

BSM-125KTL

Modularity Inverter



- Active power derating
- Thin-film capacitor design improve the system service life
- Modularity design, easy for expansion and maintenance
- Having night SVG function, response the grid modulation command all weather

Performance Features

- Wide DC voltage input range, max. voltage up to 1000V
- New inverter technology design, output harmonic wave is small, max. efficiency is up to 98.5%
- Sustainable operation under the environment temperature of 40℃ operate with the power of 110%
- Wide MPPT tracking range and high efficiency MPPT
- Installation indoors
- Low voltage ride through
- Adjustable reactive power

Brief Introduction

Modularity inverter can realize the paralleled operation of 1-8 independent 125KW inverter module units. The whole set of equipment shares one set of control unit in order to save costs. The new inversion technology design decreases the loss and improves the whole efficiency. Independent inverter module can start in turn, through starting the optimum number of inverter modules, the working time of inverter module can be balanced so as to effectively lengthen the service life of the whole set of equipment. Independent inverter module can be safely cut off through load switch, there is no need to shut down all the machines to maintain and replace the independent module, so it won't influence the operation of other modules. Humanized touch screen operation interface can be maintained without shut down. Remote monitoring system is adopted to check and modify the system setups, easy to maintain and fast to response.

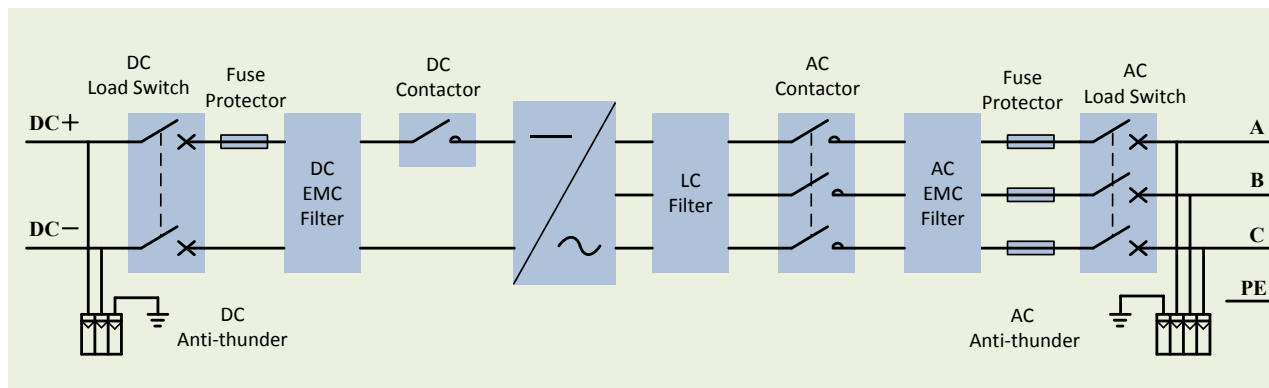
1MW PV inverter system takes 8 pieces of 125KW inverter modules in paralleled operation. The volume of modules depends on the valid solar energy collected from the solar PV battery panels. When in the morning, at dusk, at night, cloudy, overcast and other weather conditions, there is only some inverter modules to operate, 45% of loss per inverter module on average, it effectively prolong the service life of equipment and decrease the failure rate of device.

High redundancy design decreases the failure loss. In general condition, there is only 2% of the whole 8 inverter modules in full load operation in the whole year accumulated generation of 1MW inverter system. If one inverter module of 1MW inverter system breaks down or needs maintenance, the generation loss caused by is only 2%.

