# 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

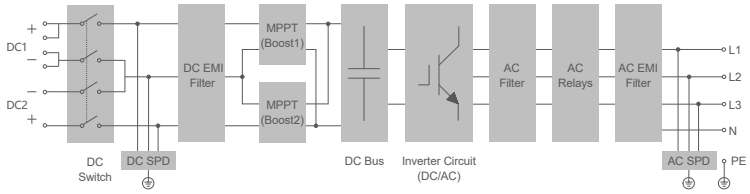
### SAFE AND DURABLE

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

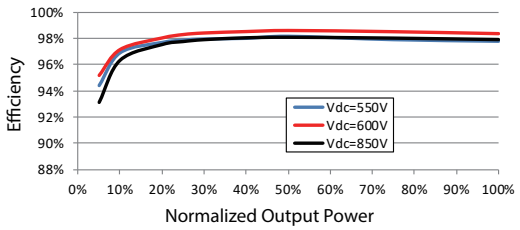
### EASY AND USER FRIENDLY

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

### CIRCUIT DIAGRAM(SG10RT)




### EFFICIENCY CURVE

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SUNGROW
Clean power for all

| 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<br>3 / N / PE, 230 / 400 V<br>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.
*** For Jordan, max. AC output current: SG10RT is 16 A.

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