SC50HV

Power Conversion System



HIGH YIELD

- Advanced three-level technology, max. efficiency 98.6%
- Effective forced air cooling, 1.1 overload capacity, no derating up to 50°C
- Wide DC input voltage range, flexible for battery configuration

SMART O&M

- Compact design and light weight for easy installation
- Easy site commissioning & monitoring via APP

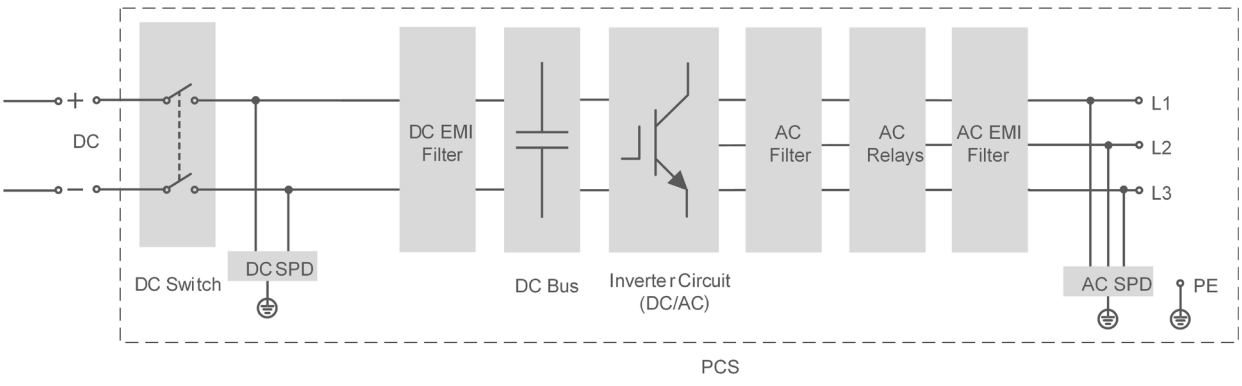
ESS APPLICATIONS

- Battery charge & discharge management intergrated
- Bidirectional power conversion system with full fourquadrant operation
- Off-grid function design, can support the electrical equipment when the power grid fails
- Compatible with high voltage battery system, low system cost

GRID SUPPORT

- Compliance with IEC/AU grid standards
- Grid support including L/HVRT, soft start/stop, specified power factor control and reactive power support

CIRCUIT DIAGRAM



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SUNGROW
Clean power for all

System Type	SC50HV
DC side	
Max.DC voltage	1500 V
Start-up Voltage	580 V
DC voltage range for nominal power	580 V ~ 1500 V
Max.DC current	96.6 A
Max.DC power	56 kW
Compatible batteries with the PCS	Li-ion
AC side (On-Grid)	
Rated output power	50 kVA @ 50 ˚C
Rated output current	72.2 A
Max.AC current	79.3 A
Nominal voltage	400 V
Voltage range	360 V ~ 440 V
Nominal frequency / frequency range	50 Hz / 45 Hz ~ 55 Hz
Max.THD of current	< 3 % (Nominal power)
DC voltage component	< 0.5 % Un (Linear balance load)
Power factor range	0.99 / 1 leading – 1 lagging
Feed-in phases / AC connection	3 / 3
AC side (Off-Grid) *	
Nominal voltage	400 V
Nominal frequency	50 Hz
Max.THD of voltage	< 3 % (linear load)
Unbalance load capacity	100 %
Efficiency	
Max. efficiency	98.6 %
Protection	
Reverse polarity protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Overvoltage protection	DC Type II / AC Type III
Grid monitoring / Ground fault monitoring	Yes
Insulation monitoring	Yes
Overheat protection	Yes
Active anti-islanding method	Frequency shift
General data	
Dimensions (W*H*D)	600 mm * 800 mm * 278 mm
Weight	70 kg
Insulation method	Transformerless
Degree of protection	IP 65
Protective class	Class I
Operating temperature range	-25 ˚C ~ 60 ˚C (> 50 ˚C derating)
Operating humidity range	0 % ~ 100 %
Temperature control method	Intelligent air cooling
Max.operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth + APP
Self-consumption at stop	< 20 W
Communication	RS485 / Ethernet / CAN
Compliance	AS / NZS 4777.2 , AS / NZS 3000, IEC 61000, IEC 62477
Grid support	L / HVRT , active & reactive power control and power ramp rate control
Country of manufacture	China

* An isolation transformer is required to support off grid running functionality
** PCS cannot be stored in environments contaminated with halogen or sulfur elements

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