

# 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

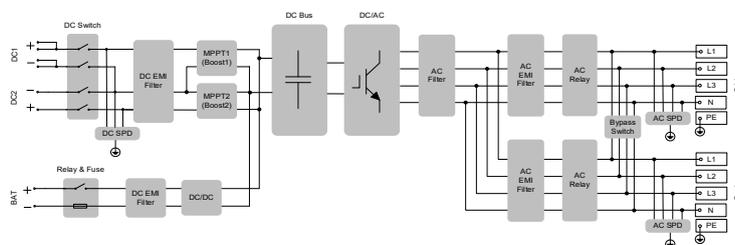
- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings



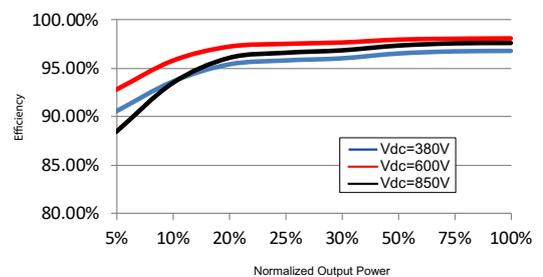
## EASY INSTALLATION

- 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 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                            | 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  |   | 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 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  | 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 / 380 V; 230 / 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                  |
| Total harmonic factor output voltage ( Linear load )     |   | 2 %  |
| Switch time to emergency mode                            |   | < 20 ms  |
| Rated output power                                       | 5000 W / 5000 VA                                    | 9999 W / 9999 VA                               |
| Peak output power **                                     | 6000 W / 6000 VA, 5 min<br>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                        |
| PID recovery function                                    |   | Yes  |
| 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 * 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 ) / Evo2 Compatible ( Battery )       |
| AC connection type                                       |   | Plug and play connector                        |
| Compliance   |   | IEC 62109-1/2, IEC 62477-1, AS/NZS 4777.2:2020 |
| Country of manufacture                                   |   | China  |

\* 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.