

SH5.0/8.0/10RT New

SUNGROW
Clean power for all

Residential Hybrid Three Phase Inverter for High Voltage Battery



FLEXIBLE APPLICATION

- 150~600V wide battery voltage range
- Supports parallel connection with full communication between inverters
- Provides 100% unbalance loads in backup mode

SMART MANAGEMENT

- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings

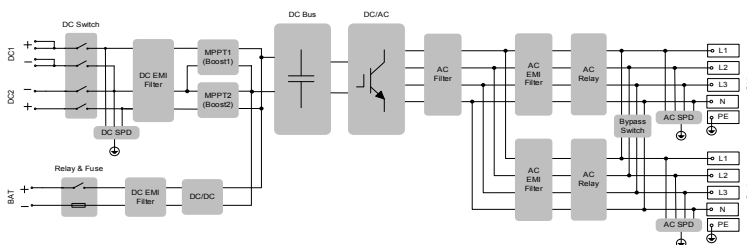
ENERGY INDEPENDENCE

- Seamless transition to backup mode for protection against power outages
- Fast charging/discharging to meet the demand of higher consumption and energy trading

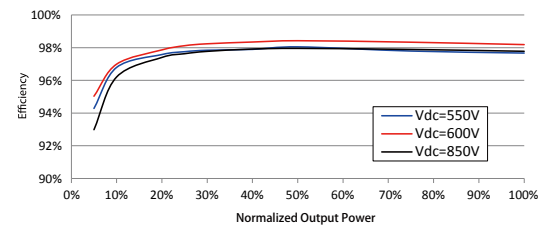
EASY INSTALLATION

- Unique push-in connectors for time-saving installation
- Touch free commissioning with smartphone
- Lightweight and compact

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH10RT)



Type designation	SH5.0RT	SH8.0RT	SH10RT
PV Input			
Max. PV input power	7500 W	12000 W	15000 W
Max. PV input voltage	1000 V	1000 V	1000 V
Startup voltage	180 V	250 V	250 V
Nominal input voltage	600 V	600 V	600 V
MPP voltage range	150 V - 950 V	200 V - 950 V	200 V - 950 V
MPP voltage range for nominal power	210 V - 850 V	330 V - 850 V	280 V - 850 V
No. of MPPTs		2	
Max. number of PV strings per MPPT	1 / 1	1 / 1	1 / 2
Max. PV input current	25 A (12.5 A / 12.5 A)	25 A (12.5 A / 12.5 A)	37.5 A (12.5 A / 25 A)
Max. current for input connector		16A	
Short-circuit current of PV input	32 A (16 A / 16 A)	32 A (16 A / 16 A)	48 A (16 A / 32 A)
AC Input and Output			
Nominal AC output power	5000 W	8000 W	10000 W
Nominal AC output current	7.3 A	11.6 A	14.5 A
Max. AC output apparent power	5000 VA	8000 VA	10000 VA
Max. AC output current	7.6 A	12.1 A	15.2 A
Nominal AC voltage	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
AC voltage range	270 - 480V		
Nominal grid frequency / Grid frequency range	50Hz / 45 - 55Hz, 60Hz / 55 - 65Hz		
THD	<3 % (of nominal power)		
DC current injection	<0.5 % In		
Power factor	>0.99 / 0.8 leading to 0.8 lagging		
Protection			
LVRT		Yes	
Anti-islanding protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
DC switch (solar)		Yes (meet AS60947.3:2018)	
DC fuse (battery)		Yes	
Overvoltage category		III [MAINS], II [PV] [BATTERY]	
SPD		DC Type II / AC Type II	
Battery Data			
Battery type		Li-ion battery	
Battery voltage		150 V - 600 V	
Max charge / discharge current		30 A* / 30 A*	
Max charge / discharge power	7500 W / 6000 W	10600 W / 10600 W	10600W / 10600W
System Data			
Max. efficiency	98.0 %	98.4 %	98.4 %
Max. European efficiency	97.2 %	97.9 %	97.9 %
Isolation method (solar / battery)	Transformerless / Transformerless		
Ingress protection rating	IP65		
Operating ambient temperature range	-25 °C - 60 °C		
Allowable relative humidity range (non-condensing)	0 % - 100 %		
Cooling method	Natural convection		
Max. operating altitude	4000m (>3000m Derating)		
Noise (Typical)	30dB(A)		
Display	LED		
Communication	RS485, WLAN, Ethernet, CAN, 4 × DI, 1 × DO		
DC connection type	MC4 (PV) / Sunclix (Battery)		
AC connection type	Plug and play connector		
Compliance	IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-3, IEC / EN 61000-3, EN 62477-1, VDE-AR-N-4105, AS/NZS 4777.2		
Mechanical Data			
Dimensions (W * H * D)	460 mm * 540 mm * 170 mm		
Mounting method	Wall-mounting bracket		
Weight	27 kg		
Backup Data			
Nominal voltage	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
Frequency range	50 Hz / 60 Hz		
Total harmonic factor output voltage	2 %		
Switch time to emergency mode	<20 ms		
Nominal output power	5000 W / 5000 VA	8000 W / 8000 VA	10000 W / 10000 VA
Peak output power	6000 W / 6000 VA, 5min 10000 W / 10000 VA, 10s	12000 W / 12000 VA, 5min	12000 W / 12000 VA, 5min
Parallel operation	Yes / 2		

* Depending on the connected battery

