

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

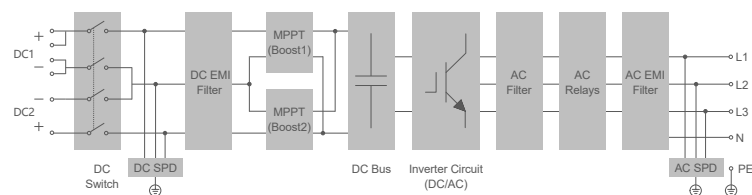
SAFE AND DURABLE

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

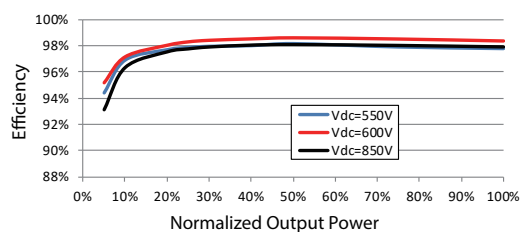
EASY AND USER FRIENDLY

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

CIRCUIT DIAGRAM(SG10RT)



EFFICIENCY CURVE



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 compatibility *****	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 °C to 60 °C					
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 compatibility, please consult Sungrow before placing an order

