

# SG50CX-P3

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

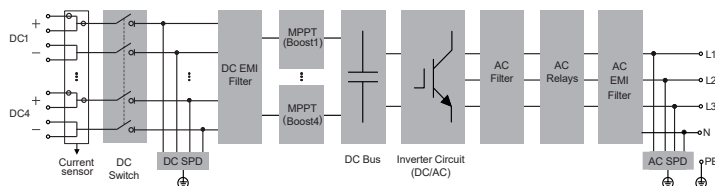
## 👛 LOWER INVESTMENT

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

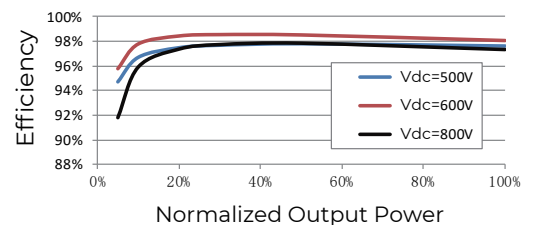
## 🛡️ PROVEN SAFETY

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

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE (SG50CX-P3)



Type designation	SG50CX-P3
<b>Input (DC)</b>	
Recommended max. PV input power	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
<b>Output (AC)</b>	
Rated AC output power	50 kW
Max. AC output apparent power	55 kVA
Max. AC output current	83.6 A
Rated AC output current( at 230V )	72.5 A
Rated AC voltage	3 / N / PE, 220 / 380 V, 230 / 400 V
AC voltage range	312 V - 480 V
Rated grid frequency	50 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
<b>Efficiency</b>	
Max. efficiency / China efficiency	98.6 % / 98.2 %
<b>Protection</b>	
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
<b>General data</b>	
Dimensions ( W * H * D )	645 mm * 595 mm * 245 mm
Weight	40 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 1 W
Corrosion	C5
Operating ambient temperature range	-30 °C to 60 °C
Allowable relative humidity range (non-condensing)	0 % - 100 %
Cooling method	Intelligent air cooling
Max. operating altitude	4000 m
Display	LED, Bluetooth+APP
Communication	RS485 / Optional: WLAN, Ethernet
DC connection type	Evo2 ( Max. 6 mm <sup>2</sup> )
AC connection type	OT or DT terminal
AC cable specification	Outside diameter 18 mm - 38 mm
Grid compliance	IEC 62109, IEC 61727, IEC 62116, VDE-AR-N 4105:2018, IEC 61000-6-3, EN 50549-1, CEI 0-21 2019, CEI0-16 2019, VDE 0126-1-1/A1 VFR 2019, UTE C15-712-1:2013, UNE 206007-1/RD 1699, UNE 217002, G99, IEC 63027
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 compatibility, please consult Sungrow before placing an order