MUST®
Solar Power System

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

PRODUCT CATALOGUE

Inverter/ Lithium Battery/ ALL-IN-ONE ESS/ Commercial & Industrial ESS /UPS/ Solar Charge Controller

220V

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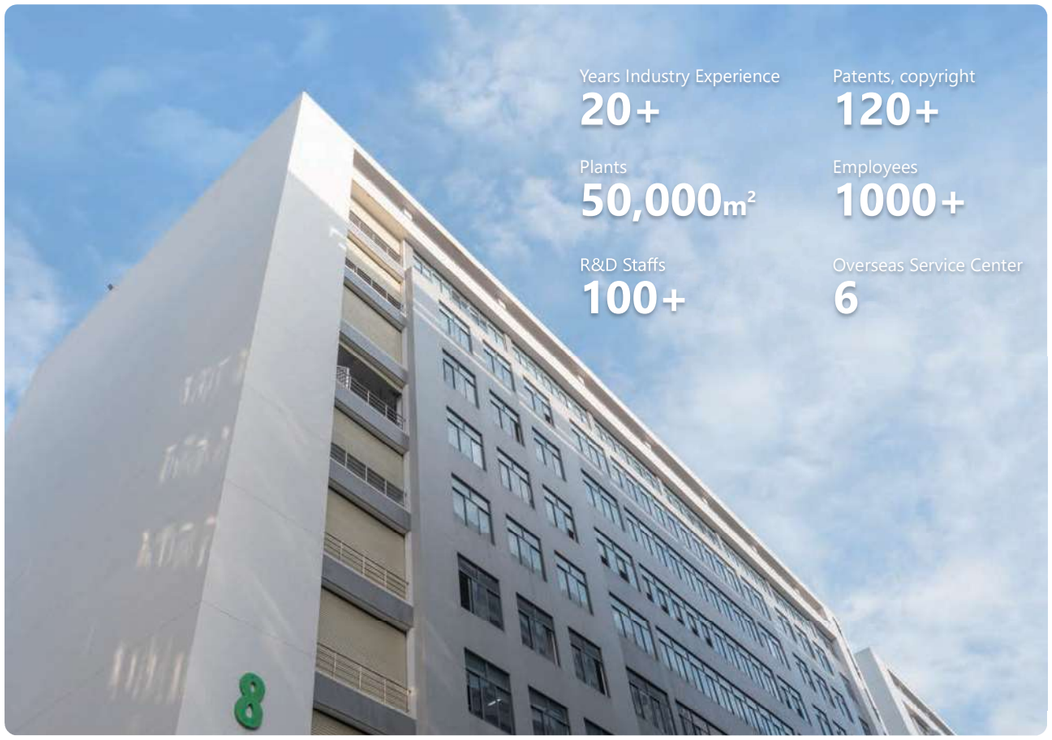
Must Energy Group

Why Choose MUST?

MUST Renewable

We are proud to have been manufacturing portable power stations, LiFePO4 batteries, inverters, UPS, and solar charge controllers since 1998, with a team of 1000 dedicated employees.
MUST integrates the latest and most advanced technology and automation solutions, owning the most complete product line in the industry with reliable quality, high efficiency and stable performance.



Efficient Production, Operation, Quality Control

Intelligent Manufacturing

Comprehensive Professional Test

Lean production

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

Complete Power Solution

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

OFF GRID SOLAR INVERTER

HYBRID SOLAR INVERTER

POWER INVERTER

ON GRID INVERTER

SOLAR CHARGER CONTROL

COMMERCIAL & INDUSTRIAL ESS

LITHIUM BATTERY

ALL-IN-ONE SYSTEM

UPS

BALCONY ENERGY STORAGE

HIGH FREQUENCY SOLAR INVERTER

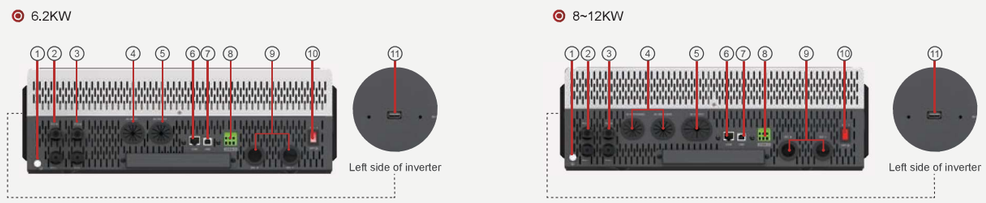
PV1800 PRO II Series

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

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

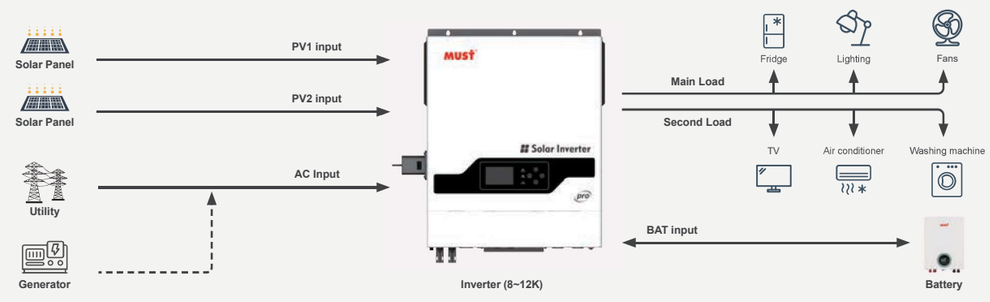
- Dual output for smart load management
- Smart color LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in Two MPPTs solar charge controller
- Wide MPPT voltage range is 90~450V, the maximum PV input voltage can reach 500V
- Can provide the power to the load without battery
-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

Back panel description



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

Solar system connection



MUST®
Solar Power System

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

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

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

MUST
Solar Power System

HIGH FREQUENCY SOLAR INVERTER

PV1800 VPM II Series

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

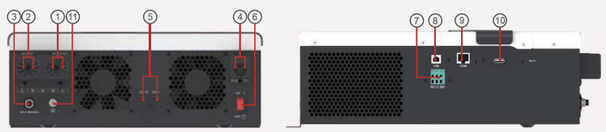
This is a multi-function inverter/charger, combining functions of inverter, MPPT 45~80A solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user-configurable and easy-accessible button operation such as battery charging current, AC/solar charger priority, and acceptable input voltage based on different applications.

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

Back panel description

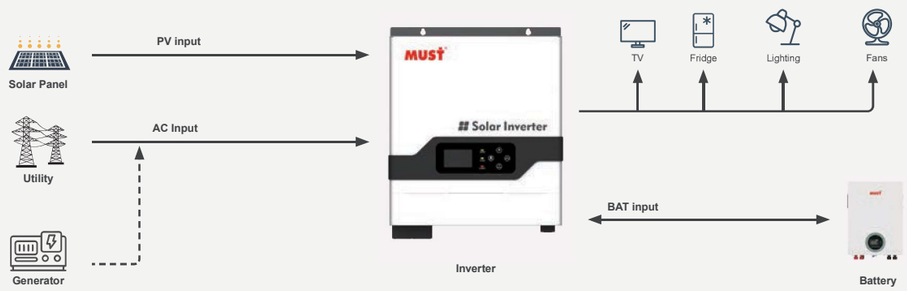
1.2KW

3.5KW/4KW



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

Solar system connection



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

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

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HIGH FREQUENCY SOLAR INVERTER

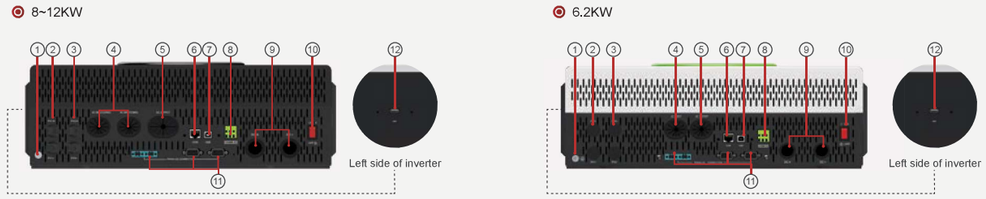
PV1900 EXP Series

4~12KW | PV500V | Dual output | WiFi | 6/9pcs parallel

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

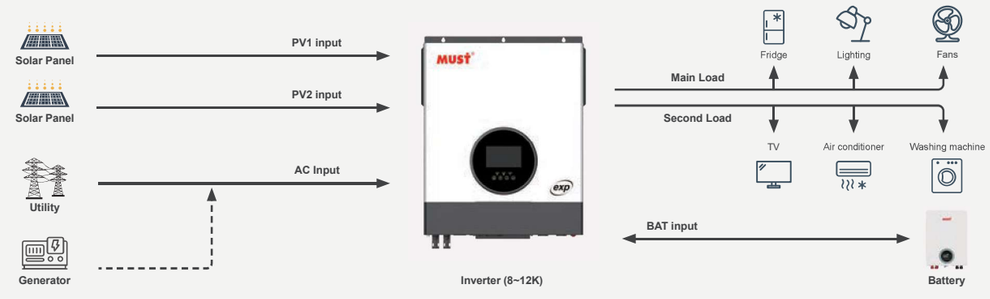
- Pure sine wave output
- Smart LCD setting (Working modes, Charge Current, Charge Voltage, etc).
- Built-in MPPT solar charge controller
- MAX PV Array Open Circuit Voltage: 500V (450V for parallel)
- Can provide the power to the load without battery
- Combining solar system, AC utility, and battery power source to supply continuous power
- Overload, short circuit and Deep discharge protection
- Cold start function
- Support USB, RS485 monitoring function
- Parallel operation with up to 9 units (for 4~6KW 48V mode)
- WIFI remote monitoring (optional)
- Dual outputs for smart load management(optional)
- Can communicate with lithium batteries

Back panel description



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

Solar system connection



MODEL	PV19-4024 EXP	PV19-6048 EXP	PV19-6248 EXP	PV19-8048 EXP	PV19-10048 EXP	PV19-11048 EXP	PV19-12048 EXP
Default Battery System Voltage	24VDC	48VDC					
INVERTER OUTPUT							
Rated Power	4000VA/ 4000W	6000VA/ 6000W	6200VA/ 6200W	8000VA/ 8000W	10000VA/ 10000W	11000VA/ 11000W	12000VA/ 12000W
Surge Power	8000W	12000W	12400W	16000W	20000W	22000W	24000W
Waveform	Pure sine wave						
AC Voltage Regulation (Batt.Mode)	230VAC±5%(Setting)						
Inverter Efficiency(Peak)	92%						
Transfer Time	10ms(UPS / VDE4105) / 20ms(APL)/ < 50ms typical (For parallel operation)						
AC INPUT							
Voltage	230VAC						
Selectable Voltage Range	170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VDE)						
Frequency Range	50Hz / 60Hz (Auto sensing)						
BATTERY							
Normal voltage	24VDC	48VDC					
Floating Charge Voltage	27.4VDC	54.8VDC					
Overcharge Protection	30VDC	60VDC					
SOLAR CHARGER & AC CHARGER							
Maximum PV Array Open Circuit Voltage	500VDC (450V for parallel)						
Charging Algorithm	3-Step (Flooded Battery, AGM / GEL / LEAD Battery), 4-Step (Li)						
Maximum PV Array Power	5000W	6000W	4000W*2	4000W*2	5000W*2	5500W*2	6000W*2
Maximum PV Input Current	18A	27	18A*2	18A*2	27A*2(40A max)	27A*2(40A max)	27A*2(40A max)
PV Array MPPT Voltage Range	90~430VDC	120~430VDC	90~450VDC (90~430VDC for parallel)				
Maximum Solar Charge Current	100A	120A	120A	120A	150A	150A	150A
Maximum AC Charge Current	80A	100A	100A	120A	150A	150A	150A
Maximum Charge Current	100A	120A	120A	120A	150A	150A	150A
MECHANICAL SPECIFICATIONS							
Machine Dimension (W*H*D) (mm)	322*486*134	309*505*147	425*455*147	425*527*145			
Package Dimension (W*H*D) (mm)	575*229*425	603*260*400	586*247*537	632*257*548			
N.W (kg)	9.5	12.5	13	18.0	18.0	18.1	18.1
G.W (kg)	12	13.8	15.6	20.6	20.6	20.7	20.7
OTHER							
Humidity	5% to 95% Relativ Humidity (Non-condensing)						
Operating Temperature Range	-10°C~50°C						
Storage Temperature Range	-15°C ~60°C						
Warranty	2 year						
CERTIFICATION & STANDARDS							

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

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LOW FREQUENCY SOLAR INVERTER

PV2900 HP Series

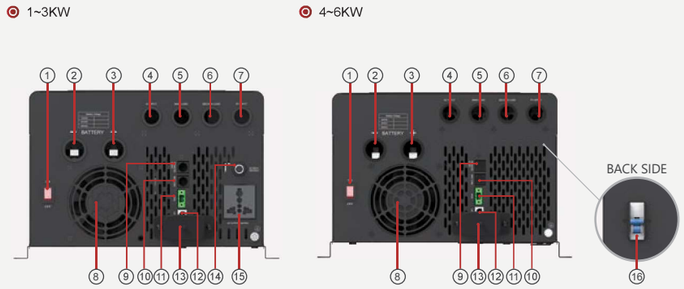
1~6KW | AC 230V | MPPT80A | WIFI | BMS | Dual output

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

AFPE/AFCI

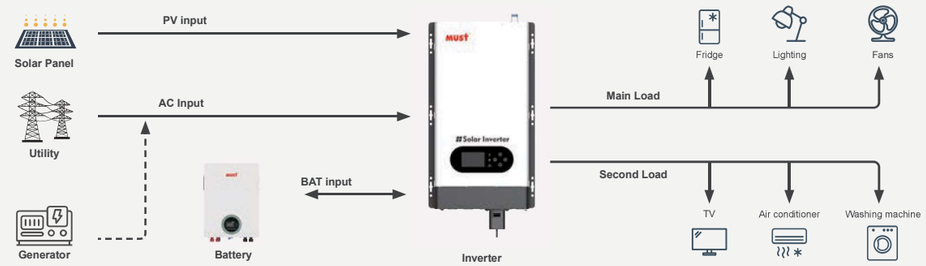
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5/12V
- Power-save mode
- Set utility priority /battery priority
- Set utility input wide/narrow voltage range
- Inverter voltage can be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

