SG150CX Preliminary

Multi-MPPT String Inverter for 1000 Vdc System

NEW



HIGH YIELD

- Higher current input, adaptable to all PV modules for more design flexibility
- Global MPPT scanning, increasing generation yield by over 2%
- Intelligent PID recovery function

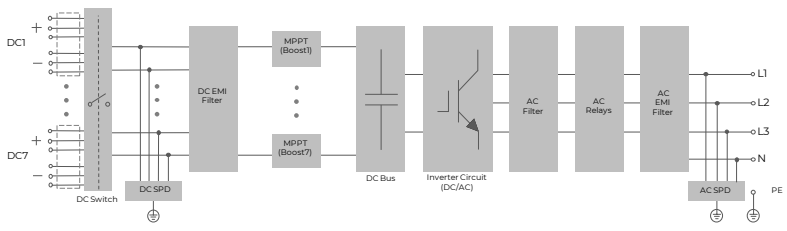
SMART MANAGEMENT

- Air duct self-cleaning, reduced maintenance and increased O&M efficiency
- IP66 protection and C5 Anti-corrosion, suitable for various harsh environments
- High-precision string detection and I-V diagnosis, accurately locating abnormal strings

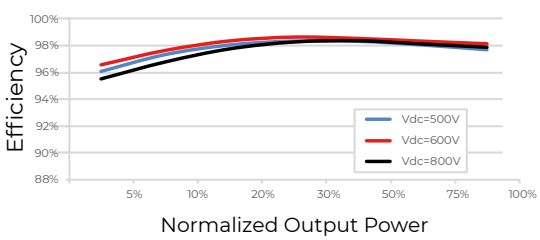
SAFE AND DURABLE

- AFCI 3.0, intelligent DC arc interrupter, with a detection range of 450m
- Active fault identification, intelligent string-level protection switch, ensuring equipment safety
- Temperature monitoring of AC & DC terminals, real time over-temperature protection

CIRCUIT DIAGRAM



EFFICIENCY CURVE



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Type designation	SG150CX
Input (DC)	
Recommended max. PV input power	210 kWp
Max. PV input voltage*	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPPT voltage range **	180 V - 1000 V
No. of independent MPP inputs	7
No. of PV strings per MPPT	3 / 3 / 3 / 3 / 3 / 3 / 3
Max. PV input current	336 A (48 A * 7)
Max. DC short-circuit current	462 A (66 A * 7)
Max. current for DC connector	30 A
Output (AC)	
Rated AC output power	150 kW
Max. AC output apparent power	150 kVA
Max. AC output current	216.5 A ***
Rated AC output current (at 230 V)	216.5 A
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 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)	< 1 % (at rated AC voltage and rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / AC connection	3 / 3-N-PE
Efficiency	
Max. efficiency / European efficiency	98.8 % / 98.2 %
Protection & function	
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
RSD compatibility ****	Optional
General data	
Dimensions (W * H * D)	1025 mm * 795 mm * 360 mm
Weight	100 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 4 W *****
Corrosion	C5
Operating ambient temperature range	-30 ℃ - 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 mm^2)
AC connection type	OT / DT terminal (120 mm^2 - 400 mm^2)
AC cable specification	Outside diameter 18 mm - 38 mm
Grid compliance	IEC EN 62109-1/-2; IEC 60529; IEC 61000-6-1/-2/-3/-4; IEC 62920; EN 55011; CISPR 11; IEC 63027; EN 50549-1-10/-2-10; IEC 61727; IEC 62116; IEC 61683; EN 50530; IEC 60068-1/-2/-14/-27/-30/-64; IEC/EN 61000-3-11/12; IEC 62920; VDE 4110; VDE 4120; PSE 2018; NC RFG; IEC 62920; TOR Erzeuger Typ A; TOR Erzeuger Typ B; OVE-Richtlinie R25/03.20; G99; CEI 0-16; CEI 0-21; VDE 0126; NTS UNE 217001/217002; NTS 631; IEC 60947.2; PEA; MEA; IEC 62910; DEWA; NRS 097; IRR-DCC-MV
Grid support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection. ** Please refer to the user manual for the full load MPPT voltage range. *** For Germany, max. AC output current is 240.6 A. For Thailand PEA, max. AC output current is 227.9A. **** For optimizer & RSD compatibility, please consult Sungrow before placing an order. ****** Night power consumption ≤ 7 W when SG150CX compatible with optimizer / RSD.

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