

# SH5.0/6.0RS

## Residential Hybrid Single Phase Inverter



### FLEXIBLE APPLICATION

- 80 V - 460 V wide battery voltage range
- Ideal for both retrofitting and new installations
- Built-in smart PID Zero function



### ENERGY INDEPENDENCE

- Seamless transition to backup mode, for protection against power outages
- Fast Charging or discharging, enabling higher self-consumption results
- Built-in EMS with advanced customization



### USER FRIENDLY SETUP

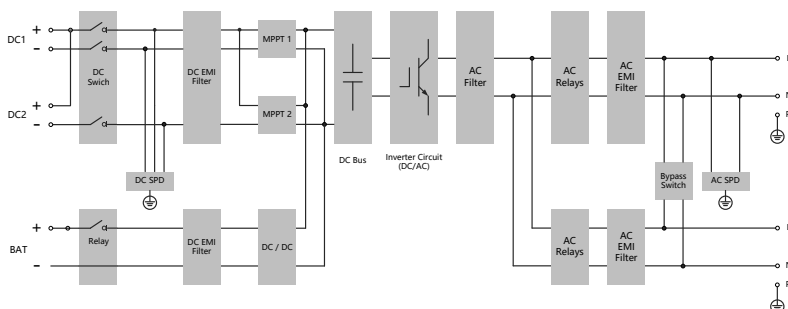
- Plug and play installation
- iSolarCloud monitoring available on App and Web
- Lightweight and compact, optimized for heat-dissipation



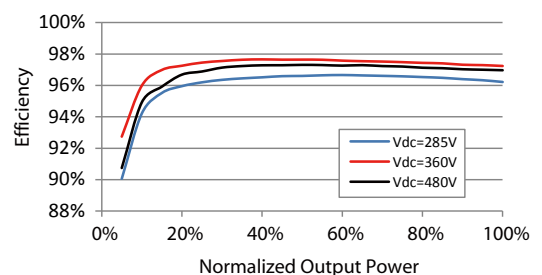
### SMART MANAGEMENT

- Real time data (10 seconds refresh sample)
- 24/7 live online monitoring and with integrated display
- Online IV curve scan and diagnosis

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE (SH6.0RS)



Type designation	SH5.0RS		SH6.0RS	
Input ( DC )				
Recommended max. PV input power	12000 Wp		13000 Wp	
Max. PV input voltage *			600 V	
Min. PV input voltage / Startup input voltage			40 V / 50 V	
Rated PV input voltage			360 V	
MPPT operating voltage range **			40 V – 560 V	
No. of independent MPP trackers			2	
No. of PV strings per MPPT			1/1	
Max. PV input current			32 A ( 16 A / 16 A )	
Max. DC short-circuit current			40 A ( 20 A / 20 A )	
Max. current for input connector			20 A	
Battery data				
Battery type			Li-ion battery	
Battery voltage range			80 V - 460 V	
Max. charge *** / discharge current ***			30 A / 30 A	
Max. charge / discharge power			6600 W	
Input / Output ( AC )				
Max. AC power from grid	12000 VA		13000 VA	
Rated AC output power	4999 W		6000 W	
Max. AC output apparent power	4999 VA		6000 VA	
Rated AC output apparent power	4999 VA		6000 VA	
Rated AC output current ( at 230 V )	21.7 A		26.1 A	
Max. AC output current	22.7 A		27.3 A	
Rated AC voltage			230 V	
AC voltage range			154 V – 276 V	
Rated grid frequency			50 Hz / 60 Hz	
Grid frequency range			45 Hz – 55 Hz / 55 Hz – 65 Hz	
Harmonic ( THD )			< 3 % ( of rated power )	
Power factor at rated power / Adjustable power factor			> 0.99 at default value at rated power	
Feed-in phases / connection phases			1/1	
Backup data ( on-grid mode )				
Max. output power for backup load ****			6000 W	
Max. output current for backup load *****			27.3 A	
Backup data ( off-grid mode )				
Rated voltage			230V ( ± 2 % )	
Rated frequency			50 Hz / 60 Hz ( ± 0.2 % )	
THDV ( @Linear load )			< 2 %	
Backup switch time			< 10 ms	
Rated output power	5000 W / 5000 VA		6000 W / 6000 VA	
Peak output power			8400 VA, 10 s	
Efficiency				
Max. efficiency / European efficiency			97.7 % / 97.3 %	
Protection & Function				
Grid monitoring			Yes	
DC reverse polarity protection			Yes	
AC short circuit protection			Yes	
Leakage current protection			Yes	
DC switch ( solar )			Yes	
Surge protection			DC Type II / AC Type II	
PID Zero			Yes	
Parallel operation on grid port / Max. No of inverters			Master-slave mode / 3	
Battery input reverse polarity protection			Yes	
General data				
Topology ( Solar / Battery )			Transformerless / Transformerless	
Degree of protection			IP65	
Dimensions ( W * H * D )			490 mm * 340 mm *170 mm	
Weight			18.5 kg	
Mounting method			Wall-mounting bracket	
Operating ambient temperature range			-25 °C – 60 °C	
Allowable relative humidity range			0 % – 100 %	
Cooling method			Natural convection	
Max. operating altitude			4000 m	
Noise ( typical )			< 45 dB ( A )	
Display			LED digital display & LED indicator	
Communication			RS485 / Ethernet / WLAN / CAN	
DI / DO			DI * 4 / DO *1 / DRM	
DC connection type	MC4 ( PV, Max.6 mm² ) / Evo2 Compatible ( Battery, Max.6 mm² )			
AC connection type *****	Plug and Play ( Grid Max.16 mm², Backup Max.6 mm² )			
Grid compliance	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 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 \*\*\*\* Please refer to the user manual and modify the settings based on actual load power \*\*\*\*\* Calculated based on 220V grid voltage \*\*\*\*\* AC Connector brand is Phoenix Contact and compatible brand. Country code needs to be set before grid connection