Back panel description



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

Solar system connection



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

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

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MUST
Solar Power System

LOW FREQUENCY SOLAR INVERTER

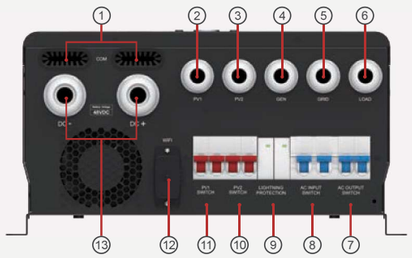
PV3900 Series

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

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

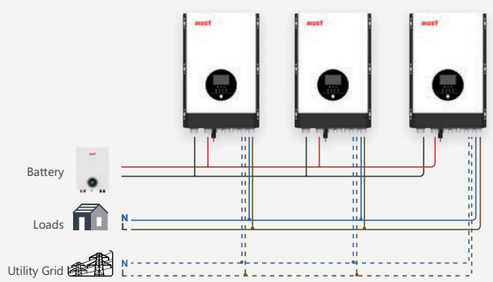
- Smart LCD setting(Working modes, Charge Current, Charge voltage, etc.)
- Built-in MPPT solar charge controller 100A/200A
- MPPT efficiency max 98%
- Powerful charge rate up to 200A
- Inside BMS function
- DC start &Automatic Self-Diagnostic Function
- WIFI monitoring function (optional)
- Compatible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

Back panel description

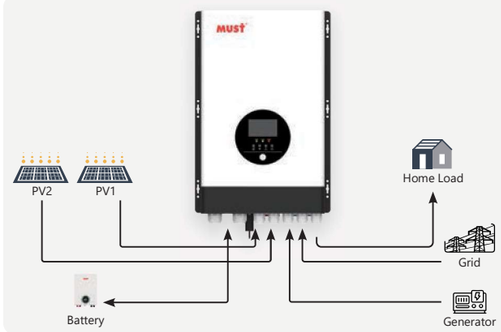


1. Communication port
2. PV1 port
3. PV2 port
4. GEN input port
5. Grid input port
6. AC output port
7. AC output switch
8. AC input switch
9. Lighting protection
10. PV2 Switch
11. PV1 Switch
12. WiFi port
13. Battery -/+

Parallel operation



Solar system connection



MODEL	PV39-8048	PV39-10048	PV39-12048
Nominal Battery System Voltage	48VDC		
Stand-alone mode	Yes		
Parallel operation	3 units		
INVERTER OUTPUT			
Rated power	8KW	10KW	12KW
Surge rating	24000VA	30000VA	36000VA
Capable of starting electric motor	4HP	5HP	6HP
Waveform	Pure sine wave / same as input (bypass mode)		
Nominal output voltage RMS	220V/230V/240V		
Inverter efficiency (peak)	>88%		
Line mode efficiency	>95%		
Power factor	1.0		
Typical transfer time	10ms(max)		
AC INPUT			
Voltage	220V/230V/240V		
Selectable voltage range	90-280 VAC (APL)		
Frequency range	50Hz / 60Hz		
BATTERY			
Low battery voltage cutoff	40-48VDC for 48VDC mode		
Low battery voltage recover	42-50VDC for 48VDC mode		
High battery voltage cutoff	60VDC for 48VDC mode		
High battery voltage recover	57VDC for 48VDC mode		
AC CHARGER			
Output voltage	Depends on battery type (Supports lead-acid, gel, and lithium batteries)		
Charger AC input breaker rating	100A		
Overcharge protection S.D.	62.8VDC for 48VDC mode		
Maximum charge current	10-140A (setting) battery terminal		
BTS			
Continuous output power	Yes Variances in charging voltage & S.D. voltage base on the battery temperature		
BYPASS & PROTECTION			
Input voltage waveform	Sine wave (grid or generator)		
Nominal input frequency	50Hz or 60Hz		
Overload protection (SMPS Load)	Software + Circuit breaker		
Output short circuit protection	Software + Circuit breaker		
Bypass breaker rating	63A		
Max bypass current	80A		
SOLAR CHARGER			
Maximum PV charge current	100A	200A	200A
DC voltage	48V		
Maximum PV array power	5000W	10000W	10000W
MPPT range @ operating voltage(VDC)	64~235VDC		
Maximum PV array open circuit voltage	250VDC		
Maximum efficiency	>98%		
Standby power consumption	<2W		
MECHANICAL SPECIFICATIONS			
Mounting	Wall mount		
Packing	Wooden box		
Machine Dimension (W*H*D)(mm)	439*660.5*223		
Package Dimension (W*H*D)(mm)	782*304*520.5		
N.W(kg)	59	68	75
G.W(kg)	76	85	92
Warranty	2years		
OTHER			
Operating temperature range	0°C to 50°C		
Storage temperature	15°C to 60°C		
Audible noise	60dB MAX		
Communication	WiFi		
Display	LED+LCD		
CERTIFICATION & STANDARDS			
CE-LVD (IEC62109-1:2010, EN IEC62109-2:2011)			

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

LOW FREQUENCY POWER INVERTER

EP3000 PLUS Series

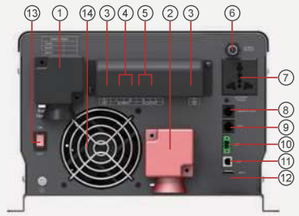
1~6kW | 230V | WIFI | BMS

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

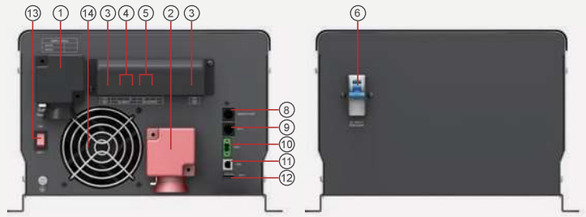
- 3 Steps charging
- Overload and short-circuit protection
- Set charging voltage/charging current.
- Battery low voltage shutdown point can be set to 10/10.5/11/11.5V/ 12V
- Power-save mode
- Set utility priority/ Battery priority
- Set utility input wide/narrow range
- Inverter voltage can be set to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

Back panel description

1~3K

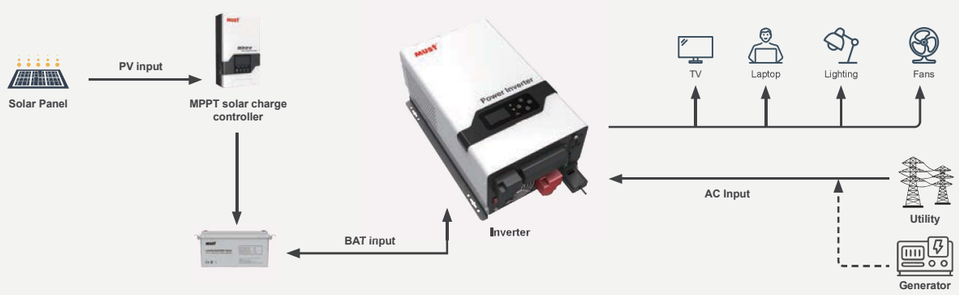


4~6K



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

Solar system connection



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

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

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HYBRID SOLAR INVERTER

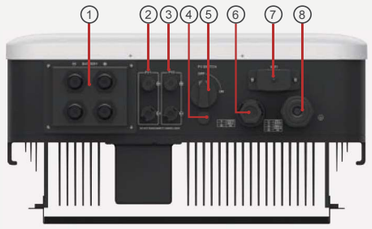
PH1100 PRO Series

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

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

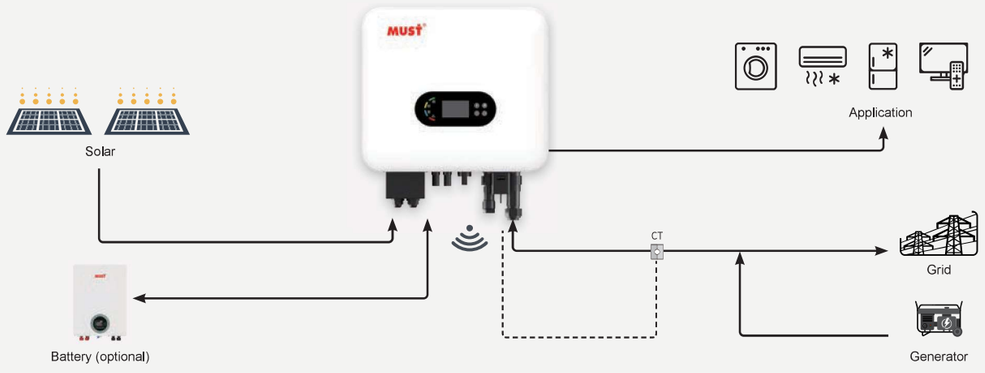
- Multiple operation modes: Grid-tie,off grid with storage backup
- IP66 water-proof and dust-proof
- MPPT voltage range 120-500V
- Support LCD display&Smart LCD setting
- Available Export control CT sensor function
- Multiple communications: RS485,GPRS and wifi etc
- Full protection function:Over-voltage,over-frequency,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

Back panel description



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

Solar system connection



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

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HYBRID SOLAR INVERTER

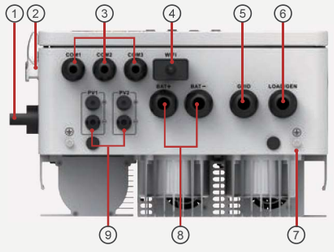
PH1100 EU-G2 Series

3~8KW | Single Phase | IP66

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

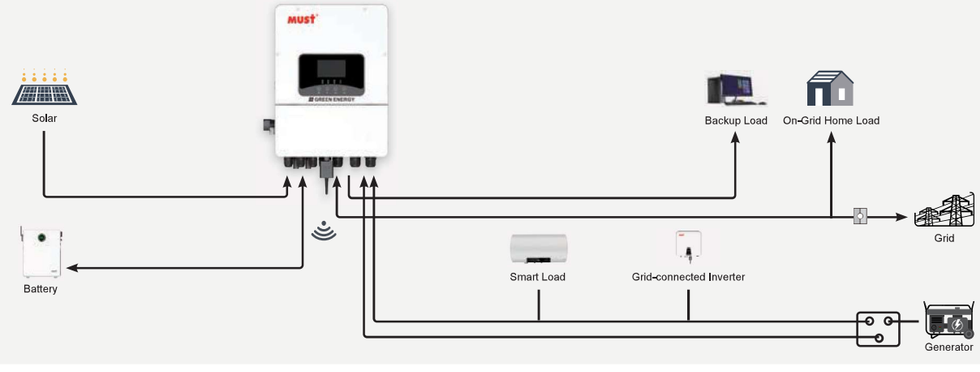
- 4.3-inch Colorful touch LCD
- IP66 protection degree
- AC couple to retrofit existing solar system
- Max. 9 pcs parallel for on-grid and off-grid operation;
- Max. charging/discharging current of 190A
- 6 time periods for battery charging/discharging
- Support storing energy from diesel generator
-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

Back panel description



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

Solar system connection



MUST®
Solar Power System

MODEL	PH11-3KL1-EU-G2	PH11-3.6KL1-EU-G2	PH11-4KL1-EU-G2	PH11-4.6KL1-EU-G2	PH11-5KL1-EU-G2	PH11-6KL1-EU-G2	PH11-7KL1-EU-G2	PH11-7.6KL1-EU-G2	PH11-8KL1-EU-G2
BATTERY INPUT DATA									
Battery type	Lead-acid battery / Lithium battery								
Battery voltage	48V								
Battery voltage range	40~64V								
Charging curve	3-stage adaptive with maintenance/Equalization								
Charging Strategy for Li-Ion Battery	Self-adaption to BMS								
Over-current protection/ Over-temperature protection	Yes / Yes								
Maximum charging/discharging power	3000W	3600W	4000W	4600W	5000W	6000W	7000W	7600W	8000W
Maximum charging/discharging current	75A	90A	100A	110A	120A	135A	175A	190A	190A
PV STRING INPUT DATA									
Max. DC Input Power	4500W	5400W	6000W	6900W	7500W	9000W	10500W	11400W	12000W
Maximum DC voltage	550V								
Start-up Voltage	125V								
Full Load DC Voltage Range	250-500V	300-500V	167-500V	192-500V	208-500V	250-500V	165-500V	179-500V	188-500V
Rated PV Input Voltage	370V								
Minimum voltage for grid connection	150V								
Enter high voltage error recovery point	550V								
Maximum input current	18A	18A	18A+18A	18A+18A	18A+18A	18A+18A	32A+32A	32A+32A	32A+32A
No.of MPP Trackers	1	1	2	2	2	2	2	2	2
Input terminal type	H4/MC4								
AC INPUT/OUTPUT DATA									
Rated AC Input/Output Active Power	3000W	3600W	4000W	4600W	5000W	6000W	7000W	7600W	8000W
Max. AC Input/Output Apparent Power	3300VA	3960VA	4400VA	5060VA	5500VA	6600VA	7700VA	8360VA	8800VA
Rated AC Input/Output Current	13A	15.6A	17.3A	20A	21.7A	26A	30.4A	33A	34.7A
Max. AC Input/Output Current	14.3A	17.2A	19.1A	22A	23.9A	28.6A	34.5A	36.3A	38.3A
Max. Continuous AC Passthrough (grid to load)	35A					40A	50A		
Rated Input/Output Voltage/Range	220/230/240VAC								
Rated Input/Output Grid Frequency/ Range	60Hz±5Hz/ 50Hz±5Hz								
Rated output power factor	1								
Power Factor Adjustment Range	0.8 leading to 0.8 lagging								
Total Harmonics Current Distortion (THDi)	<3%								
Grid Type	Single phase								
DC Current Injection	<0.5%								
EFFICIENCY									
Max. Efficiency	97.5%								
Euro Efficiency	96.5%								
MPPT Efficiency	>99%								
PROTECTION									
Integrated	Islanding protection, Output overcurrent protection, Output overvoltage protection, PV input polarity reverse protection, DC Switch (optional), Ground Fault Sensing, leakage current monitoringprotection								
Surge Protection	DC Type III/AC Type III								
Overvoltage Category	DC Type II/AC Type III								
GENERAL DATA									
Operating Temperature Range (°C)	-25°C~+60°C, >45°C Derating								
Cooling	Fan cooling								
Noise (dB)	≤50dB								
Altitude	3000m, >3000mDerating								
Topology	Battery-side transformer isolation, PV-side non-transformer isolation								
Communication	USB/ WiFi/ Enternet(optional)								
Display	4.3-inch touch screen								
Protection Degree	IP66								
Installation Style	Wall-mounted								
MECHANICAL SPECIFICATIONS									
Machine Dimension (W*H*D)(mm)	360*500*238								
Package Dimension (W*H*D)(mm)	622*479*363								
N.W(kg)	22								
G.W(kg)	25								
Warranty	5 year								
CERTIFICATION & STANDARDS									
NBT32004-2013/EN50549									

