

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

Residential Hybrid Single Phase Inverter

NEW



FLEXIBLE APPLICATION

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

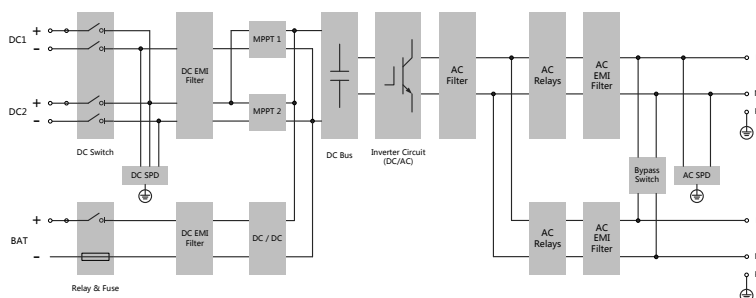
USER FRIENDLY SETUP

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

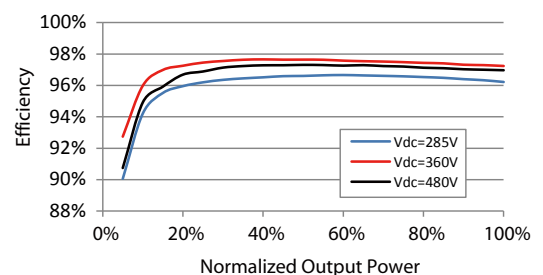
SMART MANAGEMENT

- 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



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. 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				
Default No. of PV strings per MPPT	1				
Max. PV input current	32 A (16 A/16 A)				
Max. DC short-circuit current	40 A (20 A/20 A)				
Input / Output (AC)					
Max. AC input 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 power	3000 VA	3680 VA	4000 VA	5000 VA*	6000 VA
Rated AC output current (at 230 V)	13.1 A	16 A	17.4 A	21.8 A**	26.1 A
Max. AC output current	13.7 A	16 A	18.2 A	22.8 A**	27.3 A
Rated AC voltage	220 / 230 / 240 V				
AC voltage range	154 V – 276 V				
Rated grid frequency /	50 Hz / 45 – 55 Hz				
Grid frequency range	60 Hz / 55 – 65 Hz				
Harmonic (THD)	<3 % (of rated power)				
Power factor at rated power /	>0.99 at default value at rated power				
Adjustable power factor	(adj. 0.8 overexcited/leading to 0.8 underexcited/lagging)				
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 %
Protection & Function					
Grid monitoring	Yes				
DC reverse polarity protection	Yes				
AC short circuit protection	Yes				
Leakage current protection	Yes				
Surge Protection	DC Type II / AC Type II				
DC switch(solar)	Yes				
DC fuse(battery)	Yes				
PID recovery function	Yes				
Battery input reverse polarity protection	Yes				
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				
General Data					
Dimensions (W * H * D)	490 * 340 * 170 mm				
Weight	18.5 kg				
Mounting method	Wall-mounting bracket				
Topology (Solar / Battery)	Transformerless / Transformerless				
Degree of protection	IP65				
Operating ambient temperature range	-25 °C to 60 °C				
Allowable relative humidity range	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) / Sunclix (Battery)				
AC connection type	Plug and Play				
Grid compliance	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-3-11, IEC/EN 61000-3-12, EN 62477-1, AS/NZS 4777.2, EN 50549-1, CEI 0-21, G98 / G99				
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 %)				
Total output THDv for linear load	< 2 %				
Switch time to emergency mode	< 10 ms				
Rated output power	3000 W / 3000 VA	3680 W / 3680 VA	4000 W / 4000 VA	5000 W / 5000 VA	6000 W / 6000 VA
Peak output power	8400 VA, 10s				

* AS4777.2 4999W, 4999VA ** AS 4777.2 :Rated and Max. AC current is 21.7A

SG5.0RT/SG7.0RT/SG10RT/ SG15RT/SG20RT **New**

SUNGROW
Clean power for all

Multi-MPPT String Inverter for 1000 Vdc System



HIGH YIELD

- Lower startup & wider MPPT voltage
- Compatible with bifacial modules
- Built-in PID recovery function

SMART MANAGEMENT

- Smart IV curve scanning
- 24/7 Live monitoring
- Over-the-air firmware updates

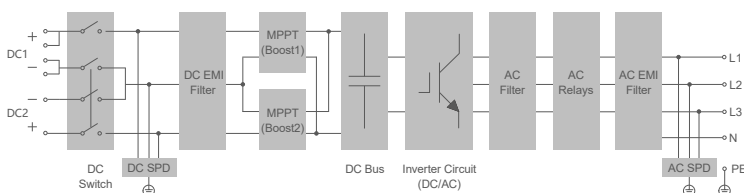
SAFE AND DURABLE

- Quick arc fault circuit interrupter
- Build-in Type II DC & AC SPD
- High anti-corrosion rating at C5

