SG5.0/6.0/7.0/8.0/10/12RT-P2

Multi-MPPT String Inverter for 1000 Vdc System

HIGH YIELD

- Lower startup & wider MPPT voltage
- Compatible with 500W+ PV modules
- Built-in PID recovery function

SMART MANAGEMENT

- 24/7 live online monitoring and with integrated display
- Remote firmware updates
- PV module-level optimisation and safety

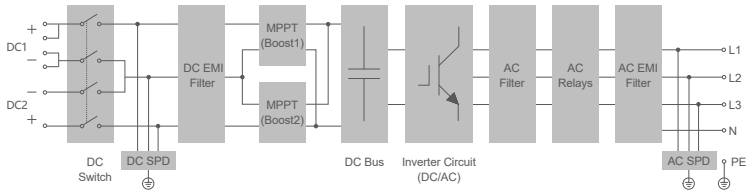
SAFE AND DURABLE

- Quick arc fault circuit interrupter
- Build-in Type II DC&AC SPD
- C5 anti-corrosion & IP65

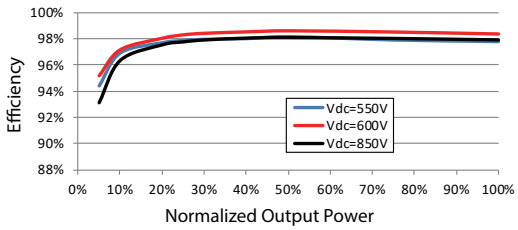
EASY AND USER FRIENDLY

- Light and compact design
- Plug and play connectors
- Fast and easy commissioning via App

CIRCUIT DIAGRAM(SG10RT)



EFFICIENCY CURVE



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SUNGROW
Clean power for all

Type designation	SG5.0RT-P2	SG6.0RT-P2	SG7.0RT-P2	SG8.0RT-P2	SG10RT-P2	SG12RT-P2
Input (DC)						
Recommended max. PV input power	7.5 kWp	9.0 kWp	10.5 kWp	12 kWp	15 kWp	18 kWp
Max. PV input voltage*	1100 V **					
Min. PV input voltage / Startup input voltage	160V / 180V					
Rated input voltage	600 V					
MPPT operating voltage range***	160 V – 1000 V					
No. of independent MPP trackers	2					
No. of PV strings per MPPT	1 / 1		2 / 1			
Max. PV input current	32 A (16 A / 16 A)		48 A (32 A / 16 A)			
Max. DC short-circuit current	40 A (20 A / 20 A)		60 A (40 A / 20 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	10.0 A	11.7 A	13.3 A	16.7 A****	20.0 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	175 V – 276 V / 304 V – 478 V					
Rated grid frequency	50 Hz / 45 Hz – 55 Hz 60 Hz / 55 Hz – 65 Hz					
Harmonic (THD)	< 3 % (at rated power)					
Power factor at rated power / Ajustable power factor	> 0.99 / 0.8 leading – 0.8 lagging					
Feed-in phases / AC connection	3 / 3-PE					
Efficiency						
Max. efficiency	98.30%					
European efficiency	97.20%	97.40%	97.60%	97.70%	97.80%	97.90%
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	Yes					
Arc fault circuit interrupter (AFCI)	Yes					
PID recovery function	Yes					
Optimizer compatbility *****	Optional					
General data						
Dimensions (W*H*D)	370 mm * 480 mm * 195 mm					
Weight	18 kg					
Mounting method	Wall-mounting bracket					
Topology	Transformerless					
Degree of protection	IP65					
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, IEC 60529, 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, NTS 2.0, UNE 217001, UNE 217002, MEA/PEA, G98, G99, CEI-021					

* Input voltage exceeding the MPPT operating voltage range triggers inverter
** The inverter enters the standby state when the input voltage ranges between 1,000V 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
*** Please refer to the user manual for the full load MPPT voltage range
**** For Belgium& Germany, Max. AC output power: SG5.0RT-P2 is 5000VA, SG6.0RT-P2 is 6000VA, SG7.0RT-P2 is 7000VA, SG8.0RT-P2 is 8000VA, SG10RT-P2 is 10000VA, SG12RT-P2 is 12000VA, SG15RT-P2 is 15000VA, SG17RT-P2 is 17000VA, SG20RT-P2 is 20000VA
**** For Jordan, Max. AC output current: SG10RT-P2 is 16A
***** For optimizer compatbility, please consult Sungrow before placing an order

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SG15/17/20RT-P2

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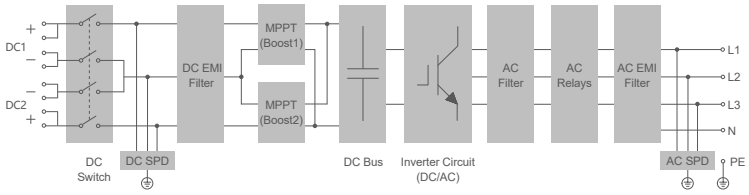
CIRCUIT DIAGRAM



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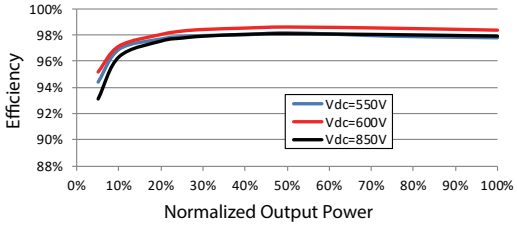

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SUNGROW
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Type designation	SG15RT-P2	SG17RT-P2	SG20RT-P2
Input (DC)			
Recommended max. PV input power	22.5 kWp	25.5 kWp	30 kWp
Max. PV input voltage*	1100 V **		
Min. PV input voltage / Startup input voltage	160V / 180V		
Rated input voltage	600 V		
MPPT operating voltage range***	160 V – 1000 V		
No. of independent MPP trackers	2		
No. of PV strings per MPPT	2 / 2		
Max. PV input current	64 A (32 A / 32 A)		
Max. DC short-circuit current	80 A (40 A / 40 A)		
Output (AC)			
Rated AC output power	15000 W	17000 W	20000 W
Max. AC output apparent power	16500 VA****	18700 VA****	22000 VA****
Rated AC output apparent power	16500 VA****	18700 VA****	22000 VA****
Max. AC output current	25.0 A	28.3 A	31.9 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	175 V – 276 V / 304 V – 478 V		
Rated grid frequency / Grid frequency range	50 Hz / 45 Hz – 55 Hz 60 Hz / 55 Hz – 65 Hz		
Harmonic (THD)	< 3 % (at rated power)		
Power factor at rated power / Ajustable power factor	> 0.99 / 0.8 leading – 0.8 lagging		
Feed-in phases / AC connection	3 / 3-PE		
Efficiency			
Max. efficiency	98.30 %		
European efficiency	97.90 %		
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	Yes		
Arc fault circuit interrupter (AFCI)	Yes		
PID recovery function	Yes		
Optimizer compatbility *****	Optional		
General data			
Dimensions (W*H*D)	370 mm * 480 mm * 195 mm		
Weight	22 kg		
Mounting method	Wall-mounting bracket		
Topology	Transformerless		
Degree of protection	IP65		
Operating ambient temperature range	-25 ℃ to 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 mm²)		
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, IEC 60529, 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, NTS 2.0, UNE 217001, UNE 217002, MEA/PEA, G98, G99, CEI-021		

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