

SC50HV

SUNGROW

For 1500 Vdc System



HIGH YIELD

- Advanced three-level technology, max. efficiency up to 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

EASY O&M

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

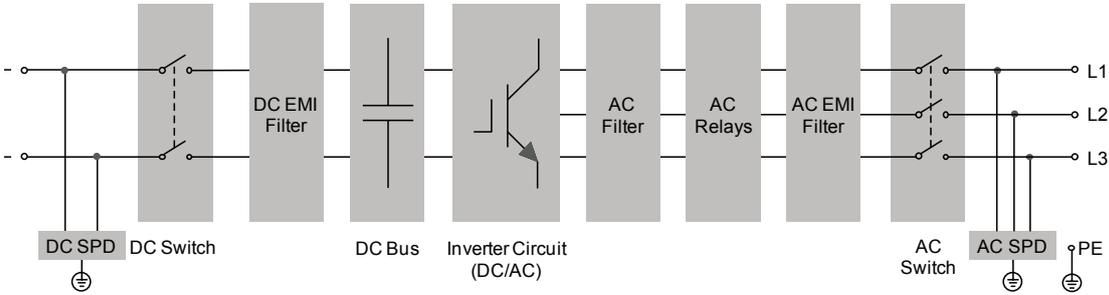
ESS APPLICATIONS

- Battery charge & discharge management integrated
- 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 grid standards
- Grid support including L/HVRT, soft start/stop, specified power factor control and reactive power support

CIRCUIT DIAGRAM



Type designation	SC50HV
DC Side	
Max. DC voltage	1500 V
Min. DC voltage	580 V
DC voltage range for nominal power	580 – 1300V (@ 50 °C) / 580 – 1500V (@ 35 °C)
Max. DC current	96.6A
Max. DC power	56 kW
AC Side (Grid)	
AC output power	55 kVA @ 45 °C / 50 kVA @ 50 °C
Max. AC current	79.3 A
Nominal AC voltage	400 V
AC voltage range	360 – 440 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
AC current THD	< 3 % (at nominal power)
DC current injection	< 0.5 % I _n
Power factor at nominal power	> 0.99
Adjustable reactive power	-100 % – 100 %
AC Side (Off-Grid)	
Nominal AC voltage	400 V ± 3 %
AC voltage THD	< 3 % (Linear load)
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
AC output power	55 kVA @ 45 °C / 50 kVA @ 50 °C
Efficiency	
Max efficiency	98.6%
Protection	
Reverse polarity protection	Yes
DC switch	Yes
AC switch	Yes
Overvoltage protection	DC Type II / AC Type II
Grid monitoring / Ground fault monitoring	Yes / Yes
Insulation monitoring	Yes
Overheat protection	Yes
General Data	
Dimensions (W*H*D)	600*800*278 mm
Weight	70 kg
Insulation method	Transformerless
Degree of protection	IP65
Operating ambient temperature range	-25 to 60 °C (> 50 °C derating)
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling concept	Temperature-controlled forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth + APP
Self-consumption at stop	< 20 W
Communication	RS485 / Ethernet / CAN
Communication protocol	Modbus-RTU / Modbus-TCP, CAN2.0B
Compliance	CE, IEC 62477, IEC 61000
Grid support	L/HVRT, active & reactive power control and power ramp rate control

