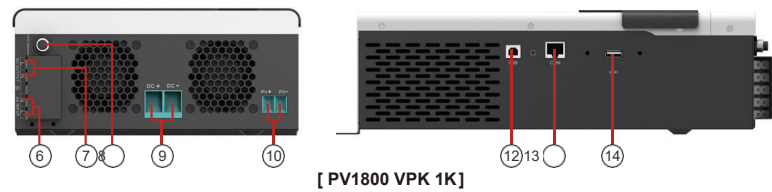
Introduction

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.

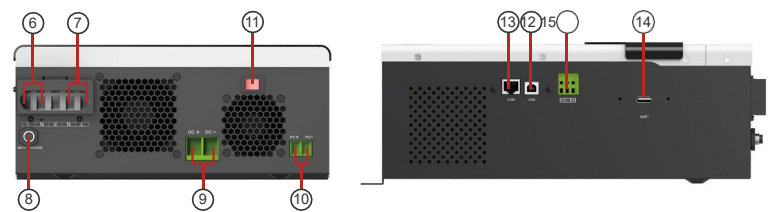
Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



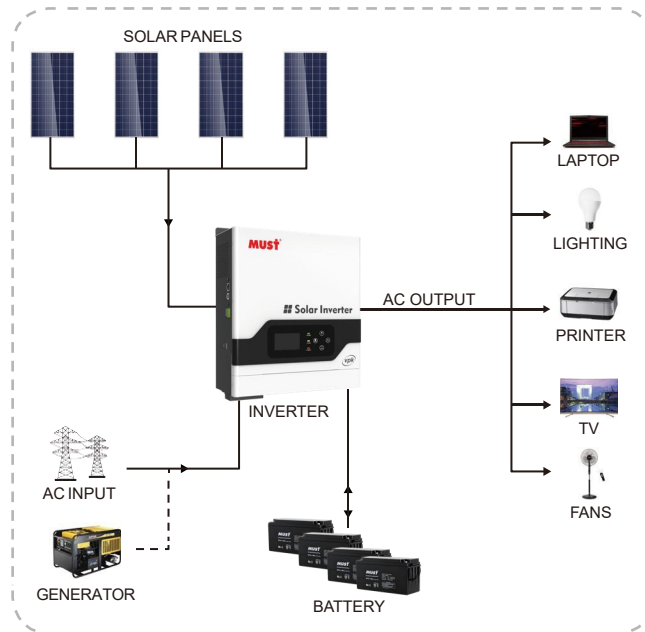
[PV1800 VPK 1K]



[PV1800 VPK 2-3K]

6. AC Input
7. AC Output
8. Circuit breaker
9. Battery Input
10. PV Input
11. Power On/Off Switch
12. USB
13. RS-485 Communication port
14. USB WiFi
15. Dry Contact

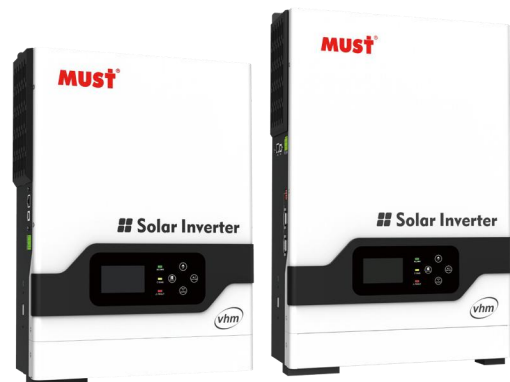
Solar system connection



Specification

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 Dimensions (W*H*D)(mm)	225*355*92	225*355*92	272*355*100	297.5*468*125	
	Package Dimensions (W*H*D)(mm)	405*373*205	405*373*205	465*373*231	618*415*261	
	Net Weight(kg)	5.0	5.5	7.8	12	
	Gross Weight(kg)	6.0	6.5	10.3	13.5	
OTHER	Humidity	5% to 95% Relative humidity (Non-condensing)				
	Operating Temperature	0°C~50°C				
	Storage Temperature	-15°C ~60°C				

High Frequency Off Grid Solar Inverter PV1800 VHM Series (2KW-5.5KW)



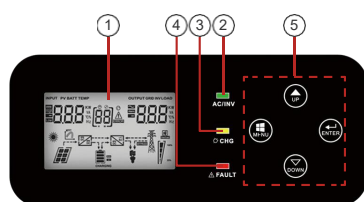
Features

- Rated power : 2KW -5.5KW
- Pure sine wave solar inverter
- Output power factor 1
- Built-in 80A MPPT solar charger
- Built-in anti-dust kit for harsh environment
- Support parallel operation up to 3 units (available for 3KW-5.5KW 48V)
- WIFI remote monitoring (optional)
- Compatible to generator

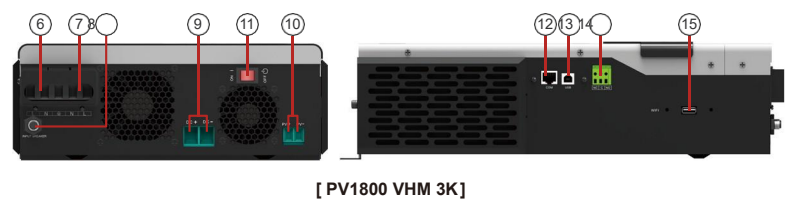
Introduction

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.

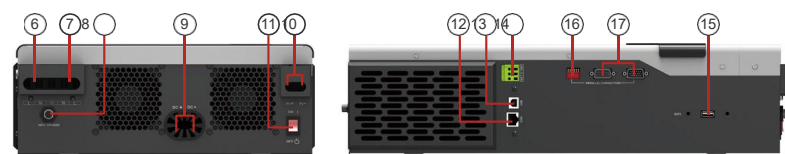
Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons

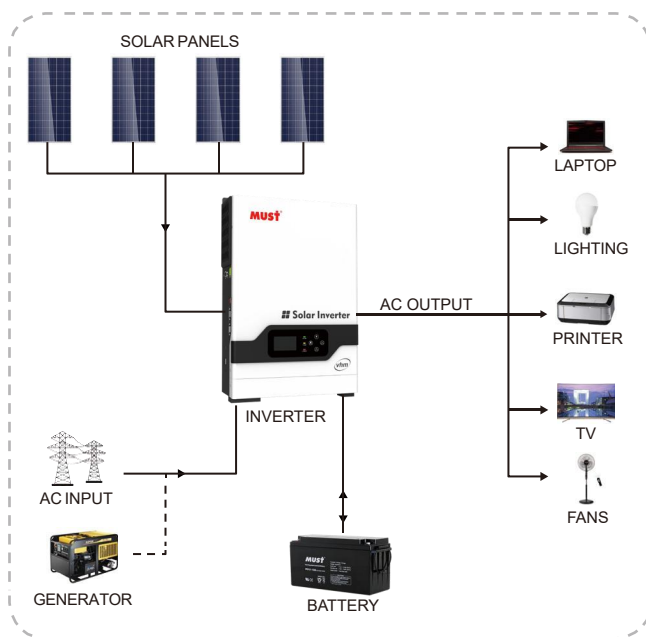


[PV1800 VHM 3K]



[PV1800 VHM 5K]

Solar system connection



6. AC input
7. AC output
8. Circuit breaker
9. Battery input
10. PV input
11. Power on/off switch
12. RS-485 Communication port
13. USB
14. Dry contact
15. USB wifi
16. Parallel switch
17. Parallel communication port (only for parallel model)

Specification

MODEL		PV18-2024 VHM	PV18-3024 VHM	PV18-3048 VHM	PV18-4048 VHM	PV18-5048 VHM	PV18-5548 VHM
Nominal Battery System Voltage		24VDC		48VDC			
INVERTER OUTPUT	Rated Power	2000W	3000W	3000W	4000W	5000W	5500W
	Surge Power	4000W	6000W	6000W	8000W	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	24VDC		48VDC			
	Floating Charge Voltage	27.4VDC		54.8VDC			
	Overcharge Protection	30VDC		60VDC			
SOLAR CHARGER & AC CHARGER	Maximum PV Array Open Circuit Voltage	145VDC					
	PV Array MPPT Voltage Range	30~130VDC		60~130VDC			
	Standby Power Consumption	2W					
	PV Input Power	2000W		4000W			
	Maximum Solar Charge Current	80A					
	Maximum Efficiency	98%					
	Maximum AC Charge Current	20A/30A		60A			
	Maximum Charge Current	80A		140A			
MECHANICAL SPECIFICATIONS	Machine Dimensions(W*H*D)(mm)	272*355*100		297.5*468*125			
	Package Dimensions(W*H*D)(mm)	540*395*241		638*395*241			
	Net Weight(kg)	10	11	13.3			
	Gross Weight(kg)	11.7	12	16.4			
OTHER	Humidity	5% to 95% Relativ Humidity (Non-condensing)					
	Operating Temperature	0°C~50°C					
	Storage Temperature	-15°C ~60°C					

High frequency solar inverter
PV1800 VPM Series (1KW-5KW)



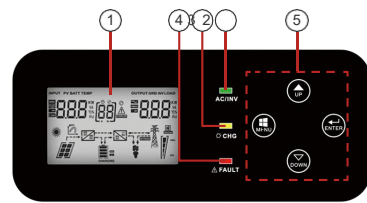
Features

- Rated power: 1-5KW
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built in MPPT 60A/80A 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 monitoring function
- WIFI remote monitoring (optional)
- Compatible to generator
- Support parallel operation up to 3 units (available for 3KW-5KW 48V)

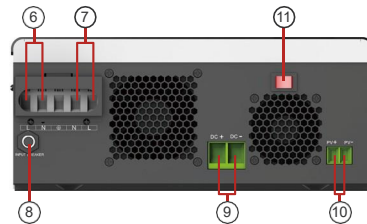
Introduction

This is a multi-function inverter/charger, combining functions of inverter, MPPT 60A/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.

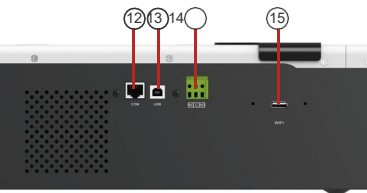
Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



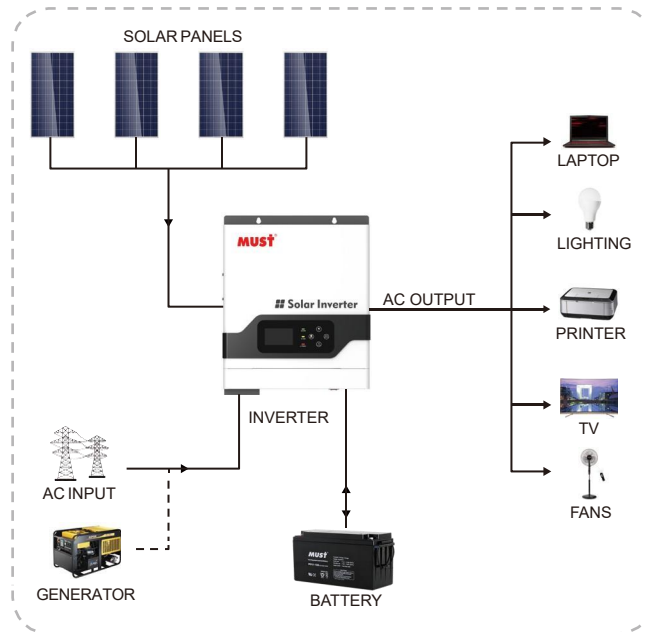
6. AC input
7. AC output
8. Circuit breaker
9. Battery input
10. PV input
11. Power on/off switch



12. RS-485 Communication port
13. USB
14. Dry contact
15. USB wifi

[PV1800 VPM 2-3K]

Solar system connection



Specification

MODEL	PV18-1012 VPM	PV18-2024 VPM	PV18-3024 VPM	PV18-3048 VPM	PV18-4048 VPM	PV18-5048 VPM	
Default Battery System Voltage	12VDC	24VDC		48VDC			
INVERTER OUTPUT	Rated Power	1000VA / 1000W	2000VA / 2000W	3000VA / 3000W	3000VA / 3000W	5000VA / 5000W	
	Surge Power	2000VA	4000VA	6000VA	6000VA	10000VA	
	Waveform	Pure sine wave					
	AC Voltage Regulation (Batt.Mode)	220VAC~240VAC(Setting)					
	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	13.7VDC	27.4VDC	54.8VDC			
	Overcharge Protection	15VDC	30VDC	60VDC			
SOLAR CHARGER & AC CHARGER"	Maximum PV Array Open Circuit Voltage	75VDC	145VDC	145VDC			
	PV Array MPPT Voltage Range	15~75VDC	30~120VDC	60~130VDC			
	Standby Power Consumption	2W					
	Maximum PV Array Power	625W	1500W	4000W			
	Maximum Solar Charge Current	60A			80A		
	Maximum Efficiency	98%					
	Maximum AC Charge Current	10A or 20A	20A or 30A	60A			
Maximum Charge Current	70A	80A	140A				
MECHANICAL SPECIFICATIONS	Machine Dimensions (W*H*D)(mm)	225*355*92	272*355*100	297.5*468*125			
	Package Dimensions (W*H*D)(mm)	410*300*178	425*390*215	638*395*241			
	Net Weight(kg)	5	7.4	14			
	Gross Weight(kg)	5.5	9.5	16.4			
OTHER	Humidity	5% to 95% Relativ Humidity (Non-condensing)					
	Operating Temperature	0°C~50°C					
	Storage Temperature	-15°C -60°C					

High Frequency Off Grid Solar Inverter

PV1800 LHM Series (AC120V: 1KW-3KW)