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HYBRID SOLAR INVERTER

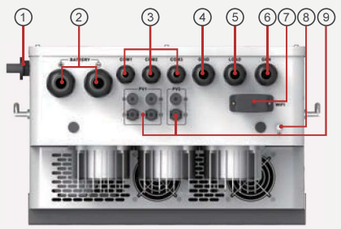
PH1100 EU Series

5~12KW | Three Phase | 380VAC

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

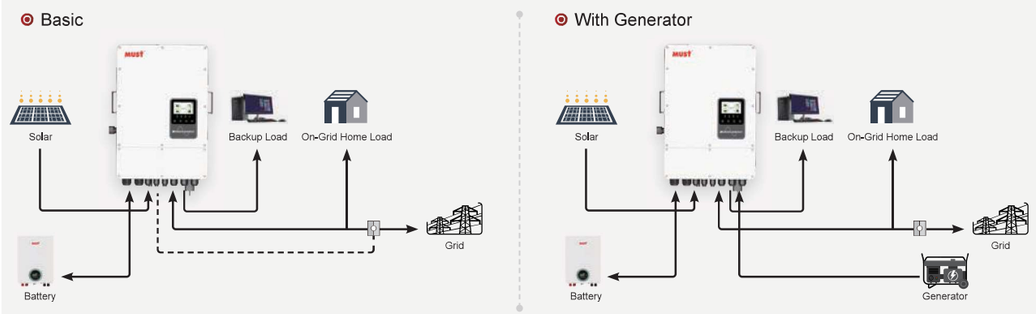
- 100% unbalanced output
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 240A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation design
- IP66 water-proof and dust-proof
- "Time of use" function: a maximum of 6 time segments can be set
- Wifi monitoring

Back panel description



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

Solar system connection



MODEL	PH11-5KL3-EU	PH11-6.5KL3-EU	PH11-8KL3-EU	PH11-10KL3-EU	PH11-12KL3-EU
Rated power	5000W	6500W	8000W	10000W	12000W
BATTERY INPUT DATA					
Battery type	Lead-acid battery / Lithium battery				
Battery voltage	48V				
Battery voltage range	40~64V				
Charging curve	4-stage adaptive with maintenance/Equalization				
Charging Strategy for Li-Ion Battery	Self-adaption to BMS				
Over-current protection/ Over-temperature protection	Yes / Yes				
Maximum charging/discharging power	5000W	6500W	8000W	10000W	12000W
Maximum charging/discharging current	120A	150A	190A	210A	240A
PV STRING INPUT DATA					
Max. DC Input Power	6500W	8450W	10400W	13000W	15600W
Rated PV Input Voltage	550V				
Maximum DC voltage	800V				
Start-up Voltage	160V				
Minimum voltage for grid connection	310V				
Full Load DC Voltage Range	350-650V				
Enter high voltage error recovery point	800V				
MPPT voltage range	200~650V				
Maximum input current	15A+15A			13A+26A	
No.of MPP Trackers	2				
No.of Strings per MPP Tracker	1+1			2+1	
AC INPUT/OUTPUT DATA					
Rated AC Input/ Output Power	5000W	6500W	8000W	10000W	12000W
Max AC Input/ Output Power	5500W	7150W	8800W	11000W	13200W
AC Input/ Output Rated Current	7.6/7.2A	9.8/9.42A	12.1/11.6A	15.2/14.5A	18.2/17.4A
Max AC Input/ Output Current	8.4/8A	10.8/10.4A	13.4/12.8A	16.7/15.9A	20/19.1A
Max. Three-phase Unbalanced Output Current	11.4/10.9A	14.7/14.1A	18.2/17.4A	22.7/21.7A	27.3/26.1A
Power Factor Adjustment Range	0.8 leading to 0.8 lagging				
Rated Input/Output Voltage	220/380,230/400Vac				
Rated Input/Output Grid Frequency/Range	50/60;45~55/55-65				
Grid Type	Three Phase				
Total Harmonics Current Distortion (THDi)	<3% (of nominal power)				
DC Current Injection	<0.5% In				
EFFICIENCY					
Max. Efficiency	≥97.6%				
Euro Efficiency	97.0%				
PROTECTION					
Integrated	Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection				
Surge Protection	DC Type III/AC Type III				
Overvoltage Category	DC Type II/AC Type III				
GENERAL DATA					
Operating Temperature Range (°C)	-25°C to +60°C, >45°C Derating				
Cooling	Fan cooling				
Noise (dB)	≤55dB				
Communication with BMS	RS485/CAN				
Machine Dimension (W*H*D)(mm)	446*692*260 (excluding connectors and racks)				
Package Dimension (W*H*D)(mm)	567*816*404				
N.W(kg)	38 (Excluding Connectors and Brackets)				
G.W(kg)	42				
Protection Degree	IP66				
Installation Style	Wall-mounted				
Warranty	5 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy				
CERTIFICATION & STANDARDS					

CE-EMC+LVD (EN6100-6-3, EN6100-6-1+EN IEC 62109-1, EN IEC 62109-2); CE-LVD(EN 62477-1) ; IEC 60529; EN50549-1; Poland Type A, (NC RfG:2016, PSE:2018, PTPiREE:2021)C10/C11; UNE217001-2020; UNE217002-2020, NTS-631 (Type A); G98+G99

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

HYBRID SOLAR INVERTER

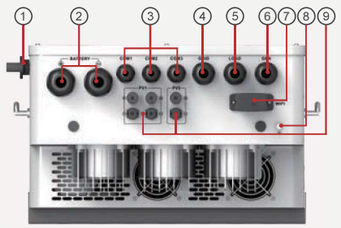
PH1100 EU Series

13~16KW | Three Phase | 380VAC | IP66

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

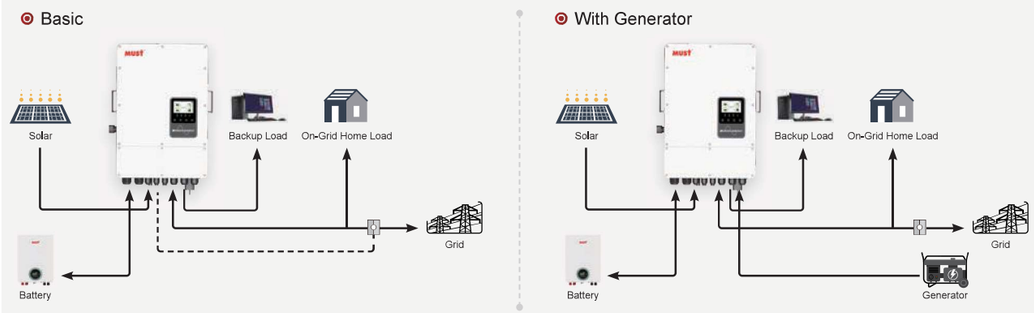
- 100% unbalanced output
- Max. 6 pcs parallel for on-grid and off-grid operation
- AC couple to retrofit existing solar system
- Support multiple batteries parallel
- Max. charging/discharging current of 320A
- Support storing energy from diesel generator
- 48V low voltage battery, transformer isolation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

Back panel description



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

Solar system connection



MODEL	PH11-13KL3-EU	PH11-14KL3-EU	PH11-15KL3-EU	PH11-16KL3-EU
Rated power	13000W	14000W	15000W	16000W
BATTERY INPUT DATA				
Battery type	Lead-acid battery / Lithium battery			
Battery voltage	48V			
Battery voltage range	40~64V			
Charging curve	4-stage adaptive with maintenance/Equalization			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
Over-current protection/ Over-temperature protection	Yes / Yes			
Maximum charging/discharging power	13000W	14000W	15000W	16000W
Maximum charging/discharging current	260A	280A	300A	320A
PV STRING INPUT DATA				
Max. DC Input Power	16900W	18200W	19500W	20800W
Rated PV Input Voltage	370V			
Maximum DC voltage	800V			
Start-up Voltage	125V			
Minimum voltage for grid connection	200V			
Full Load DC Voltage Range	352~650V	379~650V	406~650V	433~650V
Enter high voltage error recovery point	800V			
MPPT voltage range	150~800V			
Maximum input current	32A/16A	32A/16A	32A/16A	32A/16A
No.of MPP Trackers	3	3	3	3
Input terminal type	H4/MC4			
AC INPUT/OUTPUT DATA				
Rated AC Input/ Output Power	13000W	14000W	15000W	16000W
Max AC Input/ Output Power	13000W	14000W	15000W	16000W
AC Input/ Output Rated Current	19.7A/18.8A	21.2A/20.3A	22.7A/21.7A	24.2A/23.2A
Max. Three-phase Unbalanced Output Current	29.5A/28.2A	31.8A/30.4A	34A/32.5A	36.3A/34.8A
Power Factor Adjustment Range	0.8 leading to 0.8 lagging			
Rated Input/Output Voltage	230/380VAC			
Rated Input/Output Grid Frequency Range	60Hz±5Hz/50Hz±5Hz			
Grid Type	Three Phase			
Total Harmonics Current Distortion (THDi)	<3% (of nominal power)			
DC Current Injection	<0.5% In			
EFFICIENCY				
Max. Efficiency	97.5%			
Euro Efficiency	96.5%			
Euro Efficiency	99.5%			
PROTECTION				
Integrated	Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection			
Surge Protection	DC Type III/AC Type III			
Overvoltage Category	DC Type II/AC Type III			
GENERAL DATA				
Operating Temperature Range (°C)	-25°C to +60°C, >45°C Derating			
Cooling	Fan cooling			
Noise (dB)	≤55dB			
Communication with BMS	RS485/CAN			
Machine Dimension (W*H*D)(mm)	446*692*260 (excluding connectors and racks)			
Package Dimension (W*H*D)(mm)	567*816*404			
N.W(kg)	38			
G.W(kg)	42			
Protection Degree	IP66			
Installation Style	Wall-mounted			
Warranty	5 Years the Warranty Period Depends the Final Installation Site of Inverter, More Info Please Refer to Warranty Policy			
CERTIFICATION & STANDARDS				
NBT32004-2013				

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HIGH VOLTAGE HYBRID SOLAR INVERTER

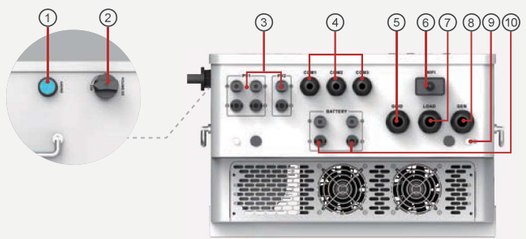
PH1100 EU Series

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

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

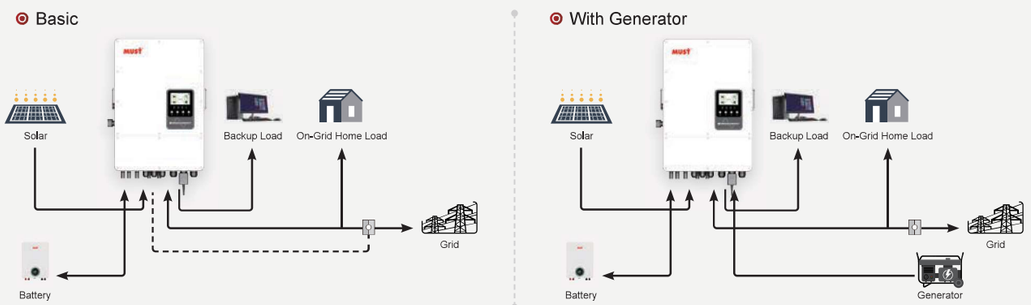
- Supports high-voltage batteries for efficient operation
- Maximum Charge and Discharge up to 50A
- IP65 Indoor & Outdoor use
- Colorful Touch Screen
- Supports Parallel Connection of Multiple Batteries
- Supports Charging and Discharging in 6 Time Periods
- Monitoring & Remote Upgrade with Wifi Module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

Back panel description



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

Solar system connection



MODEL	PH11-5KL3-EU-HV	PH11-6KL3-EU-HV	PH11-8KL3-EU-HV	PH11-10KL3-EU-HV	PH11-12KL3-EU-HV	PH11-15KL3-EU-HV	PH11-20KL3-EU-HV	PH11-25KL3-EU-HV
Rated power	5000W	6000W	8000W	10000W	12000W	15000W	20000W	25000W
BATTERY INPUT DATA								
Battery type	Lead-acid battery / Lithium battery							
Battery voltage range	160-700V							
Charging curve	4-stage adaptive with maintenance/Equalization							
Charging Strategy for Li-ion Battery	Self-adaption to BMS							
Over-current protection	Yes							
Over-temperature protection	Yes							
Maximum charging/discharging current	30A	30A	37A	37A	37A	37A	37A	50A
PV STRING INPUT DATA								
Max. DC Input Power	6500W	7800W	10400W	13000W	15600W	19500W	26000W	32500W
Rated PV Input Voltage	600V							
Maximum DC voltage	1000V							
Start-up Voltage	180V							
Minimum voltage for grid connection	200V							
Full Load DC Voltage Range	162~800V	195~800V	260~800V	325~800V	339~800V	423~800V	565~800V	480~800V
MPPT voltage range	150~800V							
Maximum input current	20A+20A	20A+20A	20A+20A	20A+20A	26A+20A	26A+20A	26A+20A	26A+26A
No.of MPP Trackers	2/4							
Input terminal type	H4/MC4							
AC INPUT/OUTPUT DATA								
Rated AC Input/ Output Power	5000W	6000W	8000W	10000W	12000W	15000W	20000W	25000W
Max. AC Input/ Output Power	5000W	6000W	8000W	10000W	12000W	15000W	20000W	25000W
Max. AC Input/ Output Current	8.4/8A	10/9.6A	13.4/12.8A	16.7/16A	18.2/17.4A	22.8/21.8A	30.4/29A	22.8/212.8A
Power Factor Adjustment Range	0.8 leading to 0.8 lagging							
Rated Input/Output Voltage	230/380VAC							
Rated Input/Output Grid Frequency Range	60Hz±5Hz/50Hz±5Hz							
Grid Type	Three Phase							
Total Harmonics Current Distortion (THDi)	<3% (of nominal power)							
Rated output power factor	1							
EFFICIENCY								
Max. Efficiency	97.5%							
Euro Efficiency	96.5%							
Euro Efficiency	99.5%							
PROTECTION								
Integrated	Islanding protection, PV input polarity reverse protection, insulationresistance detection, surge protection,leakage current monitoringprotection,output current protection, output short circuit protectionoutput overvoltage protection							
Surge Protection	DC Type III/AC Type III							
Overvoltage Category	DC Type II/AC Type III							
GENERAL DATA								
Operating Temperature Range (°C)	-25°C to +60°C, >45°C Derating							
Cooling	Fan cooling							
Noise (dB)	≤55dB							
Communication	USB/ WI-FI/ Ethernet(optional)							
Machine Dimension (W*H*D)(mm)	446*692*260 (excluding connectors and racks)							
Package Dimension (W*H*D)(mm)	567*816*404							
N.W(kg)	38							
G.W(kg)	42							
Protection Degree	IP66							
Installation Style	Wall-mounted							
Warranty	5 Years							
CERTIFICATION & STANDARDS								
NBT32004-2013/EN50549								

