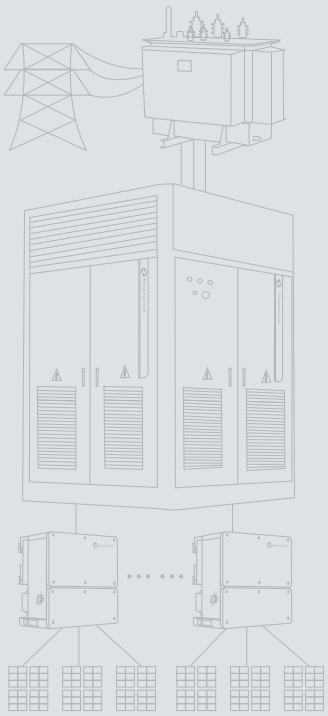
Hopewind



PV Inverter (Central and C&D)

Stock Code: SSE-603063

Shenzhen Hopewind Electric Co., Ltd. (Stock Code:SSE-603063) focuses on the research, manufacture, sales and service of renewable energy & electric drive products, with main products of wind power generation products, photovoltaic generation products and industrial drive products. Furthermore, Hopewind owns independent development & testing platforms of integrated high-power power electric equipment and monitoring system. Through innovation in technology and service, Hopewind continuously creates value for customers, and has become one of the most competitive enterprises in renewable energy field.

In the field of grid-connected PV generation, HOPEWIND provides competitive overall solutions, including centralized/centralized-distributed high-power PV generation systems and medium/small power string-type PV generation systems.

In the field of grid-connected PV generation, Hopewind provides competitive overall solutions as well, which including centralized/centralized-distributed high-power PV generation systems.

For centralized inverter solution,there are 500kW, 630kW and 800kW for 1100V series inverters and 1250kW, 1562.5kW, 2500kW and 3125kW inverters for 1500V series. Hopewind can supply combiner box for both 1100V and 1500V series. Meanwhile, Hopewind provides 1MW, 1.25MW, 1.5625MW, 2MW, 2.5MW, 3.125MW, 4MW, 5MW, 6.25MW, 6.8MW for integrated turnkey solution.

In the string inverter solution, we provide 5kW to 8kW mono-phase inverter for residential projects, 8kW to 110kW three-phase medium power inverter for commercial projects (400Vac) , 40kW to 136kW and DC1500V 250kW high power inverter for large power station projects. At the same time, we also provide the corresponding WiFi/GPRS wireless modules as well as the data collector modules in large-scale power plant to meet the requirement of remote monitoring as well as system operation and maintenance management.

【Honors】

National Science and Technology Progress Award

Laboratory Qualification Approved by CNAS

National High-tech Enterprises

【Quality System】

ISO9001: 2015

ISO14001: 2015

ISO45001: 2018

Headquarter · Shenzhen

6 R&D and manufacturing bases: Shenzhen, Suzhou, Dongguan, Yancheng, Xi'an, Heyuan

30+ Global service bases: Deployed worldwide, and provides comprehensive services for global customers

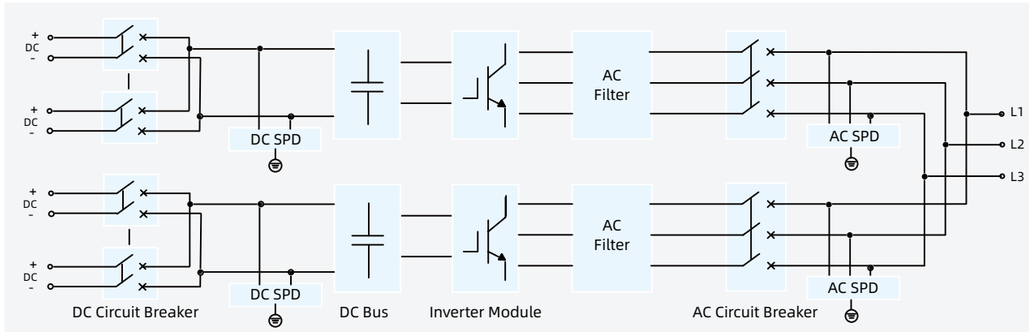
Contents

2.5MW/3.125MW

Features

- 2.5MW and 3.125MW Parallel operation to various harsh environments such as high temperature, high humidity, and high altitude
- Night SVG function, high MPPT tracking speed and precision, built-in PID
- Three-level technology with a maximum efficiency of 99.06% and film capacitor design - High electric generation and improved longevity
- Small size, high power density, modular design, convenient maintenance and this can save the transportation and installation costs
- IP55 Protection

