

SH5.0/6.0/8.0/10RT

Residential Hybrid Three Phase Inverter



FLEXIBLE APPLICATION

- 150 V-600 V 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

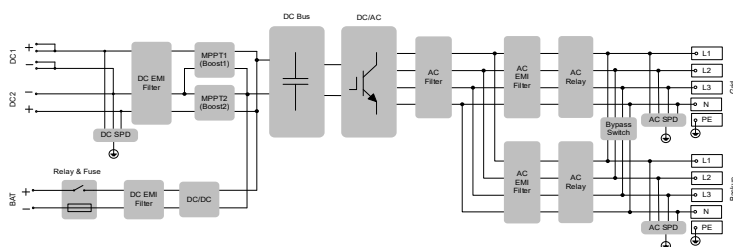
SMART MANAGEMENT

- 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

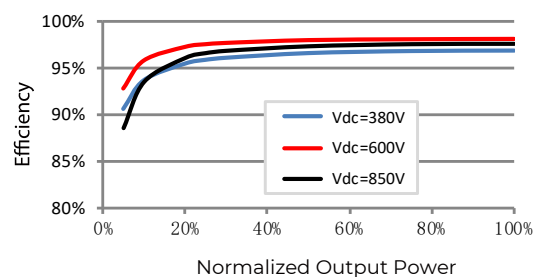
EASY INSTALLATION

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH5.0RT)



Type designation	SH5.0RT	SH6.0RT	SH8.0RT	SH10RT
Input (DC)				
Recommended max. PV input power	7500 Wp	9000 Wp	12000 Wp	15000 Wp
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			
MPPT operating voltage range **	150 V – 950 V	200 V – 950 V	200 V – 950 V	200 V – 950 V
No. of independent MPP trackers	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)
Max. DC short-circuit current	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 range	150 V - 600 V			
Max. charge *** / discharge current ***	30 A / 30 A			
Max. charge / discharge power	7500 W / 6000 W	9000 W / 7200 W	10600 W / 10600 W	10600 W / 10600 W
Input / Output (AC)				
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
Max. 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 V / 380 V; 230 V / 400 V; 240 V / 415 V			
AC voltage range	270 V - 480 V			
Rated grid frequency	50 Hz			
Grid frequency range	45 Hz - 55 Hz			
Harmonic (THD)	< 3 % (of rated power)			
DC current injection	< 0.5 % I _n			
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 (on grid mode)				
Max. output power for backup load ****	16500 W			
Max. output current for backup load	3 * 25 A			
Backup data (off - grid mode)				
Rated voltage	3 / N / PE, 220Vac / 230Vac / 240Vac			
Rated frequency	50 Hz			
THDV(@Linear load)	2 %			
Backup switch time	< 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	3 * 18.5 A			
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			
Leakage current 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)	460 mm * 540 mm * 170 mm			
Weight	27 kg			
Mounting method	Wall-mounting bracket			
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			
Noise (Typical)	30 dB (A)			
Display	LED			
Communication	RS485, WLAN, Ethernet, CAN, 4 × DI, 1 × DO			
DI/DO	DI*4/DO*1/DRM			
DC connection type	MC4 (PV, Max.6mm²) / Evo2 Compatible (Battery, Max.6mm²)			
AC connection type	Plug and play connector (Grid Max.10mm², Backup Max.6mm²)			
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 PTPIDEE, NC RfG, EIES 2018:2, PPDS4, C10/11			

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection. ** Please refer to the user manual for the full load MPPT voltage range.
 *** Depending on the connected battery. **** Please refer to the user manual and modify the settings based on actual load power. ***** 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.