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MUST
Solar Power System

THREE PHASE HYBRID SOLAR INVERTER

PH1100 EU Series

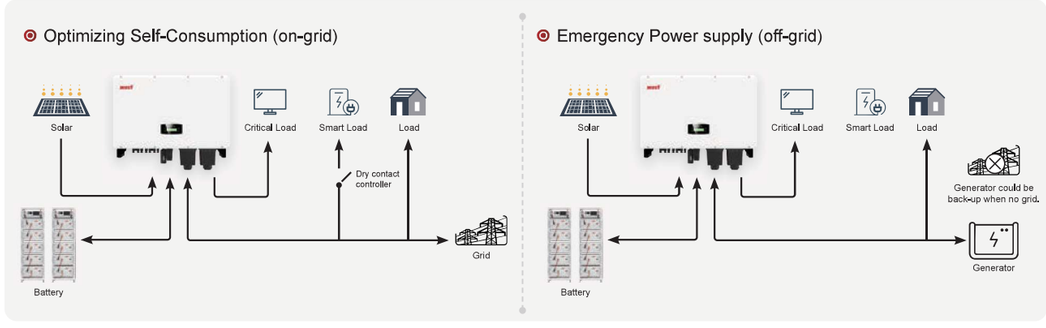
20~50KW | High Voltage | IP66

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

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

Application

Solar system connection



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

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ON GRID SOLAR INVERTER

PH5900 M Series

3~6KW | Single Phase | 230VAC

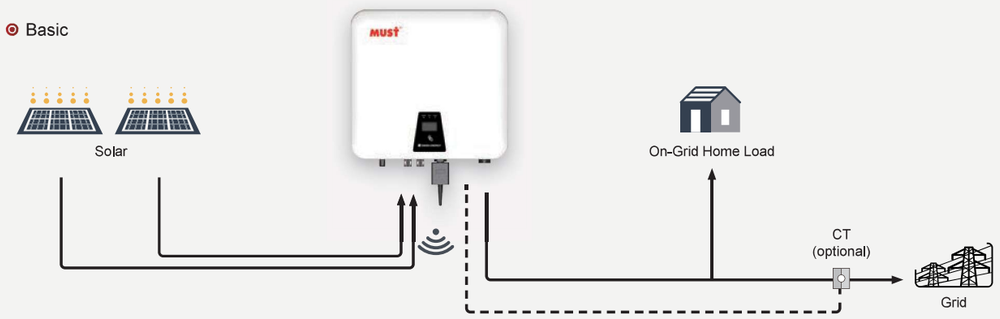
PH5900 M series PV inverters fully considers the needs of end customers. It is used to convert the DC generated by photovoltaic panels into AC, which is send to the grid in a single-phase mode. The product has excellent performance. The OLED is used for the status display of inverter, which can effectively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

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

Back panel description

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

Solar system connection



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

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

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ON GRID SOLAR INVERTER

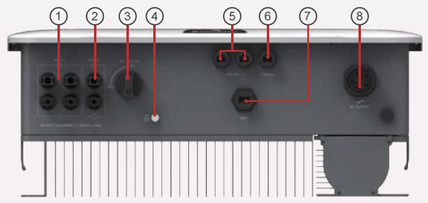
PH5900 TM Series

4~15KW | Three-phase | 380VAC

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

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

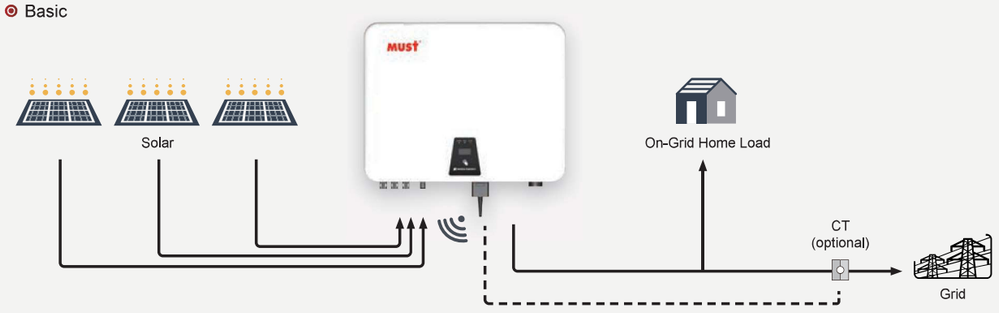
Back panel description



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

Solar system connection

Basic



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

CE-EMC+LVD(EN6100-6-3,2007,EN6100-6-1:2017+EN IEC62109-1:2010, EN IEC62109-2:2011)
IEC60529; EN50549-1; Poland Type A (NC RfG:2016,PSE:2018,PTPiREE:2021); IEC61727; IEC62116.

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

ON GRID SOLAR INVERTER

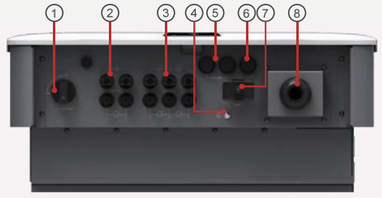
PH5900 TM Series

17~25KW | Three-phase | 380VAC

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

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

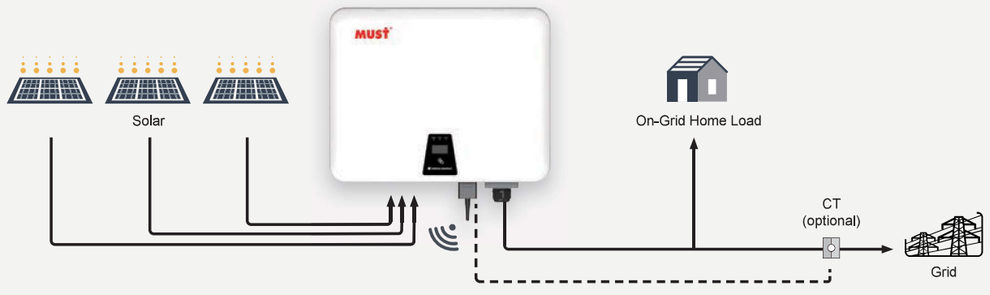
Back panel description



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

Solar system connection

Basic



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

CE-EMC+LVD(EN6100-6-3,2007,EN6100-6-1:2017+EN IEC62109-1:2010,EN IEC62109-2:2011)
IEC60529; EN50549-10

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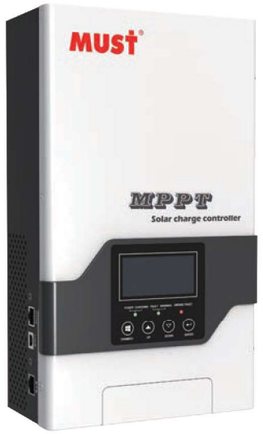
MUST
Solar Power System

MPPT SOLAR CHARGE CONTROLLER

PC1800F Series

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

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

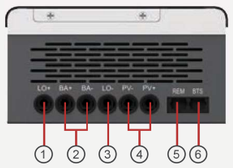


- LCD display , easy to operate on LCD screen
- Multi stage charging
  (3-stage charging , parallel charging and equalized charging function)
- Maximum Solar Input Voltage: 245V
- BTS – Battery remote temperature sensor terminal
- Enable to charge Li-thium, Gel , lead-acid battery
- With RS485 & USB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

Back panel description

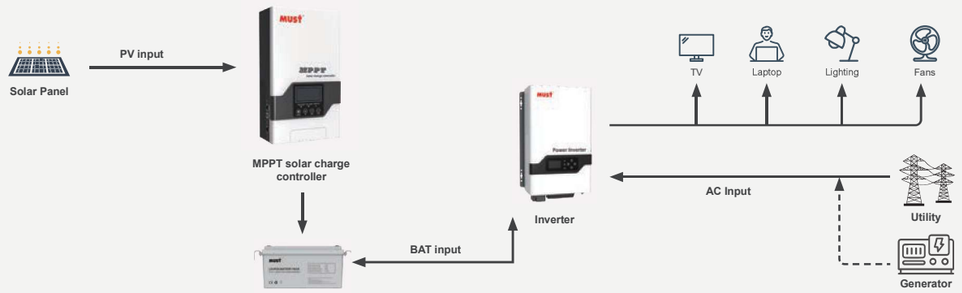
80A

100A



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

Solar system connection



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

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

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BALCONY SOLAR STORAGE SYSTEM

PM Series + HPC Series

Discover the perfect energy solution tailored for diverse living spaces. Whether you reside in an apartment with a sun-kissed balcony or own a detached home boasting a lush garden, the HPC+PM series is designed to fit seamlessly. Even if you're looking to harness solar power from a detached house balcony or rooftop, our product ensures optimal performance. Embrace a sustainable future, no matter where you live, and let the HPC+PM series illuminate every corner of your home.

Solar Panel

Microinverter

MPPT Charger+Lithium Battery

PM Series	Model	PM-800	PM-1000	PM-1200	PM-1600	PM-2000
	INPUT(DC)					
	Recommended solar panel input power(W)	275-530W× 2	275-530W× 2	275-530W× 2	275-530W× 4	275-530W× 4
	Number of DC input connections (group)	MC4 × 2			MC4 × 4	
	Maximum DC input voltage	60V			60V	
	Operating voltage range	16-60V			16-60V	
	Start-up voltage	22V			22V	
	MPPT tracking range	22-55V			22-55V	
	MPPT tracking accuracy	>99.5%			>99.5%	
	Maximum DC input current	14A*2	16A*2	18A*2	14A*4	16A*4
	**OUTPUT(AC)**					
	Max. continuous output power	800W	1000W	1200W	1600W	2000W
	Nominal output voltage	230V	230V	230V	230V	230V
	Operating voltage range	190-270V	190-270V	190-270V	190-270V	190-270V
	Max. continuous output current	3.47A	4.34A	5.12A	6.95A	8.69A
	Nominal output frequency	50Hz/ 60Hz				
	Output frequency range	47.5-50.5Hz/ 58.9-61.9Hz				
	Maximum units per branch	6set	6set	6set	2set	2set
	THD	<5%				
	Power factor	>0.99				
	Peak efficiency	96%				
	Protective class	Class I				
	PROTECTION FUNCTION					
	Protection	Over/under voltage protection, Over/under frequency protection, Anti-islanding protection, Over current protection, Over load protection, Over temperature protection				
	Protection grade	IP67				
	Working environment temperature	-40°C~ +65°C				
	Indication light quantity	Working status: Led light + Wi-Fi Signal Led light				
	Communication connection mode	Wifi/2.4G				
	Cooling method	Natural cooling(no fan)				
	Working environment	Indoor / outdoor				
	MECHANICAL SPECIFICATIONS					
	Machine Dimension (W*H*D)(mm)	227*195.5*42			342*225.4*50	
	Package Dimension (W*H*D)(mm)	/			/	
	N.W(kg)	2.52			5.2	
	G.W(kg)	/			/	
	Standard Warranty	10 years				
	CERTIFICATION & STANDARDS					
	VDE: VDE-AR-N 4105 CE-LVD: EN62109-1, EN62109-2 Rohs: IEC62321					

HPC1800 Series	Model	HPC1800
	GENERAL	
	Capacity	2330Wh
	Material of cell	LiFePO4
	Cycles	>6000@80%Capacity
	Storage Temperature	-20°C~50°C
	Operating Temperature	-10°C~45°C
	Battery Management System(BMS)	OVP, UVP, OCP, SCP, OTP, UTP, etc
	PHOTOVOLTAIC INPUT	
	Power	2*500W max
	Range of input voltage	15V~70V
	Max input current	2*10A
	**BATTERY OUTPUT**	
	Power	2*400W max
	Range of output voltage	42V~50.4V
	Max output current	11.9A
	BATTERY	
	Nominal voltage	44.8V
	Charging voltage	50.4V
	Max charging current	50A (1C)
	Max discharge current	50A (1C)
	Depth of discharge	90%
	MECHANICAL SPECIFICATIONS	
	Machine Dimension (W*H*D)(mm)	390*200*395
	Package Dimension (W*H*D)(mm)	490*300*490
	N.W (kg)	25.3
	G.W (kg)	28
	Standard Warranty	5years
	CERTIFICATION & STANDARDS	
	CE	

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LITHIUM IRON PHOSPHATE (LiFePO4) BATTERY

LP1500 Series

0.64~5.12KWH

The Must LP1500 SERIES LiFePO4 battery is fit for E-mobility, Energy Storage System, Defense & Security, telecom outdoor applications,renewable energy systems, and other harsh environment applications.

