

# SC75HV

## 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 voltage operation window, flexible for battery configuration

### EASY O&M

- Compact design and light weight for easy installation
- Easy site commissioning & monitoring via APP
- Scalable system configuration, extend to MW power range

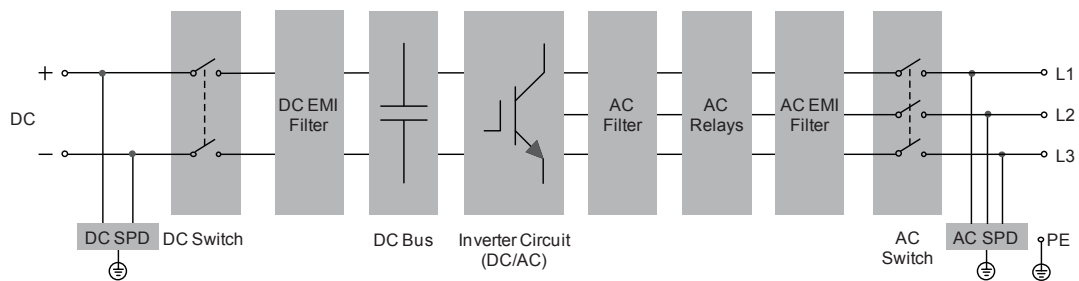
### ESS APPLICATIONS

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

### GRID SUPPORT

- Complies with IEC grid standards, UL 1741, UL 1741 SA
- Grid support including L/HVRT, soft start/stop, specified power factor control and reactive power support

## CIRCUIT DIAGRAM



System Type	SC75HV
<b>DC side</b>	
Max. DC voltage	1500 V
Min. DC voltage	870 V
DC voltage range for nominal power	870 – 1300 V @50 °C (122 °F) / 870 – 1500 V@35 °C (95 °F)
Max. DC current	96.6 A
Max. DC power	84 kW
<b>AC side (Grid)</b>	
AC output power	82.5 kVA @ 45 °C (113 °F) / 75 kVA @ 50 °C (122 °F)
Max. AC current	79.3 A
Nominal AC voltage	600 V
AC voltage range	528 – 660 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 % In
Power factor at nominal power	> 0.99
Adjustable reactive power	-100 % – 100 %
<b>AC side (Off-Grid)</b>	
Nominal AC voltage	600 V ± 3 %
AC voltage THD	< 3 % (Linear load)
Nominal voltage frequency / Voltage frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
AC output power	82.5 kVA @ 45 °C (113 °F) / 75 kVA @ 50 °C (122 °F)
<b>Efficiency</b>	
Max. charge efficiency	98.5%
Max. discharge efficiency	98.6%
<b>Protection</b>	
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
<b>General Data</b>	
Dimensions (W*H*D)	600*800*278 mm (23.6"*31.5"*11.0")
Weight	75 kg (165.3 lbs)
Isolation	Transformerless
Degree of protection	IP65 (NEMA 4X)
Operating ambient temperature range	-25 to 60 °C (> 50 °C derating) (-13 to 140 °C (> 122 °C derating))
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Temperature controlled forced air cooling
Max. operating altitude	4000 m (> 3000 m derating) (13123 ft (> 9843 ft 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, UL 1741, UL 1741 SA
Grid support	L / HVRT, active & reactive power control and power ramp rate con trol
Type designation	SC75HV-10