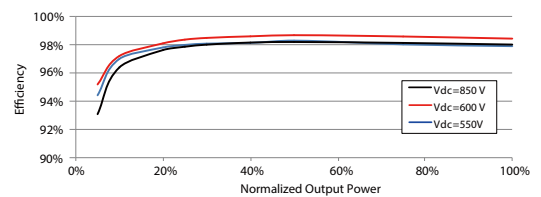
EASY AND USER FRIENDLY

- 18 kg compact design
- Unique push-in connectors
- Fast and easy commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



SG5.0RT/SG7.0RT/SG10RT/SG15RT/SG20RT

Type designation	SG5.0RT	SG7.0RT	SG10RT	SG15RT	SG20RT
Input (DC)					
Recommended max. PV input power	7.5 kW	10.5 kW	15 kW	22.5kW	30 kW
Max. PV input voltage			1100 V		
Min. PV input voltage / Start-up input voltage			180 V		
Nominal input voltage			600 V		
MPP voltage range			160 V – 1000 V		
No. of independent MPP inputs			2		
No. of PV strings per MPPT	1/1	2/1	2/1	2/2	2/2
Max. PV input current	25 A (12.5 A/12.5 A)	37.5 A (25 A/12.5 A)	37.5 A (25 A/12.5 A)	50 A (25 A / 25 A)	50 A (25 A / 25 A)
Max. current for input connector			30A		
Max. DC short-circuit current	32 A (16 A / 16 A)	48 A (32 A / 16 A)	48 A (32 A / 16 A)	64 A (32 A / 32 A)	64 A (32 A / 32 A)
Output (AC)					
Nominal AC power (@230 V, 50 Hz)	5000 W	7000 W**	10000 W	15000 W	20000 W
Max. AC output power	5500 VA*	7700 VA**	11000 VA*	16500 VA*	22000 VA*
Max. AC output current	8.3 A	11.7 A	16.7 A	25 A	31.9 A
Nominal AC voltage			3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V 3 / N / PE, 240 / 415 V		
AC voltage range			180 V – 276 V		
Nominal grid frequency / Grid frequency range			50 Hz / 45 – 55 Hz 60 Hz / 55 – 65 Hz		
Harmonic(THD)			<3 % (at nominal power)		
Power factor at nominal power / Adjustable power factor			>0.99 / 0.8 leading – 0.8 lagging		
Feed-in phases / AC connection			3 / 3		
Efficiency					
Max. efficiency	98.40%	98.40%	98.50%	98.50%	98.50%
European efficiency	97.40%	97.70%	97.90%	98.10%	98.10%
Protection					
Grid monitoring			Yes		
DC reverse connection protection			Yes		
AC short-circuit protection			Yes		
Leakage current protection			Yes		
Surge Protection			DC Type II / AC Type II		
DC switch			Yes		
Arc fault circuit interrupter (AFCI)			Yes		
PID recovery function			Yes		
General Data					
Dimensions (W*H*D)			370 * 480 * 195 mm		
Mounting method			Wall-mounting bracket		
Weight	18 kg	18 kg	18 kg	21 kg	21 kg
Topology			Transformerless		
Degree of protection			IP65		
Operating ambient temperature range			-25 °C to 60 °C		
Allowable relative humidity range			0% – 100%		
Cooling method	Natural cooling	Natural cooling	Natural cooling	Smart forced air cooling	Smart forced air cooling
Max. operating altitude			4000 m (> 2000 m derating)		
Noise(Typical)	35dB (A)	35dB (A)	35dB (A)	45dB (A)	45dB (A)
Display			LED		
Communication			WLAN, Ethernet, RS485, DI, DO		
DC connection type			MC4		
AC connection type			Plug and play		
Compliance	EN 61000-6-1/-3, IEC62109-2, IEC 61727, IEC 62116, AS/NZS 4777.2:2015, VDE-AR-N-4105, DIN VDE0126-1-1, CEI 0-21, EN50549-1				

*: For Australia & Belgium & Germany Max. AC output power: SG5.0RT is 5000VA, SG10RT is 10000VA, SG15RT is 15000VA, SG20RT is 20000VA,

** : For Australia, 6999W, 6999 VA



SG5.0RS-ADA/SG8.0/10RS

Multi-MPPT String Inverter for 600 Vdc System

ADA



☀️ HIGH YIELD

- Compatible with high power PV modules and bifacial modules
- Lower startup & wider MPPT voltage range
- Built-in smart PID recovery function