UN38.3

- 6000 cycles @ 80% DOD, 25 °C for effectively lower total of ownership cost.
- Safe, reliable and long life
- Support series or parallel connection
- Battery Management System (BMS) is incorporated against abuse.
- Superior charge/discharge efficiency
- Low maintenance batteries with stable chemistry.
- Extreme heat tolerance
- Lithium batteries provide more Wh/Kg while also being up to 1/3 the weight of its SLA equivalent.
- Support Bluetooth and APP to view battery information (optional)

Application

Technical Data		LP15-1250	LP15-12100	LP15-12150	LP15-12200	LP15-24100	LP15-24150	LP15-24200
Nominal Voltage		12.8V				25.6V		
Nominal Capacity		50Ah	100Ah	150Ah	200Ah	100Ah	150Ah	200Ah
Nominal energy		640Wh	1280Wh	1920Wh	2560Wh	2560Wh	1920Wh	5120Wh
Max. output power		0.6KW	1.2KW	1.2KW	1.2KW	2.5KW	2.5KW	2.5KW
Life Cycles		6000 cycles @ 80% DOD, 25°C						
Recommended Charge Voltage		14.6V				29.2V		
Recommended Charge Current		20A		40A		20A	40A	
End Of Discharge Voltage		10V				20V		
Standard Method	Charge	10A	20A	30A	40A	20A	30A	40A
	Discharge	25A	50A	75A	100A	50A	75A	100A
Maximum Continuous Current	Charge	25A	50A	75A	100A	60A	75A	100A
	Discharge	50A	100A	100A	100A	100A	100A	100A
BMS Cut-Off Voltage	Charge	15.4 V (3.85V/Cell)				30.8 V (3.85V/Cell)		
	Discharge	9.2 V (2s) (2.3V/Cell)				18.4 V (2s) (2.3V/Cell)		
Temperature	Charge	0~50°C						
	Discharge	-20~60°C						
Storage Temperature		-5~35°C						
Shipment voltage		≥12.8V				≥25.6V		
Case Material		ABS+PC						
Machine Dimension (W*H*D) (mm)		260*167*210	339*185*218	339*185*218	502*186*243	502*186*243	522*240*218	522*240*218
Package Dimension (W*H*D) (mm)	carton box	315*225*260	385*230*260	385*230*260	520*225*280	520*225*280	545*285*288	545*285*288
N.W (kg)		7.5	12	15	21	20	29	37
G.W (kg)	carton box	/	13	16	22	21	31	38

* Variations in dimensions and weights may occur due to production batches.

Charge Retention And Capacity Recovery Capability	Standard charge the battery, and then put aside at room temperature for 28d or 55°C for 7d, Charge retention rate≥90%, Recovery rate of charge≥90%
Warranty	5 years
Certification & Standards	CE-EMC (EN 61000-6-3+A1+AC EN IEC 61000-6-1); UN38.3/ MSDS

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LITHIUM IRON PHOSPHATE (LiFePO4) BATTERY

LP1600 Series

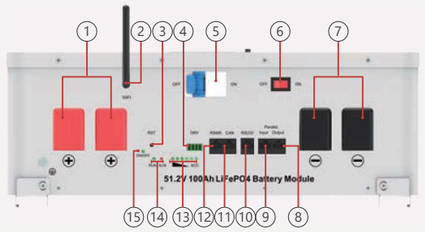
2.56~16.384KWH | WIFI

The LP1600 Series offers a versatile and reliable power solution. Combine up to 40 units for energy capacities ranging from 2560Wh to 15360Wh. With WiFi Remote Monitoring, stay connected and in control. Whether it's wall-mounted convenience, stacked-mounting (up to 5 units) for space efficiency, or rack-mounted for industrial power management, this series offers seamless adaptability.

UN38.3

- 3-in-1: Wall-mounted, Stacked-mounted, Rack-mounted(optional)
- Vertical-mounted only for LP16-48300 & LP16-48320
- Large capacity, high power output
- Safest lithium iron phosphate battery cell with high energy density
- Modular design: supports up to 40 units in parallel
- Support CAN & RS485 communication with mainstream inverters
- Local monitoring via LCD monitor
- Built-in WiFi Smart BMS Module

Back panel description



1. BAT+
2. WiFi
3. RST port
4. DRY port
5. Air circuit breaker
6. Start buttons
7. BAT-
8. Parallel output port
9. Parallel input port
10. RS232 communication port
11. CAN communication port
12. RS485 communication port
13. SOC indicator
14. Status indicator
15. ON/OFF indicator

Installation method

Technical Data		LP16-24100	LP16-24200	LP16-24300	LP16-48100	LP16-48200	LP16-48300	LP16-48320
Nominal Voltage		25.6V			51.2V			
Nominal Capacity		100Ah	200Ah	300Ah	100Ah	200Ah	300Ah	320Ah
Nominal energy		2560Wh	5120Wh	7680Wh	5120Wh	10240Wh	15360Wh	16384Wh
Max. output power		2.5KW	3.5KW	5KW	5KW	7.5KW	10KW	7.5KW
Life Cycles		6000 cycles @ 80% DOD, 25°C						
Recommended Charge Voltage		29.2V			58.4V			
Recommended Charge Current		20A	40A	60A	20A	40A	60A	60A
End Of Discharge Voltage		22V			44V			
Standard Method	Charge	20A	40A	60A	20A	40A	60A	60A
	Discharge	50A	100A	150A	50A	100A	150A	100A
Maximum Continuous Current	Charge	100A	150A	200A	100A	150A	200A	150A
	Discharge	100A	150A	200A	100A	150A	200A	150A
BMS Cut-Off Voltage	Charge	29.2 V (3.65V/Cell)			58.4 V (3.65V/Cell)			
	Discharge	22.0V (2s) (2.75V/Cell)			44.0V (2.75V/Cell)			
Temperature	Charge	0~50°C						
	Discharge	-20~60°C						
Storage Temperature		-5~35°C						
Shipment Voltage		≥25.6V			≥51.2V			
Safety Function		Over-charge, Over-discharge, Over-current, Low/High-temperature, Short-circuit Protections						
Module Parallel		Up to 40 units						
Communication		CAN2.0/RS232/RS485						
IP Protection level		IP21						
Case Material		SPCC						
Installation Mode		Wall-mounted, Stacked-mounted, Rack-mounted(optional)					Vertical-mounted	
Machine Dimension (W*H*D) (mm)		442*485.5*177	442*486.5*250	442*495*230	442*625.5*177	442*686.5*250	490*923*265	
Package Dimension (W*H*D) (mm)	carton box	557*227*547	557*300*547	/	688*227*557	non	/	
	wooden box	555*340*565	555*410*565	600*570*405	700*570*350	759*405*569	1000*450*565	
N.W (kg)		27	44	68	45	80	117	
G.W (kg)	carton box	30	48	/	48	non	/	
	wooden box	40	57	85	58	97	137	
* Variations in dimensions and weights may occur due to production batches.								
Charge Retention And Capacity Recovery Capability		Standard charge the battery, and then put aside at room temperature for 28d or 55°C for 7d, Charge retention rate≥90%, Recovery rate of charge≥90%						
Warranty		5 years						
Certification & Standards		CE-EMC (EN 61000-6-3: 2007+A1: 2011+AC: 2012 EN IEC 61000-6-1: 2019) IEC62619-1:2018; IEC62619:2022; IEC62619:2017; UN38.3/ MSDS						

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LITHIUM IRON PHOSPHATE (LiFePO4) BATTERY

LP2800 Series

5.12/10.24/15.36KWH | WiFi | IP65

The LP2800 Series wall mounted Lithium battery (LiFePO4 Battery) solutions are highly integrated, deep cycle backup power solutions for your solar home energy storage system. Energy capacities ranging 5120Wh,10240Wh or 15360Wh with rich experience and advanced techniques, the product has the features of the fashionable design, high energy, high power density, long service life, and easiness of installation and expansion.

UN38.3

- Floor-mounted/ Wall-mounted
- Standard warranty: 10 years
- 6000 cycles @ 80% DOD, 25°C
- Large capacity, high power output
- Safest lithium iron phosphate battery cell with high energy density
- 15 Units in parallel maxium
- IP65 protection for both indoor and outdoor use
- Support CAN & RS485 communication with mainstream inverters
- Easy-To-Read monitoring
- Integrated battery management system (BMS)
- Built-in WiFi Smart Module
- Battery parallel kit can be used to expand battery capacity more conveniently (optional; max. 15pcs)

Application

Technical Data	LP28-48100	LP28-48200	LP28-48300
ELECTRICAL			
Nominal Voltage	51.2V		
Nominal Capacity	100Ah	200Ah	300Ah
Operating Voltage Range	43.2 ~ 56.8V		
Max. Charging Current	100A		
Max. Output Power	5KW	6KW	10KW
GENERAL			
Nominal Energy	5120Wh	10240Wh	15360Wh
Usable Energy	5120Wh	10240Wh	15360Wh
Scalability	Max. 15 in parallel (76.8kWh)	Max. 15 in parallel (153.6kWh)	Max. 15 in parallel (230.4kWh)
Design life	10+ Years at 25°C	10+ Years at 25°C	10+ Years at 25°C
Cycles life	>6000 at 25°C	>6000 at 25°C	>6000 at 25°C
OPERATING			
Charge Temperature	0~50°C		
Discharge Temperature	-20~60°C		
Storage Temperature	-5~35°C		
Humidity	5%~95% RH (No Condensation)		
Altitude	≤ 4000m		
Ingress Protection	IP65		
Install location	Indoor or outdoor without sunlight exposure		
Installation Mode	Floor-mounted/ Wall-mounted	Floor-mounted	Floor-mounted
Communication Interface	CAN/ RS485/ WIFI/ BLE		
Compatible Inverters	Compatible with over 25 mainstream inverter brands		
Warranty	10 years		
MECHANICAL			
Machine Dimension (W*H*D (mm)	500*620*175	500*892.5*150	500*980*250
Package Dimension (W*H*D) (mm) (wooden box)	/	/	1050*435*625
N.W (kg)	≈51	≈92	/
G.W (kg) (wooden box)	/	/	/

* Variations in dimensions and weights may occur due to production batches.

CERTIFICATION & STANDARDS

UN38.3, EN 61000-6-1, EN 61000-6-3, IEC62619

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LITHIUM IRON PHOSPHATE (LiFePO4) BATTERY

LP2900 Series

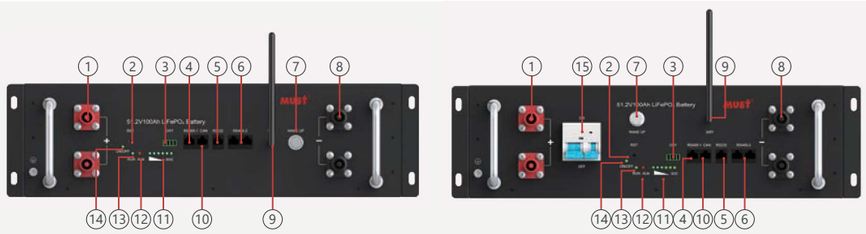
5.12-10.24KWH | WiFi

This battery is designed and manufactured by MUST for energy storage applications. It has long service life, high safety, flexible installation, strong expansibility and strong communication ability. It can be used in conjunction with MUST or many other brands of on/off grid inverters and EMS, and can also be equipped with WIFI modules to achieve wireless transmission and communication between devices, forming a complete energy storage system. The design of the battery meets the requirements of UN38.3, CE, IEC62619 and other standards for energy storage battery.

UN38.3

- 19 inches rack standard
- Standard warranty: 10 years
- A simpler stacking bracket can be used to form a battery system (optional)
- Built-in WiFi Smart BMS Module
- 7000 cycles @ 80% DOD, 25°C
- Large capacity, high power output
- Safest lithium iron phosphate battery cell with high energy density
- Supports up to 16 units in parallel
- High integration, saving installation cost and simplifying the wiring
- Built-in circuit breaker for over-current protection
- Perfect compatibility: support CAN & RS485 communication with mainstream inverters

Back panel description



[EU Verison] [SA/NA Version]

1. Positive pole connector*2
2. Reset switch
3. Dry point signal
4. RS485-1 communication port
5. RS232 communication port
6. RS485-2 communication port
7. Wake up button
8. Negative pole connector*2
9. WiFi antenna
10. CAN port
11. SOC indicators
12. Alarm indicators
13. RUN indicators
14. ON/OFF indicators
15. air circuit breaker

Technical Data		LP29-48100	LP29-48200
Nominal Voltage		51.2V	
Nominal Capacity		100Ah	200Ah
Nominal Energy		5120Wh	10240Wh
AC Internal Impedance		≤30.0mΩ	
Standard Charging	Constant current	50.0A	100.0A
	Constant voltage	56.8V	56.8V
	End current (Cut off)	5A	10A
Standard Discharging	Constant current	50A	150A
	Cut off voltage	43.2V	43.2V
Charging Voltage Range		56.8~57.6V	56.8~57.6V
Max. Continuous Charging Current		100.0A	150.0A
Max. Output Power		5KW	7.5KW
Parallel connection		Up to 16 units	
Communication Port		RS485, CAN, WIFI(optional)	
Power cable connectors		ESS-120A-25-B/S	
Operation Temperature	Charging temperature	0~50°C	
	Discharging temperature	-20~60°C	
	Relative Humidity	5%~95% (No Condensation)	
	Storage Temperature	-5°C~35°C	
Installation Mode		Rack (19") installation	Rack (19") installation
Machine Dimension (W*H*D (mm)		440*133*470	/
Package Dimension (W*H*D) (mm)		/	/
N.W (kg)		≈44.5	/
G.W (kg)		/	/
* Variations in dimensions and weights may occur due to production batches.			
Altitude		≤4000m	
Warranty		10 years	
Certification & Standards		CE-EMC(EN 61000-6-3: 2007+A1: 2011+AC: 2012 EN IEC 61000-6-1: 2019); IEC62619:2017; IEC62619:2022; UN38.3/ MSDS	

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

LV BATTERY SYSTEM

LP3000 Series

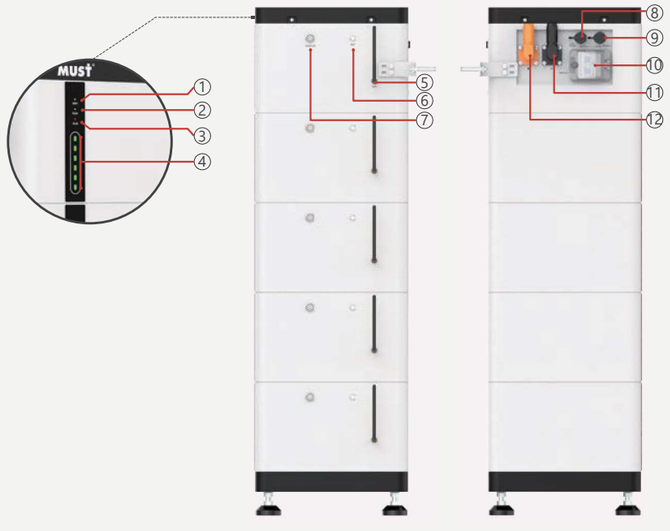
5.12~40.96KWH | WiFi | IP65

The LP3000 series is an advanced lithium iron phosphate (LFP) battery designed for solar energy storage and backup power applications. With its safe, long-lasting LFP chemistry, intelligent battery management system, and robust design, this battery provides an ideal storage solution for residential and commercial renewable energy systems.

