

# SG80KTL-20

String Inverter for 1000 Vdc System



## High Yield

- Max. efficiency 98.9 %, European efficiency 98.7 %
- Full power operation without derating at 50 °C



## Easy O&M

- Integrated string current monitoring function for fast trouble shooting
- Compact design and light weight for easy installation
- Plug-in design of fan and SPD, convenient for on-site maintenance



## Saved Investment

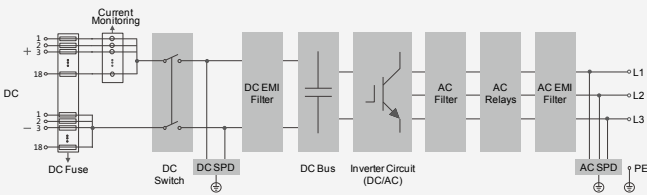
- Max. DC/AC ratio up to 1.4
- Integrated DC combiner box, both positive and negative DC fuse and DC/AC overvoltage protection



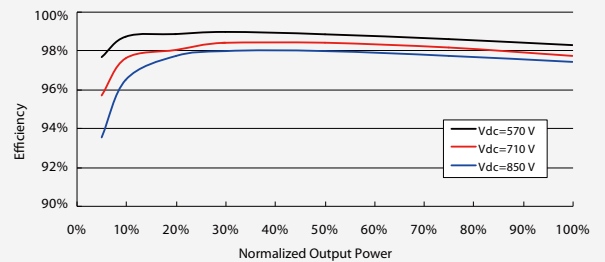
## Grid Support

- Compliance with standards: CE, BDEW, VDE-AR-N 4120, IEC 62109, IEC 61727, IEC 62116
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control

### Circuit Diagram



### Efficiency Curve



**Input (DC)****SG80KTL-20**

Max. PV input voltage	1100 V
Min. PV input voltage / Startup input voltage	570 V / 620 V
Nominal input voltage	710 V
MPP voltage range	570 – 950 V
MPP voltage range for nominal power	570 – 850 V
No. of independent MPP inputs	1
Max. number of PV strings per MPPT	18
Max. PV input current	144 A
Max. current for input connector	12 A
Max. DC short-circuit current	200 A

**Output (AC)**

AC output power	80000 VA @ 50 °C
Max. AC output current	116 A
Nominal AC voltage	3 / PE, 230 / 400 V
AC voltage range	310 – 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 % 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

**Efficiency**

Max. efficiency / Euro. efficiency	98.9 % / 98.7 %
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**Protection**

DC reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
DC switch / AC switch	Yes / No
DC fuse	Yes (positive and negative, 15A)
PV string current monitoring	Yes
Overvoltage protection	DC Type II / AC Type II

**General Data**

Dimensions (W*H*D)	634*957*267 mm
Weight	71 kg
Isolation method	Transformerless
Degree of protection	IP65
Night power consumption	< 4 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	MC4 (Max. 6mm <sup>2</sup> )
AC connection type	Screw clamp terminal (Max. 150 mm <sup>2</sup> )
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, CE, BDEW, CEA
Grid support	LVRT, HVRT, active & reactive power control and power ramp rate control
Type designation	SG80KTL-20