Product Principle



Specifications (2500kW/3125kW/DC1500V)

Model		HPHV2500-550	HPHV2500-630	HPHV3125-550	HPHV3125-600	HPHV3125-630
DC Input	MPPT Voltage Range	800V ~ 1450V				
	Max. DC Voltage	1500V				
	Number of DC Inputs	12 Inputs (24 Combiner Box/Input) 18 Inputs (16 Combiner Box/Input)		14 Inputs (24 Combiner Box/Input) 22 Inputs (16 Combiner Box/Input)		
	Max. String Current	400A				
AC Output	Rated Output Power	2500kW		3125kW		
	Max. Output Power	2750kW		3438kW		
	Rated Output Current	2624A	2292A	3280A	3008A	2864A
	Max. Output Current	2886A	2522A	3608A	3309A	3150A
	Rated Output Voltage	550V	630V	550V	600V	630V
	Operating Voltage Range	440V ~ 632V	504V ~ 724V	440V ~ 632V	480V ~ 690V	504V ~ 724V
	Rated Grid Frequency	50Hz / 60Hz				
	Operating Frequency Range	±3Hz				
	THD	<3% (Rated Power)				
	DC Current Component	<0.5% (Rated Output Current)				
	Power Factor	0.8(ind.) to 0.8(cap.)				
System Parameters	Max. Efficiency	99.02%	99.04%		99.06%	99.11%
	China Efficiency	98.49%		98.62%		
	Standby Power Consumption	<100W				
	Cooling System	Forced Air-cooling				
	Protection Level	IP55				
	Operating Temperature Range	-40℃ ~ +55℃ (Operation with derating above 40℃)				
	Storage Temperature Range	-40℃ ~ +70℃				
	Operating Altitude ①	≤5000m (Operation with derating above 4000m)				
	Relative Humidity	0% ~ 95%, no condensation				
	LVRT	Zero voltage ride through is satisfied				
	Communication	RS485, Ethernet				
Mechanical Parameters	Dimensions (W*H*D) ②	1710*2505*1650mm				
	Weight	≤2700kg				

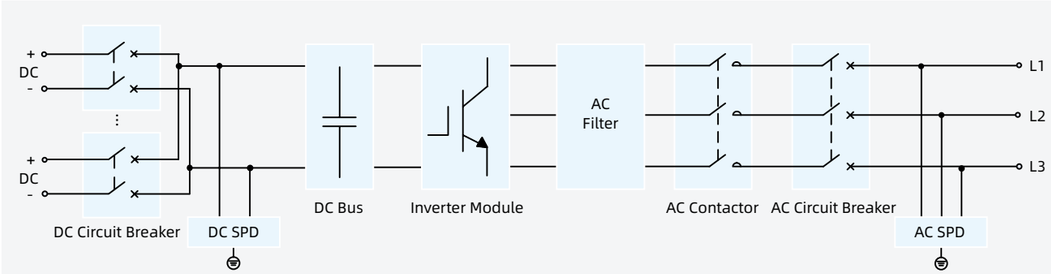
① Please contact HOPEWIND for application over 4000m altitude.
② Dimension excludes screws, locks, etc.

1.25MW/1.5625MW

Features

- The single-machine capacity is 1.25MW, 1.5625MW
- Three-level technology, with an efficiency of up to 99.11%, using film capacitor
- With nighttime SVG function, fast tracing speed, high precision and wide range
- Adapt to high temperature, high humidity, high altitude and other harsh environments
- Smaller size, higher power density, modular design for easier maintenance, saving on transportation and installation costs
- Max. DC input voltage up to 1500V, AC output voltage 550V/600V/630V, reducing system costs
- Through the HVRT/LVRT certification test of the China Electric Power Research Institute, the batch application of 1500V power station system is satisfied

Product Principle



Specifications (1250kW/1562.5kW/DC1500V)

