

SH5.0/6.0RS

Residential Hybrid Single Phase Inverter



FLEXIBLE APPLICATION

- 80~460 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

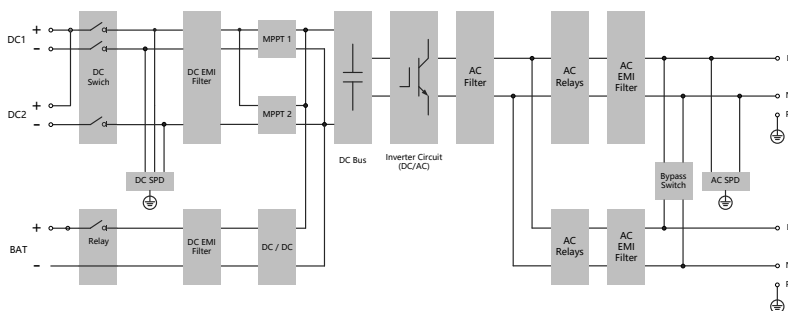
- Plug and play installation **
- iSolarCloud monitoring available on App and Web
- Lightweight and compact, optimized for heat-dissipation



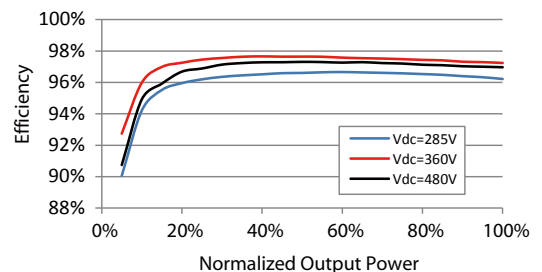
SMART MANAGEMENT

- Real time data (10 seconds refresh sample)
- 24 / 7 live monitoring both online 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. operating PV voltage / Start-up input voltage		40 V / 50 V
Rated PV input voltage		360 V
MPP voltage range		40V – 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	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 230V)	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)		
Rated output power for backup load		6000 W
Rated output current for backup load		27.3 A
Backup Data (off-grid mode)		
Rated voltage		230V (±2 %)
Rated grid frequency		50 Hz / 60 Hz (±0.2 %)
Output voltage harmonic (THD)		< 2 %
Switch time to emergency mode		< 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
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 / 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(Non-condensing)		0 % – 100 %
Cooling method		Natural convection
Max. operating altitude		4000 m
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 62109-1/2, IEC 62477-1, AS/NZS 4777.2:2020
Country of manufacture		China

* Only for P-type PV module

** Country code needs to be set before grid connection

*** AC Connector brand is Phoenix Contact and compatible brand



SH8.0 - 10RS

Residential Hybrid Single Phase Inverter

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FLEXIBLE APPLICATION

- 200%DC/AC PV input 16A*4MPPTs
- Ideal for both new installation and retrofit scenario
- Built-in smart PID recovery function



SMART MANAGEMENT

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



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

- Plug and play installation
- iSolarCloud monitoring available on App and Web
- whole home backup available



Type designation	SH8.0RS	SH10RS
Input (DC)		
Recommended max. PV input power	16000 Wp	20000 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		4
No. of PV strings per MPPT	1/1/1/1	1/1/1/1
Max. PV input current		64 A (16 A / 16 A / 16 A / 16 A)
Max. DC short-circuit current		80 A (20 A / 20 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		50 A* / 50 A*
Max. charge / discharge power		10000 W / 10000 W
Input and Output (AC)		
Max. AC power from grid		14500 VA
Rated AC output power	8000 W	9999 W
Max. AC output apparent power	8000 VA	9999 VA
Max. AC output current	36.4 A	45.5 A
Rated AC voltage		1 / N / PE, 220 V / 230 V / 240V
AC voltage range		154 V – 276 V
Rated grid frequency		50 Hz / 60Hz
Grid frequency range		45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)		< 3 % (at rated power)
Power factor at rated power / Adjustable power factor		> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / connection phases		1 / 1-N-PE
Backup data (on grid mode)		
Rated output power for backup load		14500 W
Rated output current for backup load		63 A
Backup data(off-grid mode)		
Rated voltage		1 / N / PE, 220 V / 230 V / 240V (± 2 %)
Rated grid frequency		50 Hz / 60Hz (± 2 %)
Output voltage harmonic (THD)		< 2 %
Switch time to emergency mode		< 10 ms
Rated output power	8000 W / 8000 VA	9999 W / 9999 VA
Peak output power		13680 VA, 10 s
Efficiency		
Max. efficiency / European efficiency	97.4 % / 96.8 %	97.5 % / 97.1 %
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		3
Battery input reverse polarity protection		Yes
AFCI		Yes
IV scan and diagnosis		Yes
General data		
Topology (solar / battery)		Transformerless / Transformerless
Degree of protection		IP65
Dimensions (W * H * D)		605 mm * 435 mm * 181 mm
Weight		29 kg
Mounting method		Wall-mounting bracket



Type designation	SH8.0RS	SH10RS
Operating ambient temperature range	- 25 °C – 60 °C	
Allowable relative humidity range (non-condensing)	0 % – 100 %	
Cooling method	Natural cooling	
Max. operating altitude	4000 m	
Noise (typical)	45 dB (A)	
Display	LED digital display and LED indicator	
Communication	RS485, WLAN, Ethernet, CAN	
DI / DO	DI * 1 / DO * 2 / DRM	
DC connection type	MC4 (PV) / Plug and play connector (battery)	
AC connection type	Plug and play connector	
Grid compliance	IEC 62109-1:2010, IEC 62109-2, IEC 62477-1, IEC61000-6-1/-2/-3/-4, IEC62920, EN55011, CISPR 11, AS/NZS 4777.2:2020	
Country of manufacture	China	

* Depending on the connected battery