🛡️ SAFE AND RELIABLE

- Integrated arc fault circuit interrupter
- Built-in Type II DC&AC SPD
- Corrosion protection rating at C5

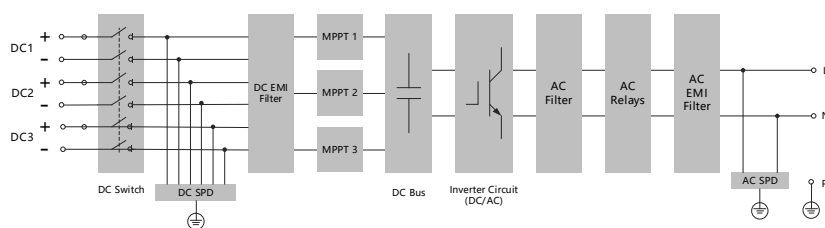
💡 USER FRIENDLY SETUP

- Plug and play installation *
- One-click access to iSolarCloud monitoring platform
- Light and compact with optimized heat dissipation design

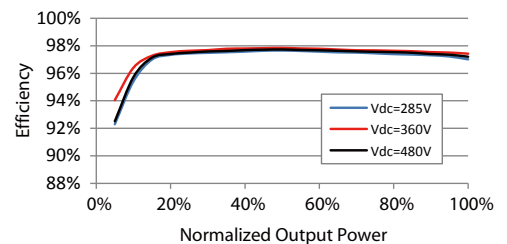
⚙️ SMART MANAGEMENT

- 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 (SG10RS-ADA)



Type designation	SG5.0RS-ADA	SG8.0RS	SG10RS
Input (DC)			
Recommended max. PV input power	7.5 kWp	12 kWp	15 kWp
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		40-560 V	
No. of independent MPP inputs		3	
No. of PV strings per MPPT		1	
Max. PV input current		48 A (16 A / 16 A / 16 A)	
Max. DC short-circuit current		60 A (20 A / 20 A / 20 A)	
Max. current for DC connector		30A	
Output (AC)			
Rated AC output power	4999 W	8000 W	9999 W
Max. AC output apparent power	4999 VA	8000 VA	9999 VA
Rated AC output apparent power	4999 VA	8000 VA	9999 VA
Max. AC output current	22.7 A	36.4 A	43.5 A
Rated AC output current (at 230V)	21.7 A	34.8 A	45.5 A
Rated AC voltage		220 / 230 / 240V	
AC voltage range		154 - 276 V	
Rated grid frequency		50 Hz / 60 Hz	
Grid frequency range		45 – 55 Hz / 55 – 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	
Efficiency			
Max. efficiency / European efficiency	97.8 % / 96.9 %	97.8 % / 97.3 %	97.8 % / 97.4%
Protection			
Grid monitoring		Yes	
DC reverse polarity protection		Yes	
AC short-circuit protection		Yes	
Leakage current protection		Yes	
Surge Protection		DC type II / AC type II	
Ground fault monitoring		Yes	
DC switch		Yes	
PV string current monitoring		Yes	
Arc fault circuit interrupter (AFCI)		Yes	
PID recovery function		Yes	
DC terminal protective cover		Yes	
General Data			
Dimensions (W*H*D)		490* 340 * 170 mm	
Weight		19 kg	
Mounting method		Wall-mounting bracket	
Topology		Transformerless	
Degree of protection		IP65	
Corrosion		C5	
Operating ambient temperature range		-25 to 60 °C	
Allowable relative humidity range (non-condensing)		0 - 100 %	
Cooling method		Natural cooling	
Max. operating altitude		4000 m	
Display		LED digital display & LED indicator	
Communication		Ethernet / WLAN / RS485 / DI (Ripple control & DRM)	
DC connection type		MC4 (Max. 6 mm ²)	
AC connection type		Plug and play connector (Max. 16 mm ²) *	
Grid compliance		IEC 62109-1/2, AS/NZS 4777.2:2020	
Grid Support		Active & reactive power control and power ramp rate control	
Country of manufacture		China	

* Country code needs to be set before grid connection



SH5.0/6.0/8.0/10RT **New**

Residential Hybrid Three Phase Inverter



FLEXIBLE APPLICATION

- 150~600V wide battery voltage range
- Supports parallel connection with full communication between inverters
- Provides 100% 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 and energy trading