Model		HPHV1250-550	HPHV1250-630	HPHV1562.5-550	HPHV1562.5-600	HPHV1562.5-630
DC Input	MPPT Voltage Range	800V ~ 1450V				
	Max. DC Voltage	1500V				
	Number of DC Inputs	6 Inputs (24 Combiner Box/Input) 9 Inputs (16 Combiner Box/Input)		7 Inputs (24 Combiner Box/Input) 11 Inputs (16 Combiner Box/Input)		
	Max. String Current	400A				
AC Output	Rated Output Power	1250kW		1562.5A		
	Max. Output Power	1375kW		1718.7kW	1719kW	1718.7kW
	Rated Output Current	1312A	1146A	1640A	1504A	1432A
	Max. Output Current	1443A	1261A	1804A	1654A	1575A
	Rated Output Voltage	550V	630V	550V	600V	630V
	Operating Voltage Range	440V ~ 632V	504V ~ 724V	440V ~ 632V	480V ~ 690V	504V ~ 724V
	Rated Grid Frequency	50Hz / 60Hz				
	Operating Frequency Range	±3Hz				
	THD	<3% (Rated Power)				
	DC Current Component	<0.5% (Rated Output Current)				
	Power Factor	0.8(ind.) to 0.8(cap.)				
System Parameters	Max. Efficiency	99.00%	99.02%	99.11%	99.00%	99.01%
	European Efficiency	98.47%	98.50%	98.47%	98.50%	98.50%
	Standby Power Consumption	<100W				
	Cooling System	Forced Air-cooling				
	Protection Level	IP20				
	Operating Temperature Range	-40℃ ~ +55℃ (Operation with derating above 40℃)				
	Storage Temperature Range	-40℃ ~ +70℃				
	Operating Altitude ①	≤5000m (Operation with derating above 4000m)				
	Relative Humidity	0% ~ 95%, no condensation				
	LVRT	Zero voltage ride through is satisfied				
	Communication	RS485, Ethernet				
Mechanical Parameters	Dimensions (W*H*D) ②	1600*2150*800mm				
	Weight	≤1300kg		≤1400kg		

① Please contact HOPEWIND for application over 4000m altitude.
② Dimension excludes screws, locks, etc.

>> Central Inverter Solution (1100V)

Features

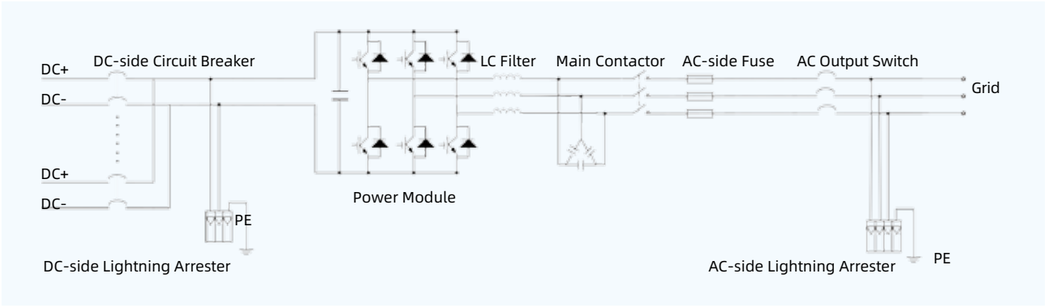
- Adapt to high altitude and low temperature environment
- Using film capacitor
- Background oscilloscope and fault recording function
- Fast tracing speed, high precision and wide range of MPPT technology
- Advanced anti-isolation technology through active and passive dual-detection
- Patented IGBT drive and ventilation design
- Computer debugging bracket and 220V socket as humanization design

Outdoor

Intdoor

- DC switch tripping protection by software control, ensure high automation and safe operation
- With convenient touch screen operation interface, monitoring system and a wide variety of communication interfaces
- With AC soft starts and AC/DC double power supply redundancy, the LVRT can be realized without using UPS or other outside auxiliary power supply
- The strong adaptability to power grid and powerful inhibition capability for harmonic wave of power grid and three phase imbalance as well as wide idle-regulating scope, fully guarantee the power generation quality
- IP55 outdoor type can be chosen, which doesn't required a extra container

Product Principle



Specifications (500kW/630kW/800kW/DC1100V)