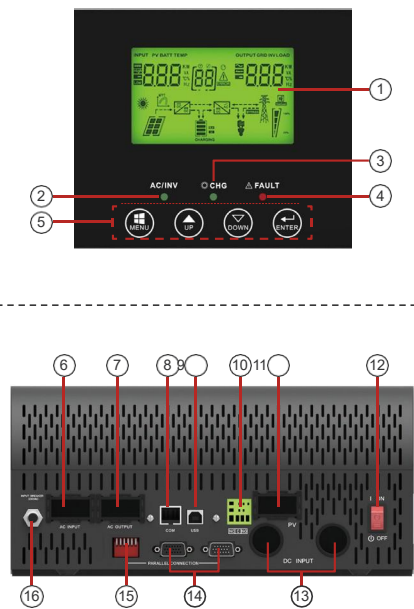


- ### Features
- Rated power : 1KW -3KW
 - Pure sine wave solar inverter
 - Output power factor 1
 - Built-in 80A MPPT solar charger
 - Built-in anti-dusk kit for harsh environment
 - Support parallel operation up to 3 units (available for 3KW 48V)
 - WIFI remote monitoring (optional)
 - Compatible to generator

Introduction

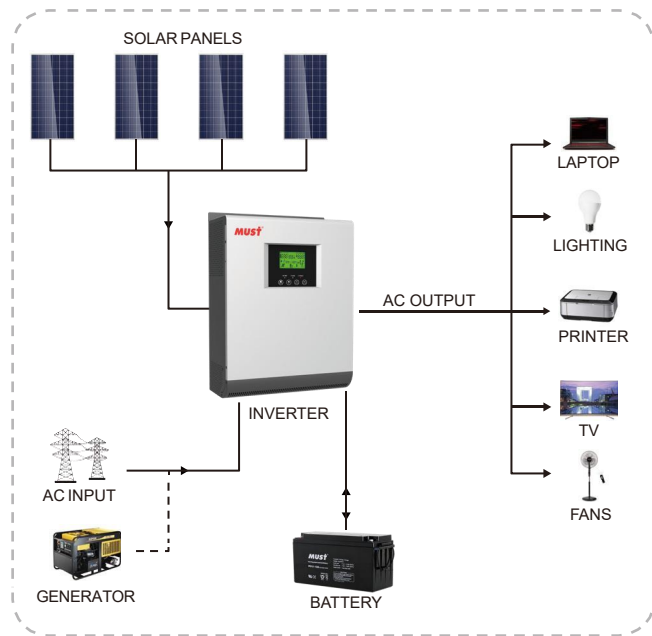
PV1800 LHM Series is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging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

Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons
6. AC Input
7. AC Output
8. RS-485 Communication port
9. USB
10. Dry Contact
11. PV Input
12. Power On/Off Switch
13. Battery Input
14. Parallel communication port
15. Parallel switch
16. Circuit breaker

Solar system connection



Specification

MODEL	PV18-1024 LHM	PV18-1524 LHM	PV18-2024 LHM	PV18-2524 LHM	PV18-3024 LHM	PV18-3048 LHM
Nominal Battery System Voltage	24VDC					48VDC
INVERTER OUTPUT	Rated Power	1000W	1500W	2000W	2500W	3000W
	Surge Power	2000W	3000W	4000W	5000W	6000W
	Waveform	Pure sine wave				
	AC Voltage Regulation (Batt.Mode)	(100VAC ~ 120VAC)±5%				
	Inverter Efficiency(Peak)	93%				
	Transfer Time	10ms (UPS / UL) 20ms (APL)				
AC INPUT	Voltage	120VAC				
	Selectable Voltage Range	90~145VAC(UPS), 60~145VAC(APL), 107~132VAC(VDE4105)				
	Frequency Range	50Hz / 60Hz(Auto sensing)				
BATTERY	Normal voltage	24VDC				48VDC
	Floating Charge Voltage	27VDC				54VDC
	Overcharge Protection	30VDC				60VDC
SOLAR CHARGER & AC CHARGER	Maximum PV Array Open Circuit Voltage	145VDC				
	PV Array MPPT Voltage Range	30-130VDC				60-130VDC
	Standby Power Consumption	2W				
	PV Input Power	1440W/1920W				2880W/3840W
	Maximum Solar Charge Current	80A				
	Maximum Efficiency	98%				
	Maximum AC Charge Current	60A				
Maximum Charge Current	140A					
MECHANICAL SPECIFICATIONS	Machine Dimensions (W*H*D)(mm)	272*355*100				297.5*468*125
	Package Dimensions (W*H*D)(mm)	465*373*231				618*415*261
	Net Weight(kg)	13.3				
	Gross Weight(kg)	16.4				
OTHER	Humidity	5% to 95% Relative humidity (Non-condensing)				
	Operating Temperature	0°C~50°C				
	Storage Temperature	-15°C ~60°C				

Low Frequency Off Grid Solar Inverter
PV2000 PK Series (1KVA-2KVA)



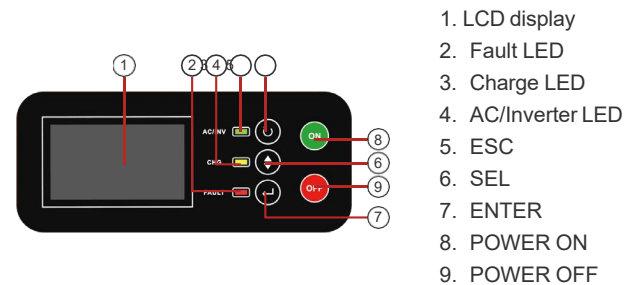
Features

- 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

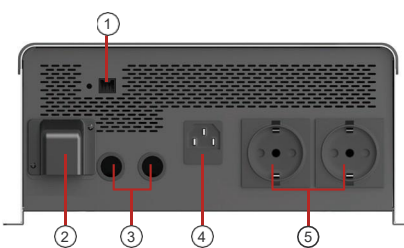
Introduction

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.

Back panel printing description

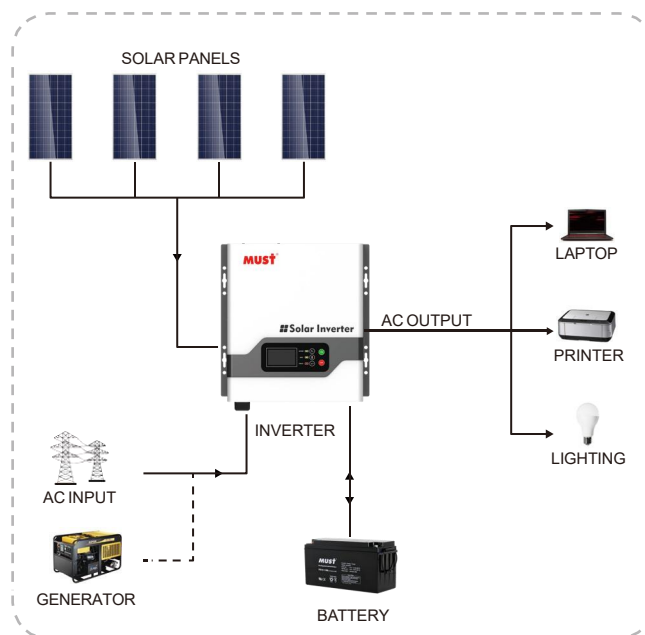


1. LCD display
2. Fault LED
3. Charge LED
4. AC/Inverter LED
5. ESC
6. SEL
7. ENTER
8. POWER ON
9. POWER OFF



1. USB
2. PV Input
3. Battery Input
4. AC Input
5. AC Output

Solar system connection



Specification

MODEL		PV20-1012 PK	PV20-1512 PK	PV20-2024 PK
Battery Input Voltage Rating		12VDC		24VDC
INVERTER OUTPUT	Rated Power	1000VA	1500VA	2000VA
	Instantaneous Power Drawn	700W	900W	1200W
	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		55±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 / 13.6 / 13.7VDC to set		27.0 27.2 27.4VDC 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	7A	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		70Vdc
	Maximum Efficiency	> 95%		
	Standby Consumption	<2W		
MECHANICAL SPECIFICATIONS	Assembly	Wall mount		
	Dimension (W*H*D) (mm)	320*300*135		
	Net Weight KG	9.0	10.0	10.5
	Shipping Dimensions (mm)	400*335*195		
	Transport Weight KG	10.0	11.0	11.5
OTHER	Working Environment	0°C~40°C 0~90% Relative humidity (non-condensing)		
	Noise	Less than 60db		
	Display	LED + LCD		

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

Low Frequency Solar Inverter/Charger
PV3000 VHM Series (1KW-6KW)



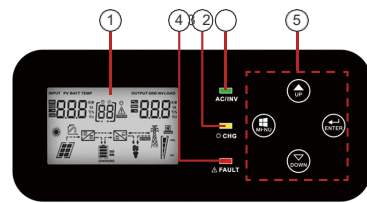
Features

- Pure sine wave output
- Friendly user interface
- 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 10/10.5/11V
- 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

Introduction

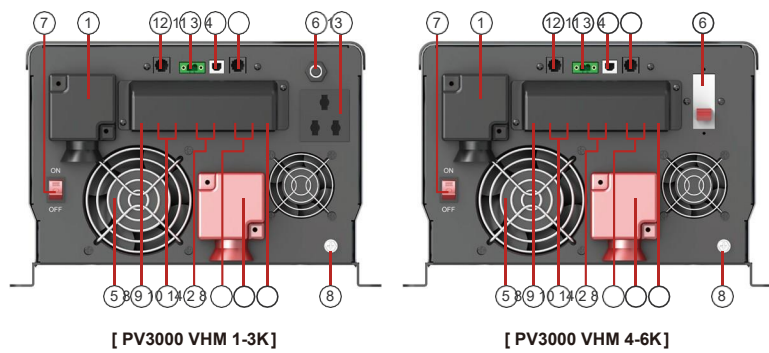
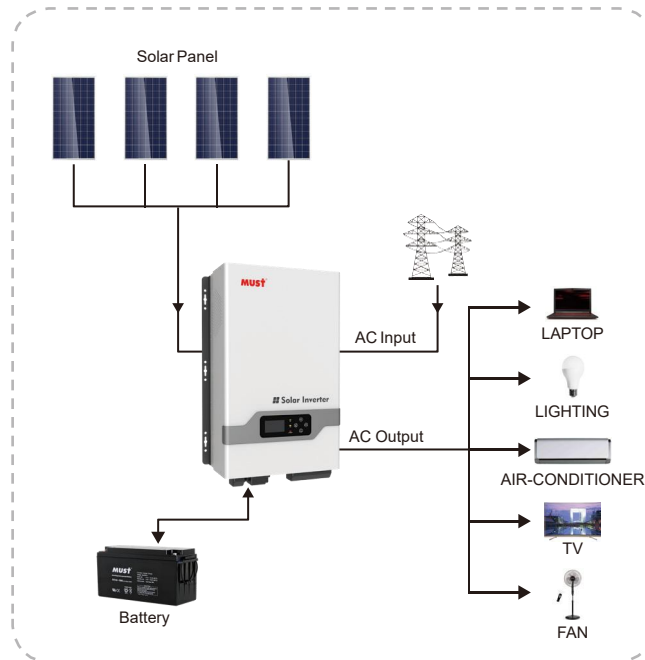
PV3000 VHM series is very economical pure sine wave solar inverter, Inbuilt with 80A MPPT charger; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current is too lower, in this way system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

Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons

Solar system connection



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

Specification

MODEL		PV30-1KW VHM		PV30-1.5KW VHM		PV30-2KW VHM		PV30-3KW VHM		PV30-4KW VHM		PV30-5KW VHM		PV30-6KW VHM	
Nominal Battery System Voltage		12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	24VDC	48VDC	24VDC	48VDC	48VDC	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		2HP		3HP		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)													
AC INPUT	Voltage	230VAC													
	Selectable Voltage Range	96~132VAC 155~280VAC(For personal computers)													
	Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz													
BATTERY	Minimum Start Voltage	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	Low Battery Alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	Low Battery Cut Off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	High Voltage Alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	High Battery Voltage Recover	(13.8-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)													
	Idle Consumption-Search Mode	Load ≤50±20W(120V)/100±20W(220V)													
CHARGER	Output Voltage	Depends on battery type													
	Charge AC Input Breaker Rating	230V	1-1.5K/10A				2-3K/30A				4-6K/40A				
	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	40A	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													
	Bypass Breaker Rating	230V	1-3K/30A				4-6K/40A								
	Max Bypass Current	30Amp													
SOLAR CHARGER	Maximum PV Array Power	1250W	2500W	1250W	2500W	1250W	2500W	2500W	5000W	2500W	5000W	5000W	5000W	5000W	5000W
	Maximum PV Charge Current	80A±4A													
	DC Voltage	12V / 24V auto work						24V / 48V auto work							
	MPPT Range @ Operating Voltage	16~100VDC @ 12V/32~145VDC @ 24V													
	Maximum PV Array OpenCircuit Voltage	145VDC													
	Standby Power Consumption	<2W													
MECHANICAL SPECIFICATIONS	Mounting	Wall Mount													
	Dimensions (W*H*D)	423*247*197mm						597*247*197mm							
	Net Weight (Solar CHG)(kg)	17.2	17.7	21.8	20.7	25.2	25.5	38.9	36.5	45.7	45.7	45.7	45.7	45.7	45.7
	Shipping Dimensions (W*H*D)	585*387*322mm						758*387*322mm							
	Shipping Weight (Solar CHG)(kg)	20	20.7	24.8	23.5	28.2	28.2	43	40.7	50	50	50	50	50	50
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	1 year													

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Low Frequency Solar Inverter/Charger
PV3000 VPM Series (1000VA-3000VA)



