SG150CX

Multi-MPPT String Inverter for 1000 Vdc System

Preliminary



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

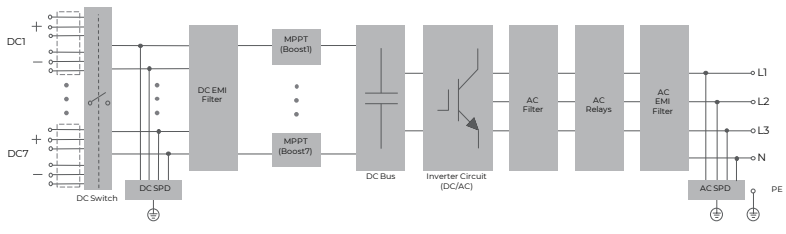
SMART MANAGEMENT

- 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

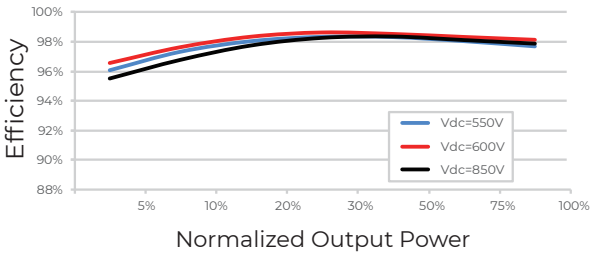
SAFE AND DURABLE

- AFCI 3.0, intelligent DC arc interrupter, with a detection range of 450m
- Active fault identification, intelligent string-level protection switch, ensuring equipment safety

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 @ 45 ℃, 143 kW @ 50 ℃
Max. AC output apparent power	165 kVA @ 40 ℃, 150 kVA @ 45 ℃, 143 kVA @ 50 ℃
Max. AC output current	250.7 A @ 380 Vac, 240.6 A @ 400 Vac
Rated AC output current	227.9 A @ 380 Vac, 216.5 A @ 400 Vac
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 400 V 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
Intelligent DC arc interrupter	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	≤ 7 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; VDE4110; VDE4120; 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; VDE0126; 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 optimizer & RSD compatibility, please consult Sungrow before placing an order

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