SC3150U-MV

Power Conversion System

SUNGROW
Clean power for all

HIGH YIELD

- Advanced three-level technology, max. inverter effciency 98.8%
- Effective forced air cooling, no derating up to 45°C
- Wide DC voltage operation window, full power operation at 1500V
- Supports two independent DC inputs

EASY O&M

- Integrated current and voltage monitoring function for online analysis and fast trouble shooting
- Low transportation and installation cost due to 20-foot container design
- Modular design and all components front accessible, easy for maintenance
- Integrated auxiliary power supply panels for external devices

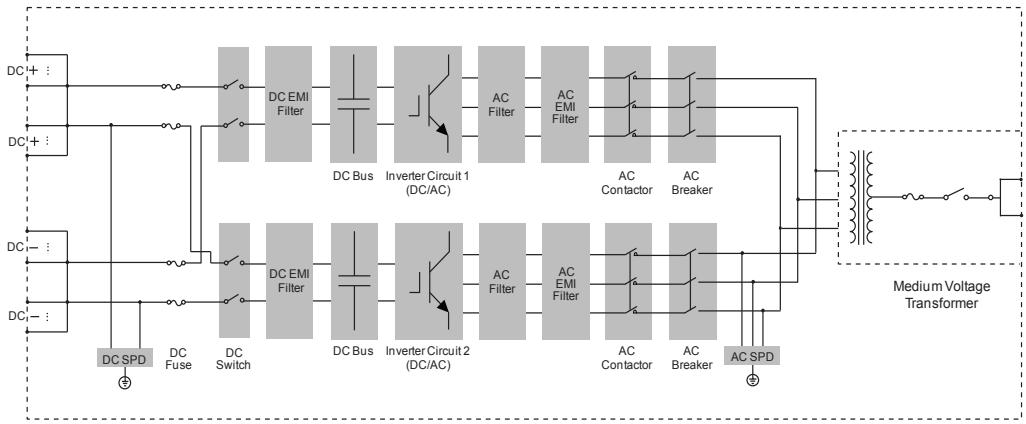
ESS APPLICATIONS

- Typical applations: peak shaving,energy shifting,frequency regulation, capacity firming
- Compatible with high voltage battery system, low system cost
- Bidirectional power conversion system with full four-quadrant operation
- Battery charge & dis-charge management and black start function integrated

GRID SUPPORT

- Compliance with UL1741, UL1741 SA, IEEE1547, Rule21
- Dynamic grid voltage and frequency support
- L/HVRT, L/HFRT, soft start/stop, specified power factor control

CIRCUIT DIAGRAM



System Type	SC3150U-MV
DC side	
Max. DC voltage	1500 V
Min. DC voltage	915 V
DC voltage range for nominal power	915 – 1500 V
Max. DC current	3508 A
Max. DC power	3210 kW
No. of DC inputs	1 or 2 optional
AC side (Grid)	
Nominal AC power(at 45 ˚C)	3150 kVA
Max. AC power at PF = 1 (at 45˚C)	3150 kVA
Max.inverter output current	2886 A
AC voltage range	34.5 KV
Nominal grid frequency / Grid frequency range	60 Hz / 55 - 65 Hz
AC current THD	< 3 % (at nominal power)
DC current injection	< 0.5 % In
Power factor at nominal power / Adjustable power factor	>0.99 / 1 leading - 1 lagging
Adjustable Reactive power	-100%~100%
Feed-in phases / Connection phases	3 / 3
AC side (Off-Grid)	
Nominal AC voltage	630 V
AC voltage range	554 - 693 V
AC voltage Distortion	< 3 % (Linear load)
DC voltage component	< 0.5 % Un (Linear balance load)
Unbalance load Capacity	100%
Nominal Voltage frequency / Voltage frequency range	60 Hz / 55 - 65 Hz
Efficiency	
Inverter max. efficiency / Inverter CEC efficiency	98.8 % / 98.5 %
Transformer	
Transformer rated power	3150 kVA
Transformer max. power	3150 kVA
LV/MV voltage	0.63 kV / 34.5 kV
Transformer vector	Dy1
Transformer cooling type	ONAN (Oil Natural Air Natural)
Oil type	Mineral oil (PCB free) or degradable oil on request
Protection	
DC input protection	Load break switch + fuse
AC output protection	Circuit breaker
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)	6058*2896*2438 mm 238.5''*114.0''*96.0''
Weight	17 T / 37478.6 lb
Degree of protection	Type 3R
Auxiliary power supply	220Vac, 1.5 kVA / 110 Vac, 2.2kVA / Optional: 480 Vac, 30 kVA
Operating ambient temperature range	-30 to 60 ℃ (> 45 ℃ derating) (-22 to 140 ℉ (> 113 ℉ derating))
Allowable relative humidity range	0 – 95 %
Cooling method	Temperature controlled forced air cooling
Max. operating altitude	1000 m (standard) / > 1000m (optional) (3280.8 ft (standard) / > 3280.8 ft (optional))
Display	Touch screen
Communication	Standard: RS485, CAN, Ethernet; Optional: optical fiber
Compliance	UL1741,IEEE1547,UL1741 SA
Grid support	L/HVRT,L/HFRT, active & reactive power control and power ramp rate control