SG3.0/4.0RT

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
- Remote firmware updates

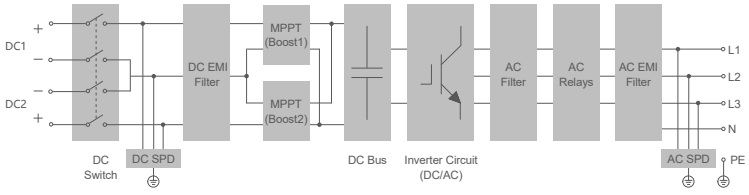
SAFE AND DURABLE

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

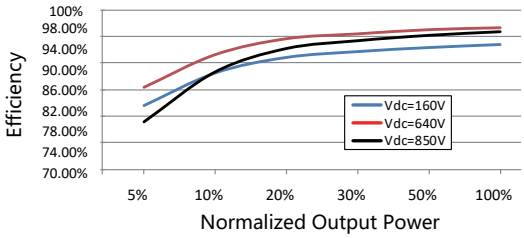
EASY AND USER FRIENDLY

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE（SG4.0RT）



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SUNGROW
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Type designation	SG3.0RT	SG4.0RT
Input (DC)		
Recommended max. PV input power	4.5 kWp	6.0 kWp
Max. PV input voltage	1100 V *	
Min. PV input voltage / Start-up input voltage	180V / 180V	
Rated 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	
Max. PV input current	25A (12.5A/12.5A)	
Max. DC short-circuit current	32A (16A/16A)	
Max. current for DC connector	30 A	
Output (AC)		
Rated AC output power	3000W	4000W
Max. AC output apparent power	3300VA	4400VA
Max. AC output current	5.1A	6.8A
Rated AC output current(at 230V)	4.3 A	5.8 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V 3 / N / PE, 240 / 415 V	
AC voltage range	180V – 276V / 311V - 478V	
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 – 55 Hz / 55 – 65 Hz	
Harmonic (THD)	<5 % (at rated power)	
Power factor at Rated power / Adjustable power factor	>0.99/0.8 leading – 0.8 lagging	
Feed-in phases / Connection phases	3 / 3-PE	
Efficiency		
Max. efficiency / European efficiency	98.2% / 96.5%	98.2% / 97%
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	
Ground fault monitoring	Yes	
DC switch	Yes	
PV String current monitoring	Yes	
Arc fault circuit interrupter (AFCI)	Yes	
PID recovery function	Yes	
General Data		
Dimensions (W*H*D)	370*480*195 mm	
Weight	18 kg	
Mounting method	Wall-mounting bracket	
Topology	Transformerless	
Degree of protection	IP65	
Night power consumption	<6W	
Operating ambient temperature range	-25 ℃ to 60 ℃	
Allowable relative humidity range (non-condensing)	0% – 100%	
Cooling method	Natural cooling	
Max. operating altitude	4000 m	
Display	LED	
Communication	WLAN / Ethernet / RS485 / DI / DO	
DC connection type	MC4 (Max. 6 mm^2)	
AC connection type	Plug and play	
Grid Compliance	IEC / EN 61000-6-1/2/3/4, IEC / EN62109-1/2, IEC 61727, IEC 62116, IEC 61683, EN50530, EN50549-1	
Grid Support	LVRT, HVRT,active & reactive power control and power ramp rate control	

*: The inverter enters the standby state when the input voltage ranges between1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

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SG5.0/6.0/7.0/8.0/10/12RT

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
- Remote firmware updates

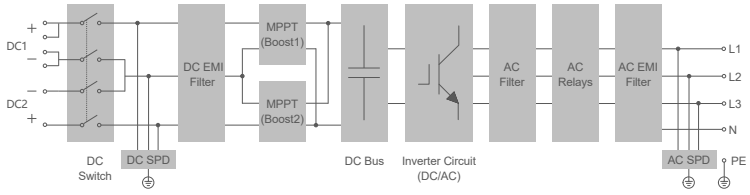
SAFE AND DURABLE

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

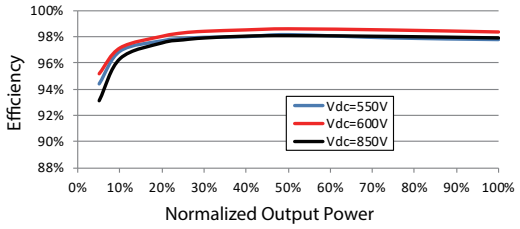
EASY AND USER FRIENDLY

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

CIRCUIT DIAGRAM(SG10RT)