UN38.3

- Max Continuous power 10kw
- Standard warranty: 10 years
- Peak power 12kw@30S
- Easy installation with modular and stacked design, just plug and play
- Real-time monitoring of battery charging and discharging, online system updates and maintenance
- IP65 protection level design Suitable for indoor and outdoor
- Excellent safety of cobalt free LiFePO4 battery
- Latest LFP technology: >7000 cycles @ 80% DOD, 25 °C
- Remote firmware upgrade
- Independent BMS system for each module
- Compatible with most popular inverter models (more than 15) on the market.
- Stack up to 8 batteries(8*5.12kwh), parallel up to 16 batteries (max capacity: 81.92kWh)
- Built-in WiFi Smart Module

Back panel description



1. WiFi indicators
2. RUN indicators
3. Alarm indicators
4. SOC indicators
5. WiFi antenna
6. Reset button
7. Wake up button
8. CAN/RS485 communication port
9. RS485-2 communication port
10. Air circuit breaker
11. Negative pole connector
12. Positive pole connector

Datesheet	LP30-5.1	LP30-10.2	LP30-15.3	LP30-20.4	LP30-25.5	LP30-30.6	LP30-35.7	LP30-40.8
System Demo								
Battery Module	LP30-48100							
Number of Modules	1	2	3	4	5	6	7	8
Energy Capacity	5.12kwh	10.24kwh	15.36kwh	20.48kwh	25.6kwh	30.72kwh	35.84kwh	40.96kwh
Usable Capacity	4.91kwh	9.83kwh	14.75kwh	19.66kwh	24.58kwh	29.49kwh	34.41kwh	39.32kwh
Max. output power	5KW	10KW	10KW	10KW	10KW	10KW	10KW	10KW
Dimension (W*D*H)(mm)	620*360*360	620*360*570	620*360*780	620*360*1090	620*360*1200	620*360*1410	620*360*1620	620*360*1830
Weight(kg)	62	112	162	212	262	312	362	412
* Variations in dimensions and weights may occur due to production batches.								
Cycle Life	7000 cycles @ 80% DOD, 25 °C							
Maximum Charge Current	50A	75A	100A	125A	150A	175A	200A	200A
Maximum Discharge Current	100A	200A	200A	200A	200A	200A	200A	200A
GENERAL								
Battery Type	Cobalt Free Lithium Iron Phosphate (LFP)							
Nominal Voltage	51.2V							
Operating voltage Range	44.8~56.8V							
IP Protection	IP65							
Install location	Indoor or outdoor without sunlight exposure							
Installation Mode	Floor installation, Stackable							
Operation Temperature	Battery discharge: -20~60°C, battery charge: 0~ 50°C							
FEATURES								
BMS Monitoring Parameters	SOC, System voltage, current, cell voltage, cell temperature, PCBA temperature measurement ,SOH							
Communication Port	CAN/RS485/BLE/WIFI							
Warranty	10 years (standard warranty) (25 °C)							
CERTIFICATION								

CE/ IEC62619 / UL1973 / UL9540A / UN38.3

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MUST
Solar Power System

ESS HIGH VOLTAGE BATTERIES

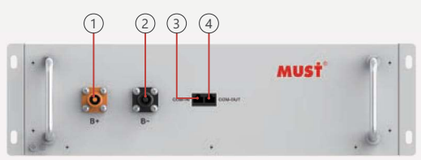
HV2900 Series

20.4-348.1KWH | 100Ah

The HV2900 is a high-performance, scalable battery storage module. The modular design allows for maximum flexibility, making it suitable for a broad range of storage applications.
Additional batteries can be installed in series, allowing for a maximum storage capacity of 348.1kWh. Installation is easy, with a plug and play solution that can save valuable time for installers.

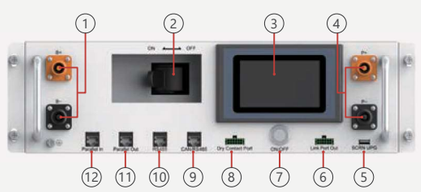
- 5.12kWh Capacity
- Single cluster 87kWh, scalable to 348.1kWh
- 6000 cycles @ 80% DOD, 25°C
- 100% Deep Charge or Discharge
- Wide Temperature Tolerance
- CAN/RS485 Communication
- High Voltage range

Back panel description



[HV2900]

1. Positive pole connector
2. Negative pole connector
3. Communication Input
4. Communication Output



[HV BOX]

1. Battery Connector
2. Air Breaker
3. LCD screen
4. PV connector
5. Scrn UPG
6. Link port out
7. Wake up button
8. Dry contact port
9. RS485/ CAM communication port
10. RS485 communication port
11. Parallel out port
12. Parallel in port

Technical Data		HV29-20.4	HV29-30.7	HV29-40.9	HV29-51.2	HV29-61.4	HV29-76.8	HV29-87.1
Battery Type		LiFePO4						
Battery Module		HV-BOX HP2900*4	HV-BOX HP2900*6	HV-BOX HP2900*8	HV-BOX HP2900*10	HV-BOX HP2900*12	HV-BOX HP2900*15	HV-BOX HP2900*17
Nominal Capacity		20480Wh	30720Wh	40960Wh	51200Wh	61440Wh	76800Wh	87040Wh
Max. output power		20KW	30KW	40KW	50KW	60KW	75KW	85KW
Nominal Voltage		204.8V	307.2V	409.6V	512.0V	614.4V	768.0V	870.4V
Operating Voltage		172.8~230.4V	259.2~345.6V	345.6~460.8V	432.0~576.0V	518.4~691.2V	648.0~864.0V	734.4~979.2V
Recommend Discharge Current		50A						
Max.Charge/ Discharge Current		100A						
Peak Discharge Current		120A@30s						
Battery Module Capacity		100Ah						
Built-in Circuit Breaker		125A						
Charge Efficiency		99%						
Battery Roundtrip Efficiency		95%						
Cycle Life		6000 cycles @ EOL 70%, 25 °C, 0.5C 0.5C charging/discharging						
Communication		CAN2.0, RS485						
Status Indicator		HV BOX : LCD						
GENERAL								
IP Rating of Enclosure		IP20						
Warranty		10 Years						
Installation Location		Indoor Rack Mounting						
Operating Temperature		Charge: 0~50°C; Discharge: -20~60°C						
Storage Temperature		-5°C~35°C						
Recommend Depth of Discharge		90%						
Humidity		5 ~ 95% (No Condensing)						
Altitude		Max. 3,000m						
MECHANICAL								
Machine Dimension (W*H*D (mm)	HV BOX	442*133*480						
	HP2900	442*133*520						
System Cabinet Dimension (W*H*D) (mm)	HV2900	550*1040*700	550*1390*700	550*1850*800	1150*1220*700	1150*1390*700	1150*1570*800	1150*1850*700
N.W (kg)	HV BOX	15						
	HV2900	206	311	405	506	610	755	870
G.W (kg)	HV BOX	/						
	HV2900	/	/	/	/	/	/	/
CERTIFICATION & STANDARDS								
Safety		IEC62619						
EMC		EN IEC 61000-6-1/2/3/4						
Transportation		UN38.3						

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PORTABLE SOLAR POWER STATION

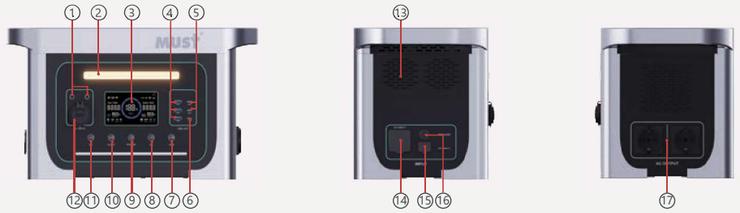
ECO181 Series

1~1.5KW | 24V,48V | 110V,230V

MUST portable power stations are battery-powered generators that keep your gear charged up and ready wherever you are. From family camping to home backup, get yourself convenient power without the noise, fumes, and fuss of a traditional gas generator.

- Portable and easy carry
- Huge AC output
- Seamless 24/7 UPS, Plug and play home backup power
- Multiple Charging Ways Available: AC Charging, Solar Charging, Car Charging

Back panel description



1. DC output port
2. LED light
3. LCD display screen
4. USB-A output ports
5. USB-C output ports (60W)
6. USB-C output ports (18W)
7. USB output switch
8. AC main switch
9. Main power switch
10. LED switch
11. DC output switch
12. Car charger DC output port
13. Air inlet & outlet
14. AC input port
15. Solar input port
16. Overload protection switch
17. AC output ports

Application

MODEL	EM1024S	EM1548S
Nominal Battery System Voltage	24VDC	48VDC
INVERTER OUTPUT		
Rated power	1000W	1500W
Output voltage waveform	Pure Sine Wave	
Output voltage regulation	110V±5%; 230V±5%	
Output frequency	50Hz / 60Hz (±0.2Hz)	
Peak efficiency	2000W (max)	3000W (max)
Standby Consumption	110V< 12W; 220V< 25W	
PV INPUT		
Max solar power input	600W	1000W
PV max charging current	25A	20A
Max efficiency	95.0% (max)	
PV array open circuit voltage	60V (max)	80V (max)
PV Array MPPT Voltage Range	12~60V	12~80V
AC INPUT		
AC input voltage	110VAC ±5%; 230VAC ±5%	
Acceptable input voltage range	90-130VAC; 180-260VAC	
Nominal input frequency	50Hz / 60Hz (Auto detection)	
Transfer time	≤15ms	
AC CHARGE		
Charging current @ Nominal input voltage	600W@110V; 600W@220V	1000W@110V; 1000W@220V
Charging Algorithm	Equalize charge - Trickle charge	
OUTPUT		
AC output	110Vac (Socket *3pcs); 230Vac (Socket *2pcs)	
Car charger output (cigarette lighter)	120W	
DC output (DC5521)	60W*2	
USB-C(Type-C)	PD18W*1+PD60W*2	
USB-A(USB)	QC18W*3	
LED (white light)	2W	
LITHIUM BATTERY		
Energy	1280Wh	1433Wh
Nominal voltage	25.6V	51.2V
Battery capacity	50Ah	28Ah
Protection board	100A	80A
Standard charging & discharge current	Charging@25A; discharge@50A	Charging@20A; discharge@40A
Operation temperature	-10°C to 45°C	-10°C to 45°C
Storage temperature	-10°C to 55°C	-10°C to 55°C
MECHANICAL SPECIFICATIONS		
Machine Dimension (W*H*D)(mm)	440*233.2*263.3	
Package Dimension (W*H*D)(mm)	504*314.5*345	
N.W(kg)	17.9	19.5
G.W(kg)	/	/
Standard Warranty	Inverter: 2 years ; Lithium battery: 5 years	
CERTIFICATION & STANDARDS		

CE-EMC+LVD (EN55032+A11, EN55035+A11, EN61000-3-2+A1, EN61000-3-3+A1, EN IEC62368-1+A11)
Rohs2.0(2011/65/EU)(2015/863/EU)

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PORTABLE SOLAR POWER STATION

HBP1800 OS Series

1.2~3KW | 12V,24V | 230V

The HBP1800 OS series is specifically designed for office use, providing a reliable and efficient power source. However, it is also versatile enough to power various household appliances, including phone, laptops, stereos, and desktop computers. Equipped with a built-in LiFePO4 battery, the HBP1800 OS has a capacity of either 1280~3072Wh, Multiple DC output ports for Multiple Devices, Plug & play, making it an ideal portable power station for a range of needs.