Model		HPSP0500	HPSP0630		HPSP0800-CC
DC Input	MPPT Voltage Range	500V ~ 900V		520V ~ 900V	500V ~ 900V
	Max. DC Voltage	1100V			
	Number of DC Inputs	8 Inputs			12 Inputs
	Max. String Current	160A			
AC Output	Rated Output Power	500kW	630kW		800kW
	Max. Output Power	550kW	693kW		840kW
	Rated Output Current	902A	1137A	1010A	1320A
	Max. Output Current	993A	1250A	1111A	1386A
	Rated Output Voltage	**320V**	**320V**	**360V**	**350V**
	Operating Voltage Range	256V ~ 368V	256V ~ 368V	288V ~ 414V	315V ~ 385V
	Rated Grid Frequency	50Hz / 60Hz			
	Operating Frequency Range	±3Hz			
	THD	<3% (Rated Power)			
	DC Current Component	<0.5% (Rated Output Current)			
	Power Factor	0.9(ind.) to 0.9(cap.)			0.95(ind.) to 0.95(cap.)
System Parameters	Max. Efficiency	99.02%	99.01%	99.03%	99.01%
	European Efficiency	98.3%	98.3%	98.4%	98.5%
	Standby Power Consumption	<50W			
	Cooling System	Forced Air-cooling			
	Protection Level	P20 (Indoor) / IP54 (Outdoor)			
	Operating Temperature Range	-40℃ ~ +55℃ (Operation with derating above 40℃)			
	Storage Temperature Range	-40℃ ~ +70℃			
	Operating Altitude ①	≤5000m (Operation with derating above 4000m)			
	Relative Humidity	5 ~ 95%, no condensation			
	LVRT	Zero voltage ride through is satisfied			
	Communication	RS485, Ethernet			
Mechanical Parameters	Dimensions (W*H*D) ②	1000*2150*800mm / 1220*2300*870mm			
	Weight	≤1000kg			

① Please contact HOPEWIND for application over 3000m altitude.
② Dimension excludes screws, locks, etc.
③ The Vac output can be customized

>> Centralized-distributed Inverter

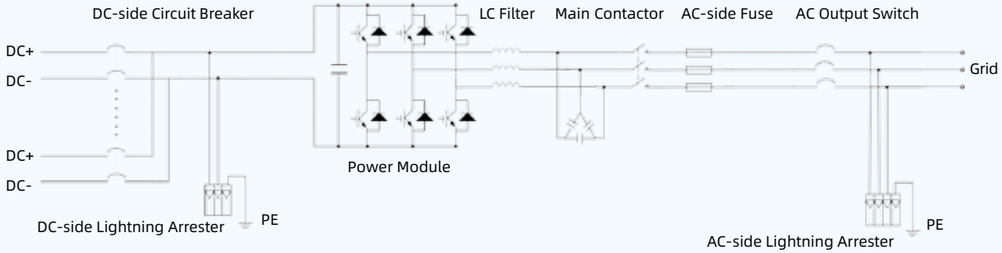
Features

- Conversion efficiency up to 9
- DC switch tripping protection by software control
- Patented IGBT driver and ventilation design
- Using film capacitor, long life, high reliability
- Certificates of ZVRT(zero voltage ride through), CE, TUV, CQC, etc.
- Power module with unit design, easy to install and maintain
- Inverter and DC distribution cabinet integrated design, less site construction, more intelligent protection
- Strong grid adaptability, strong capability for restraining harmonic and three-phase unbalanced, wide range of active and reactive power regulation