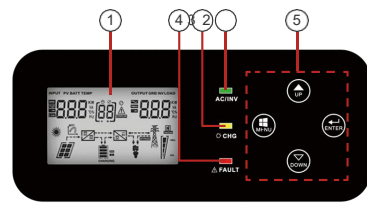
Features

- Pure sine wave output
- Friendly user interface
- 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 10/10.5/11V
- 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

Introduction

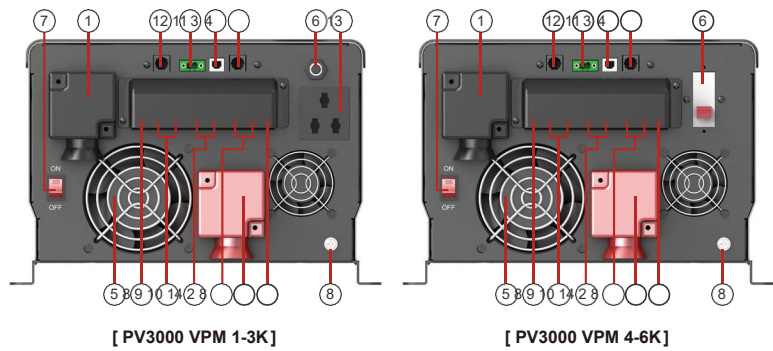
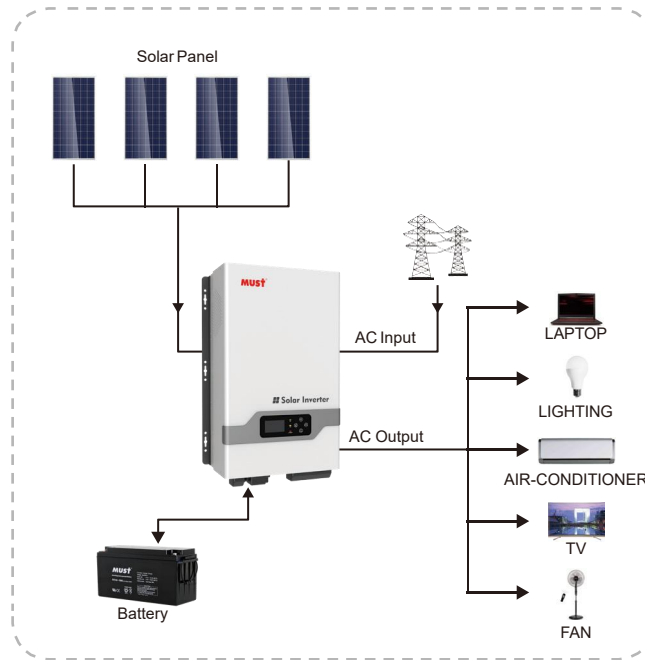
PV3000 VPM series is very economical pure sine wave solar inverter, inbuilt with 60A MPPT Charger and AC Charger from 20A to 60A; Solar/AC priority is configurable, when setting solar priority, solar will charge batteries as first priority, and AC can also charge batteries when solar charger current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

Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons

Solar system connection



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

Specification

MODEL		PV30-1K VPM		PV30-1.5K VPM		PV30-2K VPM		PV30-3K 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)								
	Voltage	230VAC								
AC INPUT	Selectable Voltage Range	96~132VAC 155~280VAC(For personal computers)								
	Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz								
	Minimum Start Voltage	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)								
BATTERY	Low Battery Alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)								
	Low Battery Cut Off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)								
	High Voltage Alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)								
	High Battery Voltage Recover	(13.8-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)								
	Idle Consumption-Search Mode	Load ≤50±20W(120V)/100±20W(220V)								
CHARGER	Output Voltage	Depends on battery type								
	Charge AC Input Breaker Rating	120V	1K/12A	1.5K/16A	2K/30A	3K/40A				
		230V	1-1.5K/10A			2-3K/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								
	Bypass Breaker Rating	230V	1-3K/30A							
		120V	1K/16A	1.5K/20A	2K/30A	3K/40A				
Max Bypass Current	30Amp									
SOLAR CHARGER	Maximum PV Array Power	1000W	2000W	1000W	2000W	1000W	2000W	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)	423*247*197mm								
	Net Weight (Solar CHG)(kg)	16.5	17	21.1	20	24.5				
	Shipping Dimensions (W*H*D)	585*387*322mm								
	Shipping Weight (Solar CHG)(kg)	19.3	20	24.1	22.8	29.1				
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	1 year								

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Low Frequency Solar Inverter

PV3000 LVHM Series (AC120V: 1KW-6KW)



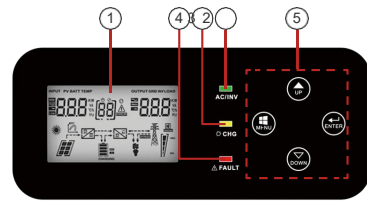
Features

- Pure sine wave output
- Friendly user interface
- 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 10/10.5/11V
- 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

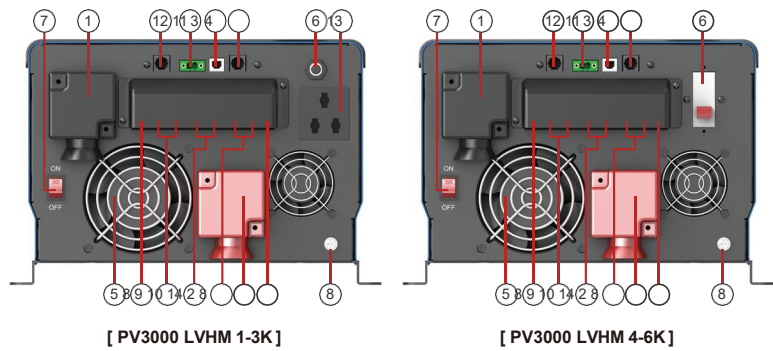
Introduction

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.

Back panel printing description

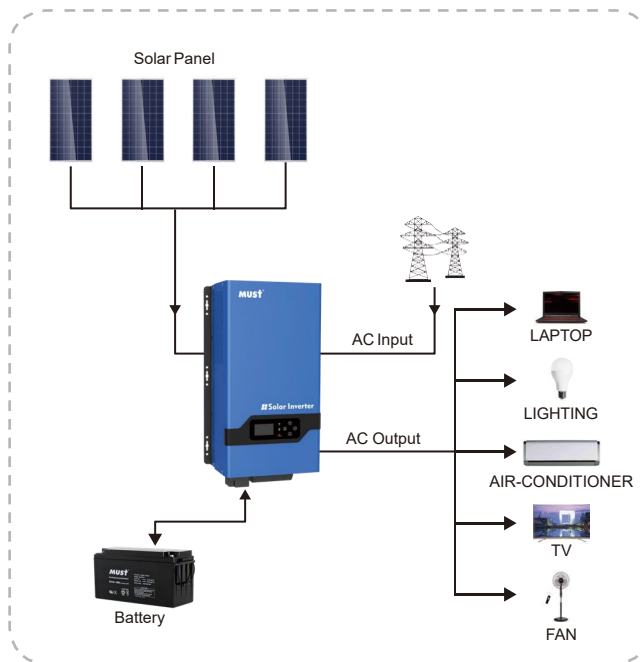


1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



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

Solar system connection



Specification

MODEL		PV30-1KW LVHM		PV30-1.5KW LVHM		PV30-2KW LVHM		PV30-3KW LVHM		PV30-4KW LVHM		PV30-5KW LVHM		PV30-6KW LVHM		
Nominal Battery System Voltage		12VDC	24VDC	12VDC	24VDC	12VDC	24VDC	24VDC	48VDC	24VDC	48VDC	48VDC	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		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)														
AC INPUT	Voltage	110/120VAC														
	Selectable Voltage Range	95~135VAC (For personal computers)														
	Frequency Range	50Hz / 60Hz(Auto sensing) 40~80Hz														
BATTERY	Minimum Start Voltage	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)														
	Low Battery Alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)														
	Low Battery Cut Off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)														
	High Voltage Alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)														
	High Battery Voltage Recover	(13.8-14.5V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)														
	Idle Consumption-Search Mode	Load ≤50±20W(120V)														
CHARGER	Output Voltage	Depends on battery type														
	Charge AC Input BreakerRating	120V	1K/12A	1.5K/16A	2K/30A	3K/40A	4-6K/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														
	Bypass Breaker Rating	120V	1K/16A	1.5K/20A	2K/30A	3K/40A	4-6K/63A									
	Max Bypass Current	30Amp														
SOLAR CHARGER	Maximum PV Array Power	1250W	2500W	1250W	2500W	1250W	2500W	2500W	5000W	2500W	5000W	5000W	5000W	5000W	5000W	
	Maximum PV Charge Current	80A±4A														
	DC Voltage	12V / 24V auto work										24V / 48V auto work				
	MPPT Range @ Operating Voltage	16~95VDC @ 12V / 30~130VDC @ 24V					30~130VDC @ 24V / 60~130VDC @48V					60~130VDC @48V				
	Maximum PV Array OpenCircuit Voltage	145VDC														
	Standby Power Consumption	<2W														
MECHANICAL SPECIFICATIONS	Mounting	Wall Mount														
	Dimensions (W*H*D)	423*247*197mm										597*247*197mm				
	Net Weight (Solar CHG)(kg)	17.2	17.7	21.8	20.7	25.2	25.5	38.9	36.5	42.5						
	Shipping Dimensions (W*H*D)	585*387*322mm										758*387*322mm				
	Shipping Weight (Solar CHG)(kg)	20	20.7	24.8	23.5	28.2	28.2	43	40.7	45						
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	1 year														

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Low Frequency Split Phase Solar Inverter PV3300 TLV Series (AC220/240V: 1KW-6KW)

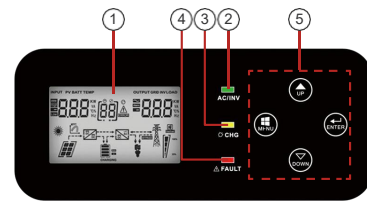


- ### Features
- Pure sine wave output
 - Friendly user interface;MFD (multi-function display)
 - 3 Steps charging
 - Overload and short-circuit protection
 - Set charging voltage/charging current.
 - Battery low voltage shutdown point can be set to 10/10.5/11V
 - Set utility priority/ Battery priority
 - 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

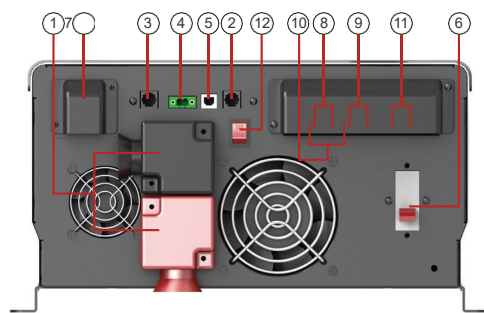
Introduction

This split phase solar inverter PV3300 TLV series, capacity range from 1KW-6KW, DC 12V/24V/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.

Back panel printing description



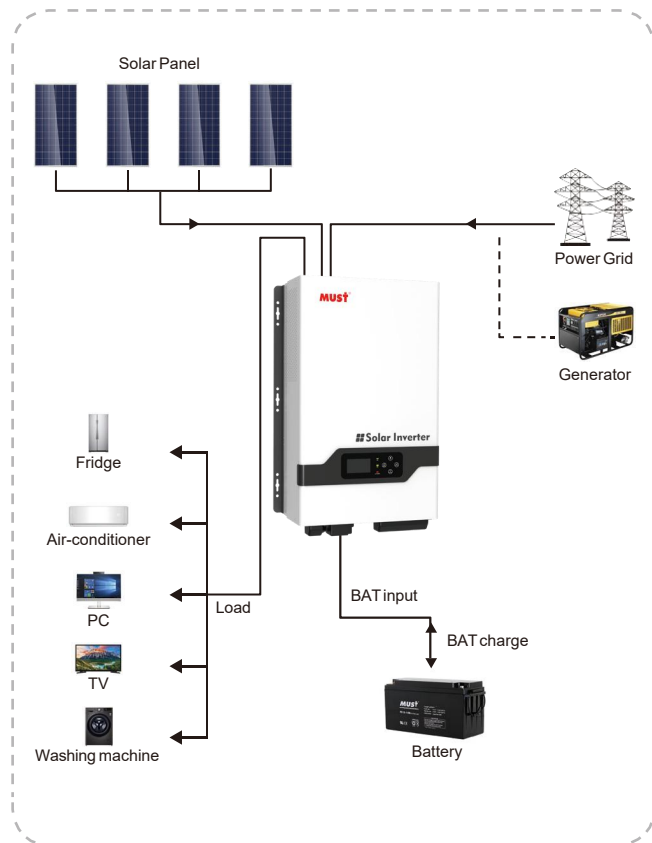
1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons



[PV3300 TLV 4-6K]

1. Battery +/-
2. Remote port
3. BTS
4. AGS
5. USB
- 6.AC input protect: Input protect breaker
7. PV +/-
8. AC output: HOT1 - N 100VAC/110VAC/120VAC
- 9.AC output: HOT2 - N 100VAC/110VAC/120VAC
- 10.AC output: HOT1 - HOT2 200VAC/220VAC/240VAC
- 11.AC input: HOT1 - HOT2 200VAC/220VAC/240VAC
- 12.Switch on/off

