

# SG33CX/SG40CX/SG50CX **New**

**SUNGROW**  
Clean power for all

Multi-MPPT String Inverter for 1000 Vdc System



## HIGH YIELD

- Up to 5 MPPTs with max. efficiency 98.7%
- Compatible with bifacial module
- Built-in PID recovery function

## SMART O&M

- Touch free commissioning and remote firmware upgrade
- Online IV curve scan and diagnosis\*
- Fuse free design with smart string current monitoring

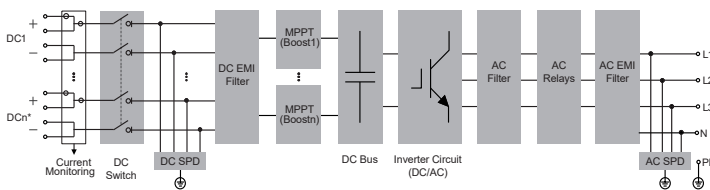
## LOW COST

- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Cable free communication with optional Wi-Fi

## PROVEN SAFETY

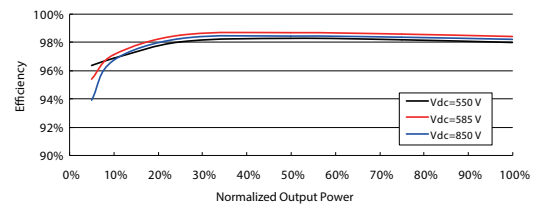
- IP66 and C5 anti-corrosion grade
- Type II SPD for both DC and AC
- Satisfied global safety and grid code

## CIRCUIT DIAGRAM



\*: n=3(SG33CX)/4(SG40CX)/5(SG50CX)

## EFFICIENCY CURVE (SG50CX)



Type designation	SG33CX	SG40CX	SG50CX
<b>Input (DC)</b>			
Max. PV input voltage		1100 V	
Min. PV input voltage / Start-up input voltage		200 V / 250 V	
Nominal PV input voltage		585 V	
MPP voltage range		200 – 1000 V	
MPP voltage range for nominal power		550 – 850V	
No. of independent MPP inputs	3	4	5
Max. number of PV strings per MPPT		2	
Max. PV input current	78 A	104 A	130 A
Max. DC short-circuit current	120 A	160 A	200 A
<b>Output (AC)</b>			
AC output power	33 kVA @45 °C, 400Vac / 36.3 kVA @ 40 °C,400Vac 33 kVA@50 °C, 415Vac / 36.3 KVA@45 °C, 415Vac	40 kVA @45 °C, 400Vac / 44 kVA @ 40 °C,400Vac 40 kVA@50 °C, 415Vac / 44 KVA@45 °C, 415Vac	50 kVA @45 °C, 400Vac / 55kVA @ 40 °C,400Vac 50KVA@50 °C, 415Vac / 55kVA @ 45 °C,415Vac (Australia: max. 50 kVA)
Max. AC output current	55.2 A	66.9 A	83.6 A
Nominal AC voltage		3 / N / PE, 230 / 400 V	
AC voltage range		312 – 528 V	
Nominal grid frequency / Grid frequency range		50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
THD		< 3 % (at nominal power)	
DC current injection		< 0.5 % I <sub>n</sub>	
Power factor at nominal power / Adjustable power factor		> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / connection phases		3 / 3	
<b>Efficiency</b>			
Max. efficiency / European efficiency	98.6 % / 98.3 %	98.6% / 98.3%	98.7% / 98.4%
<b>Protection</b>			
DC reverse connection protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
Grid monitoring		Yes	
DC switch		Yes (not available for Australia)	
AC switch		No	
PV String current monitoring		Yes	
Q at night		Yes	
PID recovery function		Yes	
Overvoltage protection		DC Type II / AC Type II	
<b>General Data</b>			
Dimensions (W*H*D)	702*595*310mm	782*645*310mm	782*645*310mm
Weight	50 kg	58 kg	62 kg
Isolation method		Transformerless	
Degree of protection		IP66	
Night power consumption		≤2 W	
Operating ambient temperature range		-30 to 60 °C	
Allowable relative humidity range (non-condensing)		0 – 100 %	
Cooling method		Smart forced air cooling	
Max. operating altitude		4000 m (> 3000 m derating)	
Display		LED, Bluetooth+APP	
Communication		RS485 / Optional: Wi-Fi, Ethernet	
DC connection type		MC4 (Max. 6 mm <sup>2</sup> )	
AC connection type		OT or DT terminal (Max.70 mm <sup>2</sup> )	
Compliance		IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4105:2018, VDE-AR-N 4110:2018, IEC 61000-6-3, EN 50549, AS/NZS 4777.2:2015, CEI 0-21, VDE 0126-1-1/A1 VFR 2014, UTE C15-712-1:2013, DEWA	
Grid Support		Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control	

\*: Only compatible with Sungrow logger and iSolarCloud



# Certificate of Conformity

Registered No.:  
**COCSHV11090/19-01\_R1**

File reference  
SHV11090/19-01

Test report No.  
TRSHV11090/19/01\_R2

Date of issue  
2020-03-19

On the basis of the tests undertaken, the samples of the below product(s) have been found to comply with the essential requirements of the referenced specifications at the time the tests were carried out:

**Applicant:** **Sungrow Power Supply Co., Ltd.**  
No. 1699 Xiyou Road, New & High Technology Industrial Development Zone  
Hefei City, Anhui Province, 230088, P.R China

**Manufacturer:** **Sungrow Power Supply Co., Ltd.**  
No. 1699 Xiyou Road, New & High Technology Industrial Development Zone  
Hefei City, Anhui Province, 230088, P.R China

**Product:** Grid-connected PV inverter

**Type designation:** SG33CX, SG40CX, SG50CX

**Standard(s):** Test according to NRS 097-2-1:2017 for PV Inverter.  
See test report for detailed information.

Remark: This certificate COCSHV11090/19-01\_R1 replaced the certificate COCSHV11090/19-01 due to update the test report.

This document is based on the evaluation of the samples of the above mentioned product(s). It does not imply an assessment of the mass-production of the product(s), and it does not permit the use of a TÜV NORD mark. The holder of this document may use it in connection with the related test report(s)



Renewable Energy

TÜV NORD (HANGZHOU) CO., LTD.  
Member of TÜV NORD Group  
Tel: +86-571-85386989  
Fax: +86-571-85386986  
www.tuv-nord.com/cn  
P.R. China