Outdoor

Intdoor

Product Principle



Specifications

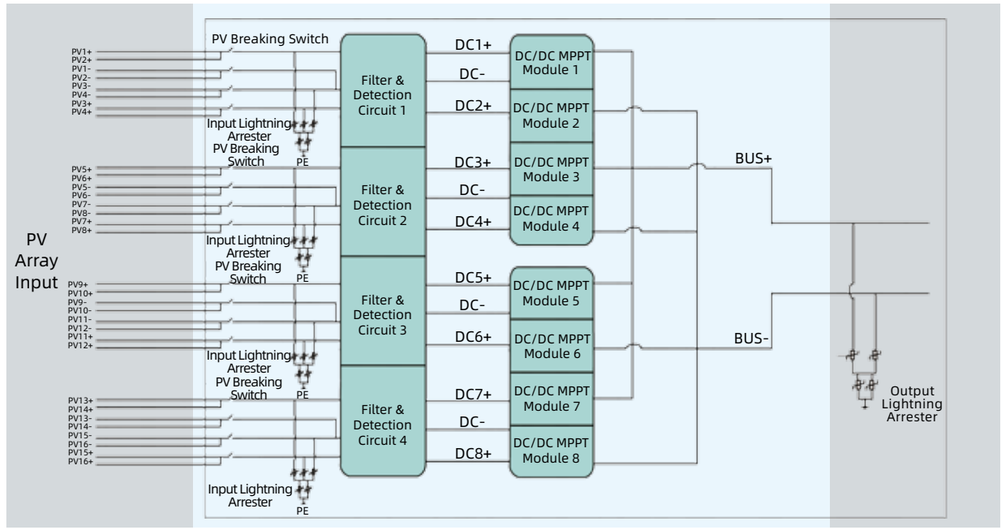
Model		HPSP01000	HPSP1250
DC Input	Max. DC Voltage	1100V	
	Rated Input Voltage	800V	
	Number of DC Inputs	12 (standard) / 14 (optional)	14 (standard) / 15 (optional)
	Max. String Current	132A	
AC Output	Rated Output Power	1000kW	1250kW
	Max. Output Power	1100kW	1300kW
	Rated Output Current	1110A	1388A
	Max. Output Current	1221A	1443A
	Rated Output Voltage	520V	
	Operating Voltage Range	416V ~ 572V	
	Rated Grid Frequency	50Hz / 60Hz	
	Operating Frequency Range	±3Hz	
	THD	<3% (Rated Power)	
	DC Current Component	<0.5% (Rated Output Current)	
	Power Factor	0.9(ind.) to 0.9(cap.)	
System Parameters	Max. Efficien	99.0%	99.15%
	European Efficien	98.7%	98.7%
	Standby Power Consumption	<50W	
	Cooling System	Forced Air cooling	
	Protection Level	P20 (Indoor) / IP55 (Outdoor)	
	Operating Temperature Range	-40℃ ~ +55℃ (Operation with derating above 40℃)	
	Storage Temperature Range	-40℃ ~ +70℃	
	Operating Altitude ①	≤5000m (Operation with derating above 4000m)	
	Relative Humidity	5 ~ 95%, no condensation	
	Communication	RS485, Ethernet	
Mechanical Parameters	Dimensions (W*H*D) ②	1000*2150*800mm / 1220*2300*870mm	
	Weight	≤1000kg	

① Please contact HOPEWIND for application over 3000m altitude.
② Dimension excludes screws, locks, etc.

Features

- High efficiency , high power density and light weight
- Dynamic MPPT self-adaptive learning and optimization function
- IP65 protection grade, meets the outdoor installation requirement
- Short circuit, open circuit and attenuation prediction function for PV panels
- Every 2 strings of PV module connect with 1 MPPT, reducing mismatch loss
- Remote intelligent monitoring for PV string, like voltage, current, DC/DC boost temperature

Product Principle



Specifications

Model		HPPCU160-16-D	HPPCU160-16	HPPCU120-12	HPPCU80-8
Input Parameters	Max. Input Voltage	1100V			
	MPPT Range	300V ~ 850V			
	Max. Input PV Strings	16		12	8
	Rated String Current	12A	9A		
	Max. String Current	13A	10A		
Output Parameters	Rated Output Voltage	800V (adjusted by inverter)			
	Rated Output Current	160A	120A	90A	60A
	Max. Output Current	176A	132A	99A	72A
System Parameters	Max. Efficien	99.7%	99.7%	99.6%	99.5%
	European Efficien	99.6%	99.6%	99.5%	99.4%
	MPPT Number	8	8	6	4
	Power Supply	Self-Powered (no consumption at night)			
	Protection Level	IP65			
	Cooling System	Natural Cooling			
	Operating Temperature Range	-40℃ ~ +55℃			
	Storage Temperature Range	-40℃ ~ +70℃			
	Relative Humidity	5% ~ 95%, no condensation			
	Communication	RS485			
	Monitoring Function	Running status and data upload to inverter automatically			
Mechanical Parameters	Dimensions (W*H*D)	550*530*280mm			350*530*280mm
	Weight	<42kg		<40kg	<30kg

Note: -D model is specialized for bifacial PV module.