Solar system connection



Specification

MODEL		PV33-1012 TLV	PV33-1512 TLV	PV33-1524 TLV	PV33-2012 TLV	PV33-2024 TLV	PV33-3024 TLV	PV33-3048 TLV	PV33-4024 TLV	PV33-4048 TLV	PV33-5048 TLV	PV33-6048 TLV
Inverter Output	Rated power	1KW	1.5KW	2KW	3KW	4KW	5KW	6KW				
	Power factor	1										
	Wave form	Pure sine wave										
	Output voltage RMS	100V / 110V / 120VAC (200V / 220V / 240VAC, L+L) ±10%										
	Output frequency	50Hz or 60Hz (±0.3Hz)										
	Inverter efficiency (peak)	>85%										
	Line mode efficiency	>95%										
	Overload	100%<Load<110% (alarm 5min then stop output) / 110%<Load<125% (alarm 60s then stop output) / Load > 125% (alarm 10s then stop output)										
	Surge rating	3000VA	4500VA	6000VA	9000VA	12000VA	15000VA	18000VA				
	Capable of starting electric motor	1HP	1HP	1.5HP	1.5HP	2HP	3HP					
Battery	Battery voltage	12VDC/24VDC			24VDC/48VDC			48VDC				
	Minimum start voltage	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)										
	Low battery voltage cut off	10V / 10.5V / 11V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)										
	Low battery voltage alarm	(10V / 10.5V / 11V)+0.5V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)										
	High battery voltage alarm	(13.8-14.5V)+1V for 12VDC mode (*2 for 24VDC, *4 for 48VDC)										
	High Battery Voltage Recover	(13.8-14.5V)+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(typical)										
Solar Charger	Maximum PV Array Power	1250W	1250W	2500W	1250W	2500W	2500W	5000W	2500W	5000W	5000W	5000W
	Maximum PV Charge Current	80A										
	DC Voltage	12V / 24V			24V / 48V			24V / 48V				
	MPPT Range @ Operating Voltage	16~95VDC @ 12V / 30~130VDC @ 24V			30~130VDC @ 24V / 60~130VDC @48V			60~130VDC @48V				
	Maximum PV Array Open Circuit Voltage	100±2Vdc / 145±2Vdc			145±2Vdc			145±2Vdc				
	Maximum Efficiency	>98%										
	Standby Power Consumption	<2W										
Charge Mode	12V	30A	45A	60A	/	/	/	/				
	24V	20A	25A	30A	40A	60A	/	/				
	48V	/	/	/	20A	30A	35A	40A				
	Min charge current 10A. Change by every 5A											
Dimensions	Dimensions (W*H*D)	277*196*466mm						277*186*621mm				
	Ship Dimensions (W*H*D)	376*306*592mm						376*296*747mm				
	Net Weight (Solar CHG)(kg)	17.2	17.7	21.8	20.7	25.2	25.5	38.9	36.5	38	39	
	Shipping Weight (Solar CHG)(kg)	20	20.7	24.8	23.5	28.2	28.2	43	40.7	39.2	40.2	
	Warranty	1year										

Low Frequency Solar Inverter

PV3500 PRO Series (4KW-12KW)



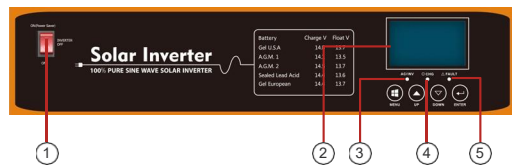
Features

- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 80A/100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 140Amp
- DC start &Automatic Self-Diagnostic Function
- WIFI / USB monitoring function (wi-fi optional)
- Supporting AGS, BTS port
- Compatible to generator

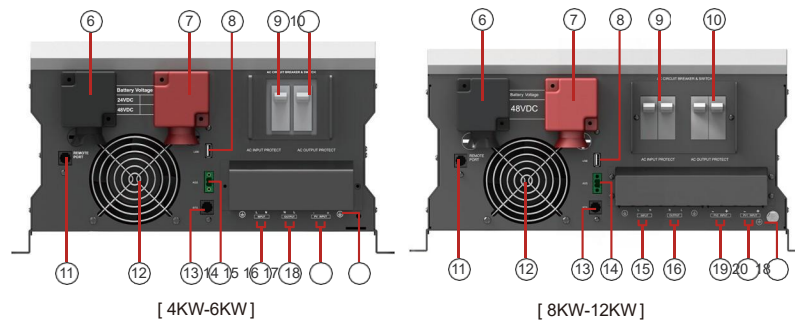
Introduction

PV3500 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.

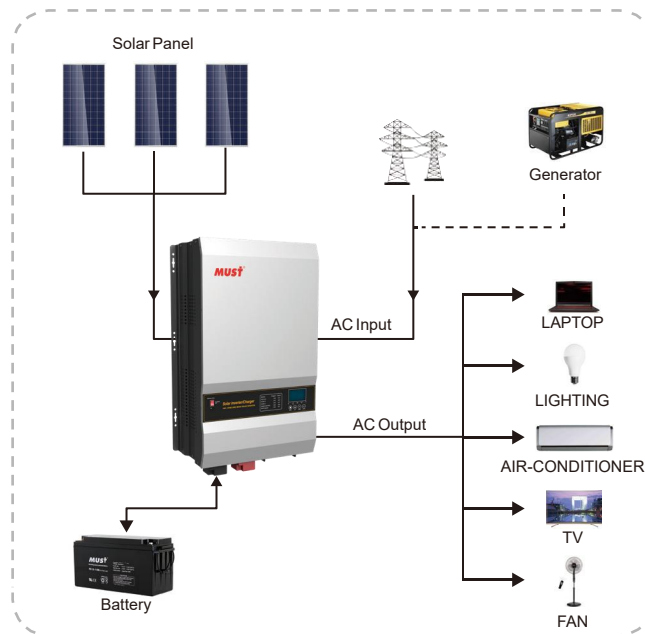
Back panel printing description



1. Switch ON/OFF
2. LCD display
3. AC/Inverter indicator
4. Charging indicator
5. Fault indicator
6. BAT-
7. BAT+
8. WIFI/USB communication port
- 9.AC input/Bypass breaker
- 10.AC output breaker
- 11.Remote control port
- 12.Fan
13. BTS
14. AGS
- 15.AC input
- 16.AC output
- 17.PV input
- 18.Ground
- 19.PV2 input (optional)
- 20.PV1 input



Solar system connection



Specification

MODEL	PV35 PRO-4K		PV35 PRO-5K		PV35 PRO-6K	PV35 PRO-8K	PV35 PRO-10K	PV35 PRO-12K			
	24V	48V	24V	48V	48V	48VDC	48VDC	48VDC			
Nominal Battery System Voltage		24V	48V	24V	48V	48V	48VDC	48VDC	48VDC		
INVERTER OUTPUT	Rated power	4KW		5KW		6KW	8.0KW	10.0KW	12.0KW		
	Surge rating	12000VA		15000VA		18000VA	24000VA	30000VA	36000VA		
	Capable of starting electric motor	2HP		2HP		3HP	4HP	5HP	6HP		
	Waveform	Pure sine wave / same as input (bypass mode)									
	Nominal output voltage RMS	220V / 230V / 240VAC (±10%RMS)									
	Output frequency	50Hz / 60Hz ± 0.3Hz									
	Inverter efficiency(peak)	>85%				>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 cutoff	20-24VDC for 24VDC mode (40-48VDC for 48VDC mode)									
	Low battery voltage recover	21-25VDC for 24VDC mode (42-50VDC for 48VDC mode)									
	High battery voltage cutoff	30VDC for 24VDC mode (60VDC for 48VDC mode)									
	High battery voltage recover	28.5VDC for 24VDC mode (57VDC for 48VDC mode)									
	Idle consumption-search mode	<30W when power saver on				<80W when power saver on					
AC CHARGER	Output voltage	Depends on battery type									
	Charger AC input breaker rating	40A	40A	50A	80A	80A	80A	80A	80A		
	Overcharge protection S.D.	31.4VDC for 24VDC mode (62.8VDC for 48VDC mode)									
	Maximum charge current	80A	60A	100A	70A	80A	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									
SOLAR CHARGER	Bypass breaker rating	40A				63A				63A	63A
	Max bypass current	40Amp				80Amp					
	Maximum PV charge current	80A				100A(200A optional)					
	DC voltage	24V / 48V Auto work				48V					
	Maximim PV array power	2000W	4000W	2000W	4000W	4000W	5000W(10000W for 200A optional)				
	MPPT range @ operating voltage(VDC)	32-145VDC for 24V mode,64-145V for 48V mode				64~145VDC					
	Maximum PV array open circuit voltage	145VDC									
	Maximum efficiency	>98%									
	Standby power consumption	<2W									
	MECHANICAL SPECIFICATIONS	Mounting	Wall mount								
Dimensions (W*H*D)		620*385*215mm				670*410*215mm					
Net weight (solar CHG) (kg)		36	41	41	69+2.5	75.75+2.5	75.75+2.5				
Shipping dimensions (W*H*D)		755*515*455mm				884*618*443mm					
Shipping weight (Solar CHG) (kg)		56	61	64	82.5+2.5	89+2.5	92+2.5				
OTHER	Operation temperature range	0°C to 40°C									
	Storage temperature	-15°C to 60°C									
	Audible noise	60dB MAX									
	Display	LED+LCD									
	Loading (20GP/40GP/40HQ)	140pcs / 280pcs / 320pcs									

Low Frequency Solar Inverter
PV3500 TLV Series (8KW-12KW)



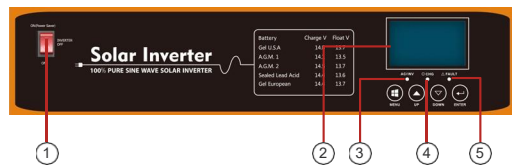
Features

- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A
- MPPT efficiency max 98%
- Powerful charge rate up to 80Amp
- DC start &Automatic Self-Diagnostic Function
- USB monitoring function
- Supporting AGS, BTS port
- Compatible to generator

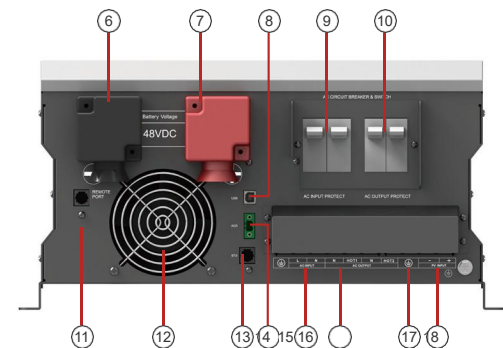
Introduction

PV3500 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.

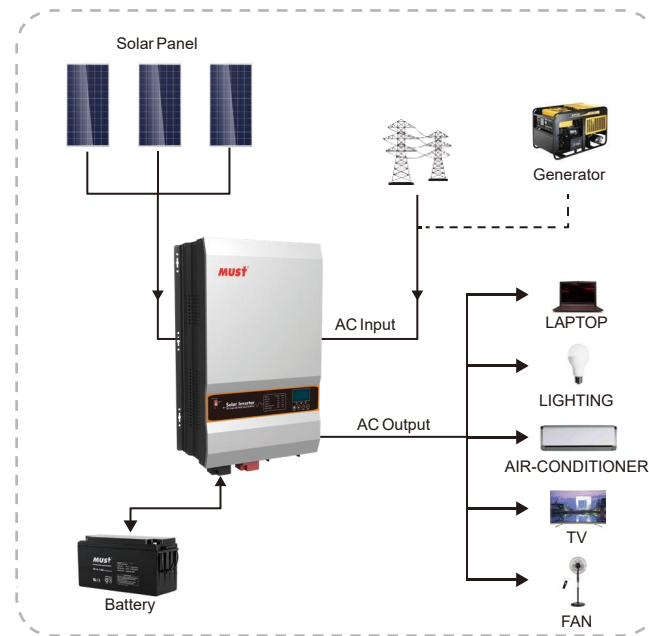
Back panel printing description



1. Switch ON/OFF
2. LCD display
3. AC/Inverter indicator
4. Charging indicator
5. Fault indicator
6. BAT-
7. BAT+
8. USB communication port
9. AC input/Bypass breaker
10. AC output breaker
- 11.Remote control port
- 12.Fan
13. BTS
14. AGS
- 15.AC input
- 16.AC output
- 17.Ground
- 18.PV input



Solar system connection



Specification

MODEL		PV35-8048 TLV	PV35-10048 TLV	PV35-12048 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 efficiency(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		
	Idle consumption-search mode	< 60W when power saver on		
AC CHARGER	Output voltage	Depends on battery type		
	Charger AC input breaker rating	80A	80A	80A
	Overcharge protection S.D.	31.4VDC for 24VDC mode (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	80Amp		
SOLAR CHARGER	Maximum PV charge current	100A		
	DC voltage	48V		
	Maximim PV array power	5000W(10000W for 200A optional)		
	MPPT range @ operating voltage(VDC)	64~145VDC		
	Maximum PV array open circuit voltage	145VDC		
	Maximum efficiency	>98%		
	Standby power consumption	<2W		
MECHANICAL SPECIFICATIONS	Mounting	Wall mount		
	Dimensions (W*H*D)	670*410*215mm		
	Net weight (solar CHG) (kg)	69+2.5	75.75+2.5	75.75+2.5
	Shipping dimensions (W*H*D)	884*618*443mm		
	Shipping weight (Solar CHG) (kg)	82.5+2.5	89+2.5	92+2.5
OTHER	Operation temperature range	0°C to 40°C		
	Storage temperature	-15°C to 60°C		
	Audible noise	60dB MAX		
	Display	LED+LCD		
	Loading (20GP/40GP/40HQ)	140pcs / 280pcs / 320pcs		

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**Pure Sine Wave Solar Inverter
PV5000 Series (3KW-5KW)**



