

# SG5.0RT/SG6.0RT/SG7.0RT/ SG8.0RT/SG10RT/SG12RT

**SUNGROW**  
Clean power for all

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
- Over-the-air firmware updates

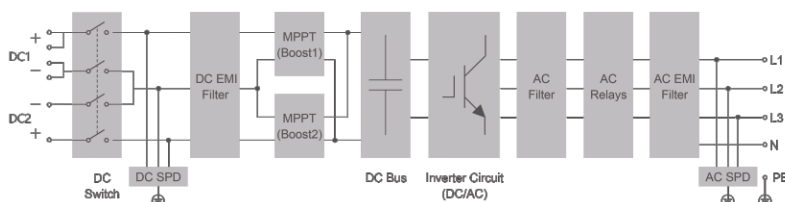
## SAFE AND DURABLE

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

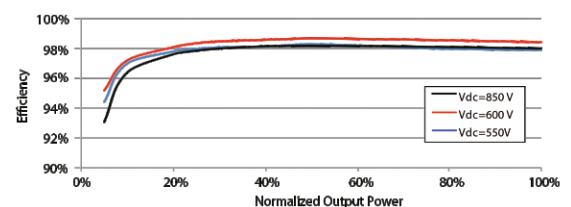
## EASY AND USER FRIENDLY

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

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



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# SG5.0RT/SG6.0RT/SG7.0RT/SG8.0RT/SG10RT/SG12RT

| Type designation                                           | SG5.0RT                                                                                                                    | SG6.0RT              | SG7.0RT              | SG8.0RT              | SG10RT               | SG12RT               |
|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Input (DC)                                                 |                                                                                                                            |                      |                      |                      |                      |                      |
| Recommended max. PV input power                            | 7.5 kW                                                                                                                     | 9.0 kW               | 10.5 kW              | 12 kW                | 15 kW                | 18 kW                |
| 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                                 | 1/1                                                                                                                        | 1/1                  | 1/1                  | 1/1                  | 2/1                  | 2/1                  |
| Max. PV input current                                      | 25 A (12.5 A/12.5 A)                                                                                                       | 25 A (12.5 A/12.5 A) | 25 A (12.5 A/12.5 A) | 25 A (12.5 A/12.5 A) | 37.5 A (25 A/12.5 A) | 37.5 A (25 A/12.5 A) |
| Max. DC short-circuit current                              | 32 A (16 A/16 A)                                                                                                           | 32 A (16 A/16 A)     | 32 A (16 A/16 A)     | 32 A (16 A/16 A)     | 48 A (32 A/16 A)     | 48 A (32 A/16 A)     |
| Output (AC)                                                |                                                                                                                            |                      |                      |                      |                      |                      |
| Nominal AC power (@230 V, 50 Hz)                           | 5000 W                                                                                                                     | 6000 W               | 7000 W**             | 8000 W               | 10000 W              | 12000 W              |
| Max. AC output 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                 |
| 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                                                                                                              |                      |                      |                      |                      |                      |
| Nominal grid frequency / 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                                                                                                                      |                      |                      |                      |                      |                      |
| 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                                                 |                                                                                                                            |                      |                      |                      |                      |                      |
| 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                                                                                                                        |                      |                      |                      |                      |                      |
| General Data                                               |                                                                                                                            |                      |                      |                      |                      |                      |
| Dimensions (W*H*D)                                         | 370*480*195 mm                                                                                                             |                      |                      |                      |                      |                      |
| Mounting method                                            | Wall-mounting bracket                                                                                                      |                      |                      |                      |                      |                      |
| Weight                                                     | 18 kg                                                                                                                      |                      |                      |                      |                      |                      |
| Topology                                                   | Transformerless                                                                                                            |                      |                      |                      |                      |                      |
| Degree of protection                                       | IP65                                                                                                                       |                      |                      |                      |                      |                      |
| Operating ambient temperature range                        | -25 °C to 60 °C                                                                                                            |                      |                      |                      |                      |                      |
| Allowable relative humidity range                          | 0% – 100%                                                                                                                  |                      |                      |                      |                      |                      |
| Cooling method                                             | Natural cooling                                                                                                            |                      |                      |                      |                      |                      |
| Max. operating altitude                                    | 4000 m (> 2000 m derating)                                                                                                 |                      |                      |                      |                      |                      |
| Noise(Typical)                                             | 35dB(A)                                                                                                                    |                      |                      |                      |                      |                      |
| Display                                                    | LED                                                                                                                        |                      |                      |                      |                      |                      |
| Communication                                              | WLAN, Ethernet, RS485, DI, DO                                                                                              |                      |                      |                      |                      |                      |
| DC connection type                                         | MC4                                                                                                                        |                      |                      |                      |                      |                      |
| AC connection type                                         | Plug and play                                                                                                              |                      |                      |                      |                      |                      |
| Compliance                                                 | EN 61000-6-1/-3, IEC62109-2, IEC 61727, IEC 62116, AS/NZS 4777.2:2015, VDE-AR-N-4105, DIN VDE0126-1-1, CEI 0-21, EN50549-1 |                      |                      |                      |                      |                      |

\*: For Australia & Belgium & Germany Max. AC output power: SG5.0RT is 5000VA, SG6.0RT is 6000VA, SG8.0RT is 8000VA, SG10RT is 10000VA, SG12RT is 12000VA.

\*\* : For Australia ,6999W,6999 VA