



COMMERCIAL PV PLANT

SYSTEM SOLUTIONS



SUNGROW
Clean power for all

ABOUT SUNGROW

Sungrow Power Supply Co., Ltd. ("Sungrow") is the world's most bankable inverter brand with over 340 GW installed worldwide as of December 2022. Founded in 1997 by University Professor Cao Renxian, Sungrow is a leader in the research and development of solar inverters with the largest dedicated R&D team in the industry and a broad product portfolio offering PV inverter solutions and energy storage systems for utility-scale, commercial & industrial, and residential applications, as well as internationally recognized floating PV plant solutions, NEV driving solutions, EV charging solutions and renewable hydrogen production systems. With a strong 26-year track record in the PV space, Sungrow products power over 150 countries worldwide.

As a leader in innovation in the solar industry, Sungrow possesses a dynamic technical R&D team which consists of over 3100 employees. The Company has also invested in its own in-house testing center approved by SGS, CSA, and TÜV Rheinland. Sungrow has the world's largest inverter factory, with a global annual production capacity of 305 GW, including 25 GW outside China.

Offering a wide range of solutions and services, Sungrow is committed to providing clean power for all and is steadfast in its efforts to become the global leader in clean power conversion technology. Learn more about Sungrow by visiting www.sungrowpower.com.

The World's Most Bankable Inverter Brand

No.1 bankable for 4 consecutive years
The only inverter supplier ranked **100%** bankable

Source: BloombergNEF



26

Years in the
Solar Industry

5300

Patent
applications

150⁺

Countries with Sungrow
Installations

NO.1

Largest PV Inverter
R&D Team



NO.1

2021 Inverter Shipments

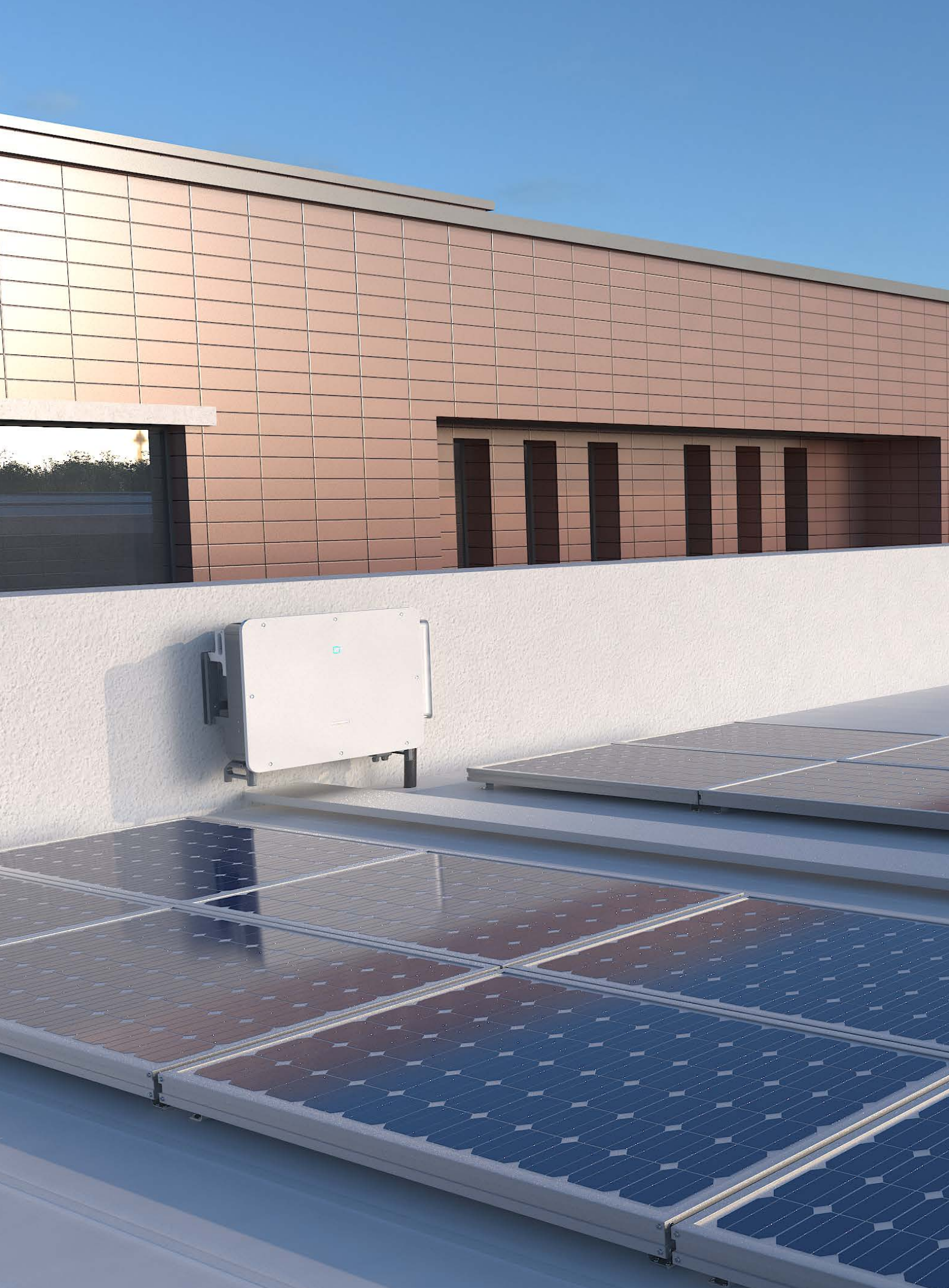
Source: IHS Markit now a part of S&P Global estimates