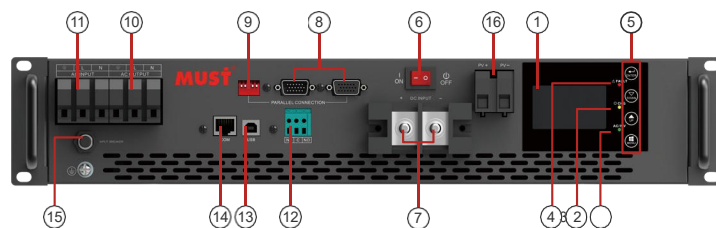
Features

- 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

Introduction

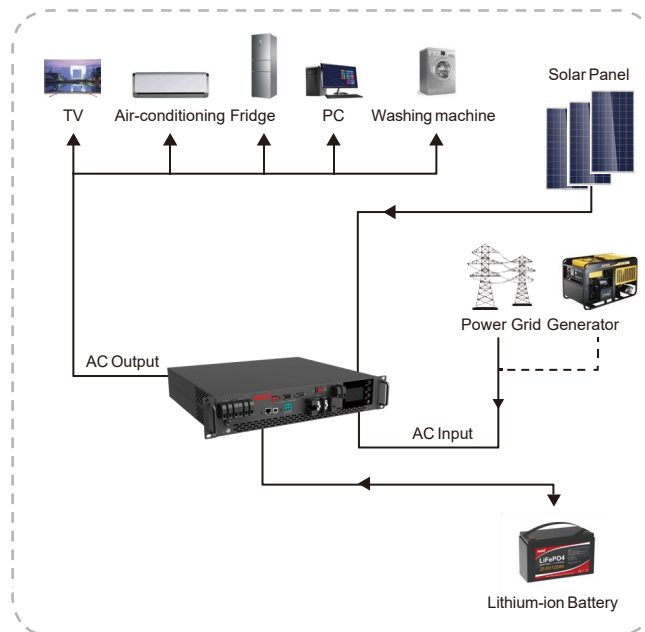
This is a multi-function inverter/charger, combining functions of inverter, solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar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

Back panel printing 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



Specification

MODEL		PV50-3K	PV50-4K	PV50-5K
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	14VDC		
	MPPT Range @ Operating Voltage	60~163VDC		
	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	Dimension (D*W*H), mm	400 x 468 x 86.3		
	Net Weight (kg)	10.0		
OTHER	Safety Certification	CE		
	Operating Temperature Range	-10°C to 40°C		
	Storage temperature	-15°C~ 60°C		

ON/OFF Grid High frequency Hybrid Solar Inverter

PH1000 PRO Series (5KW)



Features

- Wide range of MPPT voltage:120-550V
- Multiple operation modes: Grid-tie,off grid and grid-tie with back up
- Support LCD display&Smart LCD setting
- Available Export control CT sensor function
- Multiple communications:USB,RS485,GPRS and wifi etc
- Monitoring inverters freely via computers or mobile phones
- 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
- IP65 Dust-proof and water-proof

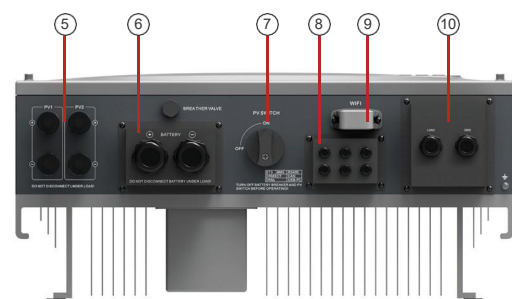
Introduction

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.

Back panel printing description

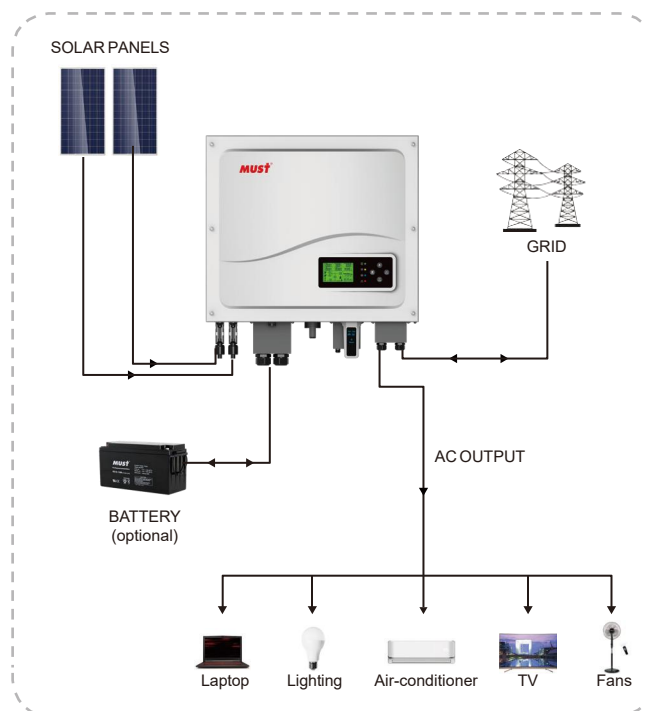


1. The inverter operation status indicator
2. Battery indicator
3. WiFi status indicator
4. Fault indicator



5. PV input terminals
6. Battery input terminals and cover
7. PV input switch
8. BTS terminals, BMS terminals, load monitor terminals, dry contact terminals, CAN communication terminals, USB terminal and cover
9. Wi-Fi comodule
- 10.AC output terminals and cover

Solar system connection



Specification

MODEL	PH10-5048PRO	
RATED POWER(W)	5000	
Nominal Battery System Voltage	48	
PV INPUT(DC)	Maximum recommended DC power(W)	7000
	Nominal DC operating voltage(V)	360
	Maximum DC voltage(V)	550
	MPPT voltage range(V)	120~550
	Maximum input current(A)	13 / 13
	Maximum short circuit current(A)	15 / 15
	No.of MPP tracker	2
	Strings per MPP tracker	1
INVERTER OUTPUT(AC)	Nominal AC output power(W)	5000
	Nominal output voltage(V);range(V)	220/230/240;180-280
	AC grid frequency(Hz);range(Hz)	50/60;45~55/55-65
	Nominal output current(A)	21.8
	Maximum output current(A)	22.8
	Total harmonic distortion i(THDi)	<3%
	Power factor at rated power	1
	Displacement power factor	0.8leading ~ 0.8lagging
BATTERY MODE OUTPUT(AC)	Output Rated Power	3680
	Nominal output voltage(V);accuracy range	230±1%
	Output ferequency(Hz);accuracy range	50/60(optional)±0.2%
	Output rated current(A)	15
	Output waveform	Pure sine wave
	Total harmonic distortion v (linear load)	<3%
BATTERY & CHARGER	Battery type	Lead-acid battery / Lithium battery
	Battery voltage(V)	48
	Battery voltage range(V)	40~60
	Charging curve	3-stage adaptive with maintenance
	Over-current protection / Over-temperature protection	Yes / Yes
	Maximum charging/discharging power(W)	4000
EFFICIENCY	Maximum efficiency	97.3%
	Euro-efficiency	96.8%
	MPPT efficiency	99.9%
PROTECTION DEVICES	DC switch rating for each MPPT	Yes
	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	Dimension(W/H/D)(mm)	480*420*215
	Net weight (kg)	27
	DC connection	H4 / MC4
	AC connection	Terminal Block
	Display	LED+LCD
	Communication interfaces	Wi-Fi / USB / GPRS / RS485
	Ingress protection rating	IP65
	Humidity	0~95% RH(No condensing)
	Operating temperature range	-20°C +60°C With derating above 45°C
	Cooling concept	Natural
Altitude	<3000m	

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High Frequency On Grid Solar Inverter

PH5000 Series (2.5KW-6KW)



Features

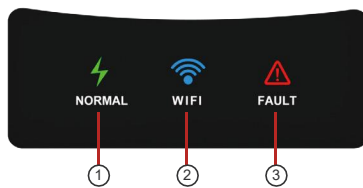
- High Frequency On Grid Solar Inverter
- Rate power: 2.5-6KW
- MPPT efficiency up to 99.50%
- Multiple communications: USB,WIFI etc
- Monitoring inverters freely via mobile phones APP
- Fanless low-noise design
- IP65 water-proof and dust-proof

Introduction

PH5000 series PV inverters take full account of the needs of end customers, with excellent performance at the same time, use LED as inverter status display, effectively improve product life. Using DSP digital control, could afford wide grid voltage range, have a full range of protection features; to maximize the benefits at the same time, greatly enhance the reliability of the product.

Back panel printing description

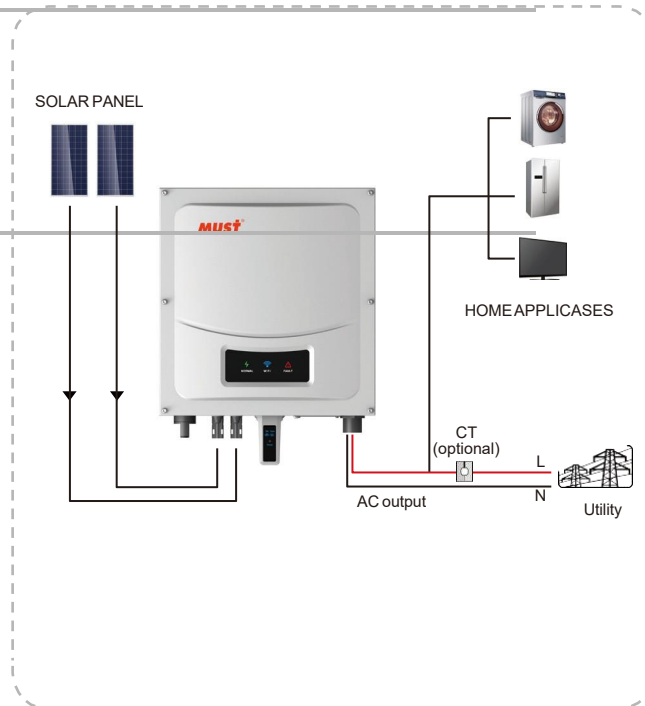
Green LED	Continuous light	Normal status
	Flicker	Waiting status
Blue LED	Flicker	Wifi normal communication
	Continuous light	Fault status
Red LED	Flicker	Program of procedure or give an alarm



1. Operation normal (Green)
2. WIFI communication (Blue)
3. Error display (Red)
4. DC switch
5. PV input
6. WIFI connector
7. PC USB connector / RS-485
8. AC output



Solar system connection



Specification

MODEL		PH50-2500	PH50-3000	PH50-3600M	PH50-4200M	PH50-4600M	PH50-5000M	PH50-6000M
RATED POWER(W)		2500	3000	3600	4200	4600	5000	6000
PV INPUT(DC)	Maximum recommended DC power(W)	2875	3450	4100	4800	5300	5750	7000
	Nominal DC operating voltage(V)	360						
	Maximum DC voltage(V)	550						
	Start voltage(V)	100						
	MPPT voltage range(V)	80-550						
	Maximum input current(A)	11	11	11/11	11/11	11/11	11/11	11/11
	No. of MPP tracker	1			2			
	Strings per MPP tracker	1						
GRID OUTPUT(AC)	Nominal AC output power(W)	2500	3000	3600	4200	4600	5000	6000
	Maximum AC output power(VA)	2500	3000	3600	4200	4600	5000	6000
	Nominal output voltage(V);range(V)	220 / 230 / 240;180-280						
	AC grid frequency(Hz);range(Hz)	50/60;45-55/55-65						
	Nominal output current(A)	10.9	13	15.7	18.3	20.0	21.8	26.1
	Maximum output current(A)	11.4	13.7	16.4	19.1	21.0	22.8	27.3
	Total harmonic distortion i(THDi)	3.THDI@Full load & THDv <1%						
	Power factor at rated power	1						
	Displacement power factor	0.8leading ~ 0.8lagging						
	AC connection	Single phase						
EFFICIENCY	Maximum efficiency	97.2%	97.2%	97.4%	97.4%	97.4%	97.4%	97.4%
	Euro-efficiency	96.8%	96.8%	97.0%	97.0%	97.0%	97.0%	97.0%
	MPPT efficiency	99.5%						
	Self-Consumption night(W)	<1						
PROTECTION DEVICES	DC reverse polarity protection	Yes						
	DC switch rating for each MPPT	Yes						
	Output over current protection	Yes						
	Output overvoltage protection-varistor	Yes						
	Ground fault monitoring	Yes						
	Grid monitoring	Yes						
	Integrated all-pole sensitive leakage current	Yes						
PHYSICAL	Dimension(W/H/D)(mm)	262*368*155	262*368*155	355*412*153	355*412*153	355*412*173	355*412*173	355*412*201
	Net weight (kg)	10	10	13.5	13.5	14.5	14.5	16.5
INTERFACE	DC connection	H4/MC4						
	AC connection	Connector						
	Display	LED						
	Communication interfaces	Wi-Fi / USB / GPRS						
ENVIRONMENT	Ingress protection rating	IP65						
	Humidity	0-100%						
	Operating temperature range	-25°C ~+60°C With derating above 45°C						
	Cooling concept	Natural						
	Noise emission(typical)[dB]	≤25						
	Altitude	<4000m						
OTHERS	Topology	transformerless						
	Warranty	Standard 5years/10 years(opt.)						
	Certificates and approvals	CE / IEC62109 / EN50549-1			CE / IEC62109 / CQC / EN50549-1			

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High Frequency On Grid Solar Inverter

PH5000TM Series (4KW-15KW)



Features

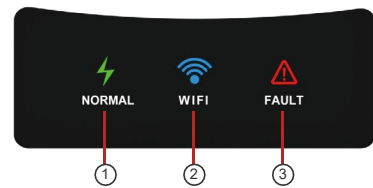
- Wide input voltage range from 160V-1000Vdc
- IP65 protection degree
- Integrated DC switch
- DSP controller
- The maximum efficiency is 98.4%
- Multi MPPT controller
- WIFI monitoring standard
- Easy installation

Introduction

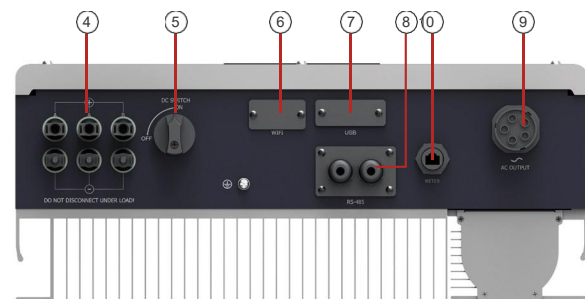
PH5000TM series PV inverters take full account of the needs of end customers, It is used to convert the DC generated by photovoltaic panels into AC and send it to the grid in a three-phase manner.with excellent performance at the same time, use LED as inverter status display, effectively improve product life.