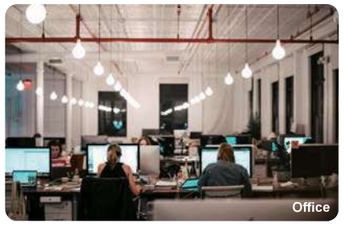
- Energy storage 1280~3072wWh Optional
- 6000+ Charge cycle @ 80% DOD,25°C
- 1~3KW Pure sine wave inverter
- Multiple DC output ports for Multiple Devices, Plug & play
- Flexible Recharging Ways (AC/ Solar)
- Built in Multi safety protection

Back panel description

1.2KW

1. LCD Screen
2. LED Light
3. Operation button
4. Power Switch
5. DC12V/1A output(5521) ×2pcs
6. USB-A 5V ×4pcs
7. USB TypeC (5V 2.1A)
8. Input breaker
9. USB port
10. AC input
11. Wifi PORT
12. PV input
13. Battery protect
14. AC output ×3pcs

Application



MODEL		HBP18-1012 OS	HBP18-2024 OS	HBP18-3024 OS
Nominal Battery System Voltage		12VDC	24VDC	24VDC
INVERTER OUTPUT				
Rated power		1200W	2000W	3000W
Output voltage waveform		Pure Sine Wave		
Output voltage regulation		230V ±5%		
Output frequency		50Hz / 60Hz (±0.2Hz)		
Peak efficiency		90%		
Nominal DC input voltage		12V (±0.3)	24V (±0.3)	24V (±0.3)
Standby Consumption		< 25W		
PV INPUT				
Max solar power input		900W	1800W	1800W
PV max charging current		60A (±3A)	60A (±3A)	60A (±3A)
Combined charging current		70A (±4A)	70A (±4A)	80A (±4A)
Max efficiency		98.0% max		
PV array open circuit voltage		105VDC	160VDC	160VDC
PV Array MPPT Voltage Range		15~105V	30~128VDC	30~128VDC
AC INPUT				
AC input voltage		230Vac ±5%		
Acceptable input voltage range		90-280VAC		
Nominal input frequency		50Hz / 60Hz (Auto detection)		
Transfer time		10ms typical (UPS, VDE); 20ms typical (APL)		
AC CHARGE				
Charging current @ Nominal input voltage		20A (±4A)	40A/(±4A)	60A (±4A)
Charging Algorithm		4-step (Li)		
OUTPUT				
AC output		230Vac (Socket *3pcs)		
USB TypeC		DC output*1pcs		
USB-A 12V/1A		DC output*2pcs		
USB-A 5V		DC output*4pcs		
LITHIUM BATTERY				
Energy		1280Wh	2560Wh	3072Wh
Nominal voltage		12.8V	25.6V	25.6V
Battery capacity		100Ah	100Ah	120Ah
Protection board		100A	100A	150A
Standard charging & discharge current		50A	50A	50A
Operation temperature	Charge	0°C to 45°C		
	Discharge	-10°C to 60°C		
MECHANICAL SPECIFICATIONS				
Machine Dimension (W*H*D)(mm)		225*295*363	275*324*403	288*348*490
Package Dimension (W*H*D)(mm)		440*305*355	485*356*420	570*370*445
N.W(kg)		17	24	33
G.W(kg)		18.5	26	36
Standard Warranty		Inverter: 2 years ; Lithium battery: 5 years		
CERTIFICATION & STANDARDS				

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

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ALL-IN-ONE ESS

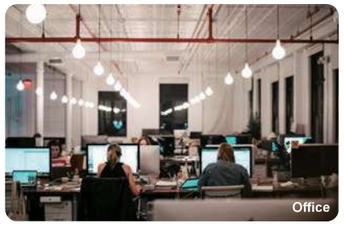
HBP1800 AT Series

3~5.2KW | 24V,48V | 2560wh, 3072wh, 5120wh

The HBP1800 AT power station is an exceptional device that boasts a 2560wh,3072Wh or 5120Wh LiFePO4 battery pack and a pure sine wave solar inverter rated at 3000W or 5200W. Unlike its competitors, this power station is capable of powering your entire party, family camping trip, cabin workshops, or even your entire home for up to two days during unexpected power outages. With 11 outlets and a maximum capacity, it can easily power all your devices, including laptops, air conditioners and more.

- 2560wh/ 3072Wh / 5120Wh LiFePO4, 6000+ Cycles @ 80% DOD,25°C
- 3KW/5.2KW Pure Sine Wave Output
- Flexible UPS Mode(24/7)
- Movable Power Station
- Off-grid Energy Storage
- Multiple Devices Can Be Loaded Simultaneously
- Flexible Recharging Way To Keep Your HBP1800 AT Always On
- App Remote Control

Application



Features higher capacities for greater compatibility with more power-hungry devices, and the latest in USB-C Power Delivery capable of charging larger USB devices like laptops.

Includes pre-installed solar charging optimization module that functions as a maximum power point tracker (MPPT), resulting in up to 40% faster charge times.

With LiFePO4 lithium cells, known for stability and safety, monitored by a state-of-the-art battery management system that prevents over-charge, over-current, and short circuiting.

Built in Multi safety protection that include short circuit, overload and over-temperture and error code reporting.

MODEL		HBP18-3024 AT	HBP18-5248 AT
INVERTER			
Rated power		3000W	5200W
Output voltage waveform		Pure sine wave	
Output voltage regulation		230Vac ±5%	
Output frequency		50Hz / 60Hz (±0.2Hz)	
Peak efficiency		90%	93%
Nominal DC input voltage		24VDC	48VDC
Standby Consumption		< 25W	
PV INPUT			
Max solar power input		1800W	5000W
PV max charging current		60A	100A
Combined charging current		80A	140A
Max efficiency		98.0% max	
PV array open circuit voltage		160VDC	450VDC
PV Array MPPT Voltage Range		30~128VDC	150~430VDC
AC INPUT			
AC input voltage		230Vac ±5%	
Acceptable input voltage range		90~280VAC	170~280VAC
Nominal input frequency		50Hz / 60Hz (Auto detection)	
Transfer time		10ms typical (UPS, VDE); 20ms typical (APL)	
AC CHARGE			
Charging current @ Nominal input voltage		60A	80A
Charging Algorithm		4-step (Li)	
OUTPUT			
AC output		230Vac (Socket *4pcs)	
Type-C		DC output*1pcs	
USB (5V 2.4A)		DC output*4pcs	
USB (12V 1A)		DC output*2pcs	
LITHIUM BATTERY			
Energy		2560Wh	3072Wh	5120Wh
Nominal voltage		25.6V	25.6V	51.2V
Battery capacity		100Ah	120Ah	100Ah
Protection board		100A	150A	100A
Standard charging & discharge current		50A	50A	100A
Operation temperature	Charge	10~45 °C		
	Discharge	-20~55 °C		
MECHANICAL SPECIFICATIONS			
Machine Dimension (W*H*D)(mm)		277*509*452	302*628*493
Package Dimension (W*H*D)(mm)		380*665*555	406*810*600
N.W(kg)		33	37	56
G.W(kg)		39	43	65
Standard Warranty		Inverter: 2 years ; Lithium battery: 5 years	
CERTIFICATION & STANDARDS			

*coming soon

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ALL-IN-ONE ESS

HBP1900 VPM Series

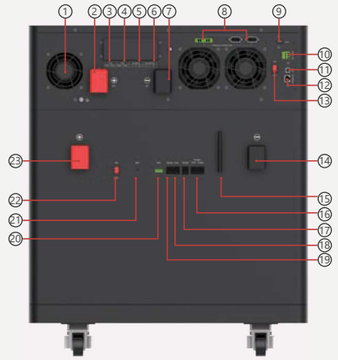
3.5~10KW | 24V/48V | 3200Wh~15360Wh

The HBP1900 VPM series integrates a high-power inverter with a large-capacity lithium battery, available in wall-mounted, floor-mounted (3.5K/5.5K), and stacked (8K/10K) designs. Its intelligent management system ensures efficient energy dispatch, extended battery life, and safe, stable operation. Ideal for residential and small commercial use, it supports renewable energy, energy savings, and backup power.

- Color display screen design
- High power inverter, high capacity A-grade lithium battery
- Multiple designs: all-in-one wall-mounted & stackable tower type
- WiFi functionality: Built-in WiFi (for 3.5–5.5KW) / External WiFi (for 8–10KW)
- Rechargeable lithium batteries use safe lithium cell LiFePO4
- The intelligent BMS system adopts the latest battery communication system
- Reduce electricity bills and increase your energy needs for electrical self-sufficiency.

Back panel description

8~10KW



1. Fan
2. BAT+ (inverter mode)
3. PV1 input
4. PV2 input
5. AC input
6. AC output
7. BAT- (inverter mode)
8. Parallel connection
9. WiFi port
10. Dry Contact
11. USB port
12. Power on/off switch
13. RS485 communication port
14. BAT- (battery mode)
15. WiFi antenna
16. Parallel port
17. RS232 communication port
18. CAN port
19. RS485 communication port
20. DRY port
21. RST port
22. Power on/off switch
23. BAT+ (battery mode)

Application

MODEL		HBP19-3524 VPM	HBP19-5548 VPM	HBP19-8048 VPM	HBP19-10048 VPM
Nominal Battery System Voltage		24VDC		48VDC	
INVERTER OUTPUT					
Rated power		3500VA / 3500W	5500VA / 5500W	8000VA / 8000W	10000VA / 10000W
Waveform		Pure sine wave			
AC Voltage Regulation (Batt.Mode)		230VAC±5%(Setting)			
Inverter Efficiency(Peak)		90~93%		92%	
Transfer Time		10ms (UPS / VDE4105) / 20ms (APL)		10ms (UPS / VDE4105) / 20ms (APL)/50ms(For parrell	
AC INPUT					
Voltage		230VAC±5%			
Selectable Voltage Range		170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)		170~280VAC(UPS) / 90~280VAC(APL) / 184~253VAC(VED4105)	
Frequency Range		50Hz / 60Hz(Auto sensing)			
SOLAR CHARGER & AC CHARGER					
Maximum PV Array Open Circuit Voltage		400VDC	450VDC	500VDC(singl model)/ 450V(parrell model)	
Maximum PV Input Current		18A	28A	18A*2	27A*2 (Max 40A)
Charging Algorithm		4-Step (Li)			
Maximum PV Array Power		4000W	6000W	4000W*2	5000W*2
PV Array MPPT Voltage Range(Typ.)		30~320VDC	60~360VDC	90~450VDC(singl model)/ 90~430V(parrell model)	
Maximum Solar Charge Current		100A	100A	120A	150A
Maximum AC Charge Current		60A	100A	120A	150A
Maximum Charge Current		100A	100A	120A	150A
LITHIUM BATTERY					
Energy		3200WH	5120WH	15360WH	15360WH
Nominal voltage		25.6V	51.2V	51.2V	51.2V
Battery capacity		125Ah	100Ah	300Ah	300Ah
Protection board		150A	100A	200A	200A
Standard charging & discharge current		125A	100A	200A	200A
Cycle life		6000+ Charge cycle @ 80% DOD,25°C			
Operating temperature	Charge	0~45°C			
	Discharge	-10~60°C			
MECHANICAL SPECIFICATIONS					
Machine Dimension (W*H*D)(mm)		486*640*160	486*850*160	Inverter: 600*180*470; Battery: 600*568*470	
Package Dimension (W*H*D)(mm)		740*260*600	950*260*600	Inverter: 627*252*585; Battery: 700*710*590	
N.W(kg)		/	/	/	/
G.W(kg)		/	/	/	/
OTHER					
Installation Mode		Wall-mounted/ Floor-mounted	Wall-mounted/ Floor-mounted	Floor-mounted	Floor-mounted
Humidity		5% to 95% Relative humidity (Non-condensing)			
Storage Temperature		-10~45°C			
Communication Interface		USB/WIFI			
Standard Warranty		Inverter: 2 years ; Lithium battery: 5 years			
CERTIFICATION & STANDARDS					
CE-EMC					

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HOME SOLAR ENERGY STORAGE SOLUTION

HBP1100 PRO Series

3.6~6KW | 5120Wh/10240Wh/15360Wh | PV 500V

HBP1100 PRO energy storage system is an all-in-one solution, which integrated a hybrid solar inverter & lithium battery in to one unit.
This model combines functions both off grid and on grid which could manage your solar home battery storage easily.
Flexible modular system could be designed based on house dailyconsumption.
ESS is easily to select the priority of power supply, it allows you to store the energy to self-consumption and sell to the grid. ESS is the best emergency energy solution for villas, apartments,hotels,shopping centers.

- Rated power 3.6~6KW
- Lithium Battery Modular 5120Wh/10240Wh/15360Wh
- Self-consumption and feed-back to the grid
- Multiple Working Mode: Energy storage mode, load priority mode, power selling mode,and a high-efficiency mode (six time periods are provided for setting different modes to achieve peak-shaving and valley-filling, maximizing economic benefits)
- Inside BMS,support to be charged and discharged according to bms requirements
- Support to connect with generator
- Automatic line-to-battery switch over

MODULAR DESIGN
Support 1~3 stacked energy storage

WIFI MONITORING
Mobile APP monitoring

PROTECTION RATING
IP66 Dust-proof and water-proof

SAVE MONEY
Peak shaving and valley filling

Application

MODEL	HBP11-3648 PRO	HBP11-4048 PRO	HBP11-4648 PRO	HBP11-5048 PRO	HBP11-6048 PRO
Rated power	3600W	4000W	4600W	5000W	6000W
Nominal Battery System Voltage	48V				
PV INPUT(DC)					
Maximum recommended DC power	4000W	5000W	5500W	6000W	7000W
Nominal DC operating voltage	360V				
Maximum DC voltage	500V				
MPPT voltage range	120V~500V				
Maximum input current	15A / 15A				
No.of MPP tracker	2				
Strings per MPP tracker	1				
INVERTER OUTPUT(AC)					
Nominal AC output power	3600W	4000W	4600W	5000W	6000W
Nominal output voltage; range	220/230/240V;180-280V				
AC grid frequency; range	50/60Hz; 45~55/55-65Hz				
Nominal output current	15.6A	17.5A	20A	21.7A	26A
Maximum output current	16A	18.1A	20.8A	22.7A	27.2A
Inrush current (spike/duration)	57.5A/5.2us				
Total harmonic distortion i(THDi)	<3%				
Power factor at rated power	1				
Displacement power factor	0.8leading~0.8lagging				
Grid type	Single phase				
BATTERY MODE OUTPUT(AC)					
Output Rated Power	3600W	4000W	4600W	5000W	6000W
Nominal output voltage; accuracy range	230±1%				
Output ferequency; accuracy range	50/60Hz (optional)±0.2%				
Output rated current	15.6A	17.5A	20A	21.7A	26A
Output waveform	Pure sine wave				
Peak power	5400W,10s	6000W,10s	6900W,10s	7500W,10s	9000W,10s
Total harmonic distortion (linear load)	<3%				
BATTERY & CHARGER					
Note: Below Parameters base on one LiFePO4 Lithium Battery Modular					
Battery parameter	51.2VDC 100Ah				
Number of battery pack	1 / 2	1 / 2	2 / 3	2 / 3	2 / 3
Capacity	5120Wh / 10240Wh	5120Wh / 10240Wh	10240Wh / 15360Wh	10240Wh / 15360Wh	10240Wh / 15360Wh
Charging curve	3-stage adaptive with maintenance				
Protection	Over-current protection / Over-temperature protection				
Maximum charging power	3600W	4000W	4600W	5000W	6000W
Maximum charging currernt	75A	85A	95A	100A	125A
EFFICIENCY					
Maximum efficiency	97.1%				
Euro-efficiency	96.5%				
MPPT efficiency	99.8%				
PROTECTION DEVICES	DC switch rating for each MPPT; Grid monitoring; Output over current protection; Output overvoltage protection-varistor; Ground fault monitoring; Integrated all-pole sensitive leakage current				
MECHANICAL SPECIFICATIONS					
Machine Dimension (W*H*D)(mm) (Inverter+Battery)	594*1154*220(5120Wh); 594*1559*220 (10240Wh); 594*1964*220 (15360Wh)				
Package Dimension (W*H*D)(mm) — Inverter	900*335*714				
Package Dimension (W*H*D)(mm) — Battery	666*280*483 (Single Battery)				
N.W(kg) — Inverter	42				
N.W(kg) — Battery(51.2V100Ah)	52				
G.W(kg) — Inverter	55				
G.W(kg) — Battery(51.2V100Ah)	57				
Standard Warranty	Inverter: 5 years ; Lithium battery: 5 years				
OTHER					
Operating Temperature Range	-15°C to 40°C				
Ingress protection rating	IP66				
Audible Noise	60dB MAX				
Display	LED+LCD				
CERTIFICATION & STANDARDS					
CE-EMC					

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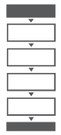
ALL-IN-ONE ESS

HBP1800 PRO Series

5.2KW | 48V | 5120Wh~25600Wh

HBP1800 PRO energy storage system ESS solution, including 5.2kw 48vdc solar inverter and a lithium battery storage with 5kwh-25kwh energy optional. it is a one-stop service system can manage your solar home battery storage system more conveniently. Flexible modular system can be designed based on house daily consumption.
The perfect emergency energy solution for villas, apartments, hotels, shopping centers.

