SG8K-D/SG8K3-D
Residential String Inverter

CIRCUIT DIAGRAM (SG8K3-D)

EFFICIENCY CURVE (SG8K3-D)

HIGH YIELD
- Industry leading efficiency of 98.5%
- Flexible PV string configurations
- High DC/AC ratio up to 1.3

SAFE AND RELIABLE
- Built-in surge arresters & RCD
- Cutting-edge technology ensures long life time
- High anti-corrosion rating at C5

EASY INSTALLATION
- Push-in connectors for time-saving installation
- Mounting plate with built-in level
- Fast and easy commissioning via App or LCD

Type designation | SG8K-D | SG8K3-D
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Max. PV input voltage | 600 V | 
Min. PV input voltage / Startup voltage | 90 V / 120 V | 
Nominal input voltage | 360 V | 480 V
MPP voltage range | 90 V – 540 V | 285 V – 480 V
No. of MPPTs | 2 | 2
Max. number of PV strings per MPPT | 1/2 | 1/2
Max. PV input current | 12.5 A / 25 A | 15 A
Max. PV short-circuit current | 15 A / 30 A | 15 A

Output (AC)

| | SG8K-D | SG8K3-D |
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AC output power | 8300 VA | 8300 VA |
Max. AC output current | 34.8 A | 36.1 A |
Nominal AC voltage | 230 Vac | 220 Vac / 240 Vac |
AC voltage range | 180 Vac – 276 Vac (this may vary with grid standards) | 176 Vac – 276 Vac (this may vary with grid standards) |
Nominal grid frequency | 50Hz / 60Hz | 60 Hz |
Grid frequency range | 45 Hz – 55 Hz / 55 Hz – 65 Hz (this may vary with grid standards) | 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

| | SG8K-D | SG8K3-D |
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Max. efficiency / European efficiency | 98.5 % / 98.0 % | 

Protection

| | SG8K-D | SG8K3-D |
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PV reverse connection protection | Yes | 
AC short circuit protection | Yes | 
Leakage current protection | Yes | 
Grid monitoring | Yes | 
PV string current monitoring | Yes | 
DC switch | Yes* | 
Overvoltage protection | DC Type II / AC Type II | 

General Data

| | SG8K-D | SG8K3-D |
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Nominal input power (Wp*St) | 600 V | 
Weight | 15.5 kg | 
Isolation method | Transformerless | 
Ingress protection rating | IP66 | 
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 % | 
Casing method | Natural cooling | 
Max. operating altitude | 4000 m (+ 2000 m derating) | 
Display / Communication | LCD / Wi-Fi | 
PV connection type | MC4 (Max. 6mm²) | 
AC connection type | Plug and play connector (Max. 6mm²) | 
Compliance | IEC62109-1, IEC62109-2, IEC62116, IEC62772, EN 61000-6-2, EN 61000-6-3, AS4777.2 | IEC62109-1, IEC62109-2, IEC62116, IEC62772, EN 61000-6-2, EN 61000-6-3, ABNT NBR 16149, ABNT NBR 16150 |

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* Devices for Australia are not equipped with DC switches

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