

# 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

## 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

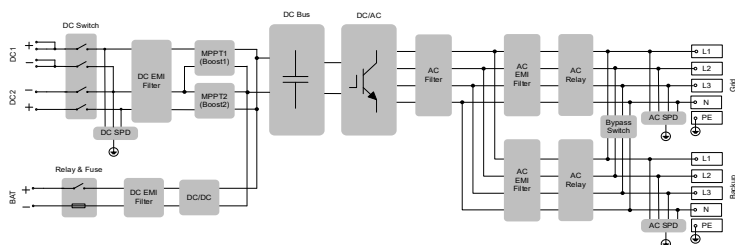
## ENERGY INDEPENDENCE

- Seamless transition to backup mode for protection against power outages
- Fast charging / discharging to meet the demand of higher consumption

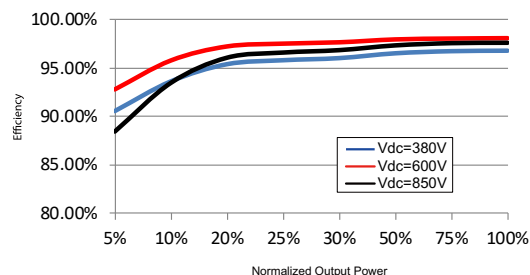
## EASY INSTALLATION

- 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 W	15000 W
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
MPP voltage range	150 V – 950 V	200 V - 950 V
MPP voltage range for rated power	210 V – 850 V	280 V - 850 V
No. of independent MPP inputs		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	36A (18A / 18A)	54A (18A / 36A)
Max. current for input connector		30 A
<b>Battery Data</b>		
Battery type		Li-ion battery
Battery voltage		150V - 600V
Max charge / discharge current		30A * / 30A *
Max charge / discharge power	7500 W / 6000 W	10600 W / 10600 W
<b>Input and 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	10000 W
Max. AC output apparent power	5000 VA	10000 VA
Rated AC output apparent power	5000 VA	10000 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 / 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)
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 / 240 Vac
Total harmonic factor output voltage (Linear load)		2 %
Switch time to emergency mode		<20 ms
Rated output power	5000 W / 5000 VA	10000 W / 10000 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 x 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 fuse (battery)		Yes
Surge Protection		DC Type II / AC Type II
PID recovery function		Yes
Parallel operation on grid port / Max. No. of inverters	Master-slave mode / 5	(need same inverters type)
Battery input reverse polarity protection		Yes
<b>General Data</b>		
Topology (solar / battery)		Transformerless / Transformerless
Degree of protection		IP65
Dimensions (W x H x D)		460*540*170 mm
Weight		27 kg
Mounting method		Wall-mounting bracket
Operating ambient temperature range		-25 °C to 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) / Sunclix (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
Country of manufacture		China

\* Depending on the connected battery

\*\* Can be reached only if PV and battery power is sufficient.