

# SG50KTL-M-20

String Inverter



### High Yield

- Max. efficiency 98.9%
- Max. DC/AC ratio up to 1.3
- Long-term overload at 1.1Pn
- Up to 4 MPP Trackers



### Easy O&M

- String current monitoring function for fast trouble shooting



### Saved Investment

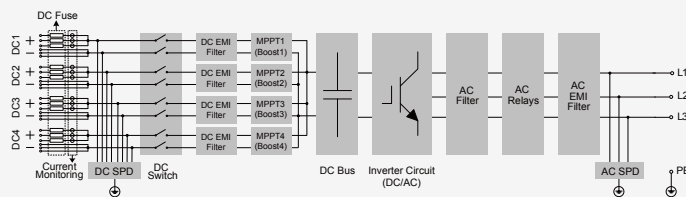
- Less construction and installation costs in 2MW block
- Integrated DC combiner box with DC switch, DC fuses and DC/AC Type II SPD



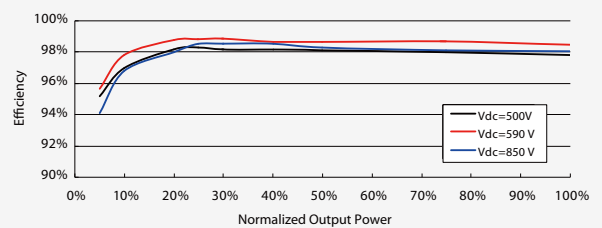
### Grid Support

- Grid support including LVRT, HVRT and FRT
- Comply with CE, G59/3 and VDE 4105

### Circuit Diagram



### Efficiency Curve



**Input (DC)**
**SG50KTL-M-20**

Max. PV input voltage	1000 V
Min. PV input voltage / Startup input voltage	300 V / 300 V
Nominal input voltage	590 V
MPP voltage range	300 - 950 V
MPP voltage range for nominal power	500 - 850 V
No. of independent MPP inputs	4
Max. number of PV strings per MPPT	3
Max. PV input current	112 A (28 A / 28 A / 28 A / 28 A)
Max. current for input connector	12 A
Max. DC short-circuit current	140 A (35 A / 35 A / 35 A / 35 A)

**Output (AC)**

Nominal AC power (at 50 °C)	50000 W
Max. AC output power at PF=1 (at 45 °C)	55000 W
Max. AC apparent power (at 45 °C)	55000 VA
Max. AC output current	80A
Nominal AC voltage	3 / N / PE or 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%In
Power factor at nominal power / Adjustable power factor	> 0.99 @ default value at nominal power, (adj. 0.8 leading - 0.8 lagging)
Feed-in phases / Connection phases	3 / 3

**Efficiency**

Max. efficiency / Euro. efficiency	98.9 % / 98.5 %
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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, 15 A)
PV string current monitoring	Yes
Anti-PID function	Optional
Overvoltage protection	DC Type II / AC Type II

**General Data**

Dimensions (W*H*D)	665*906*256 mm
Weight	70 kg
Isolation method	Transformerless
Degree of protection	IP65
Night power consumption	<1W
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
AC connection type	Screw clamp terminal (Max. 50 mm <sup>2</sup> )
Compliance	CEA, IEC 62109, IEC 61727, IEC 62116, IEC 61683, IEC 60068, CE, VDE AR-N-4105 and G59/3
Grid support	LVRT, HVRT, active & reactive power control and power ramp rate control
Type designation	SG50KTL-M-20