EFFICIENCY CURVE



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SUNGROW
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Type designation	SG5.0RT	SG6.0RT	SG7.0RT	SG8.0RT	SG10RT	SG12RT
Input (DC)						
Recommended max. PV input power	7.5 kWp	9.0 kWp	10.5kWp	12 kWp	15 kWp	18 kWp
Max. PV input voltage	1100 V *					
Min. PV input voltage / Start-up input voltage	180V / 180V					
Rated 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	1 / 1	2 / 1	2 / 1	2 / 1	2 / 1
Max. PV input current	25 A (12.5 A / 12.5 A)		37.5 A (25 A / 12.5 A)			
Max. DC short-circuit current	32 A (16 A / 16 A)		48 A (32 A / 16 A)			
Max. current for DC connector	30 A					
Output (AC)						
Rated AC output power	5000 W	6000 W	7000 W	8000 W	10000 W	12000 W
Max. AC output apparent power	5500 VA**	6600 VA**	7700 VA**	8800 VA**	11000 VA**	13200 VA**
Rated AC output apparent power	5500 VA**	6600 VA**	7700 VA**	8800 VA**	11000 VA**	13200 VA**
Max. AC output current	8.3 A	10 A	11.7 A	13.3 A	16.7 A	20 A
Rated AC output current(at 230V)	7.2 A	8.7 A	10.1 A	11.6 A	14.5 A	17.4 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V 3 / N / PE, 240 / 415 V					
AC voltage range	180V – 276V / 311V - 478V					
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	3 / 3-PE					
Efficiency						
Max. efficiency	98.40%	98.40%	98.40%	98.50%	98.50%	98.50%
European efficiency	97.40%	97.40%	97.70%	97.80%	97.90%	97.90%
Protection&Function						
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					
Ground fault monitoring	Yes					
DC switch	Yes					
PV String current monitoring	Yes					
Arc fault circuit interrupter (AFCI)	Yes					
PID recovery function	Yes					
General Data						
Dimensions (W*H*D)	370*480*195 mm					
Weight	18 kg					
Mounting method	Wall-mounting bracket					
Topology	Transformerless					
Degree of protection	IP65					
Night power consumption	< 6 W					
Corrosion	C5					
Operating ambient temperature range	-25 ℃ to 60 ℃					
Allowable relative humidity range (non-condensing)	0% – 100%					
Cooling method	Natural cooling					
Max. operating altitude	4000 m					
Display	LED					
Communication	WLAN / Ethernet / RS485 / DI / DO					
DC connection type	MC4 (Max. 6 mm²)					
AC connection type	Plug and play					
Grid Compliance	IEC / EN 61000-6-1/2/3/4, IEC 61000-3-2/3/11/12, IEC / EN62109-1/2, IEC 61727, IEC 62116, IEC 61683, IEC 60068-2-1/2/14/30/64/27,IEC TS 62910 , EN50530, AS/NZS 4777.2:2020, VDE-AR-N-4105, DIN VDE0126-1-1/A1, EN50549-1, DEWA, VFR 2019, UTE C15-712-1, PSE NC RfG, UNE 206006/7 IN, MEA/PEA, G98, UNE 217002:2020, NTS V2 TypeA					
Grid Support	LVRT, HVRT,active & reactive power control and power ramp rate control					

*: The inverter enters the standby state when the input voltage ranges between1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.
** For Germany, max. AC output power: SG5.0RT is 5000VA, SG6.0RT is 6000VA, SG7.0RT is 7000VA, SG8.0RT is 8000VA, SG10RT is 10000VA, SG12RT is 12000VA.

SG15/20RT

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

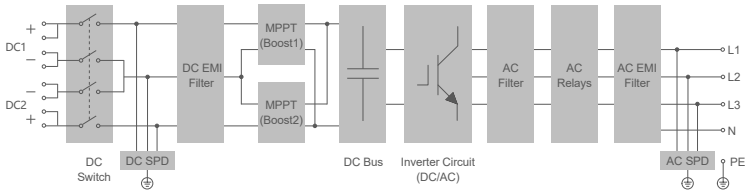
SAFE AND DURABLE

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

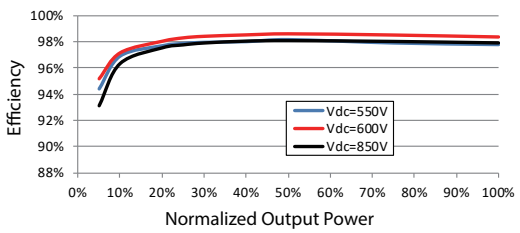
EASY AND USER FRIENDLY

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE



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SUNGROW
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Type designation	SG15RT	SG20RT
Input (DC)		
Recommended max. PV input power	22.5 kWp	30 kWp
Max. PV input voltage *	1100 V	
Min. PV input voltage / Start-up input voltage	180 V / 180 V	
Rated PV input voltage	600 V	
MPPT operating voltage range **	160 V – 1000 V	
No. of independent MPP inputs	2	
No. of PV strings per MPPT	2 / 2	
Max. PV input current	64 A (32 A / 32 A)	
Max. DC short-circuit current	90 A (45 A / 45 A)	
Max. current for input connector	30 A	
Output (AC)		
Rated AC output power	15000 W	20000 W
Max. AC output apparent power	15000 VA	20000 VA
Rated AC output apparent power	15000 VA	20000 VA
Max. AC output current	22.7 A	30.3 A
Rated AC output current(at 230V)	21.7 A	29 A
Rated AC voltage	3 / N / PE, 230 V / 400 V	
AC voltage range	180 V – 276 V / 311 V – 478 V	
Rated grid frequency	50 Hz / 60 Hz	
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	3 / 3-N-PE	
Efficiency		
Max.efficiency / European efficiency	98.5 % / 98.1 %	
Protection&Function		
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	
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)	370 mm * 480 mm * 195 mm	
Weight	21 kg	
Mounting method	Wall-mounting bracket	
Topology	Transformerless	
Degree of protection	IP65	
Corrosion	C5	
Operating ambient temperature range	-25 ℃ - 60 ℃	
Allowable relative humidity range (non-condensing)	0 % – 100 %	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000 m	
Display	LED	
Communication	WLAN / Ethernet / RS485 / DI / DO	
DC connection type	MC4 (Max. 6 mm^2)	
AC connection type	Plug and play	
Compliance	IEC / EN 61000-6-1/2/3/4, IEC 61000-3-2/3/11/12, IEC / EN62109-1/2, IEC 61727, IEC 62116, IEC 61683, IEC 60068-2-1/2/14/30/64/27, IEC TS 62910 , EN 50530, AS/NZS 4777.2:2020, VDE-AR-N-4105, DIN VDE0126-1-1/A1, EN 50549-1, DEWA, VFR 2019, UTE C15-712-1, PSE NC RfG, NTS 2.0, UNE 206006/7 IN, UNE 217002, MEA/PEA, G98	
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

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