Using DSP digital control,could afford wide grid voltage range, have a full range of protection features; to maximize the benefits at the same time, greatly enhance the reliability of the product.

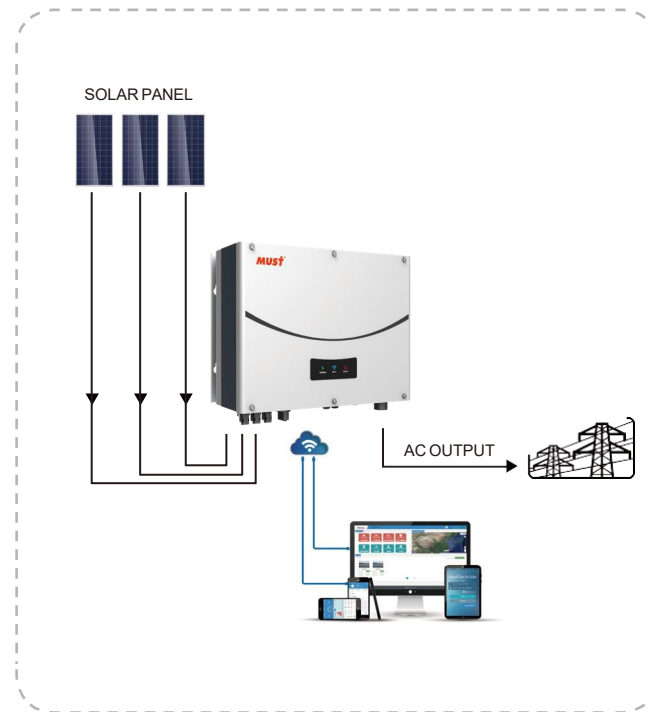
Back panel printing description



1. Operation normal (Green)
2. WIFI communication (Blue)
3. Error display (Red)
4. PV input
5. DC switch
6. WIFI connector
- 7.USB 8. RS485
9. AC output
10. Meter



Solar system connection



Specification --- 4-6KW

MODEL		PH50-4000TM	PH50-5000TM	PH50-6000TM
OUTPUT (AC)	Rated AC output power	4000W	5000W	6000W
	Max.AC apparent power	4400VA	5500VA	6600VA
	Max.output current	6.4A	8A	9.6A
	Nominal AC Voltage	230V / 400V		
	AC Voltage range	320-478V		
	AC grid frequency range	50±5Hz		
		60±5Hz		
	Power factor at Rated power	1		
	Adjustable displacement power factor	0.8leading...0.8lagging		
	THDi @ Full load & THDI <1%	< 3%		
	AC grid connection type	3W+N+PE		
	INPUT DATA	Max.recommended PV power	4800W	6000W
Max.DC voltage		1000V		
Start voltage		160V		
Nominal voltage		600V		
MPPT voltage range		200V-1000V		
Max.input current		12.5A / 12.5A		
Number of independent MPP trackers / strings per MPP tracker		2/1		
DC connection		H4 / MC4		
EFFICIENCY	Max.efficiency	98.4%		
	Euro weighted efficiency	97.6%		
	MPPT efficiency	99.5%		
Protection devices	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	Dimension(W/H/D)(mm)	500*428*200		
	Weight (kg)	21		
	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	Ip65		
	Relative humidity	0-100%		
FEATURES	AC connection	Connector		
	Display	LED		
	Interfaces:USB/WI-FI/RS485/GPRS	Yes/Yes/Yes/Opt		
	Warranty	Standard 5 years / 10 years (opt.)		
	Certificates and approvals	CE / IEC62109 / EN50549-1		

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

Specification --- 7-11KW

MODEL		PH50-7000TM	PH50-8000TM	PH50-9000TM	PH50-10000TM	PH50-11000TM
OUTPUT (AC)	Rated AC output power	7000W	8000W	9000W	10000W	11000W
	Max.AC apparent power	7700VA	8800VA	9900VA	11000VA	12100VA
	Max.output current	11.1A	12.7A	14.3A	15.9A	17.5A
	Nominal AC Voltage	230V / 400V				
	AC Voltage range	320-478V				
	AC grid frequency range	50±5Hz				
		60±5Hz				
	Power factor at Rated power	1				
	Adjustable displacement power factor	0.8leading...0.8lagging				
	THDi @ Full load & THDI <1%	< 3%				
	AC grid connection type	3W+N+PE				
INPUT DATA	Max.recommended PV power	8400W	9600W	10800W	12000W	13200W
	Max.DC voltage	1000V				
	Start voltage	160V				
	Nominal voltage	600V				
	MPPT voltage range	200V-1000V				
	Max.input current	12.5A / 12.5A				
	Number of independent MPP trackers / strings per MPP tracker	2/1				
	DC connection	H4 / MC4				
EFFICIENCY	Max. efficiency	98.4%				
	Euro weighted efficiency	98%				
	MPPT efficiency	99.5%				
	Protection devices	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	Dimension(W/H/D)(mm)	500*428*200				
	Weight (kg)	23.2				
	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	Ip65				
	Relative humidity	0-100%				
	FEATURES	AC connection	connector			
Display		LED				
Interfaces:USB/WI-FI/RS485/GPRS		yes/yes/yes/opt				
Warranty		Standard 5 years / 10 years (opt.)				
Certificates and approvals		CE / IEC62109 / EN50549-1				

Specification --- 12-15KW

MODEL		PH50-12000TM	PH50-13000TM	PH50-15000TM
OUTPUT (AC)	Rated AC output power	12000W	13000W	15000W
	Max.AC apparent power	13200VA	14300VA	16500VA
	Max.output current	19A	20.6A	23.8A
	Nominal AC Voltage	230V / 400V		
	AC Voltage range	320-478V		
	AC grid frequency range	50±5Hz		
		60±5Hz		
	Power factor at Rated power	1		
	Adjustable displacement power factor	0.8leading...0.8lagging		
	THDi @ Full load & THDI <1%	< 3%		
	AC grid connection type	3W+N+PE		
INPUT DATA	Max.recommended PV power	14400W	15600W	18000W
	Max.DC voltage	1000V		
	Start voltage	160V		
	Nominal voltage	600V		
	MPPT voltage range	200V-1000V		
	Max.input current	21A / 11A		
	Number of independent MPP trackers / strings per MPP tracker	2/2+1		
	DC connection	H4 / MC4		
EFFICIENCY	Max. efficiency	98.4%		
	Euro weighted efficiency	98%		
	MPPT efficiency	99.5%		
	Protection devices	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	Dimension(W/H/D)(mm)	500*428*200		
	Weight (kg)	24.8		
	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	Ip65		
	Relative humidity	0-100%		
	FEATURES	AC connection	connector	
Display		LED		
Interfaces:USB/WI-FI/RS485/GPRS		yes/yes/yes/opt		
Warranty		Standard 5 years / 10 years (opt.)		
Certificates and approvals		CE / IEC62109 / EN50549-1		

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

High Frequency On/Off Hybrid Solar Inverter PH1800 Plus Series (2KW-5.5KW)



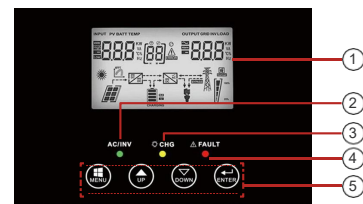
Features

- Rated Power 2KW-5.5KW
- Pure sine wave output
- Self-consumption and Feed-in to the grid
- Programmable supply priority for PV, Battery or Grid
- User-adjustable battery charging current suits different types of batteries
- Programmable multiple operation modes: Grid-tie, off-grid and grid-tie with backup
- Monitoring software & Wifi Kit for real-time status display and control
- Support parallel operation up to 3 units

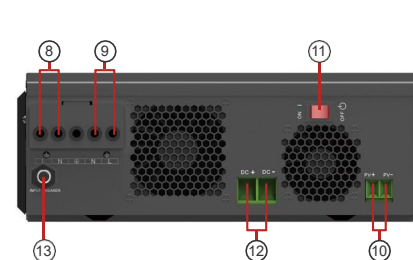
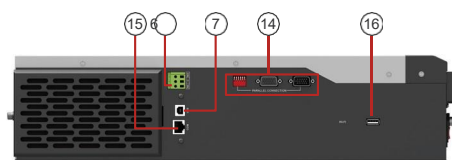
Introduction

PH1800 Plus series hybrid solar inverter, it can realize self-consumption and feed-in to the grid from solar energy with best solution according to your setting. During the daytime solar power can run your home appliances and if there is extra solar power it will feed-in to the grid or you can choose to save them on the battery to backup when power failure or nighttime.

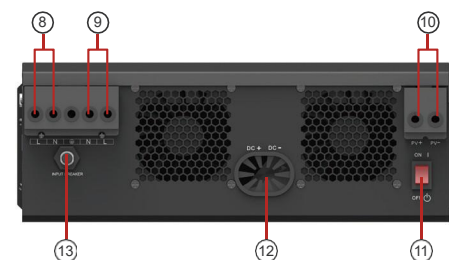
Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons
6. Dry contact
7. USB
8. AC Input
9. AC Output
10. PV Input
11. Power On/Off Switch
12. Battery Input
13. Circuit breaker
14. Parallel connection port
15. RS-485 Communication port
16. USB WIFI

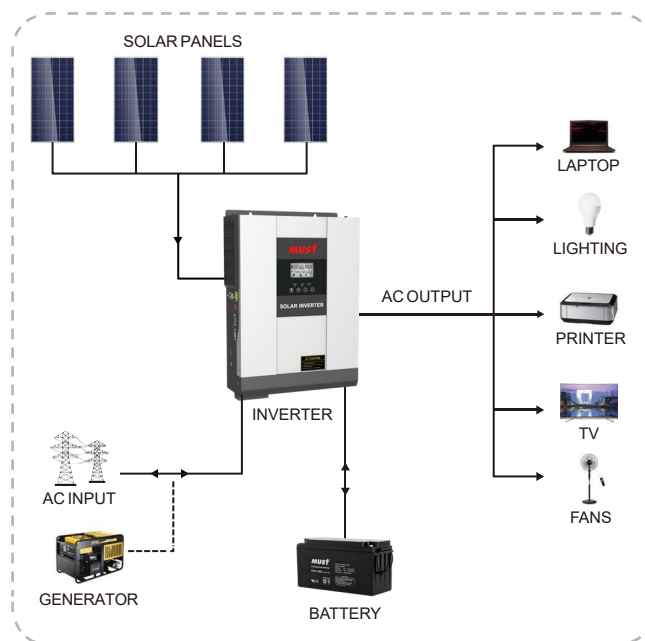


(2KW-3KW)



(3KW-5.5KW)

Solar system connection



Specification

MODEL		PH18-2024 Plus	PH18-3024 Plus	PH18-3048 Plus	PH18-4048 Plus	PH18-5048 Plus	PH18-5548 Plus
Nominal Battery System Voltage		24VDC			48VDC		
INVERTER OUTPUT	Rated Power	2000W	3000W	3000W	4000W	5000W	5500W
	Surge Power	4000W	6000W	6000W	8000W	10000W	11000W
	Waveform	Pure Sine Wave					
	AC Voltage Regulation (Batt.Mode)	220VAC~240VAC(setting)					
	Electric Current	8.7A	13A		17.4A	21.7A	23.9A
	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	24VDC			48VDC		
	Floating Charge Voltage	27.4VDC			54.8VDC		
	Overcharge Protection	30VDC			60VDC		
SOLAR CHARGER & AC CHARGER	Maximum PV Array Open Circuit Voltage	145VDC					
	PV Array MPPT Voltage Range	30~130VDC			64~130VDC		
	Standby Power Consumption	2W					
	Maximum PV Array Power	2000W			4000W		
	Maximum Solar Charge Current	80A					
	Maximum Efficiency	98%					
	Maximum AC Charge Current	60A					
Maximum Charge Current	140A						
MECHANICAL SPECIFICATIONS	Machine Dimensions (W*H*D)	272*355*100 mm			297.5*468*125mm		
	Net Weight(KG)	7.4			10		
	Package Dimensions(W*H*D)	570*405*246mm			610*405*241mm		
	Gross Weight(KG)	10			12.6		
OTHER	Humidity	5% to 95% Relative Humidity (Non-condensing)					
	Operating Temperature	0°C ~55°C					
	Storage Temperature	-15°C ~60°C					

Pure Sine wave High Frequency solar Inverter(450V)

PH1800 PRO Series (3KW, 5.2KW)



