SH5.0/6.0/8.0/10RT

Residential Hybrid Three Phase Inverter

FLEXIBLE APPLICATION

- 150~600V wide battery voltage range
- Supports parallel connection with master-slave controlling
- Provides 100% power to 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

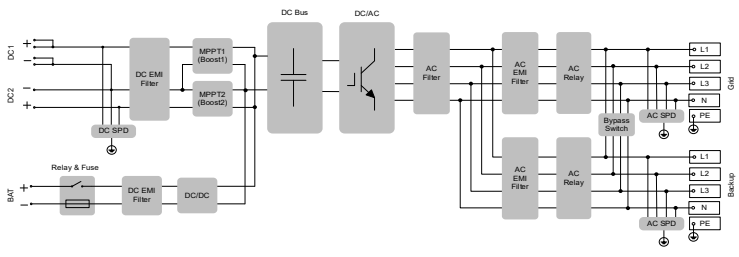
SMART MANAGEMENT

- 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

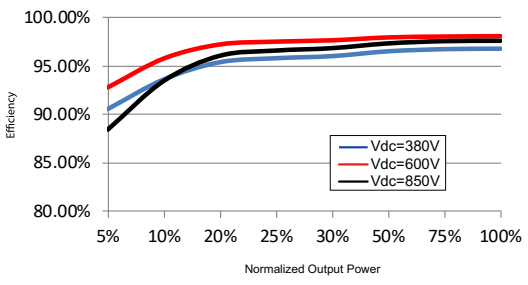
EASY INSTALLATION

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH5.0RT)



SUNGROW
Clean power for all

Type designation	SH5.0RT	SH6.0RT	SH8.0RT	SH10RT
PV Input				
Recommended max. PV input power	7500 W	9000 W	12000 W	15000 W
Max. PV input voltage	1000 V			
Min. PV input voltage / Startup input voltage	150 V / 180 V	200 V / 250 V	200 V / 250 V	200 V / 250 V
Rated PV input voltage	600 V			
MPP voltage range	150 V – 950 V	200 V – 950 V	200 V – 950 V	200 V – 950 V
No. of independent MPP inputs	2			
No. 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)	25 A (12.5 A / 12.5 A)	25 A (12.5 A / 12.5 A)	37.5 A (12.5 A / 25 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)
Max. current for input connector	30 A			
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	7500W / 6000W	9000W / 7200W	10600W / 10600W	10600W / 10600W
AC Input and Output				
Max. AC input power to battery	11600 W	14000 W	18600 W	20600 W
Max. AC power from grid	12500 W	15000 W	18600 W	20600 W
Rated AC output power	5000 W	6000 W	8000 W	10000 W
Rated AC output apparent power	5000VA	6000 VA	8000 VA	10000 VA
Max. AC output current	7.6 A	9.1 A	12.1 A	15.2 A
Rated AC voltage	3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V			
AC voltage range	270 - 480 V			
Rated grid frequency	50 Hz			
Grid frequency range	45 - 55 Hz			
Harmonic (THD)	<3% (of rated power)			
DC current injection	<0.5% In			
Power factor at Rated power / Adjustable power factor	>0.99 / 0.8 leading to 0.8 lagging			
Feed-in phases/connection phases	3 / 3			
Backup Data				
Rated voltage	3/N/PE, 220 Vac/230 Vac/240 Vac			
Frequency range	50 Hz / 60 Hz			
Total hamonic factor output voltage (Linear load)	2 %			
Switch time to emergency mode	<20 ms			
Rated output power	5000W / 5000VA	6000W / 6000VA	8000W / 8000VA	10000W / 10000VA
Peak output power ***	"6000W / 6000VA, 5min 10000W / 10000VA, 10s"	"7200W / 7200VA, 5min 10000W / 10000VA, 10s"	"12000W / 12000VA, 5min"	"12000W / 12000VA, 5min"
Peak output power on single phase ****	2000 VA (≥9.6kWh)	2200 VA (≥12.8kWh)	2700 VA (≥12.8kWh)	3400 VA (≥12.8kWh)
Rated output current for backup load during on grid mode	3 x 18.5A			
Efficiency				
Max. efficiency / European efficiency	98% / 97.2%	98.2% / 97.5%	98.4% / 97.9%	98.4% / 97.9%
Protection & Function				
Grid monitoring	Yes			
DC reverse polarity protection	Yes			
AC short-circuit protection	Yes			
DC switch (solar)	Yes			
DC Overcurrent Protection (Battery)	Yes			
Surge Protection	DC Type II / AC Type II			
Parallel operation on grid port / Max. No. of inverters	Master-slave mode / 5 *			
Battery input reverse polarity protection	Yes			
General Data				
Topology (solar / battery)	Transformerless / Transformerless			
Degree of protection	IP65			
Dimensions (W * H * D)	460mm×540mm×170mm			
Weight	27kg			
Mounting method	Wall-mounting bracket			
Operating ambient temperature range	-25 ℃ - 60 ℃			
Allowable relative humidity range (non-condensing)	0% - 100%			
Cooling method	Natural convection			
Max. operating altitude	4000m			
Noise (Typical)	30dB(A)			
Display	LED			
Communication	RS485, WLAN, Ethernet, CAN, 4 × DI, 1 × DO			
DI/DO	DI*4/DO*1/DRM			
DC connection type	MC4 (PV) / Evo2 Compatible (Battery)			
AC connection type	Plug and play connector			
Compliance	IEC / EN 62109, IEC / EN 61000-6, EN 62477-1, IEC 61727, IEC 62116, IEC 61683, VDE-AR-N-4105, AS/NZS 4777.2:2020, EN50549-1, NRS 097-2-1, TOR Generator Type A, NA/EEA:2020 NE7, SII 2021, NC RfG PTPiREE, NC RfG, EIFS 2018:2, PPDS4, C10/11			

*: Germany is available for 2 inverters parallel in maximum if no ripple control is used in system **: Depending on the connected battery
: Can be reached only if PV and battery power is sufficient. *: Peak power only for Resistive loads. Detail refer to SHRT backup output power document.