340GW⁺

Deployed
Worldwide

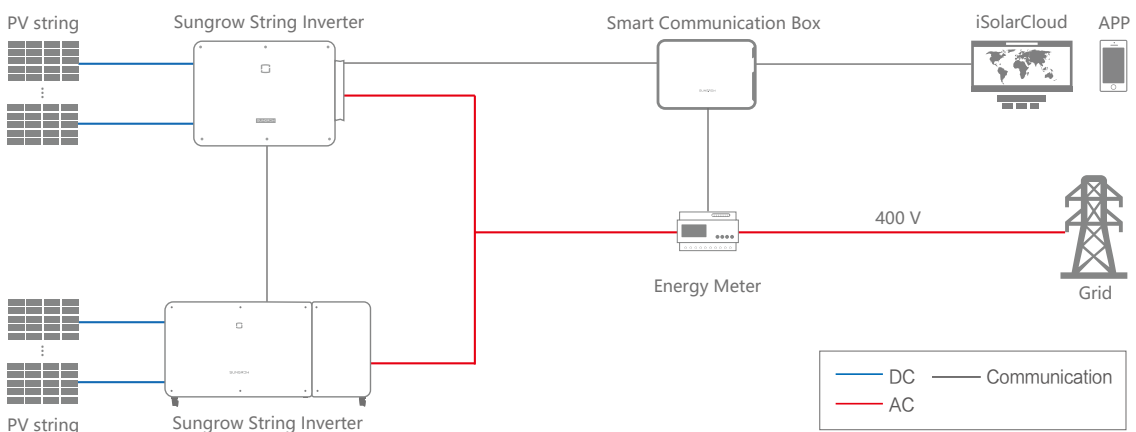
305GW

Inverter Annual
Capacity



Commercial PV Plant System Solutions

Commercial PV Plants



Recommend Inverters



SG125CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

NEW



HIGH YIELD

- 12 MPPTs with max. efficiency 98.5%
- DC 15A current input, compatible with over 500W+ PV module
- Dynamic shading optimization mode



SMART O&M

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



LOWER INVESTMENT

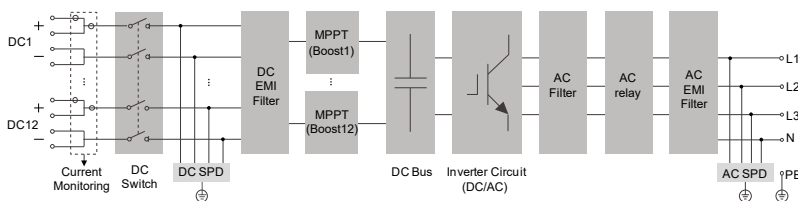
- Compatible max. 240mm² Al AC cables
- Drawer-style cable sealing plate support AC cable pre-assembly



