

# 11 Appendix

## 11.1 Technical Data

### 11.1.1 Electrical Specifications

| Technical Specifications                     | SG3KTL-M  | SG4KTL-M            | SG5KTL-M            |
|--|---|---------------------|---------------------|
| <b>Input Side Data</b>                       |   |                     |                     |
| Max. PV input voltage                        | 550V  |                     |                     |
| Startup voltage                              | 150V  |                     |                     |
| Nominal input voltage                        | 370V  |                     |                     |
| MPP voltage range                            | 125...500V  |                     |                     |
| MPP voltage range for nominal power          | 160...500V  | 170...500V          | 200...500V          |
| Max. PV input power(DC1/DC2)                 | 3200W(1650W /1650W)   | 4300W(2200W /2800W) | 5400W(2750W /3500W) |
| Max. PV input current (DC1/DC2)              | 20A(10A/10A)  | 26A(10A/16A)        | 26A(10A/16A)        |
| Max. current for input connector             | 10A   |                     |                     |
| Short-circuit current of PV input (DC1/DC2)  | 24A(12A/12A)  | 32A(12A/20A)        | 32A(12A/20A)        |
| No. of MPPTs                                 | 2   |                     |                     |
| Max. number of PV strings per MPPT (DC1/DC2) | 1/1   | 1/2                 | 1/2                 |
| <b>Output Side Data</b>                      |   |                     |                     |
| Nominal AC output power                      | 3000W   | 4000W               | 5000W               |
| Max AC output apparent power                 | 3150VA  | 4200VA              | 5100VA              |
| Max. AC output current                       | 15A   | 20A                 | 22A                 |
| Nominal AC voltage                           | 230Vac(Single phase)  |                     |                     |
| AC voltage range                             | 180...276Vac (May vary as per corresponding country's grid standard)                |                     |                     |
| Nominal grid frequency                       | 50Hz/60Hz   |                     |                     |
| Grid frequency range                         | 45Hz...55Hz/55Hz...65Hz (May vary as per corresponding country's grid standard)     |                     |                     |
| THD  | <3% (Nominal power)   |                     |                     |
| DC current injection                         | <0.5%   |                     |                     |
| Power Factor                                 | >0.99@default value at nominal power<br>* (adj. 0.8 over-excited~0.8 under-excited) |                     |                     |

| Technical Specifications            | SG3KTL-M  | SG4KTL-M           | SG5KTL-M       |
|-------------------------------------|---|--------------------|----------------|
|                                     | *Valid only when the Pro-param on the LCD display is set as DE            |                    |                |
| <b>Protection</b>                   |   |                    |                |
| Anti-islanding protection           | Yes   |                    |                |
| DC reverse connection protection    | Yes   |                    |                |
| AC short circuit protection         | Yes   |                    |                |
| Leakage current protection          | Yes   |                    |                |
| DC switch                           | Optional  |                    |                |
| DC fuse                             | No  |                    |                |
| Overvoltage protection              | Varistors   |                    |                |
| <b>System Data</b>                  |   |                    |                |
| Max. Efficiency                     | 97.4%   | 97.6%              | 97.6%          |
| Max. European efficiency            | 96.5%   | 97.0%              | 97.0%          |
| Isolation method                    | Transformerless   |                    |                |
| Ingress protection rating           | IP65  | IP65(Fan IP55)     | IP65(Fan IP55) |
| Night power consumption             | <1 W  |                    |                |
| Operating ambient temperature range | -25°C...+60°C(up 45°C derating)   |                    |                |
| Allowable relative humidity range   | 0...95% (No condensing)   |                    |                |
| Cooling Method                      | Natural cooling   | Forced air cooling |                |
| Max. Working Altitude               | 4000m(operation with derating above 2000m)                                |                    |                |
| Display                             | Graphic LCD   |                    |                |
| Communication                       | RS485(RJ45 connector), WiFi(Optional)                                     |                    |                |
| DC Terminals                        | SUNCLIX   |                    |                |
| AC Terminals                        | Plug and play connector (Wieland RST25I3S)                                |                    |                |
| Certification                       | IEC61000-6-2, IEC61000-6-3, AS/NZS3100, AS4777.2, AS4777.3, VDE-AR-N-4105 |                    |                |
| <b>Mechanical Data</b>              |   |                    |                |
| Dimensions(W× H× D)                 | 420× 555× 179mm   |                    |                |
| Mounting method                     | Wall bracket  |                    |                |
| Weight                              | 24kg  |                    |                |

### 11.1.2 PV Input Specification

| Type     | Area | DC Power Limit for Each Input | Total DC Input Power Limit | Open-circuit Voltage Limit for Each Input | Short-circuit Current Limit |
|----------|------|-------------------------------|----------------------------|---|-----------------------------|
| SG3KTL-M | DC1  | 1650W                         | 3200W                      | 550V                                      | 12A                         |
|          | DC2  | 1650W                         |                            |   | 24A                         |
| SG4KTL-M | DC1  | 2200W                         | 4300W                      | 550V                                      | 12A                         |
|          | DC2  | 2800W                         |                            |   | 20A                         |
| SG5KTL-M | DC1  | 2750W                         | 5400W                      | 550V                                      | 12A                         |
|          | DC2  | 3500W                         |                            |   | 20A                         |

### 11.1.3 Temperature Derating Curve

