SG40/50CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

HIGH YIELD

- DC 15A current input, compatible with over 500W+ PV module
- Dynamic shading optimization mode
- Built-in PID recovery function

SMART O&M

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

LOWER INVESTMENT

- Easy to handle thanks to 34% weight reduced
- Plug and Play with Buckle Design

PROVEN SAFETY

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



Type designation	SG40CX-P2	SG50CX-P2
Input (DC)		
Recommended max. PV input power	56 kWp	70 kWp
Max. PV input voltage*	1100 V	
Min. PV input voltage / Startup input voltage	160 V / 200 V	
Rated PV input voltage	600 V	
MPPT voltage range**	160 V - 1000 V	
No. of independent MPP inputs	4	
No. of PV strings per MPPT	2	
Max. PV input current	120 A (30 A * 4)	
Max. DC short-circuit current	160 A (40 A * 4)	
Max. current for DC connector	30 A	
Output (AC)		
Rated AC output power	40 kW	50 kW
Max. AC output apparent power	44 kVA	55 kVA
Max. AC output current	66.9 A	83.6 A
Rated AC output current(at 230V)	58 A	72.5 A
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V	
AC voltage range	312 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 / AC connection	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	
RSD compatibility ****	Optional	
General data		
Dimensions (W * H * D)	645 mm * 575 mm * 245 mm	
Weight	40 kg	41 kg
Mounting method	Wall-mounting bracket	
Topology	Transformerless	
Degree of protection	IP66	
Night power consumption	< 7 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 / Optional: WLAN, Ethernet	
DC connection type	Evo2 (Max. 6 mm^2)	
AC connection type	OT terminal (16-35 mm^2)	OT or DT terminal (35-50 mm^2)
AC cable specification	Outside diameter 18 mm - 38 mm	
Grid compliance	IEC 62109-1/2, IEC 61727, IEC 62116, VDE-AR-N 4105:2018, IEC 61000-6-3, IEC 61683 IEC 60068 EN 50530, IEC 62910, IEC 61920, IEC61000-3-11/12, IEC 60529, EN 50549-1/2/10, EN/IEC 61000-6-1/2/3/4, EN 300 328, EN301489, EN 62311, CEI 0-21 2019, CEI 0-16 2019, VDE 0126-1-1/A1 VFR 2019, UTE C15-712-1:2013, UNE 217002, G99, IEC 63027, TOR typeA+B and OVE R25, DEWA, VDE 4110, IRR-DCC-MV, NC RfG, PSE 2018, NRS-097-2-1, UNE 217001, ITC-BT-40, NTS V2.1, PEA, MEA, RD 647	
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
*** 30kVA for Germany, Belgium, Austria, Ukraine and Denmark, 33kVA for others
**** For SP600S optimizer & SR20D-M RSD compatibility, please consult Sungrow before placing an order