



COMMERCIAL PV/ESS PLANT

SYSTEM SOLUTIONS

ABOUT SUNGROW

Sungrow Power Supply Co., Ltd. (“Sungrow”) is the world’s most bankable inverter brand with over 269 GW installed worldwide as of June 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 25-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 145 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 3 consecutive years

No.1 supplier in financed projects

Source: BloombergNEF

25

Years in the
Solar Industry

4400+

Patent
applications

150+

Countries with Sungrow
Installations

NO.1

2021 Inverter Shipments
Source: IHS Markit now a
part of S&P Global estimates





269GW⁺

Deployed
Worldwide

3GWh

2021 Energy storage
system shipment

145GW / Year

Global Production
Capacity

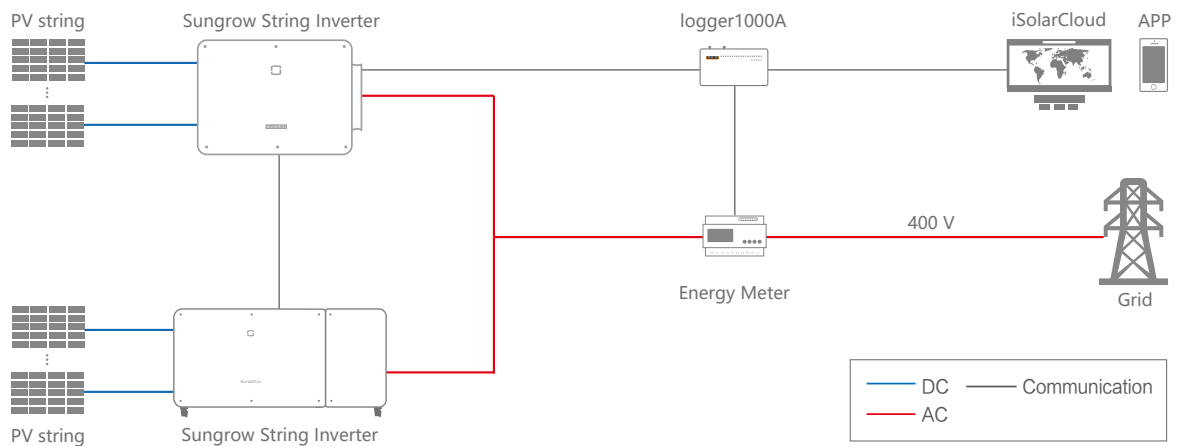
20GWh

Annual Capacity of ESS &
Energy Storage Battery Pack



C&I PV Plant System Solution

C&I PV Plant System Solution



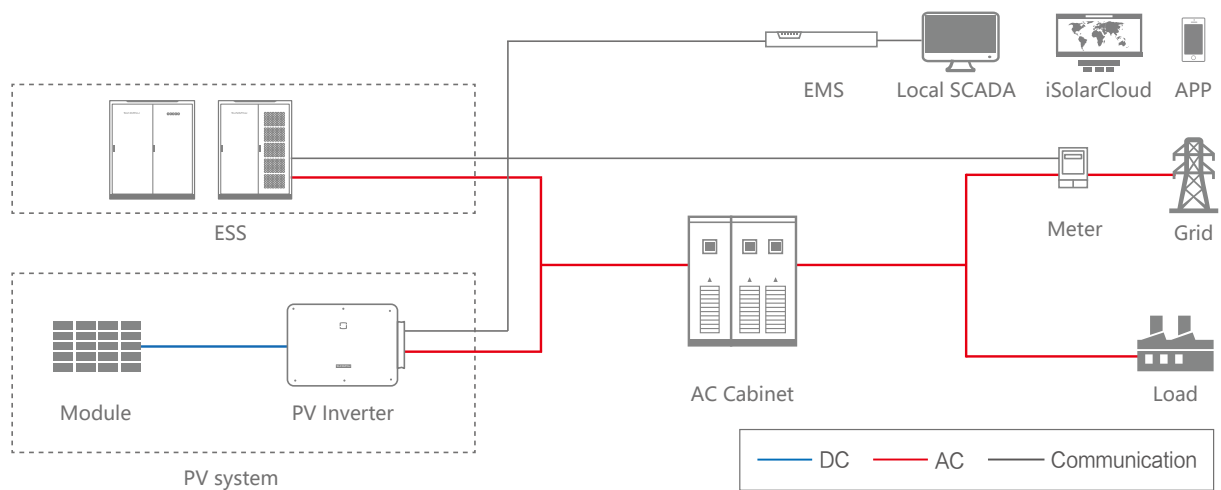
Recommend Products





C&I Hybrid (PV+ESS) Solution

C&I Hybrid (PV+ESS) Solution



Recommend Products



ST101/106/111/115/120
/124/129CP-50HV



ST500CP-SC50HVx5



ST2007kWH(L)-1000TL



SG110CX-P2



SG30/50CX

SG110CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

Preliminary



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

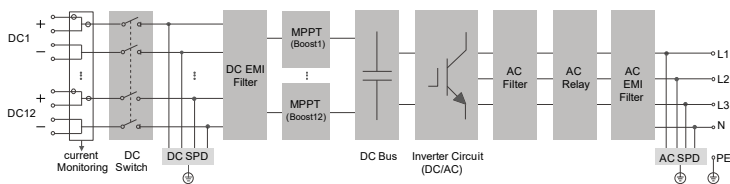
LOWER INVESTMENT

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

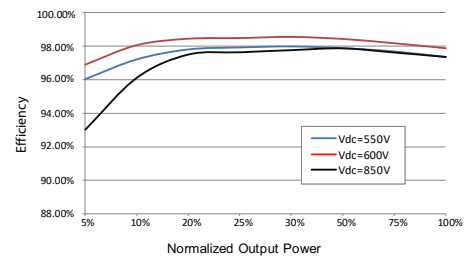
PROVEN SAFETY

- 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	SG110CX-P2
Input (DC)	
Recommended max. PV input power	154 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	20 A
Output (AC)	
Max. AC Output power	110 kVA
Rated AC output apparent power	110 kVA
Max. AC output current	167.1 A
Rated AC output current (at 230V)	159.4 A
Rated AC voltage	3 / N / PE, 220 / 380 V, 230 / 400 V
AC voltage range	304 – 456 V (380 V) / 320 – 480 V (400 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	98.6 % / 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	RS485 / Optional: WLAN, Ethernet
DC connection type	Evo2 (Max. 6 mm ²)
AC connection type	OT / DT terminal (Max. 240 mm ²)
Grid Compliance	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
Country of manufacture	China

SG110CX Premium

Multi-MPPT String Inverter for 1000 Vdc System

AU



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

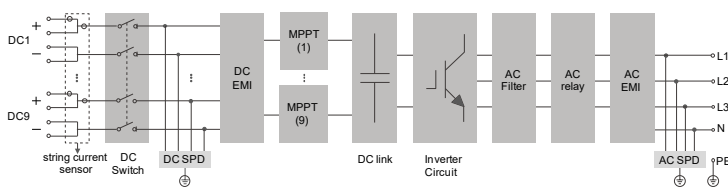
SAVED INVESTMENT

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

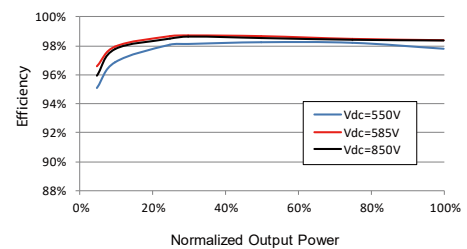
PROVEN SAFETY

- IP66 and C5 protection
- Type II SPD for both DC and AC
- Compliant with global safety and grid code

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG110CX
