SG125CX-P2

Multi-MPPT String Inverter for 1000 Vdc System



HIGH YIELD

- 12 MPPTs with max. efficiency 98.5%
- DC 15A current input, compatiable with over 500W+ PV module
- Dynamic shading optimization mode

SMART O&M

- Key component diagnosis and protection
- Smart IV Curve Diagnosis
- Grid fault record function, easy for remote O&M

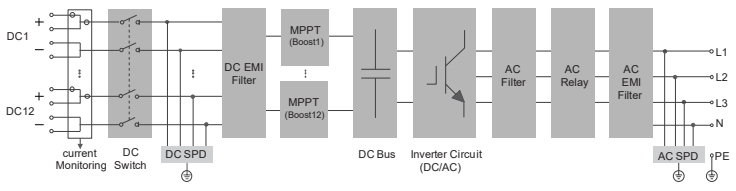
LOWER INVESTMENT

- Compatible max. 240mm² Al AC cables
- Drawer-style cable sealing plate support AC cable pre-assembly

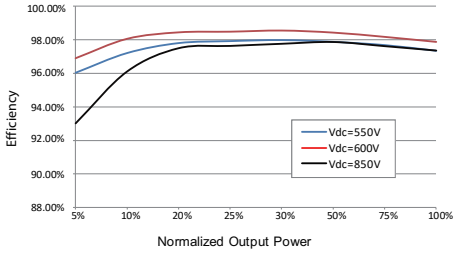
PROVEN SAFETY

- IP66 protection and C5 Anti-corrosion
- DC Type I+II SPD, AC Type II SPD
- Support AFCI 2.0 function

CIRCUIT DIAGRAM



EFFICIENCY CURVE



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Type designation	SG125CX-P2
Input (DC)	
Recommended max. PV input power	175 kW
Max. PV input voltage	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPP voltage range	180 V – 1000 V
No. of independent MPP inputs	12
No. of PV strings per MPPT	2
Max. PV input current	360 A (30 A * 12)
Max. DC short-circuit current	480 A (40 A * 12)
Max. current for DC connector	30A
Output (AC)	
Rated AC output power	125 kW (415 V @ 50 °C) *
Max. AC output apparent power	125 kVA (415 V @ 50 °C) *
Max. AC output current	181.1 A
Rated AC output current(at 230V)	181.1 A
Rated AC voltage	3 / N / PE, 230 / 400 V ; 3 / N / PE, 240 / 415 V
AC voltage range	320 V – 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)	< 3 % (at rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / connection phases	3 / 3-N-PE
Efficiency	
Max. efficiency / European efficiency	98.5% / 98.3%
Protection	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC Type I + II / AC Type II
Ground fault monitoring	Yes
DC switch	Yes
PV string current monitoring	Yes
Arc fault circuit interrupter (AFCI)	Yes
PID recovery function	Yes
Optimizer compatibility **	Optional
General Data	
Dimensions (W * H * D)	1020 * 795 * 360 mm
Weight	87 kg
Mounting Method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 5 W
Corrosion	C5
Operating ambient temperature range	-30 ℃ to 60 ℃
Allowable relative humidity range (non-condensing)	0 % – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m
Display	LED, Bluetooth+APP
Communication	RS485 / WLAN (optional) / Ethernet (optional)
DC connection type	Evo2 (Max. 6 mm²)
AC connection type	OT / DT terminal (Max. 240 mm²)
AC cable specification	Outside diameter 30 mm – 60 mm
Grid Compliance	IEC 62109-1, EN/IEC 61000-6-1/2/3/4, IEC 61727, IEC 62116, EN 50549-1/2, UTE C15-712-1, VDE V 0126-1-1, VDE-AR-N 4105:2018, VFR 2019, NC RfG, G99, UNE 217002, NTS, CEI 0-21 2019,CEI0-16 2019, NRS-097-2-1,
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control

* PV input voltage need over 630VDC

** For optimizer compatibility, please consult Sungrow before placing an order

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