Features

1. Turn-key Solution with High Integration

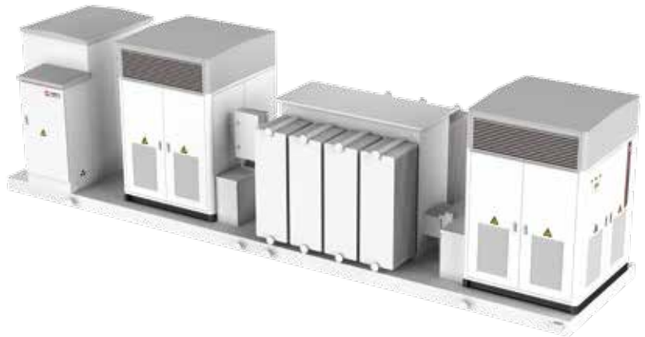
The integration of transformer, inverter, container, cable, etc.. The connection among all device interfaces is finished before shipment.

2. Easy Transportation and Hoisting

The overall system uses 20ft/40ft container, which is easy for transportation and hoisting, no need specific lifting equipment.

3. Save the Investment, Increase the Revenue

Integrated PV power station saves the civil foundation cost of containerised transformer and inverter, and reduce the cost of AC cable between inverter and transformer.

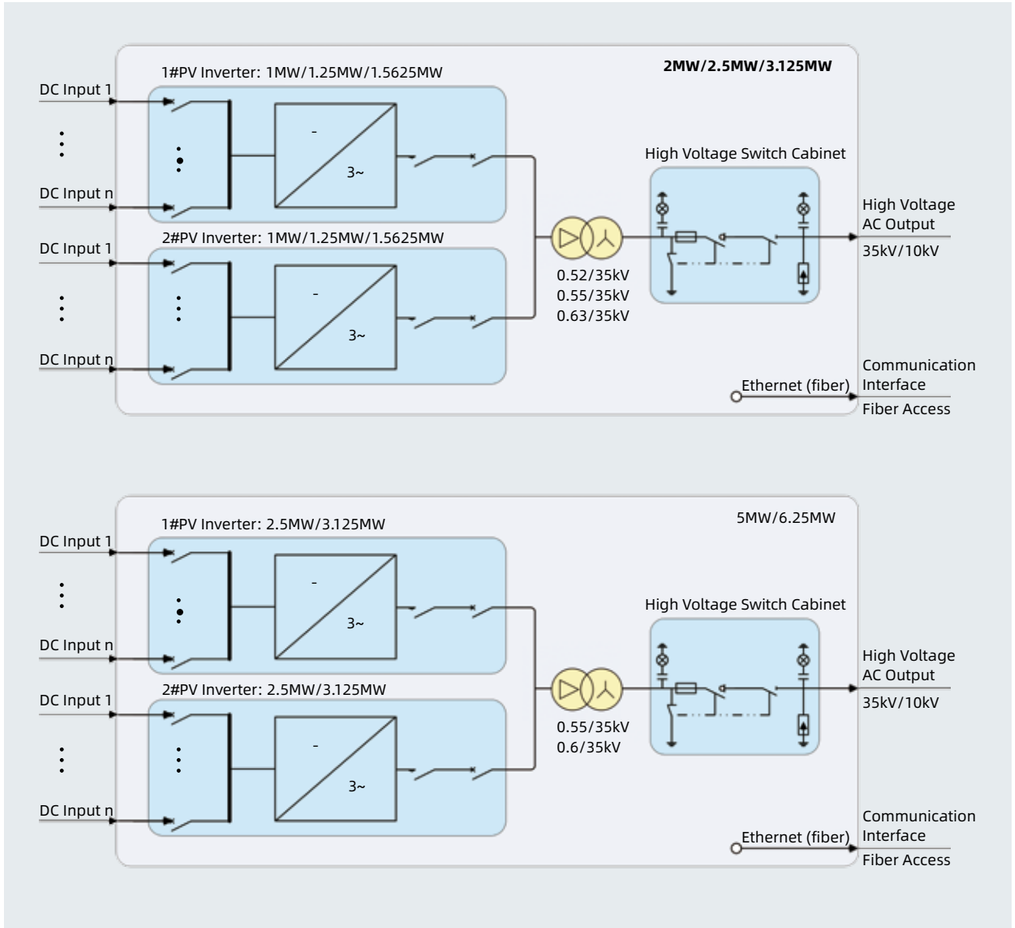


Specifications of container integrated solution

Model					
	Dry-type	HPCTNS1000-G HPCTNS1250-G	HPCTNS1562.5-G HPCTNS2000-G	HPCTNS2500-G HPCTNS3125-G HPCTNS4000-G	HPCTNS5000-G HPCTNS6250-G
	Oil-type	HPCTNS1000-Y HPCTNS1250-Y	HPCTNS1562.5-Y HPCTNS2000-Y	HPCTNS2500-Y HPCTNS3125-Y HPCTNS4000-Y	HPCTNS5000-Y HPCTNS6250-Y
Total Power		1MW / 1.25MW	1.5625MW / 2MW	2.5MW / 3.125MW / 4MW	5MW / 6.25MW
Output of Inverter		320V / 360V / 520V / 550V / 600V / 630V			550V / 600V / 630V
Output of Transformer		10kV/22kV/35kV			
Type of Transformer		Two-winding / Three-winding			
High Voltage Switch Cabinet		Including high voltage loading switch, SPD, fuse			
Low Voltage CT, PT and Electric Energy Meter		Optional			
Remote Monitoring Transformer Temperature Rise and Others		Support			
Dimensions (W*H*D)	Dry-type	5000*2600*2500mm		9000*2800*2600mm	
	Oil-type	3900*2600*2500mm		7800*2800*2600mm	
Weight	Dry-type	<11000kg	<16000kg	<18000kg	
	Oil-type	<8500kg	<13000kg	<14000kg	

Note: The actual size is subject to the specific project requirements.

Schematic diagram



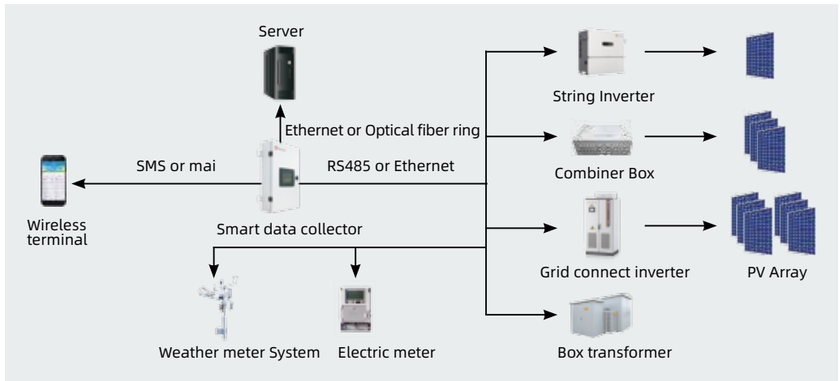
>> Smart Data Collector

Features

- Linux embedded OS, with 32-bit ARM-iMX25 series CPU and DDR2 64MB RAM
