

# SG15/17/20RT-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

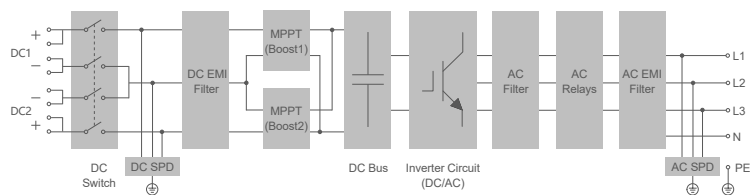
- Quick arc fault circuit interrupter
- Build-in Type II DC&AC SPD
- C5 anti-corrosion & IP65



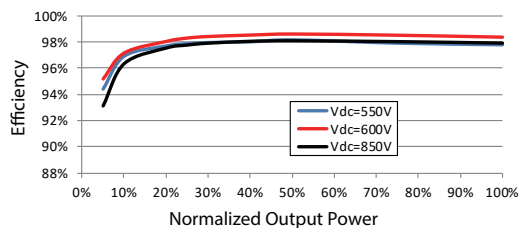
## EASY AND USER FRIENDLY

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

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



| 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<br>3 / N / PE, 230 / 400 V<br>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<br>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 compatibility *****                        | 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 °C to 60 °C                                                                                                                                                                                                                                                                                                                              |  |              |              |
| 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 |  |              |              |

\* 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

