

SG111HV

String Inverter for Japan 1500 Vdc System



High Yield

- Five-level topology, Max. efficiency 98.9%
- Max. DC/AC ratio up to 1.5
- Full power operation without derating at 50 °C



Easy O&M

- Virtual central solution, easy for O&M
- Anti-corrosion design
- Plug-in design of fan and SPD, easy for on-site maintenance



Saved Investment

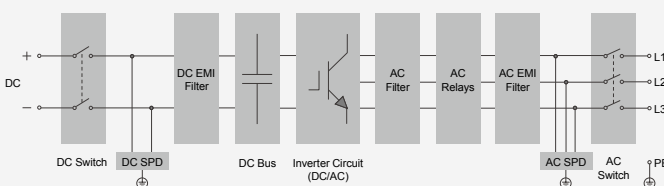
- DC 1500 V, low system cost and cable loss
- AC 540 V, high-voltage and ultra-high-voltage PV station application
- Suitable for horizontal and vertical installation



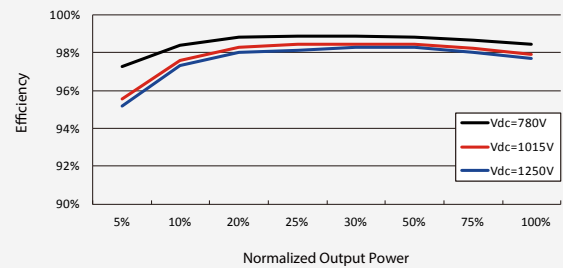
Grid Support

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

Circuit Diagram



Efficiency Curve



Input (DC)**SG111HV**

Max. PV input voltage	1500 V
Min. startup input voltage	835 V
Nominal input voltage	1015 V
MPP voltage range	780 – 1450 V
MPP voltage range for nominal power	780 – 1250 V
No. of independent MPP inputs	1
No. of PV strings	1
Max. PV input current	146 A
Max. DC short-circuit current	240 A

Output (AC)

AC output power	111000 VA @ 50 °C / 113000 VA @ 50 °C (settable)
Max. AC output current	121 A
Nominal AC current	118.7 A
Nominal AC voltage	3 / PE, 540 V
AC voltage range	432 – 648 V
Nominal grid frequency / Grid frequency range	50 Hz / 60 Hz, 45 - 55 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
Connection phases	3

Efficiency

Max. efficiency / Euro. efficiency	98.90 % / 98.70 %
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Protection

Grid protection	OVR / UVR / OFR / UFR
FRT	FRT 2017
DC reverse connection protection	Yes
Leakage current protection	Yes
AC short-circuit protection	Yes
DC Overvoltage protection	Type II
AC Overvoltage protection	Type II
DC switch / AC switch	Yes / Yes

General Data

Weight	76 kg
Dimensions (W*H*D)	670 * 902 * 296 mm
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	0 – 100 % (non-condensing)
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display / Communication	LED, Bluetooth+APP / RS485
DC connection type	OT or DT terminal (Max. 60 mm ²)
AC connection type	OT or DT terminal (Max. 150 mm ²)
Grid support	Fault ride through (FRT) 2017, Remote active power control
Type designation	SG111HV-10

