

# SG5KTL-MT/SG6KTL-MT/ SG8KTL-M

**SUNGROW**  
Clean power for all

SG5KTL- MT/SG6KTL-MT/SG8KTL-M

Multi-MPPT String Inverter for 1000 Vdc System



## HIGH YIELD

- Industry leading efficiency of 98.6%
- Flexible PV string configurations with DC/AC ratio up to 1.3



## SMART MANAGEMENT

- Feature-rich online monitoring via App or Web
- Over-the-air firmware updates
- Gain energy flow transparency with Sungrow smart meter
- Accurate dynamic feed-in control



## SAFE AND DURABLE

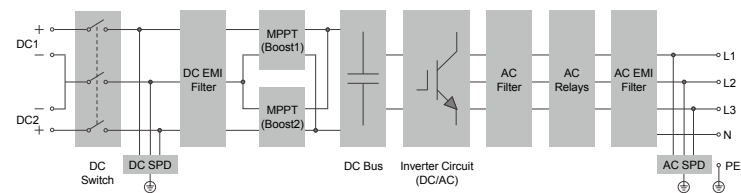
- Built-in surge arresters and residual current protection
- High anti-corrosion rating at C5



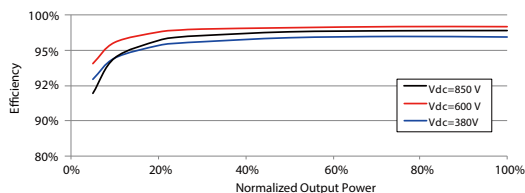
## EASY AND USER FRIENDLY

- 20kg compact design
- Unique push-in connectors for time-saving installation
- Mounting plate with built-in level
- Fast and easy commissioning via App

