

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

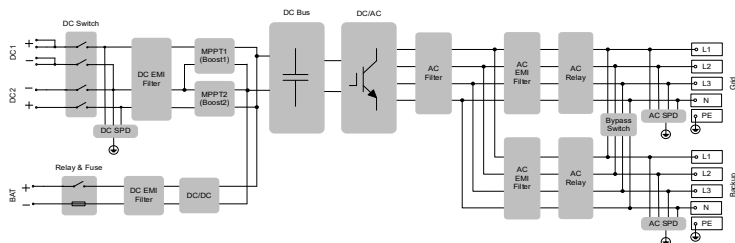
SMART MANAGEMENT

- 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

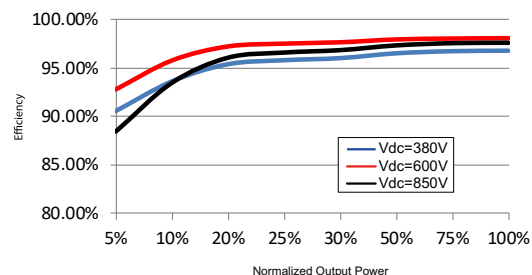
EASY INSTALLATION

- 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 / 12.5 A)
Short-circuit current of PV input	32A (16A / 16A)	32A (16A / 16A)	32A (16A / 16A)	48A (16A / 32A)
Max. current for input connector		30 A		
Battery Data				
Battery type		Li-ion battery		
Battery voltage		150V - 600V		
Max charge / discharge current		30A ** / 30A **		
Max charge / discharge power	7500W / 6000W	9000W / 7200W	10600W / 10600W	10600W / 10600W
AC Input and Output				
Max. AC input power	11600W	14000W	18600W	20600W
Max. AC power from grid	12500W	15000W	18600W	20600W
Rated AC output power	5000W	6000W	8000W	10000W
Rated AC output apparent power	5000VA	6000VA	8000VA	10000VA
Max. AC output current	7.6A	9.1A	12.1A	15.2A
Rated AC voltage		3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
AC voltage range		270 - 480V		
Rated grid frequency		50Hz		
Grid frequency range		45 - 55Hz		
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, 220Vac / 230Vac / 240Vac		
Frequency range		50Hz / 60Hz		
Total harmonic factor output voltage (Linear load)		2%		
Switch time to emergency mode		<20ms		
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 (≥128kWh)	2700 VA (≥128kWh)	3400 VA (≥128kWh)
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.