- Support 8 ways DI (dry connect and isolated DI input), 4 ways DO interface (relay)
- Support 6 ways AI/AO interface (4 ways are current type and 2 ways are voltage type)
- 2 ways CAN communication interface, support 1 way high speed SD, support 2 ways PT100 temperature detect
- (Optional) Support USB 2.0 high speed interface, the highest speed can reach 480Mbps
- Support IEC60870-5-103, IEC60870-5-104, Modbus-RTU, Modbus-TCP,CDT and other communication protocol
- Support multiple communication methods including RS485, Ethernet, optic fiber, and optional wireless communication methods including GPRS, WIFI, ZigBee, 3G, 4G and so on
- Provide functional configuration debugging tool with well designed UI, you can configure and debugging the communication management function of data collector by the tool, including interface configuration, protocol configuration, forward configuration, message monitoring, data viewing, data storage, etc Provide both indoor type and outdoor type

Indoor Outdoor

Product Principle



Specifications

Type		Indoor	Outdoor
Model		HPCB2000-I	HPCB2000
Communication Interface	Data Collector	8*RS485, maximum manageable equipment 256	
	Optical fiber exchanger	2 optical and 2 electrical fiber exchanger	
	Optical fiber terminal box	4 in 24 out SC single module optical fiber terminal box	
System Parameters	Working temperature	-40℃~+60℃	
	Storage Temperature	-40℃~+70℃	
	Working humidity	5% ~ 95%, No Condensation	
	Working altitude	≤5000m	
	Protection level	IP20	IP65
	Display screen	Support	
	Power supply	AC220V, 50Hz / 60Hz	
	Line incoming and outgoing way	Bottom-in & Bottom-out	
	Incoming line spec	AC220: 1.0mm outdoor uv-proof wire	
	Optical fiber	Diameter ≤ 14mm, single module optical fiber	
Mechanical Parameter	Dimensions (W*H*D)	410*700*150mm	
	Weight	≤15kg	

