

SG49K5J

String Inverter For Japan



High Yield

- Max. efficiency 98.9 % European efficiency 98.5 %
- Full power operation without derating at 50 °C
- Up to 4 MPP trackers



Easy O&M

- Integrated IV curve scan function for fast trouble shooting
- Plug-in design of fan and SPD, easy for on-site maintenance.



Saved Investment

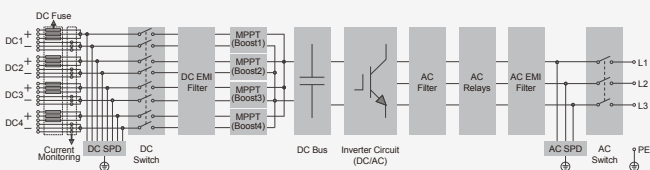
- Max. DC/AC ratio up to 1.5
- Capacity less than 50 kW plant only need one inverter
- Can be installed horizontally, saving installation cost



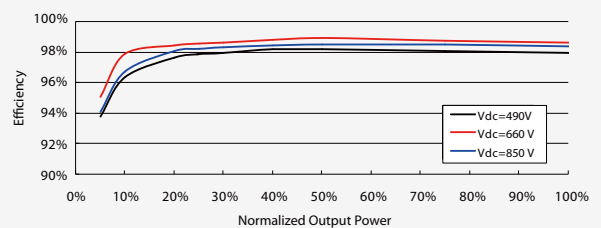
Grid Support

- Compliance with Japan utility grid standards
- Fault ride through (FRT) 2017
- Remote active power control

Circuit Diagram



Efficiency Curve



Input (DC)
SG49K5J

Max. PV input voltage	1000 V
Min. PV input voltage / Startup input voltage	200 V / 250 V
Nominal input voltage	660 V
MPP voltage range	200 – 950 V
MPP voltage range for nominal power	490 – 850 V
No. of independent MPP inputs	4
Max. number of PV strings per MPPT	3
Max. PV input current	112A (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)	49500 W
Max. AC output power at PF=1 (at 50 °C)	49500 W
Max. AC apparent power (at 50 °C)	49500 VA(default), 55000 VA(settable)
Max. AC output current	80 A
Nominal AC voltage	3 / PE, 420 V / 440 V
AC voltage range	374 – 506 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 _n
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 % / 98.5 %
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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 / Yes
DC fuse	Yes (positive, 15A)
PV string current monitoring	Yes
Overvoltage protection	DC Type II / AC Type II

General Data

Dimensions (W*H*D)	677*962*282.5 mm
Weight	70 kg
Isolation method	Transformerless
Degree of protection	IP65
Night power consumption	< 2 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	OT terminal (Max. 6 mm ²)
AC connection type	OT terminal (Max. 70 mm ²)
Grid support	FRT 2017, active & reactive power control and power ramp rate control
Type designation	SG49K5J-10