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE



| Type designation                               | SG5KTL-MT                                                                                              | SG6KTL-MT                                                                                 | SG8KTL-M                                                                                                                                  |
|------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Input (DC)</b>                              |                                                                                                        |                                                                                           |                                                                                                                                           |
| Max. PV input voltage                          |                                                                                                        | 1100 V                                                                                    |                                                                                                                                           |
| Min. PV input voltage / Start-up input voltage |                                                                                                        | 200 V / 250 V                                                                             |                                                                                                                                           |
| Nominal PV input voltage                       |                                                                                                        | 600 V                                                                                     |                                                                                                                                           |
| MPP voltage range                              |                                                                                                        | 200 – 1000 V                                                                              |                                                                                                                                           |
| MPP voltage range for nominal power            | 240 – 850 V                                                                                            | 290 – 850 V                                                                               | 380 – 850 V                                                                                                                               |
| No. of independent MPP inputs                  |                                                                                                        | 2                                                                                         |                                                                                                                                           |
| Max. number of PV strings per MPPT             |                                                                                                        | 1                                                                                         |                                                                                                                                           |
| Max. PV input current                          |                                                                                                        | 22A (11A / 11A)                                                                           |                                                                                                                                           |
| Max. current for input connector               |                                                                                                        | 15 A                                                                                      |                                                                                                                                           |
| Max. DC short-circuit current                  |                                                                                                        | 30 A (15A / 15A )                                                                         |                                                                                                                                           |
| <b>Output (AC)</b>                             |                                                                                                        |                                                                                           |                                                                                                                                           |
| Nominal AC power                               | 5500 VA@ 35 °C /<br>5000 VA @ 45 °C                                                                    | 6600 VA@ 35 °C /<br>6000 VA @ 45 °C                                                       | 8800 VA@ 35 °C /<br>8000 VA @ 45 °C                                                                                                       |
| Max. AC output current (at 35 °C)              | 8.5A                                                                                                   | 10.0 A                                                                                    | 13.3 A                                                                                                                                    |
| Nominal AC voltage                             |                                                                                                        | 3 / N / PE, 230 / 400 V                                                                   |                                                                                                                                           |
| AC voltage range                               |                                                                                                        | 270 - 480 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 % In                                                                                |                                                                                                                                           |
| Power factor at nominal power                  |                                                                                                        | >0.99                                                                                     |                                                                                                                                           |
| Adjustable power factor                        |                                                                                                        | 0.8 leading - 0.8 lagging                                                                 |                                                                                                                                           |
| Feed-in phases / connection phases             |                                                                                                        | 3 / 3                                                                                     |                                                                                                                                           |
| <b>Efficiency</b>                              |                                                                                                        |                                                                                           |                                                                                                                                           |
| Max. efficiency / European efficiency          | 98.4% / 97.6%                                                                                          | 98.4% / 97.7%                                                                             | 98.6% / 98.0%                                                                                                                             |
| <b>Protection</b>                              |                                                                                                        |                                                                                           |                                                                                                                                           |
| LVRT                                           |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| Islanding Protection                           |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| DC reverse connection protection               |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| AC short-circuit protection                    |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| Leakage current protection                     |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| Grid monitoring                                |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| DC switch                                      |                                                                                                        | Yes*                                                                                      |                                                                                                                                           |
| AC switch                                      |                                                                                                        | No                                                                                        |                                                                                                                                           |
| PV string current monitoring                   |                                                                                                        | Yes                                                                                       |                                                                                                                                           |
| Overvoltage protection                         |                                                                                                        | DC Type II / AC Type II                                                                   |                                                                                                                                           |
| <b>General Data</b>                            |                                                                                                        |                                                                                           |                                                                                                                                           |
| Dimensions (W*H*D)                             |                                                                                                        | 370*485*160 mm                                                                            |                                                                                                                                           |
| Weight                                         |                                                                                                        | 20 kg                                                                                     |                                                                                                                                           |
| Isolation method                               |                                                                                                        | Transformerless                                                                           |                                                                                                                                           |
| Degree of protection                           |                                                                                                        | IP65                                                                                      |                                                                                                                                           |
| Night power consumption                        |                                                                                                        | < 1 W**                                                                                   |                                                                                                                                           |
| Operating ambient temperature range            |                                                                                                        | -25 to 60 °C (> 45 °C derating)                                                           |                                                                                                                                           |
| Allowable relative humidity range              |                                                                                                        | 0 – 100 % (non-condensing)                                                                |                                                                                                                                           |
| Cooling method                                 |                                                                                                        | Natural cooling                                                                           |                                                                                                                                           |
| Max. operating altitude                        |                                                                                                        | 4000 m (> 3000 m derating)                                                                |                                                                                                                                           |
| Display / Communication                        |                                                                                                        | LED, Bluetooth + APP / RS485, (optional: WiFi, Ethernet)                                  |                                                                                                                                           |
| DC connection type                             |                                                                                                        | MC4 (Max. 6 mm <sup>2</sup> )                                                             |                                                                                                                                           |
| AC connection type                             |                                                                                                        | Plug and play connector (Max. 6 mm <sup>2</sup> )***                                      |                                                                                                                                           |
| Compliance                                     | EN62109-1, EN62109-2, IEC 61727, IEC 62116, VDE 0126-1-1/4105, AS 4777.2, EN 50438:2013, C10/11, G59/3 | EN62109-1, EN62109-2, IEC 61727, IEC 62116,VDE 0126-1-1/4105,EN 50438:2013, C10/11, G59/3 | EN62109-1, EN62109-2, IEC 61727, IEC 62116,VDE 0126-1-1/4105,UTE C15-712-1,VFR-2014, CEI 0-21, EN 50438:2013, C10/11, G59/3, UNE 206007-1 |
| Grid Support                                   | Active & reactive power control and power ramp rate control                                            |                                                                                           |                                                                                                                                           |
| Type designation                               | SG5KTL-MT                                                                                              | SG6KTL-MT                                                                                 | SG8KTL-M                                                                                                                                  |

\*: Devices for Australia are not equipped with DC switches

\*\*Deluxe Version: < 3W (DC & AC power supply)

\*\*\*Deluxe Version: Max.10mm<sup>2</sup> (Unique push-in connector)



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