>> MW-level PV Container

Features

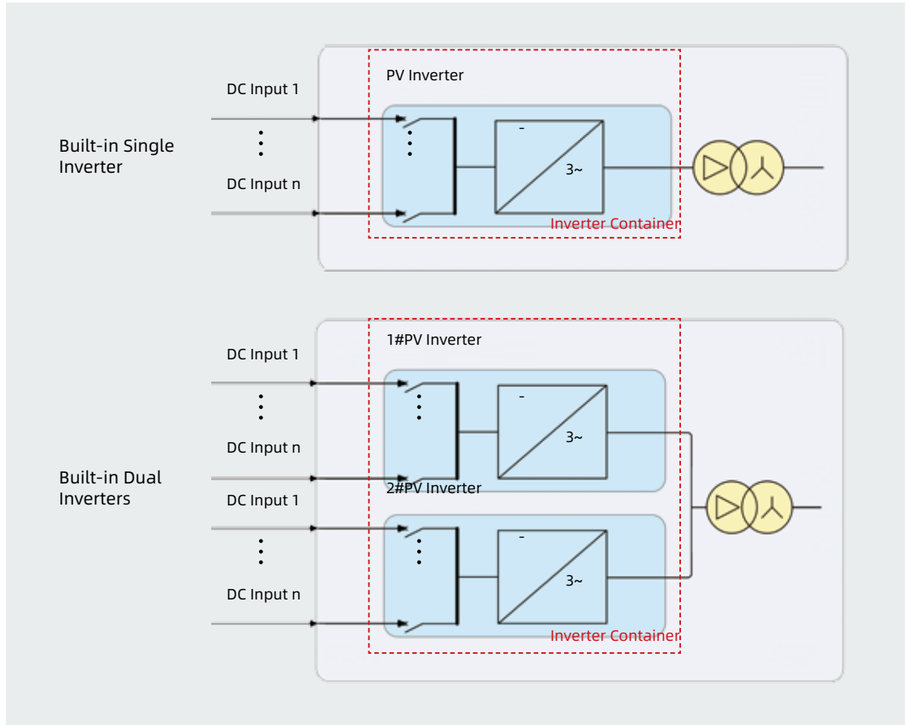
- Adapt to high altitude and low temperature environment
- Standard container design meets IP54 specifications, easy transportation and installation
- Integrated design of DC and AC distribution and heat dissipation, low construction cost
- Built in single or two inverters, external transformers can be flexibly, access to different voltage levels the power grid

Specifications

Number of Matched Inverters	Single Unit (DC 1100V Inverter)	Dual Unit (DC 1100V Inverter)	Dual Unit (DC 1500V Inverter)
Dimensions (W*H*D)	1500*2500*1100mm	1500*2500*2438mm	2100*2523*2438mm
Weight	≤2000kg	≤3000kg	≤4500kg

Note : The actual size is subject to the actual product

Product Principle



>> Project Cases

Chaoyang 500MW PV Project by China Power (exemplary project)

> 118.5MW PV Project, Russia

> Yijun 250MW PV Project by Xiaguang, Tongchuan PV tech research base

100MW Turnkey Solution, Russia

Licheng 155MW Project, Changzhi PV tech research base

Shanxi 82MW PV project

> Lijiamen Fishing pond 100MW PV Project, Lixian

> Shihuiqiao Xingye Farmland 50MW PV Plant, Shayang

Wuhan 50MW PV&Agriculture project

Xitan 20MW PV Plant by Huaneng Kangbao, Hebei

> Fuping Chengnanzhuang 30MW Poverty Alleviation PV Project, Baoding, Hebei

Zhaoyuan Lantianlianjie 70MW PV Plant, Daqing, Heilongjiang

> Dayuying 20MW PV Project by Neimenggu Guodian, Chifeng

> 10MW PV Project by Huangneng Yingkou Redian

Hepu farmland 30MW PV Plant by Zhonghe Huineng, Ningbo, Zhejiang

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If there is any change in product size and parameters, they shall be subject to the latest actual product

Hopewind Website