

SH3.0/3.6/4.0/5.0/6.0RS

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

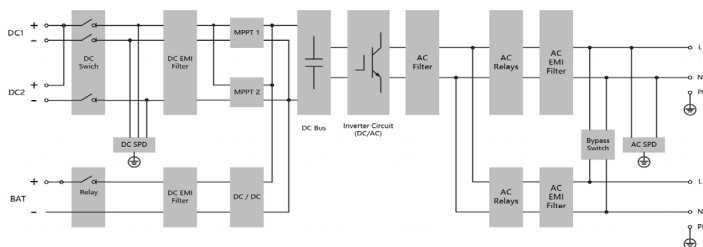
- Plug and play installation
- iSolarCloud monitoring available on App and Web
- Lightweight and compact, optimized for heat-dissipation



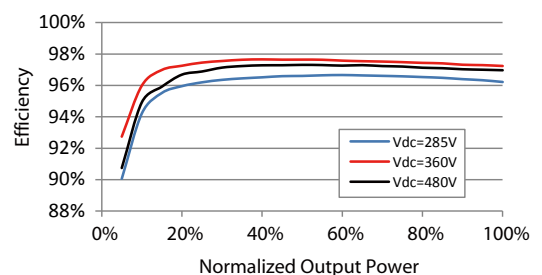
SMART MANAGEMENT

- 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	SH3.0RS	SH3.6RS	SH4.0RS	SH5.0RS	SH6.0RS
Input (DC)					
Recommended max. PV input power	10000 Wp	10700 Wp	11000 Wp	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		
MPP voltage range			40 V – 560 V		
No. of independent MPP inputs			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			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	10000 VA	10700 VA	11000 VA	12000 VA	13000 VA
Rated AC output power	3000 W	3680 W	4000 W	5000 W	6000 W
Max. AC output apparent power	3000 VA	3680 VA	4000 VA	5000 VA	6000 VA
Max. AC output current	13.7 A	16 A	18.2 A	22.8 A	27.3A
Rated AC voltage			220 V / 230 V / 240 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		
Efficiency					
Max. efficiency / European efficiency	97.4 % / 97.0 %	97.5 % / 97.1 %	97.6 % / 97.2 %	97.7 % / 97.3 %	97.7 % / 97.3 %
Backup data (on grid mode)					
Rated output power for backup load			6000 W		
Rated output current for backup load			27.3 A		
Backup data (off-grid mode)					
Rated voltage			220 V / 230 V / 240 V (± 2 %)		
Frequency range			50 Hz / 60 Hz (± 0.2 %)		
Output voltage harmonic (THD)			< 2 %		
Switch time to emergency mode			< 10 ms		
Rated output power	3000W / 3000VA	3680W / 3680VA	4000 W / 4000 VA	5000W / 5000VA	6000W / 6000VA
Peak output power			8400 VA, 10s		
Protection & Function					
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 Zero function			Yes		
Parallel operation on grid port / Max. No of inverters			Master-slave mode / 3		
Optimizer compatibility *			Optional		
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 to 60 °C		
Allowable relative humidity range			0 % – 100 %		
Cooling method			Natural convection		
Max. operating altitude			4000 m		
Noise emission			< 45dB (A)		
Display			LED digital display & LED indicator		
Communication			RS485 / Ethernet / WLAN / CAN		
DI / DO			DI * 4 / DO * 1 / DRM		
DC connection type			MC4 (PV) / Evo2 Compatible (Battery)		
AC connection type			Plug and Play		
Grid compliance	IEC/EN 62109-1, IEC/EN 62109-2, IEC62116, IEC61727, IEC/EN 61000-3-11, IEC/EN 61000-3-12, EN 62477-1, AS/NZS 4777.2:2020, EN 50549-1, CEI 0-21, G98 / G99, UNE 217002:2020, NTS V2 TypeA, C10/26				

* For optimizer compatibility, please consult Sungrow before placing an order

