

SH5.0/6.0/8.0/10RT New

SUNGROW
Clean power for all

Residential Hybrid Three Phase Inverter



FLEXIBLE APPLICATION

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

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

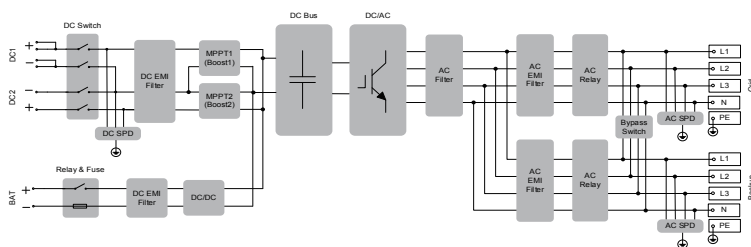
SMART MANAGEMENT

- 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

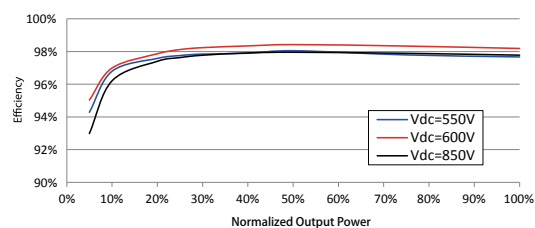
EASY INSTALLATION

- 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	SH6.0RT	SH8.0RT	SH10RT
PV Input				
Max. PV input power	7500 W	9000 W	12000 W	15000 W
Max. PV input voltage			1000 V	
Startup voltage	180 V	250 V	250 V	250 V
Nominal input voltage			600 V	
MPP voltage range	150 V - 950 V	200 V - 950 V	200 V - 950 V	200 V - 950 V
MPP voltage range for nominal power	210 V - 850 V	250 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 / 1	1 / 2
Max. PV input current			25 A (12.5 A / 12.5 A)	
Max. current for input connector			16 A	
Short-circuit current of PV input	32 A (16 A / 16 A)	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	6000 W	8000 W	10000 W
Nominal AC ouput current	7.3 A	8.7 A	11.6 A	14.5 A
Max. AC output apparent power	5000 VA	6000 VA	8000 VA	10000 VA
Max. AC output current	7.6 A	9.1 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 - 480 V		
Nominal grid frequency / Grid frequency range		50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz		
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	
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 / 6600 W	9000 W / 7200 W	10600 W / 10600 W	10600 W / 10600 W
System Data				
Max. efficiency	98.0%	98.2%	98.4%	98.4%
European efficiency	97.2%	97.5%	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		4000 m (>3000 m derating)		
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 * 540 * 170 mm		
Mounting method		Wall-mounting bracket		
Weight		27 kg		
Backup Data				
Nominal voltage		3 / N / PE, 220 Vac / 230 Vac / 240 Vac		
Frequency range		50Hz / 60Hz		
Total hamonic factor output voltage		2%		
Switch time to emergency mode		< 20ms		
Nominal output power	5000 W / 5000 VA (100% unbalance load)	6000 W / 6000 VA (100% unbalance load)	8000 W / 8000 VA (100% unbalance load)	10000 W / 10000 VA (100% unbalance load)
Peak output power	6000 W / 6000 VA,5min 10000 W / 10000 VA,10s	7200 W / 7200 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

