

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

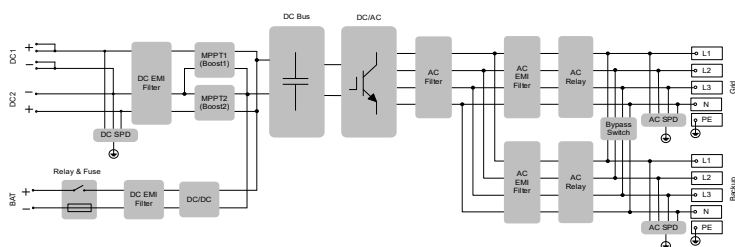
SMART MANAGEMENT

- 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

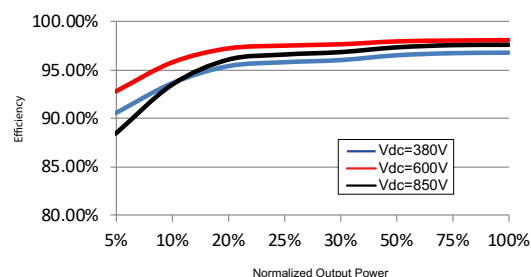
EASY INSTALLATION

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH5.0RT)



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 harmonic 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 °C - 60 °C		
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/I1		

*: 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.