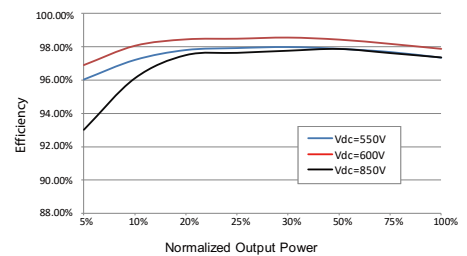
PROVEN SAFETY

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG125CX-P2
Input (DC)	
Recommended max. PV input power	175 kW
Max. PV input voltage	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPP voltage range	180 – 1000 V
No. of independent MPP inputs	12
No. of PV strings per MPPT	2
Max. PV input current	360 A (30 A *12)
Max. DC short-circuit current	480 A (40 A *12)
Max. current for DC connector	20A
Output (AC)	
Max. AC Output power	125 kVA (415 V @ 50 °C) *
Rated AC output apparent power	125 kVA (415 V @ 50 °C) *
Max. AC output current	181.1 A
Rated AC output current(at 230V)	181.1 A
Rated AC voltage	3 / N / PE, 230 / 400 V ; 3 / N / PE, 240 / 415 V
AC voltage range	320 – 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 – 55 Hz / 55 – 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 / connection phases	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 monitoring	Yes
Q at night function	Yes
Arc fault circuit interrupter (AFCI)	Yes
PID recovery function	Yes
General Data	
Dimensions (W*H*D)	1020*795*360 mm
Mounting Method	Wall-mounting bracket
Weight	87 kg
Topology	Transformerless
Degree of protection	IP66
Corrosion	C5
Night power consumption	< 5 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	SP600S (Optional)
DC connection type	RS485 / Optional: WLAN, Ethernet
AC connection type	Evo2 (Max. 6 mm ²)
Grid Compliance	OT / DT terminal (Max. 240 mm ²) IEC 62109-1, EN/IEC 61000-6-1/2/3/4, IEC 61727, IEC 62116, EN 50549-1/2, UTE C15-712-1, VDE V 0126-1-1, VDE-AR-N 4105:2018, VFR 2019, NC RfG, G99, UNE 217002, NTS, CEI 0-21 2019, CEI0-16 2019, NRS-097-2-1
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control

* PV input voltage need over 630 VDC



SG110CX

Multi-MPPT String Inverter for 1000 Vdc System



HIGH YIELD

- 9 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
- Smart IV Curve diagnosis*
- Fuse free design with smart string current monitoring

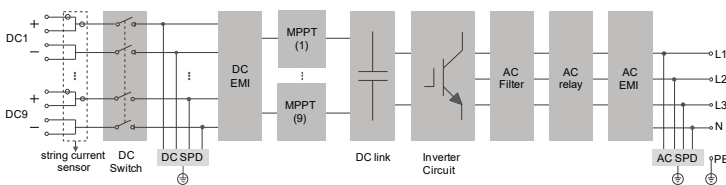
SAVED INVESTMENT

- Compatible with Al and Cu AC cables
- DC 2 in 1 connection enabled
- Q at night function

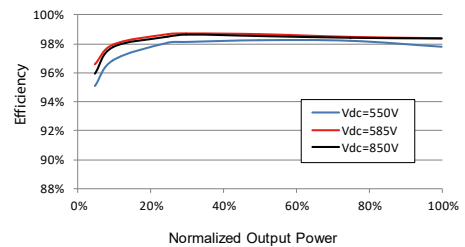
PROVEN SAFETY

- IP66 and C5 anti-corrosion
- Type II SPD for both DC and AC, DC Type I+II optional
- Compliant with global safety and grid code