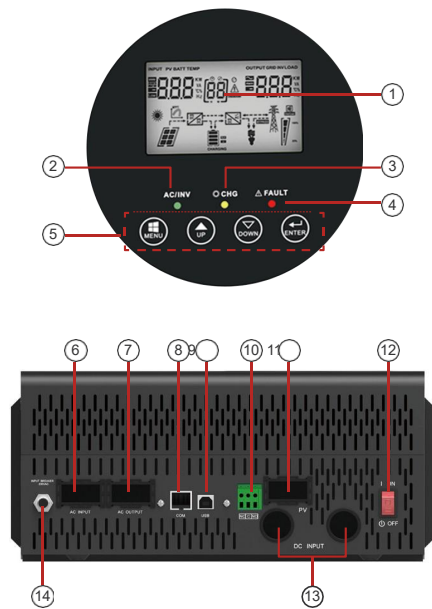
Features

- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- MAX PV Array Open Circuit Voltage: 450V
- 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
- WIFI remote monitoring (optional)
- Compatible to generator

Introduction

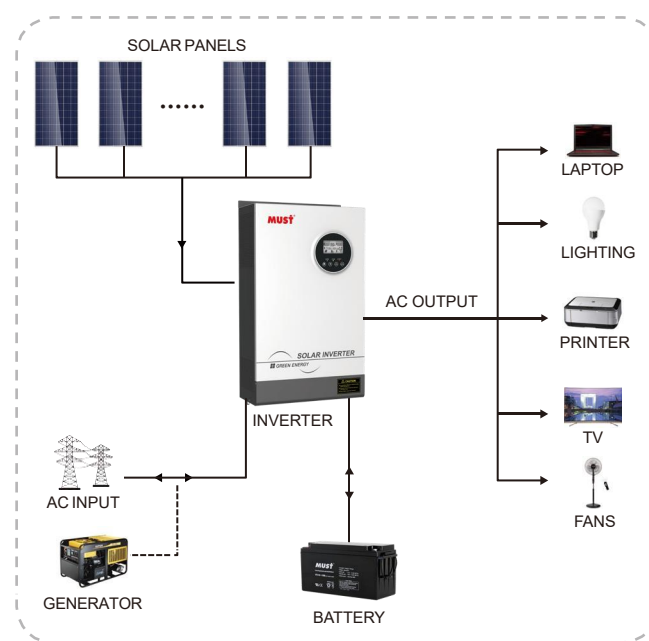
PH1800 PRO is a multi-function inverter/charger, combining functions of inverter, MPPT solar charger and battery charger to offer uninterruptible power support in portable size. PH1800 PRO Series can run without battery. The Maximum PV array open circuit voltage can reach 450V and MPPT voltage is 150~430V,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

Back panel printing description



- | | |
|-----------------------|------------------------------|
| 1. LCD Display | 8. RS-485 Communication port |
| 2. Status Indicator | 9.USB 10.Dry Contact |
| 3. Charging Indicator | 11.PV Input |
| 4. Fault Indicator | 12.Power On/Off Switch |
| 5. Function Buttons | 13.Battery Input |
| 6. AC Input | 14.Circuit breaker |
| 7. AC Output | |

Solar system connection



Specification

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%~93%	
Transfer Time	10ms (UPS / VDE4105) 20ms (APL)	
AC INPUT		
Voltage	230VAC±5%	
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL)	
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 Array Power	5000W	
PV Array MPPT Voltage Range	150~430 VDC	
Maximum Solar Charge Current	80A	
Maximum AC Charge Current	60A	
Maximum Charge Current	80A	
MECHANICAL SPECIFICATIONS		
Machine Dimensions (W*H*D)(mm)	289*414*124.5	330*488*119
Package Dimensions (W*H*D)(mm)	393*488*251	396*638*241
Net Weight(kg)	8	14
Gross Weight(kg)	9.5	16.4
OTHER		
Humidity	5% to 95% Relative humidity (Non-condensing)	
Operating Temperature	-10°C ~50°C	
Storage Temperature	-15°C ~60°C	

Low Frequency On/Off Grid Hybrid Solar Inverter

PH3000 Series (3KW-4KW)



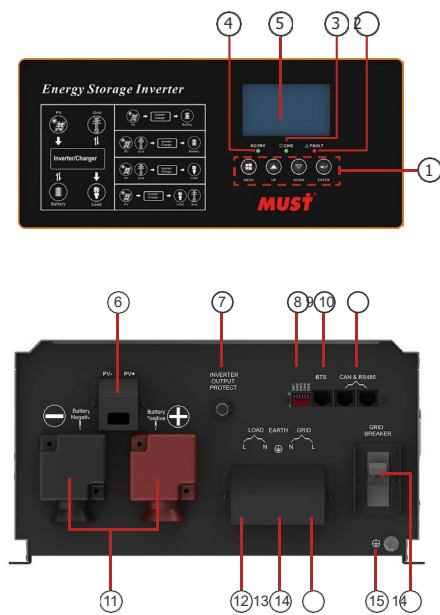
Features

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

Introduction

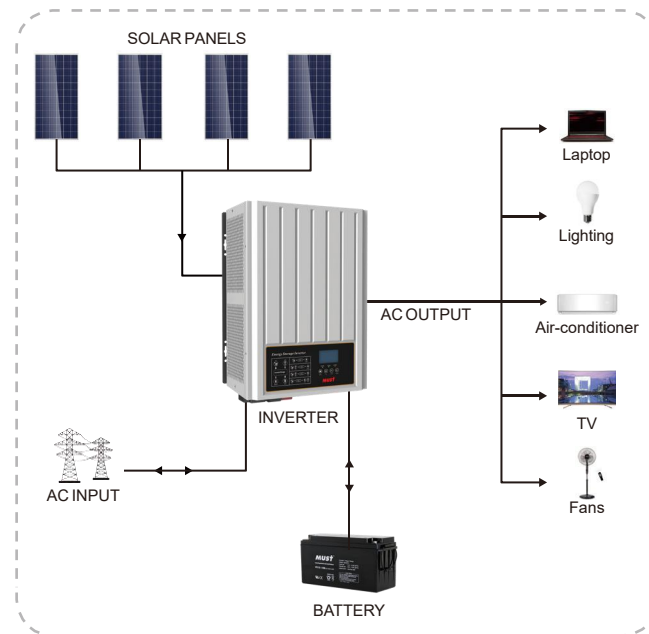
PH3000 series Energy Storage Inverter has capacity of 3KW and 4KW, it is multi-functional, combining functions of inverter, On-Grid, MPPT solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible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

Back panel printing description



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

Solar system connection



Specification

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

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

Low Frequency On/Off Grid Hybrid Solar Inverter PH3000 Series (10-12KW)



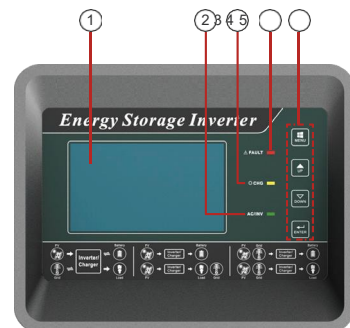
Features

- 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

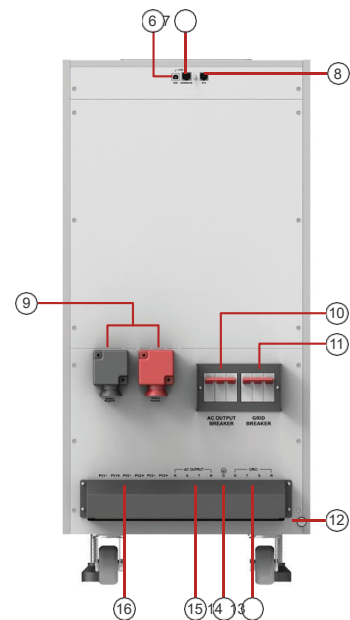
Introduction

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.

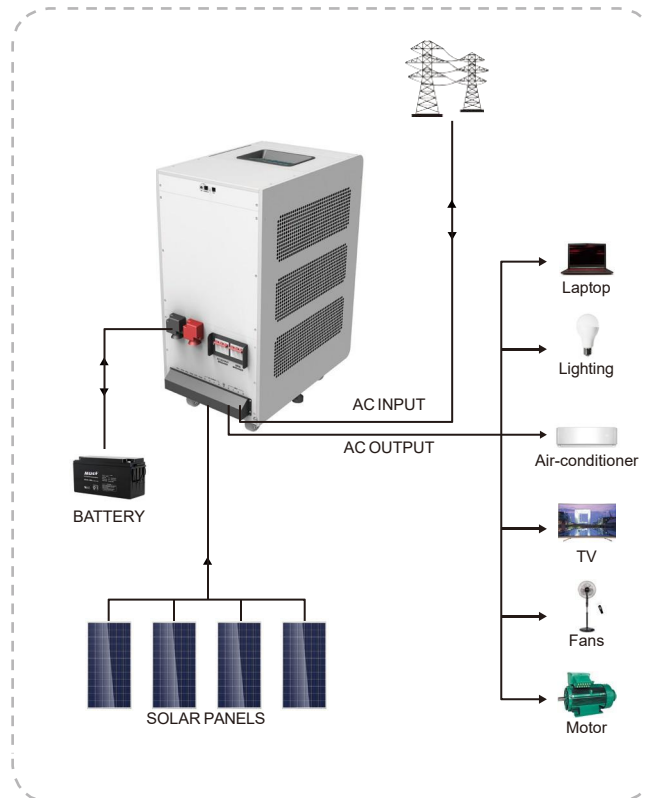
Back panel printing description



1. LCD Display
2. Status Indicator
3. Charging Indicator
4. Fault Indicator
5. Function Buttons
6. USB communication 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



Type of Battery

PH3000 series can be used with lithium battery pack or lead-acid battery, to keep your appliances running for days.



Wall-mounted lithium battery



Rack-mounted lithium battery

Specification

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%	
AC INPUT	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 maximum current	26.0A per phase	34.8A per phase
	Nominal frequency	50Hz / 60Hz	
BATTERY	Acceptable input voltage range	Defaults 186Vac ~253Vac per phase;Narrow 174Vac ~272Vac per phase; Wide 95Vac ~272Vac per phase	
	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	
SOLAR CHARGER & AC CHARGER	Float Voltage	57.2VDC	
	PV Open Circuit Voltage	145VDC	
	Max Solar Charging Current	60A per channel	
	Max AC Charging Current	60A per phase	80A per phase
MECHANICAL SPECIFICATIONS	Max Charging Current	120A per phase	140A per phase
	Mounting	Vertical	
	Machine Dimension, W*H*D(mm)	392*828*629	
	Package Dimensions (W*H*D)(mm)	513*1031*700	
	Net Weight (kg)	133	140
OTHER	Gross Weight (kg)	128	160
	Communication terminal	RS485 / CAN bus	
	Operation Temperature Range	0°C ~ +50°C	
	Environmental Protection Rating	IP20	
Ambient humidity	0 -- 90% relative humidity (non-condensing)		
Altitude	≤2000m		

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

Solar Water Pump Inverter
PT100 Series (1.5-55KW)



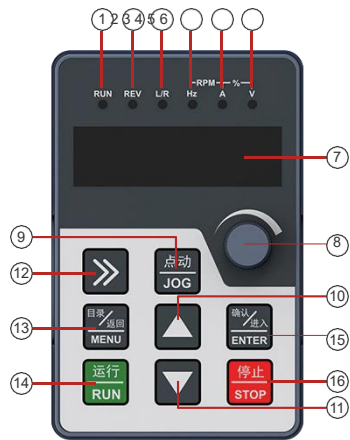
Features

- Support single phase/three phase 220V, and three phase 380V solar water pump inverter, power from 1.5KW to 55KW.
- Simply connect the photovoltaic panel to the solar water pump inverter, and the PV pump can be automatically started after power-on.
- It has protection functions such as PV over-voltage protection, over-temperature automatic protect, etc., which can effectively extend the life of the product.
- Ensure solar power tracking efficiency can reach 99%.
- All series of products can realize automatic switching of PV DC input and grid AC input, which can meet 24 hours of no care work.
- Supports IP20 grade cabinet solutions.

Introduction

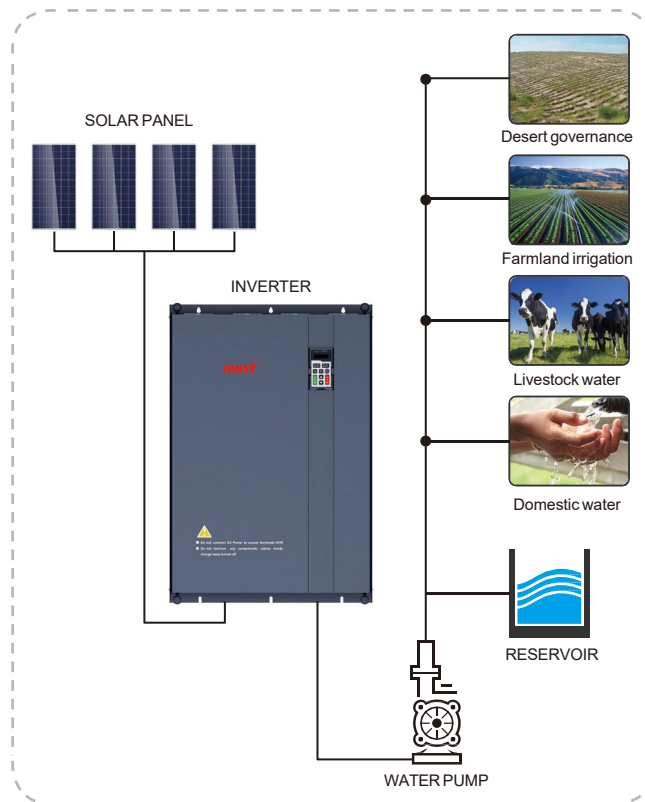
PT100 series is MUST newly launches specially for solar pumping inverter applications. Based on the original solar pump inverter products, which optimizes the usability and performance, and extends applicable voltage levels and power range of the product. The voltage level can be applied to single phase/three phase 220V, three phase 380V pumps, power range from 1.5KW to 55KW.

