

# SG8K-D

Residential String Inverter



## High Yield

- Higher yield with max. efficiency 98.5 %, European efficiency 98.0 %
- Flexible PV string configurations, DC/AC ratio up to 1.3



## Smart Management

- Easy local and online monitoring via App or Web
- Export power control with smart energy meter



## Safe and Durable

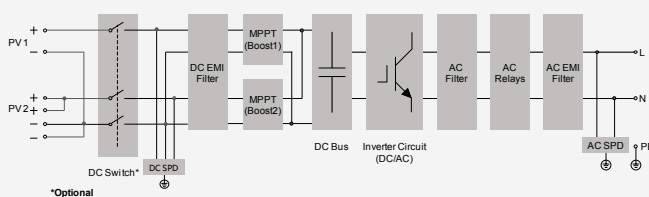
- Built-in surge arresters and residual current protection
- High anti-corrosion with aluminum alloy die casting



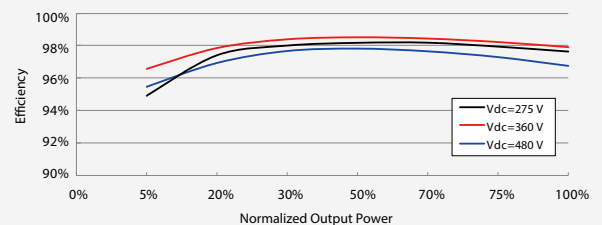
## Easy and User Friendly

- 15.5 kg compact design, plug and play installation
- Fast commissioning via LCD

## Circuit Diagram



## Efficiency Curve



**Input (DC)****SG8K-D**

|                                        |               |
|----------------------------------------|---------------|
| Max. PV input voltage                  | 600 V         |
| Min PV input voltage / Startup voltage | 90 V / 120 V  |
| Nominal input voltage                  | 360 V         |
| MPP voltage range                      | 90 V – 540 V  |
| MPP voltage range for nominal power    | 275V – 480 V  |
| No. of MPPTs                           | 2             |
| Max. number of PV strings per MPPT     | 1 / 2         |
| Max. PV input current                  | 12.5 A / 25 A |
| Max. current for input connector       | 15 A / 30 A   |
| Max. PV short-circuit current          | 15 A / 30 A   |

**Output (AC)**

|                                    |                                                                   |
|------------------------------------|-------------------------------------------------------------------|
| AC output power                    | 8000 VA                                                           |
| Max. AC output current             | 34.8 A                                                            |
| Nominal AC voltage                 | 230 Vac                                                           |
| AC voltage range                   | 180 Vac – 276 Vac (this may vary with grid standards)             |
| Nominal grid frequency             | 50Hz / 60Hz                                                       |
| Grid frequency range               | 45 Hz – 55 Hz / 55 Hz – 65 Hz (this may vary with grid standards) |
| Total harmonic distortion (THD)    | < 3 % (of nominal power)                                          |
| DC current injection               | < 0.5 % (of nominal current)                                      |
| Power factor                       | > 0.99 / 0.8 leading - 0.8 lagging                                |
| Feed-in phases / Connection phases | 1 / 1                                                             |

**Efficiency**

|                          |       |
|--------------------------|-------|
| Max. efficiency          | 98.5% |
| Max. European efficiency | 98.0% |

**Protection**

|                                  |                         |
|----------------------------------|-------------------------|
| PV reverse connection protection | Yes                     |
| AC short circuit protection      | Yes                     |
| Leakage current protection       | Yes                     |
| Grid monitoring                  | Yes                     |
| PV string current monitoring     | Yes                     |
| DC switch                        | Optional                |
| Overvoltage protection           | DC Type II / AC Type II |

**General Data**

|                                              |                                                                                  |
|----------------------------------------------|----------------------------------------------------------------------------------|
| Dimensions (W*H*D)                           | 360*390*148 mm                                                                   |
| Weight                                       | 15.5 kg                                                                          |
| Isolation method                             | Transformerless                                                                  |
| Ingress protection rating                    | IP65                                                                             |
| Power loss in night mode                     | < 1 W                                                                            |
| Operating ambient temperature                | -25 °C to 60 °C (>45 °C derating)                                                |
| Allowable relative humidity (non-condensing) | 0 – 100 %                                                                        |
| Cooling method                               | Natural cooling                                                                  |
| Max. operating altitude                      | 4000 m (> 2000 m derating)                                                       |
| Display / Communication                      | LCD / Wi-Fi                                                                      |
| PV connection type                           | MC4 (Max. 6 mm <sup>2</sup> )                                                    |
| AC connection type                           | Plug and play connector (Max. 6 mm <sup>2</sup> )                                |
| Compliance                                   | IEC62109-1, IEC62109-2, IEC62116, IEC61727, EN 61000-6-2, EN 61000-6-3, AS4777.2 |
| Grid support                                 | Active & reactive power control, power ramp rate control                         |
| Type designation                             | SG8K-D                                                                           |