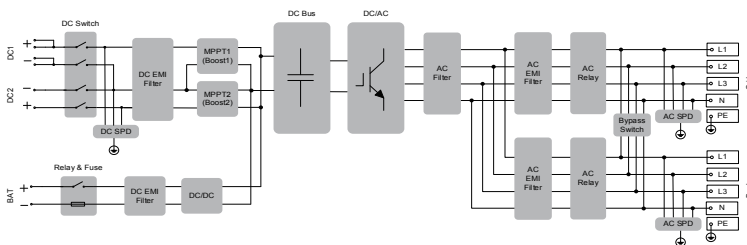
SMART MANAGEMENT

- 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

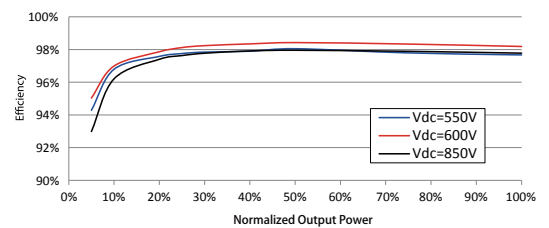
EASY INSTALLATION

- Unique push-in connectors for time-saving installation
- Touch free commissioning with smartphone
- Lightweight and compact

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH10RT)



Type designation	SH5.ORT	SH6.ORT	SH8.ORT	SH10RT
PV Input				
Max. PV input power	7500 W	9000 W	12000 W	15000 W
Max. PV input voltage			1000 V	
Startup voltage	180 V	250 V	250 V	250 V
Nominal input voltage			600 V	
MPP voltage range	150 V - 950 V	200 V - 950 V	200 V - 950 V	200 V - 950 V
MPP voltage range for nominal power	210 V - 850 V	250 V - 850 V	330 V - 850 V	280 V - 850 V
No. of MPPTs			2	
Max. number of PV strings per MPPT	1/1	1/1	1/1	1/2
Max. PV input current			25 A (12.5 A / 12.5 A)	
Max. current for input connector			16 A	
Short-circuit current of PV input	32 A (16 A / 16 A)	32 A (16 A / 16 A)	32 A (16 A / 16 A)	48 A (16 A / 32 A)
AC Input and Output				
Nominal AC output power	5000 W	6000 W	8000 W	10000 W
Nominal AC output current	7.3 A	8.7 A	11.6 A	14.5 A
Max. AC output apparent power	5000 VA	6000 VA	8000 VA	10000 VA
Max. AC output current	7.6 A	9.1 A	12.1 A	15.2 A
Nominal AC voltage		3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V		
AC voltage range		270 - 480 V		
Nominal grid frequency / Grid frequency range		50 Hz / 45 - 55 Hz, 60 Hz / 55 - 65 Hz		
THD		<3 % (of nominal power)		
DC current injection		<0.5 % In		
Power factor		>0.99 / 0.8 leading to 0.8 lagging		
Protection				
LVRT			Yes	
Anti-islanding protection			Yes	
AC short circuit protection			Yes	
Leakage current protection			Yes	
DC switch (solar)			Yes	
DC fuse (battery)			Yes	
Overvoltage category		III [MAINS], II [PV] [BATTERY]		
SPD		DC Type II / AC Type II		
Battery Data				
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 / 6600 W	9000 W / 7200 W	10600 W / 10600 W	10600 W / 10600 W
System Data				
Max. efficiency	98.0%	98.2%	98.4%	98.4%
European efficiency	97.2%	97.5%	97.9%	97.9%
Isolation method (solar / battery)			Transformerless / Transformerless	
Ingress protection rating			IP65	
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 (>3000 m derating)	
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 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-3, IEC / EN 61000-3, EN 62477-1, VDE-AR-N-4105, AS / NZS 4777.2	
Mechanical Data				
Dimensions (W * H * D)			460 * 540 * 170 mm	
Mounting method			Wall-mounting bracket	
Weight			27 kg	
Backup Data				
Nominal voltage			3 / N / PE, 220 Vac / 230 Vac / 240 Vac	
Frequency range			50Hz / 60Hz	
Total harmonic factor output voltage			2%	
Switch time to emergency mode			< 20ms	
Nominal output power	5000 W / 5000 VA (100% unbalance load)	6000 W / 6000 VA (100% unbalance load)	8000 W / 8000 VA (100% unbalance load)	10000 W / 10000 VA (100% unbalance load)
Peak output power	6000 W / 6000 VA, 5min 10000 W / 10000 VA, 10s	7200 W / 7200 VA, 5min 10000 W / 10000 VA, 10s	12000 W / 12000 VA, 5min	12000 W / 12000 VA, 5min
Parallel operation			Yes / 2	

* Depending on the connected battery