Back panel printing description



1. Operating instructions
2. Reverse indication
3. Command source indication
4. Frequency indication
5. Current indication
6. Voltage indication
7. LED Display
8. Potentiometer
9. Jog command
10. Increment
11. Decrement
12. Shift key
13. Menu key
14. RUN
15. Enter/confirm
16. Stop/Reset

Solar system connection



Specification

Functionality Description		PT100
TECHNICAL CONTROL PERFORMANCE	Control mode	SVC, V/F
	Motor type	Asynchronous motor
	Speed control accuracy	±0.5% (SVC)
	Starting torque	0.25Hz/150% (SVC)
	Torque boost	Automatic torque boost; manual torque boost 0.1%~30.0%
OPERATIONAL CONTROL PERFORMANCE	Frequency command	Digital setting, analog voltage setting, analog current setting, pulse setting, serial port setting, keyboard potentiometer setting. Can be switched in many ways.
	Auxiliary frequency command	Eleven kinds of auxiliary frequency commands, which can flexibly realize auxiliary frequency fine-tuning and frequency synthesis.
	Operation command	Operation command operator panel setting / Control terminal setting / Serial communication port setting / Can be switched in a variety of ways.
	Automatic voltage adjustment function	When the grid voltage changes, it can automatically keep the output voltage constant.
	Speed tracking restart function	Achieve shock-free and smooth start to the rotating motor
EFFICIENCY	MPPT tracking efficiency	99.5%max (PV mode)
PROTECTION	Loss phase protection	Input / output loss phase protection
	Instantaneous overcurrent protection	Stop at ≥250% of rated output current
	Over-voltage protection	Stop at ≥800V of main circuit DC voltage
	Low-voltage protection	The main circuit DC voltage will stop when undervoltage (different depending on the model)
	Over-temperature protection	Protection will be triggered when the inverter bridge over-temperature
	Overload protection	Over-load ≥150% 60s, inverter will shut down
	Over current protection	If rated current over 2.5 times, inverter will shutdown for protection
	Brake protection	Braking unit overload protection, braking resistor short circuit protection
	Short circuit protection	Output phase short circuit protection
	CONTROL SINGLE	Communication interface
Input terminal X		8 X terminals, more than fifty kinds of input function options. The X8 terminal supports high-speed pulse signal input.
Output terminal		1 high-speed pulse output terminal (open-collector type is optional), supports 0~100kHz square wave signal output; 2 AO terminals; 2 relay output terminals.
Control voltage source output		DC24V, 100mA
Analog signal input		AI1: 0V~+10V; AI2: 0~+10V / 0~20mA, the main board dial switch selection. AI3: -10V~+10V;
Analog signal output		2 ways, 0~+10V / 0~20mA output programmable, selected by the main board dial switch.
Open-collector output		2 ways, multiple operating states are optional; the maximum output current is 50mA.
Programmable relay output	2 ways, multiple states are available; contact capacity: 250VAC/3A or 30VDC/1A.	
DISPLAY	Five-digit display	31 state parameters such as setting frequency, output frequency, output voltage, output current, motor speed, output torque, switch value terminal, etc., programming menu parameters and 25 fault codes, etc.
	Indicator light (LED)	Parameter unit, setting direction, RUN/STOP status, control mode
ENVIROMENT	Use occasions	The room is free from direct sunlight, dust, corrosive gas, combustible gas, oil mist, water vapor, dripping water or salt, etc
	Altitude	1000 meters below sea level (When the altitude exceeds 1000m, derate at a rate of 1% per 100m height)
	Ambient temperature	-10°C ~+40°C, it is not recommended to run above 50°C (when the ambient temperature exceeds 40°C, derate at a rate of 3% per 1°C derating)
	Humidity	5%~95%RH, no condensation
	Vibration	Less than 5.9m/s ² (0.6g)
	Storage temperature	-20°C ~ +60°C, air temperature change is less than 1°C/min
STRUCTURE	Protection class	IP20
	Cooling method	Air cooling
	Installation type	Wall-mounted

MPPT SOLAR CHARGE CONTROLLER

- PC1800F SERIES (60/80/100A)
- PC1800A SERIES (60/80A)
- PC1600A SERIES (20/30/40A)

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.



Features

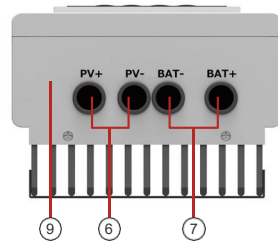
- LCD display , easy to operate on LCD screen
- Multi stage charging (3-stage charging , parallel charging and equalized charging function)
- BTS - Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB communication port
- Protection: PV array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

Back panel printing description

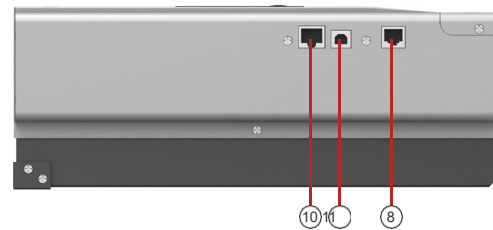


— PC1800A SERIES (60/80A)

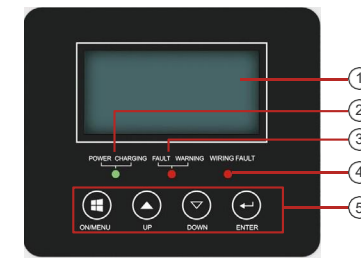
1. LCD display
2. Power ON/Charging indicator
3. Fault and warning indicator
4. Wiring fault indicator
5. Operation button



6. PV connextors
7. Battery connectors



9. Wiring box cover
- 10.RS485 communication port
- 11.USB

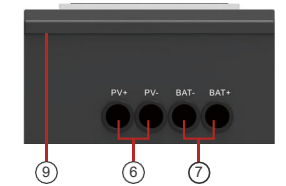


— PC1800F SERIES (60/80/100A)

1. LCD display
2. Power ON/Charging indicator
3. Fault and warning indicator
4. Wiring fault indicator
5. Operation button



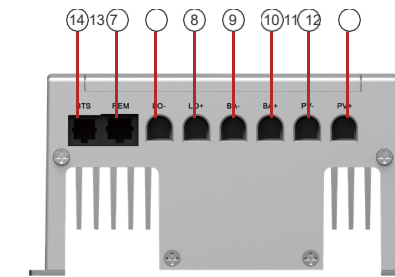
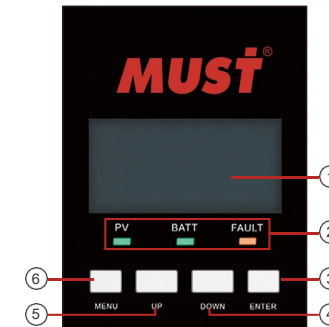
6. PV connectors
7. Battery connectors
8. Battery temperature sensor terminal



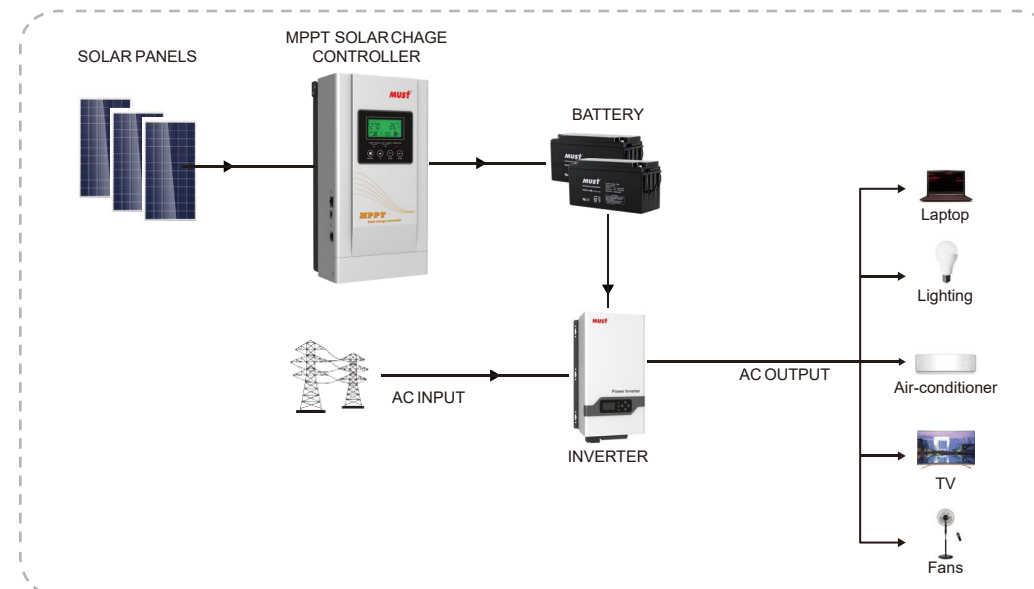
9. Wiring box cover
- 10.RS485 communication port
- 11.USB

— PC1600A SERIES (20/30/40A)

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



Solar system connection



Specification —— PC1600A

MODEL		PC16-2015A	PC16-3015A	PC16-4015A
Nominal Battery System Voltage		12VDC / 24VDC (Auto Detection)		
CONTROLLER INPUT	PV Open Circuit Voltage	100VDC@12V / 145VDC @24V		
	PV Array MPPT Voltage Range	16VDC~100VDC@12VDC/32VDC~130VDC@24VDC		
	Max PV Input Power(12V)	300W	450W	600W
	Max PV Input Power(24V)	600W	900W	1200W
BATTERY	Absorption Voltage	12.5VDC / 25.0VDC		
	Refloat Voltage	13.7VDC / 27.4VDC		
	Float Voltage	14.3VDC / 28.6VDC		
	Low Voltage Protection Point	10.0VDC / 20.0VDC		
DC OUTPUT	Output Voltage	10.0~14.5VDC / 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	10.25VDC / 20.5VDC		
	Low Voltage cut off	10.0VDC / 20.0 VDC		
Low Voltage Recovery	11.0VDC / 22.0VDC			
GENERAL SPECIFICATION	Radiating Mode	Automatic cooling		
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 protection		
		Output short circuit protection		
		Low voltage protection for storage battery		
MECHANICAL SPECIFICATIONS	Mounting	Wall mount		
	Machine Dimension (W*H*D)(mm)	154*236*88mm (color box / pcs)		
	Gross Wight (kg)(per pcs)	2.2kg	2.65kg	2.65kg
	Package Dimension (W*H*D)(mm)	610*308*230mm (4pcs / Carton)		
	Gross Weight (kg)(per carton)	10.8kg	13.4kg	13.4kg
OTHER	Environmental Rating	Indoor		
	Operation Temperature Range	0°C ~ 55°C		
	Loading (20GP/40GP/40HQ)	2500pcs / 5000pcs / 5800pcs		

Specification —— PC1800A

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
	Maximum Solar Input Voltage	100V	145V
	PV Array MPPT Voltage Range	15~95V	30~130V
	Maximum Input Power	12 Volt-940W 24 Volt-1880W 36 Volt-2820W 48 Volt-3760W	12 Volt-1250W 24 Volt-2500W 36 Volt-3750W 48 Volt-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	Absorption Stage	Float Stage
	Flooded Battery	14.2V / 28.4V / 42.6V / 56.8V	13.7V / 27.4V / 41.1V / 54.8V
	AGM / GEL / LEAD Battery (Default)	14.4V / 28.8V / 43.2V / 57.6V	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 AND ENVIRONMENT	Product Size (W*H*D)(mm)	315*160*135	
	Product Weight (kg)	4.7kg	
	Ambient Temperature Range	-10°C to 55°C	
	Storage Temperature	-40°C to 75°C	
	Humidity	0%~90% RH (No condensing)	
Enclosure	IP20		

Specification —— PC1800F

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
	Maximum Solar Input Voltage	100V	145V	
	PV Array MPPT Voltage Range	15~95V	30~130V	45~130V
	Maximum Input Power	12 Volt-940W 24 Volt-1880W 36 Volt-2820W 48 Volt-3760W	12 Volt-1250W 24 Volt-2500W 36 Volt-3750W 48 Volt-5000W	12 Volt-1560W 24 Volt-3120W 36 Volt-4680W 48 Volt-6250W
BATTERY	Charging Set Points	Absorption Stage		Float Stage
	Flooded Battery	14.2V / 28.4V / 42.6V / 56.8V		13.7V / 27.4V / 41.1V / 54.8V
	AGM (Default)	14.4V / 28.8V / 43.2V / 57.6V		13.7V / 27.4V / 41.1V / 54.8V
	Over-charging Voltage	15.5V / 30.0V / 45.0V / 60.0V		
	Over-charging Comeback Voltage	14.5V / 29.5V / 44.5V / 59.0V		
	Battery Defect Voltage	10.0V / 17.0V / 25.5V / 34.0V		
	Temperature Compensation Coefficient	-5mv / °C / cell (25°C vef)		
	Peak Conversion Efficiency	98% (MPPT Efficiency 99%)		
	Maximum Battery Current	60Amps	80Amps	100Amps
	Max Charging Current	60amps continuous @ 40°C ambient	80amps continuous @ 40°C ambient	100amps continuous @ 40°C ambient
	GENERAL SPECIFICATION	Radiating Mode	Fan cooling	
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	Mounting	Wall mount		
	Machine Dimension (W*H*D)(mm)	152*85*294 (per pcs)		
	G.W (kg)	3kg/pcs		
	Package Dimension (W*H*D)(mm)	625*366*232 (4pcs / Carton)		
	Gross Weight (kg)	14kg		
OTHER	Environmental Rating	Indoor		
	Operation Temperature Range	-10~55°C		
	Ambient Humidity	0~90% relative humidity (non-condensing)		
	Altitude	≤3000m		