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG110CX
Input (DC)	
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
No. of independent MPP inputs	9
No. of PV strings per MPPT	2
Max. PV input current	26 A * 9
Max. DC short-circuit current	40 A * 9
Output (AC)	
AC output power	110 kVA @ 45 °C / 100 kVA @ 50 °C
Max. AC output current	158.8 A
Nominal AC voltage	3 / N / PE, 400 V
AC voltage range	320 – 460 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
Harmonic (THD)	< 3 % (at nominal power)
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / AC connection	3 / 3-PE
Efficiency	
Max. efficiency	98.7 %
European efficiency	98.5 %
Protection and Function	
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch	Yes
AC switch	No
PV string monitoring	Yes
Q at night function	Yes
PID recovery function	Yes
Arc fault circuit interrupter (AFCI)	Optional
Surge protection	DC Type II (optional: Type I + II) / AC Type II
General Data	
Dimensions (W*H*D)	1051*660*362.5 mm
Weight	89 kg
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 2 W
Operating ambient temperature range	-30 to 60 °C (> 50 °C derating)
Allowable relative humidity range	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display	LED, Bluetooth+APP
Communication	RS485 / Optional: WLAN, Ethernet
DC connection type	MC4 (Max. 6 mm ²)
AC connection type	OT / DT terminal (Max. 240 mm ²)
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control
Country of manufacture	China

*: Only compatible with Sungrow Logger, EyeM4 and iSolarCloud

** : The inverter enters the standby state when the input voltage ranges between 1,000V and 1,100V. If the maximum DC voltage in the system can exceed 1000V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

SG33/50CX

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
- Smart IV Curve diagnosis *
- Fuse free design with smart string current monitoring

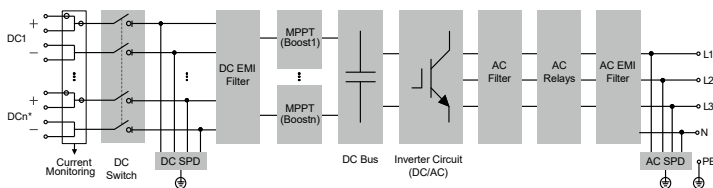
SAVED INVESTMENT

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

PROVEN SAFETY

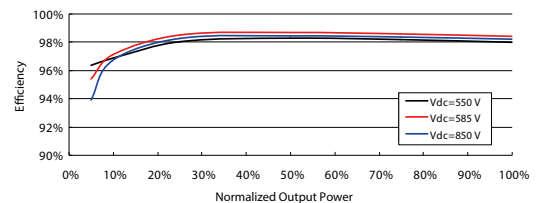
- IP66 and C5 anti-corrosion
- Type II SPD for both DC and AC, DC Type I+II Opt
- Satisfied global safety and grid code

CIRCUIT DIAGRAM



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

EFFICIENCY CURVE



Type designation	SG33CX	SG50CX
Input (DC)		
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	
No. of independent MPP inputs	3	5
No. of PV strings per MPPT	2	
Max. PV input current	3 * 26 A	5 * 26 A
Max. DC short-circuit current	3 * 40 A	5 * 40 A
Output (AC)		
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	50 kVA @45 °C, 400Vac / 55kVA @ 40 °C, 400Vac 50KVA @ 50 °C, 415Vac / 55kVA @ 45 °C,415Vac
Max. AC output current	55.2 A	3 / N / PE, 230 / 400 V 83.6 A
Nominal AC voltage	312 – 528 V	
AC voltage range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
Nominal grid frequency / Grid frequency range	< 3 % (at nominal power)	
Harmonic (THD)	< 0.5 % In	
DC current injection	> 0.99 / 0.8 leading – 0.8 lagging	
Power factor at nominal power / Adjustable power factor	3 / 3	
Feed-in phases / AC connection		
Efficiency		
Max. efficiency / European efficiency	98.6 % / 98.3 %	98.7 % / 98.4 %
Protection and Function		
DC reverse polarity protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
Grid monitoring	Yes	
Ground fault monitoring	Yes	
DC switch	Yes	
AC switch	No	
PV string monitoring	Yes	
Q at night function	Yes	
PID recovery function	Yes	
Arc fault circuit interrupter (AFCI)	Optional	
Overvoltage protection	DC Type II (optional: Type I + II) / AC Type II	
General Data		
Dimensions (W*H*D)	702*595*310 mm	782*645*310 mm
Weight	50 kg	62 kg
Topology	Transformerless	
Degree of protection	IP66	
Night power consumption	≤2 W	
Operating ambient temperature range	-30 to 60 °C (> 45 °C derating)	
Allowable relative humidity range	0 – 100 %	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000 m (> 3000 m derating)	
Display	LED, Bluetooth+APP	
Communication	RS485 / Optional: WLAN, Ethernet	
DC connection type	MC4 (Max. 6 mm ²)	
AC connection type	OT or DT terminal (Max.70 mm ²)	
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control	
Country of manufacture	China	

