

# SG5.0/7.0/8.0/10RT

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

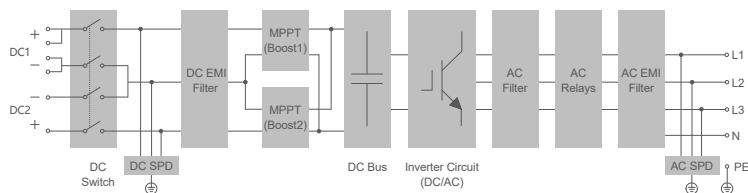
## SAFE AND DURABLE

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

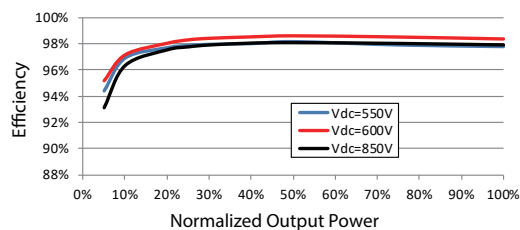
## EASY AND USER FRIENDLY

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

## CIRCUIT DIAGRAM(SG10RT)



## EFFICIENCY CURVE



| Type designation                                      | SG5.0RT                           |                        | SG7.0RT       | SG8.0RT       | SG10RT |
|-------------------------------------------------------|-----------------------------------|------------------------|---------------|---------------|--------|
| Input (DC)                                            |                                   |                        |               |               |        |
| Recommended max. PV input power                       | 7.5 kWp                           |                        | 10.5 kWp      | 12 kWp        | 15 kWp |
| Max. PV input voltage                                 | 1100 V *                          |                        |               |               |        |
| Min. PV input voltage / Start-up input voltage        | 180V / 180V                       |                        |               |               |        |
| Rated PV 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                             | 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                         | 36 A (18 A / 18 A)                | 54 A (36 A / 18 A)     |               |               |        |
| Max. current for input connector                      | 30 A                              |                        |               |               |        |
| Output (AC)                                           |                                   |                        |               |               |        |
| Rated AC output power                                 | 5000 W                            | 6999 W                 | 8000 W        | 9999 W        |        |
| Max. AC output apparent power                         | 5500 VA                           | 6999 VA                | 8000 VA       | 9999 VA       |        |
| Rated AC output apparent power                        | 5500 VA                           | 6999 VA                | 8000 VA       | 9999 VA       |        |
| Max. AC output current                                | 7.6 A                             | 10.6 A                 | 12.2 A        | 15.2 A        |        |
| Rated AC output current(at 230V)                      | 7.2 A                             | 10.1 A                 | 11.6 A        | 14.5 A        |        |
| Rated AC voltage                                      | 3 / N / PE, 230 / 400 V           |                        |               |               |        |
| AC voltage range                                      | 180V – 276 V / 311 V – 478 V      |                        |               |               |        |
| 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-N-PE                        |                        |               |               |        |
| Efficiency                                            |                                   |                        |               |               |        |
| Max.efficiency / European efficiency                  | 98.4% / 97.4%                     | 98.4% / 97.7%          | 98.5% / 97.8% | 98.5% / 97.9% |        |
| 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 * 480 * 195 mm                |                        |               |               |        |
| Weight                                                | 18 kg                             |                        |               |               |        |
| Mounting method                                       | Wall-mounting bracket             |                        |               |               |        |
| Topology                                              | Transformerless                   |                        |               |               |        |
| Degree of protection                                  | IP65                              |                        |               |               |        |
| Corrosion                                             | C5                                |                        |               |               |        |
| 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                     |                        |               |               |        |
| Compliance                                            | IEC 62109-1/2, AS/NZS 4777.2:2020 |                        |               |               |        |
| Country of manufacture                                | China                             |                        |               |               |        |

\* 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.

# SG15/17/20RT

Multi-MPPT String Inverter for 1000 Vdc System



NEW



## 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

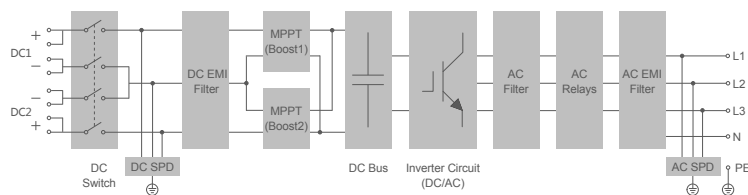
- Quick arc fault circuit interrupter
- Built-in Type II DC & AC SPD
- High anti-corrosion rating C5