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System Topological Graph



Technical Parameters

Combination Type		BSM-125KTL	BSM-250KTL	BSM-500KTL	BSM-1MTL
Parameters at DC Side	Max. DC Voltage	1000Vdc	1000Vdc	1000Vdc	1000Vdc
	Max. Power Voltage Tracking Range	450-820Vdc	450-820Vdc	450-820Vdc	450-820Vdc
	Max. Input Power	150kW	300kW	600kW	1200kW
	Max. Input Current	300A	600A	1200A	2400A
Parameters at AC Side	Nominal Output Power	125kW	250kW	500kW	1000kW
	Nominal Grid Voltage	315Vac	315Vac	315Vac	315Vac
	Grid Voltage Range	268~347Vac	268~347Vac	268~347Vac	268~347Vac
	Nominal Output Current	230A	460A	920A	1840A
	Nominal Grid Frequency	50Hz	50Hz	50Hz	50Hz
	Grid Frequency Range	48~50.5Hz	48~50.5Hz	48~50.5Hz	48~50.5Hz
	Power Factor	0.9 (ahead) ~0.9 (lag)	0.9 (ahead) ~0.9 (lag)	0.9 (ahead) ~0.9 (lag)	0.9 (ahead) ~0.9 (lag)
THD	<3% (Nominal Power)	<3% (Nominal Power)	<3% (Nominal Power)	<3% (Nominal Power)	
System Parameter	Isolation Method	Isolation without Transformer	Isolation without Transformer	Isolation without Transformer	Isolation without Transformer
	Max. Efficiency	98.5%	98.5%	98.5%	98.5%
	European Efficiency	97.2%	97.2%	97.2%	97.2%
	Enclosure Protection Grade	IP21(Indoors)	IP21(Indoors)	IP21(Indoors)	IP21(Indoors)
	Allowable Environment Temperature	-25~+55℃	-25~+55℃	-25~+55℃	-25~+55℃
	Allowable Relative Humidity	5~95% (No Condensation)	5~95% (No Condensation)	5~95% (No Condensation)	5~95% (No Condensation)

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	Allowable Max. Altitude	6000m (3000m+ Derating)	6000m (3000m+ Derating)	6000m (3000m+ Derating)	6000m (3000m+ Derating)
	Noise	<65dB	<65dB	<65dB	<65dB
	Cooling Method	Intelligent Forced Air Cooling	Intelligent Forced Air Cooling	Intelligent Forced Air Cooling	Intelligent Forced Air Cooling
	Self-consumption of Electricity at Night	<80W	<80W	<80W	<80W
	Fresh Air Consumption	2000m3/h	4000m3/h	8000m3/h	16000m3/h
	No. of Cabinets in Parallel	1PCS Controller Cabinet+ 1PCS Module Cabinet	1PCS Controller Cabinet+ 2PCS Module Cabinets	1PCS Controller Cabinet + 4PCS Module Cabinets	1PCS Controller Cabinet+ 8PCS Module Cabinets
Display		Touch Screen	Touch Screen	Touch Screen	Touch Screen
Communication Interface		RS485	RS485	RS485	RS485
Protection Function	Short-circuit Protection	√	√	√	√
	Over-load Protection	√	√	√	√
	DC Over-voltage and Under-voltage Protection	√	√	√	√
	Grid Monitoring	√	√	√	√
	Insulation Monitoring	√	√	√	√
	Over-temperature Protection	√	√	√	√
	DC Reverse Polarity Protection	√	√	√	√
	Islanding Protection	Active and Passive Detection	Active and Passive Detection	Active and Passive Detection	Active and Passive Detection
Mechanical Parameter	Dimension (W/L/D) (mm)	Control Cabinet 400/600/2000 Module Cabinet 400/600/2000	1200/600/2000	2000/600/2000	3600/600/2000
	Weight (kg)	Control Cabinet 200 Module Cabinet 300	800	1400	2600
Reference Standard	EMC	IEC 61000-6-2 IEC 61000-6-4	IEC 61000-6-2 IEC 61000-6-4	IEC 61000-6-2 IEC 61000-6-4	IEC 61000-6-2 IEC 61000-6-4
	Safety	IEC 62109-1	IEC 62109-1	IEC 62109-1	IEC 62109-1
	On-grid	GB/T 19939-2005 CGC/GF004:2011	GB/T 19939-2005 CGC/GF004:2011	GB/T 19939-2005 CGC/GF004:2011	GB/T 19939-2005 CGC/GF004:2011

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Application Topology

■PV Grid-tied Generation System