*: Only compatible with Sungrow logger, EyeM4 and iSolarCloud

***: The inverter enters the standby state when the input voltage ranges between 1,000 V and 1,100 V. If the maximum DC voltage in the system can exceed 1000 V, the MC4 connectors included in the scope of delivery must not be used. In this case MC4 Evo2 connectors must be used.

SG33/40/50CX-P2

Preliminary

Multi-MPPT String Inverter for 1000 Vdc System

NEW



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

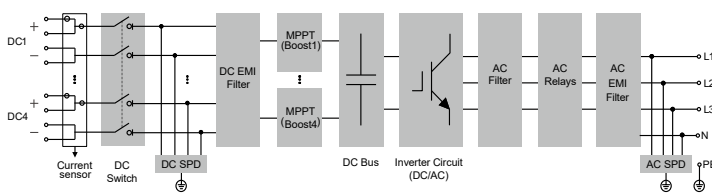
LOWER INVESTMENT

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

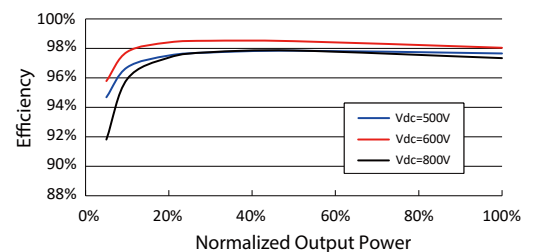
PROVEN SAFETY

- 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-P2)



Type designation	SG33CX-P2	SG40CX-P2	SG50CX-P2
Input (DC)			
Recommended max. PV input power	46.2 kWp	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	
MPP voltage range		160 V – 1000 V	
No. of independent MPP inputs	3	4	4
No. of PV strings per MPPT		2	
Max. PV input current	90 A (30 A * 3)	120 A (30 A * 4)	120 A (30 A * 4)
Max. DC short-circuit current	120 A (40 A * 3)	160 A (40 A * 4)	160 A (40 A * 4)
Max. current for DC connector		20A	
Output (AC)			
Rated AC output power	33 kVA	40 kVA	50 kVA
Max. AC output apparent power	36.3 kVA	44 kVA	55 kVA
Max. AC output current	55.2 A	66.9 A	83.6 A
Rated AC output current (at 230 V)	47.8 A	58 A	72.5 A
Rated AC voltage		3 / N / PE, 220 / 380 V, 230 / 400 V	
AC voltage range		312 – 480 V	
Rated grid frequency		50 Hz / 60 Hz	
Grid frequency range		45 – 55 Hz / 55 – 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 / connection phases		3 / 3-N-PE	
Efficiency			
Max. efficiency / European efficiencyEuro. Efficiency		98.5% / 98.3%	
Protection			
Grid monitoring		Yes	
DC reverse connection 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	
General Data			
Dimensions (W*H*D)		645*575*245 mm	
Mounting Method		Wall-mounting bracket	
Weight	38 kg	40 kg	41 kg
Topology		Transformerless	
Degree of protection		IP66	
Corrosion		C5	
Night power consumption		< 5W	
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	
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)	
AC Cable specification		Outside diameter 18 – 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, C99		
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control		