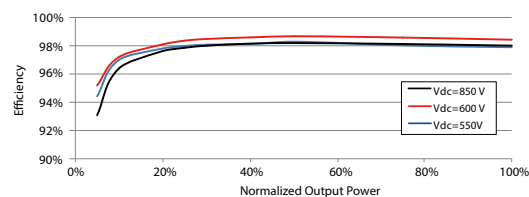
## EASY AND USER FRIENDLY

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

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



| Type designation                                           | SG15RT     | SG17RT                                                                                                                                               | SG20RT     |
|------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| <b>Input (DC)</b>                                          |            |                                                                                                                                                      |            |
| Recommended max. PV input power                            | 22.5 kWp   | 25.5 kWp                                                                                                                                             | 30 kWp     |
| Max. PV input voltage                                      |            | 1100 V*                                                                                                                                              |            |
| Min. PV input voltage / Start-up input voltage             |            | 180 V                                                                                                                                                |            |
| Nominal input voltage                                      |            | 600 V                                                                                                                                                |            |
| MPP voltage range                                          |            | 160 V – 1000 V                                                                                                                                       |            |
| No. of independent MPP inputs                              |            | 2                                                                                                                                                    |            |
| No. of PV strings per MPPT                                 |            | 2 / 2                                                                                                                                                |            |
| Max. PV input current                                      |            | 50 A (25 A / 25 A)                                                                                                                                   |            |
| Max. current for input connector                           |            | 30A                                                                                                                                                  |            |
| Max. DC short-circuit current                              |            | 64 A (32 A / 32 A)                                                                                                                                   |            |
| <b>Output (AC)</b>                                         |            |                                                                                                                                                      |            |
| Nominal AC power (@230 V, 50 Hz)                           | 15000 W    | 17000 W                                                                                                                                              | 20000 W    |
| Max. AC output power                                       | 16500 VA** | 18700 VA**                                                                                                                                           | 22000 VA** |
| Max. AC output current                                     | 25 A       | 28.3 A                                                                                                                                               | 31.9 A     |
| Nominal 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                                           |            | 180 V – 276 V / 311 V – 478 V                                                                                                                        |            |
| Nominal grid frequency /<br>Grid frequency range           |            | 50 Hz / 45 – 55 Hz<br>60 Hz / 55 – 65 Hz                                                                                                             |            |
| Harmonic(THD)                                              |            | <3 % (at nominal power)                                                                                                                              |            |
| Power factor at nominal power /<br>Adjustable power factor |            | >0.99 / 0.8 leading – 0.8 lagging                                                                                                                    |            |
| Feed-in phases / AC connection                             |            | 3 / 3                                                                                                                                                |            |
| <b>Efficiency</b>                                          |            |                                                                                                                                                      |            |
| Max. efficiency                                            |            | 98.50 %                                                                                                                                              |            |
| European efficiency                                        |            | 98.10 %                                                                                                                                              |            |
| <b>Protection</b>                                          |            |                                                                                                                                                      |            |
| 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                                                                                                                              |            |
| DC switch                                                  |            | Yes                                                                                                                                                  |            |
| Arc fault circuit interrupter (AFCI)                       |            | Yes                                                                                                                                                  |            |
| PID recovery function                                      |            | Yes                                                                                                                                                  |            |
| <b>General Data</b>                                        |            |                                                                                                                                                      |            |
| Dimensions (W*H*D)                                         |            | 370*480*195 mm                                                                                                                                       |            |
| Mounting method                                            |            | Wall-mounting bracket                                                                                                                                |            |
| Weight                                                     |            | 21 kg                                                                                                                                                |            |
| Topology                                                   |            | Transformerless                                                                                                                                      |            |
| Degree of protection                                       |            | IP65                                                                                                                                                 |            |
| Operating ambient temperature range                        |            | -25 °C to 60 °C                                                                                                                                      |            |
| Allowable relative humidity range                          |            | 0% – 100%                                                                                                                                            |            |
| Cooling method                                             |            | Smart forced air cooling                                                                                                                             |            |
| Max. operating altitude                                    |            | 4000 m (> 2000 m derating)                                                                                                                           |            |
| Noise (Typical)                                            |            | 45dB(A)                                                                                                                                              |            |
| Display                                                    |            | LED                                                                                                                                                  |            |
| Communication                                              |            | WLAN / Ethernet / RS485 / DI / DO                                                                                                                    |            |
| DC connection type                                         |            | MC4 (Max. 6 mm <sup>2</sup> )                                                                                                                        |            |
| AC connection type                                         |            | Plug and play                                                                                                                                        |            |
| Compliance                                                 |            | IEC / EN 61000-6-1/2/3/4, IEC / EN62109-1/2, IEC 61727, IEC 62116, IEC 61683, EN50530, AS/NZS 4777.2:2015, VDE-AR-N-4105, DIN VDE0126-1-1, EN50549-1 |            |

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

\*\*:: For Australia & Belgium & Germany, max. AC output power: SG15RT is 15000VA, SG17RT is 17000VA, SG20RT is 20000VA.