- Stacked movable energy storage systems
- Rechargeable lithium batteries use safe lithium cell LiFePO4
- The intelligent BMS system adopts the latest battery communication system
- Flexible investment with 5.12kWh modular design, scalable from 5.12kWh to 25.6kWh
- The battery capacity can be increased freely and flexibly according to the situation of home use.
- Reduce electricity bills and increase your energy needs for electrical self-sufficiency.



CONVENIENT APPLICATION

Easy plug-in installation

MODULAR DESIGN

Support 2 stacked ~ 5 stacked energy storage

HIGH POWER

Power for all applications

MODEL		HBP18-52481 PRO	HBP18-52482 PRO	HBP18-52483 PRO	HBP18-52484 PRO	HBP18-52485 PRO
INVERTER						
Rated power		5200W				
Output voltage waveform		Pure sine wave				
Output voltage regulation		230Vac±5%				
Output frequency		50Hz or 60Hz				
Peak efficiency		93%				
Nominal DC input voltage		48Vdc				
Standby Consumption		< 25W				
PV INPUT						
Max solar power input		6000W				
PV max charging current		100A				
Combined charging current		100A				
Max efficiency		98.0% max				
PV array open circuit voltage		450VDC				
PV Array MPPT Voltage Range		150V-430VDC				
AC INPUT						
AC input voltage		230Vac ±5%				
Acceptable input voltage range		170~280VAC				
Nominal input frequency		50Hz / 60Hz (Auto detection)				
Transfer time		10ms typical (UPS, VDE); 20ms typical (APL)				
AC CHARGE						
Charging current @ Nominal input voltage		80A				
Charging Algorithm		4-step (Li)				
OUTPUT						
AC output		230Vac (Terminal)				
LITHIUM BATTERY						
Energy		5120Wh	10240Wh	15360Wh	20480Wh	25600Wh
Nominal voltage		51.2V				
Battery capacity		100Ah	200Ah	300Ah	400Ah	500Ah
Standard charging and discharge current		100A				
Maximum continuous charging & discharge current		100A				
Operation ambient temperature	Charge	0~45 °C				
	Discharge	-20~55 °C				
DIMENSION						
Machine Dimension (W*H*D)(mm) (Inverter+Battery)		540*434*500	540*601*500	540*768*500	540*935*500	540*1102*500
Package Dimension (W*H*D)(mm)	Inverter	627*252*585				
	Battery (single battery)	614*371*610				
N.W(kg)	Inverter	17				
	Battery (single battery)	47				
G.W(kg)	Inverter	28				
	Battery (single battery)	60				
Standard Warranty		Inverter: 2 years ; Lithium battery: 5 years				
CERTIFICATION & STANDARDS						

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

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LOW-VOLTAGE INTEGRATED ESS

ESP Series

10/20KW | Max 51.2kWh | IP54

ESP series is a integrated low-voltage energy storage system that combines inverters ranging from 10KW/20KW with 51.2kWh batteries.

This fully integrated solar solution is pre-configured for seamless operation, including factory-set communication between the batteries and inverter and pre-installed power harness connections, allowing installers to focus on connecting solar panels, loads, grid power and generators. Once connected, the system is ready to provide reliable energy.

- Built-in 10KW/20KW inverter
- On/off grid systems, suitable for a wide range of scenarios
- Max 51.2kWh LiFePO4 Rack Battery for Long-Lasting Energy Storage
- Safe and Reliable LiFePO4, 6000+ cycles
- All-in-One design quick installation and cost savings
- Intelligent Cooling for Enhanced Battery Longevity
- Maximum support for 10 machines in AC parallel
- PACK+PCS IP54, C3/C5 Anti-corrosion gradeoptional
- Support foronline monitoring and O&M
- 10 Years Warranty

Application

MODEL	ESP-5010	ESP-4020
Rated power	10000W	20000W
Nominal Battery System Voltage	48V	48V
PV INPUT(DC)		
Maximum recommended DC power	10000W	20000W
Nominal DC operating voltage	360V	360V
Maximum DC voltage	500V	500V
MPPT voltage range	90~450V	90~450V
Maximum input current	27A/27A	27A/27A/27A/27A
No.of MPP tracker	2	2
Strings per MPP tracker	1	1
AC INPUT		
Iutput voltage waveform	Sinusoidal(utility or genearator)	
Input type	Single phase	
Nominal iutput voltage, range	230V;90-280V	
AC grid frequency, range	50/60Hz; 40~65Hz	
Maximum iutput current	53A	106A
Transfer Time	10ms typical (UPS,VDE);20ms typical (APL)	
INVERTER OUTPUT(AC)		
Nominal AC output power	10000W	20000W
Output waveform	Pure sine wave	
Power factor at rated power	1	
Nominal output voltage	220/230/240V	
Frequency	50/60Hz	
Maximum output current	43.5A	86.9A
Grid type	Single phase; Off grid	
BATTERY & CHARGER		
Note: Below Parameters base on one LiFePO4 Lithium Battery Modular		
Battery parameter	51.2VDC 200Ah	51.2VDC 200Ah
Number of battery pack	5	4
Capacity	51200Wh	40800Wh
Battery Life Cycles	6000 cycles @ 80% DOD, 25°C	
Charging curve	4-stage adaptive with maintenance	
Protection	Over-current protection / Over-temperature protection	
Maximum charging/discharging power	10000W	20000W
Maximum charging/discharging currernt	210A	420A
EFFICIENCY		
Maximum efficiency	92%	
MPPT efficiency	99.8%	
PROTECTION DEVICES		
DC switch rating for each MPPT; Grid monitoring; Output over current protection; Output overvoltage protection-varistor; Ground fault monitoring; Integrated all-pole sensitive leakage current		
MECHANICAL SPECIFICATIONS		
Machine Dimension (W*H*D)(mm)	650*2050*700	
Package Dimension (W*H*D)(mm)	/	
N.W(kg)	/	
G.W(kg)	/	
Standard Warranty	Inverter: 5 years ; Lithium battery: 10 years	
OTHER		
Operating Temperature Range	-15°C to 40°C	
Ingress protection rating	IP54	
Communication	Wifi/USB/CAN/RS485	
Audible Noise	60dB MAX	
Display	LED+LCD	
CERTIFICATION & STANDARDS		
IEC62619, LVD(IEC62477), ROHS, CE-EMC(IEC61000-6-1/-6-3), CE-LVD(IEC62109-1/-2)		

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ENERGY STORAGE SYSTEM

ESG Series

25~50KW | 614V | 230/400V | 600kwh (max)

The ESG series Energy Storage System (ESS) presents a cutting-edge solution meticulously designed for high-rate cyclic charging and discharging scenarios. Recognized for its robustness, this innovative system harnesses the power of Lithium Iron Phosphate (LiFePO4) technology, which offers not only superior performance but also peace of mind through its comprehensive suite of advanced safety features.

- High Capacity, Delivers up to 61.44 kWh with optional expansions up to 600kWh.
- Utilizes durable Lithium Iron Phosphate (LiFePO4) technology.
- Wide Operating Range: -20°C to 55°C.
- Integrated fire suppression, smoke, and gas detection systems.
- Exceeds 6000 cycles, providing long-lasting performance.
- Easy Installation, Floor-mounted design for simple setup in various environments.
- 10-Year Warranty

Typical application cases

MUST
Solar Power System

MODEL	ESG-6025	ESG-6036	ESG-6040	ESG-6050
AC SPECIFICAITON				
AC rated power	25KW	36KW	40KW	50KW
Max. AC Output Current	21.8A	60A	66A	84A
Peak Output Power	27500VA	39600VA,60s	44000VA,60s	55000VA,60s
Nominal Output Voltage	230V/400V			
Rated frequency	50Hz/60Hz			
Output THDi	3%			
Switching Time	<20ms	<10ms		
Grid structure	3-phase 4-wire+PE			
Power Factor	1-(0.8-0.8)			
Max. Efficiency	97.5%	98.6%		
BATTERY SYSTEM				
DC rated voltage	614V			
DC voltage range	556.8V~691.2V			
Rated capacity	100Ah			
Rated energy	61.4KWH			
Max discharge current	100A			
Cell	3.2Vdc 100Ah LiFePO4			
Battery module	51.2Vdc 100Ah 5.12KWh Air cooling			
PV INPUT				
Max. DC Input Power	32.5KW	54KW	60KW	75KW
PV DC.Max voltage	1000V			
MPPT voltage range	150~850V			
Rated DC Input Voltage	600V	620V		
DC Input Voltage Range	150~800V	150~1000V		
Full MPPT Range	480~800V	500~850V		
Rated current	26*2	40*4A		
Max. input current	31.2*4A	48*4A		
No.of MPPT Tracker /Strings	2/4	4/8		
AC LOAD OUTPUT (BACK-UP)				
Nominal Output Power	25000VA	36000VA	44000VA	55000VA
Nominal Output Voltage	230V/380V	230V/400V		
Nominal Output Frequency	50Hz/60Hz			
Nominal Output Current	36.2A	52.2A	58A	72.5A
THDV (with linear load)	3%			
Switching Time	<10ms			
GENERAL DATA				
Cooling	Air conditioning cooling + intelligent air cooling			
Noise Level	≤75dB			
Temperature Range	-20°C ~ 55°C (> 45°C capacity reduction)			
Protection Level	IP21			
Highest altitude	4000m (>3000m capacity reduction)			
Humidity Range	0~95%(No condensing)			
Installation mode	Vertical mounting			
Maximum efficiency	95.5%			
Isolation mode	Built-in isolation transformer			
Protection function	Ac over/under voltage, over temperature, abnormal frequency, AC phase error, over current,communication failure, fan failure, insulation impedance detection, anti-island			
Display	Touch screen			
Communication interface	RS485/ CAN/WiFi/GPRS/ 4G			
MECHANICAL SPECIFICATIONS				
Machine Dimension (W*H*D)(mm)	910*2210*1010	910*2210*938		
Package Dimension (W*H*D)(mm)	/	/		
N.W(kg) (Includes MPPT module)	903	895	918	935
G.W(kg)	/	/	/	/
Warranty	10 years			
CERTIFICATION & STANDARDS				
CE-EMC(EN 61000-6-2/-4); CE-LVD(IEC 62109-1/-2); UN38.3				

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HYBRID COMMERCIAL AND INDUSTRIAL ESS

ESG-E Series

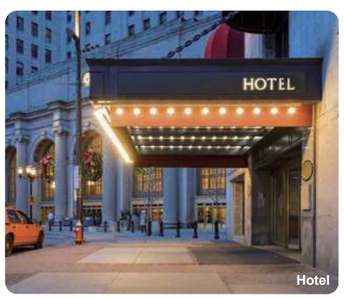
105~125KW | 280/314Ah | 215kwh/233kwh/261kwh

The ESS-E series Cabinet series are outdoor battery cabinets for small-scale commercial and industrial energy storage, with three different capacity: 215kWh, 233kWh and 261kwh. It combines battery, PCS, and EMS in a single integrated system. They can be widely used in farms, animal husbandry, hotels, schools, warehouses, communities and solar parks.

CE IEC ISO UN38.3

- 215~261KWH cabinet design, scalable from2.4MWH
- All-in-one design with a high degree of integration
- Modular design with optional modules of different sizes
- Support for grid-connected and off-grid operation
- MPPT Solar controller available as an option
- IP54 class fire and explosion-proof housing
- Liquid cooling design, 3-5°C temperature difference of the battery cell
- 10-Year Warranty
- High reliability intelligent BMS

Typical application cases



MODEL	ESG-E215	ESG-E233	ESG-E261
Battery Energy(kWh)	215KWH	233KWH	261KWH
Rate Power	105KW	125KW	125KW
AC Output	400V, 3L+N+PE, 50Hz/60Hz		
Transfer time	≤20ms		
Communication	CAN/ RS485		
Cooling metod	Liquid Cooling		
Storage temperature Range	-20~45°C		
Operation temperature	-20~60°C		
Humidity	5%RH~95%RH		
Altitude	≤3000m		
Safety System	Aerosol		
BATTTERY PARAMETERS			
Battery chemistry	LiFePO4		
Nominal capacity	280Ah	280Ah	314Ah
Composition method	1P240S	1P260S	
Nominal voltage	768V	832V	
Operating Voltage Range	650~864V	728~936V	
Efficiency	>94% (DC side)		
Max Charging Current	140A		
Max Discharging Current	140A		
Cycle	6000		
Calendar Life	10 years		
PCS PARAMETERS			
Max DC power	126kw/1min	137kw/1min	137kw/1min
Rate operating voltage	230/400VAC	AC 400VAC	AC 400VAC
Max AC current	167A	180A	180A
Approved grid frequency range	50±5Hz	50/60Hz	50/60Hz
AC harmonic voltage	<3% (linear load)		
Voltage deviation	<5% (linear load) (phase<3%)		
MECHANICAL SPECIFICATIONS			
Machine Dimension (W*H*D)(mm)	1460*2203*1400		
N.W(kg)	≈2500	≈2600	≈2750
IP Grade	IP54		
CERTIFICATION & STANDARDS			
CB, CE, EMC, UN38.3, RoHs			

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