COM100

Smart Communication Box



FLEXIBLE NETWORKING

- Support of RS485, Ethernet, WLAN and Wi-SUN communication
- Support of energy meter, meteo station, sensors and other equipment



EASY OPERATION

- Night light for maintenance
- Robust enclosure, easy to install



CONVENIENT O&M

- Inverter batch parameter settings and firmware updates
- PV Plant maintenance via remote Web access for optimized OPEX
- Active and reactive power control
- Local monitoring



Type designation	COM100
Communication	
Max. number of devices	30
RS485 interface	3
Ethernet	1*RJ45, 10/100 Mbps
Digital input	5, Max. 24 Vdc
Analog input	4, support 4 – 20 mA or 0 – 10 Vdc
EyeW485 Host Module(optional)	1, 24 Vdc
I/O Module(optional)	1, 4*DI, 2*PT100 / PT1000, 2*AI (0 – 10 V), 2*DO, 24 Vdc
Wireless communication	
WLAN communication	802.11 b/g/n/ac HT20/40/80 MHz 2.4 GHz/5 GHz
Wi-SUN communication(optional)	Band: 860 – 928 MHz
Power supply	
AC input	100 Vac – 300 Vac, 50 / 60 Hz
Power consumption	Typ. 20 W, Max. 30 W
Night light for maintenance	<1 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Storage Temperature	-40 °C to 70 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W*H*D)	460*315*126 mm
Weight	6 kg
Mounting type	Wall mounted, Bracket mounted, Pole mounted, outdoor and indoor
Box material	PC
Cable specification	AC cable: outdoor UV protection cable of 1 – 1.5 mm ² , outside diameter 13 – 18 mm RS485 cable: outdoor UV protection shielded twisted pair (STP) of 0.75 – 1.5 mm ² , outside diameter 6 – 18 mm Ethernet: CAT5 cable, outdoor UV protection shielded, outside diameter 6 – 18mm AI, DI: outdoor UV protection cable of 0.75 mm ² , outside diameter 4.5 – 6mm
Ordering information	
COM100D	The COM100D includes Logger1000, AC adapter, SPD, Air switch, Night light Support of 4G, Ethernet, WLAN, MPLC (optional) and Wi-SUN (optional) communication Apply to China, India, Malaysia
COM100E	The COM100E includes Logger1000, AC adapter, SPD, Air switch, Night light Support of Ethernet, WLAN, MPLC (optional) and Wi-SUN (optional) communication Apply to Global

* EyeW485 host module needs to be used with EyeW485 to realize wireless 485 automatic network in the area.

WiNet-S

Communication Module



SMART AND FLEXIBLE

- WLAN or Ethernet, flexible compatibility of plant networking, one-click access to iSolarCloud
- Automatic network configuration with DHCP, transmission without configuration
- Free WLAN configuration, easy and time saving



SIMPLE AND EFFICIENT

- Plug and play, quick installation
- Data interval in seconds, quick glance for what you want
- Support of Smart IV Curve Diagnosis*
- Support of local and remote parameter setting and firmware updates



SAFE AND RELIABLE

- Password and encrypted transmission for data protection
- IP66, wide temperature range

Type designation	WiNet-S
Communication	
Max. number of supported devices	1
LED display	LED × 3
Communication Mode	
Internet communication	Channel x 1, 10 / 100Mbps self-adaptation, Communication distance ≤100 m
WLAN communication	802.11 b / g IEEE802.11n HT20@2.4 GHz IEEE802.11n HT40@2.4 GHz 2.4 GHz
Power supply	
DC input	5 VDC, 2.1 A
Power consumption	≤5 W
Ambient conditions	
Operating temperature	-30 °C to 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	48 * 132 * 36 mm
Mounting type	Plug and Play

*: WiNet-S is part of Smart IV Curve Diagnosis solution



EyeM4

Wireless Communication Module for Multiple Inverters



SMART AND FLEXIBLE

- One-click access to iSolarCloud
- One module can manage up to 10 inverters for remote maintenance and control
- Plug and play, easy installation



