

## Multi-MPPT String Inverter for Japan 1000 Vdc System



### HIGH YIELD

- Max. efficiency 98.9 % European efficiency 98.5 %
- Full power operation without derating at 50 °C
- Up to 4 MPPT trackers



### EASY O&M

- Integrated IV curve scan function for fast trouble shooting\*
- Plug-in design of fan and SPD, easy for on-site maintenance.



### SAVED INVESTMENT

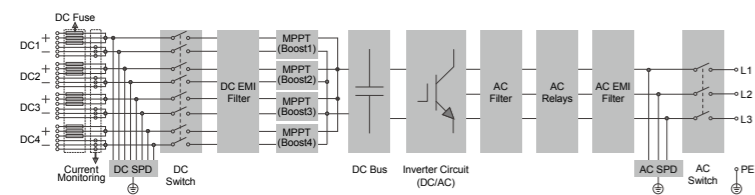
- Max. DC/AC ratio up to 1.5
- Capacity less than 50 kW plant only need one inverter
- Can be installed horizontally, saving installation cost



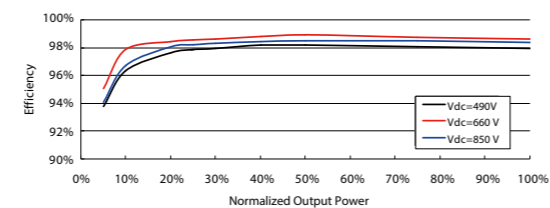
### GRID SUPPORT

- Compliance with Japan utility grid standards
- Fault ride through (FRT) 2017
- Remote active power control

### CIRCUIT DIAGRAM



### EFFICIENCY CURVE



| Type designation  | SG49K5J   |
|---|---|
| <b>Input (DC)</b>                                       |   |
| Max. PV input voltage                                   | 1000 V  |
| Min. PV input voltage / Startup input voltage           | 200 V / 250 V   |
| Nominal input voltage                                   | 660 V   |
| MPP voltage range                                       | 200 – 950 V   |
| MPP voltage range for nominal power                     | 490 – 850 V   |
| No. of independent MPP inputs                           | 4   |
| Max. number of PV strings per MPPT                      | 3   |
| Max. PV input current                                   | 112A (28 A / 28 A / 28 A / 28 A)                                      |
| Max. current for input connector                        | 12 A  |
| Max. DC short-circuit current                           | 140 A (35 A / 35 A / 35 A / 35 A)                                     |
| <b>Output (AC)</b>                                      |   |
| AC output power   | 49.5 kVA @ 50 °C / 55 kVA @ 50 °C (settable)                          |
| Max. AC output current                                  | 80 A  |
| Nominal AC voltage                                      | 3 / PE, 420 V / 440 V   |
| AC voltage range  | 374 – 506 V   |
| Nominal grid frequency / Grid frequency range           | 50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz                                |
| THD   | < 3 % (at nominal power)  |
| DC current injection                                    | < 0.5 % I <sub>n</sub>  |
| Power factor at nominal power / Adjustable power factor | > 0.99 / 0.8 leading – 0.8 lagging                                    |
| Feed-in phases / Connection phases                      | 3 / 3   |
| <b>Efficiency</b>                                       |   |
| Max. efficiency   | 98.9 %  |
| Euro. efficiency  | 98.5 %  |
| <b>Protection</b>                                       |   |
| DC reverse connection protection                        | Yes   |
| AC short-circuit protection                             | Yes   |
| Leakage current protection                              | Yes   |
| Grid monitoring   | Yes   |
| DC switch   | Yes   |
| AC switch   | Yes   |
| DC fuse   | Yes (positive, 15A)   |
| PV string current monitoring                            | Yes   |
| Oversvoltage protection                                 | DC Type II / AC Type II   |
| <b>General Data</b>                                     |   |
| Dimensions (W*H*D)                                      | 677*962*282.5 mm  |
| Weight  | 70 kg   |
| Isolation method  | Transformerless   |
| Degree of protection                                    | IP65  |
| Night power consumption                                 | < 2 W   |
| Operating ambient temperature range                     | -25 to 60 °C (> 50 °C derating)                                       |
| Allowable relative humidity range (non-condensing)      | 0 – 100 %   |
| Cooling method  | Smart forced air cooling  |
| Max. operating altitude                                 | 4000 m (> 3000 m derating)  |
| Display / Communication                                 | Graphic LCD / RS485   |
| DC connection type                                      | OT terminal (Max. 6 mm <sup>2</sup> )                                 |
| AC connection type                                      | OT terminal (Max. 70 mm <sup>2</sup> )                                |
| Grid support  | FRT 2017, active & reactive power control and power ramp rate control |
| Type designation  | SG49K5J   |

\*: Only compatible with Sungrow logger and iSolarCloud

