

# SH5.0/10RT

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

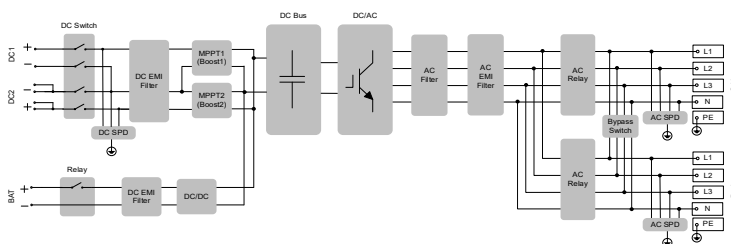
- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings



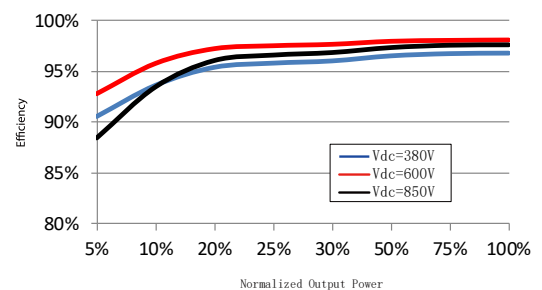
## EASY INSTALLATION

- 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	SH10RT
<b>Input (DC)</b>		
Recommended max. PV input power	7500 Wp	15000 Wp
Max. PV input voltage *		1000 V
Min. PV input voltage / Startup input voltage	150 V / 180 V	200 V / 250 V
Rated PV input voltage		600 V
MPPT operating voltage range **	150 V – 950 V	200 V - 950 V
No. of independent MPP trackers		2
No. of PV strings per MPPT	1 / 1	1 / 2
Max. PV input current	25 A ( 12.5 A / 12.5 A )	37.5 A ( 12.5 A / 25 A )
Max. DC short-circuit current	36 A ( 18 A / 18 A )	54 A ( 18 A / 36 A )
Max. current for input connector		30 A
<b>Battery data</b>		
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	10600 W / 10600 W
<b>Input / Output (AC)</b>		
Max. AC input power	11600 W	14000 W
Max. AC power from grid	12500 VA	20600 VA
Rated AC output power	5000 W	9999 W
Max. AC output apparent power	5000 VA	9999 VA
Rated AC output apparent power	5000 VA	9999 VA
Rated AC output current	7.3 A	14.5 A
Max. AC output current	7.6 A	15.2 A
Rated AC voltage		3 / N / PE, 220 V / 380 V; 230 V / 400 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 )
Power factor at rated power / Adjustable power factor		> 0.99 / 0.8 leading to 0.8 lagging
Feed-in phases / Connection phases		3 / 3-N-PE
<b>Backup data</b>		
Rated voltage		3 / N / PE, 220 Vac / 230 Vac
THDV(@Linear load)		2 %
Backup switch time		< 20 ms
Rated output power	5000 W / 5000 VA	9999 W / 9999 VA
Peak output power ****	6000 W / 6000 VA, 5 min 10000 W / 10000 VA, 10 s	12000 W / 12000 VA, 5 min
Rated output current for backup load during on grid mode		3 * 18.5 A
<b>Efficiency</b>		
Max. efficiency / European efficiency	98.0 % / 97.2 %	98.4 % / 97.9 %
PV to Bat to Grid efficiency		> 94 %
<b>Protection &amp; Function</b>		
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
<b>General data</b>		
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
DC connection type		MC4 (PV, Max.6 mm <sup>2</sup> ) / Evo2 Compatible (Battery, Max.6 mm <sup>2</sup> )
AC connection type		Plug and play connector (Grid Max.10 mm <sup>2</sup> , Backup Max.6 mm <sup>2</sup> )
Compliance		IEC 62109-1/2, IEC 62477-1, AS/NZS 4777.2:2020
Country of manufacture		China

\* 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

\*\*\*\* Can be reached only if PV and battery power is sufficient. Detail compatibility for backup under off-grid scenario can be referred to the user manual.