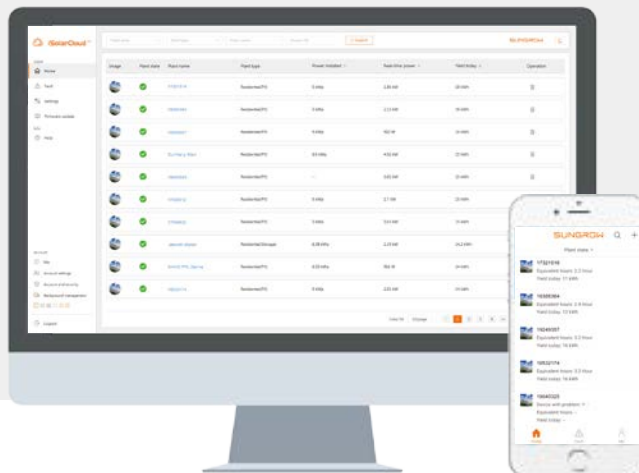
CONVENIENT O&M

- Built-in Web server for monitoring and configuration, by PC or smartphone browser no App required
- Support of plant maintenance by remote Web access, optimized OPEX
- Support of local and remote parameter setting and firmware updates

Type designation	EyeM4
Communication	
Max. number of devices	10
LED display	LED * 3
Wireless communication	
4G communication	LTE(FDD): B1, B3, B5, B8 LTE(TDD): B38, B39, B40, B41 TD-SCDMA: B34, B39 CDMA: BC0 GSM: 900MHz/1800MHz WCDMA: B1, B8
WLAN communication	802.11 b/g/n/ac HT20/40/80 MHz 2.4 GHz / 5 GHz
Power supply	
DC input	5 VDC, 0.8 A
Power consumption	<4 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W * H * D)	48 * 130 * 36 mm
Mounting type	Plug and Play
Ordering information	
EyeM4A	Supports 4G and WLAN communication
EyeM4C	Supports WLAN communication

iSolarCloud

Remote Monitoring and O&M Platform



FLEXIBLE AND FRIENDLY

- Centralized power plant management, optimized OPEX
- Simple network infrastructure, fast platform deployment
- Flexible data access, Web portal and App



SAFE AND RELIABLE

- Hierarchical access management
- Cyber security and redundant data storage over the lifecycle of plants, certified data security
- Full log for trace and audit



SIMPLE AND EFFICIENT

- Scan QR to create plant or get support, devices automatic access
- Accurate positioning of faults, quick trouble shooting, real-time push of information, reducing time to resolve faults
- Parameter setting, firmware updates, IV curve diagnosis, data analysis and automated reports
- Support of plant maintenance by remote Web access of local data logger



Type designation	iSolarCloud
Monitoring Device	
Device type	Inverter, combiner box, meteo station, energy meter, transformer and other plant devices
Monitoring Capacity	More than 100 GW (scalable)
Data Collection	
Time interval	5minutes or less
General Data	
Language	Chinese, English, German, French, Spanish, Portuguese, Italian, Dutch, Polish, Japanese, Korean, Vietnamese, Traditional Chinese
Data storage time	> 25 years
Storage capability	> 100PB
System reliability	99.99%
Minimum Web requirements	
Browser	IE 11, Chrome 65, Safari 11, Firefox 60
Resolution	1366 * 768, 1920 * 1080 recommended
Minimum Operating Environment for App	
Mounting type	Android 5.0, iOS 10.0
Dimensions (W * H)	1920 * 1080, 2001 * 1125, 1280 * 720



Case Reference



520 kW PV Plant Australia



1 MW PV Plant Australia



550kW PV Plant Germany



950kW PV Plant Korea



1 MW PV Plant Vietnam



2 MW PV Plant India



660kW PV Plant India



50 kW PV Plant India



10MW PV Plant Pakistan



6.5 MW PV Plant Spain



227 kW PV Plant Malaysia



1.4 MW PV Plant Vietnam

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