Input (DC)	
Recommended max. PV input power	147 kW
Max. PV input voltage	1100 V **
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Rated 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	234 A (26 A / 26 A / 26 A / 26 A / 26 A / 26 A / 26 A / 26 A)
Max. DC short-circuit current	360 A (40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A / 40 A)
Output (AC)	
Max. AC Output power	110 kVA @ 45 °C / 100 kVA @ 50 °C
Rated AC output apparent power	110 kVA
Max. AC output current	158.8 A
Rated AC voltage	3 / N / PE, 400 V
AC voltage range	320 – 460V
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 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 / AC connection	3 / 3-PE
Efficiency	
Max. efficiency / European efficiency	98.7 % / 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
DC terminal protective cover	Yes
Communication dongle (EyeM4)	Yes
Surge protection	DC Type 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)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, IEC 61000-6-3, EN 50549, AS/NZS 4777.2:2020, 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
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.



SG30/50CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

Preliminary



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

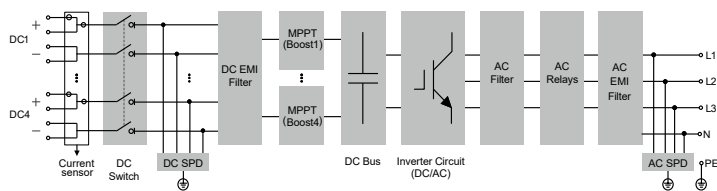
LOWER INVESTMENT

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

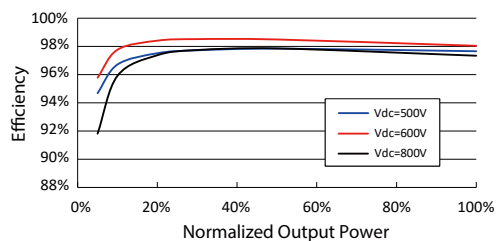
PROVEN SAFETY

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

CIRCUIT DIAGRAM (SG50CX-P2)



EFFICIENCY CURVE



Type designation	SG30CX-P2	SG50CX-P2
Input (DC)		
Recommended max. PV input power	42 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
No. of PV strings per MPPT	2	2
Max. PV input current	90 A (30 A * 3)	120 A (30 A * 4)
Max. DC short-circuit current	120 A (40 A * 3)	160 A (40 A * 4)
Max. current for DC connector	20A	
Output (AC)		
Rated AC output power	30 kVA	50 kVA
Max. AC output apparent power	33 kVA	55 kVA
Max. AC output current	50.2 A	83.6 A
Rated AC output current(at 230V)	43.5 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 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	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)	OT or DT terminal (35 – 50 mm ²)
AC Cable specification	Outside diameter 18~38mm	
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	
Grid Support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control	

SG50CX Premium

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 Scanning *
- Fuse free design with smart string current monitoring

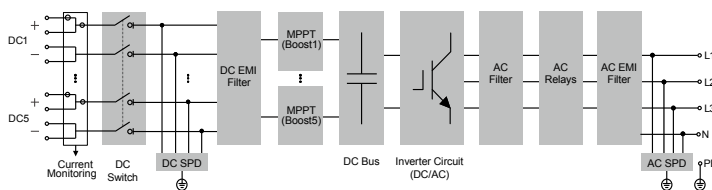
SAVED INVESTMENT

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

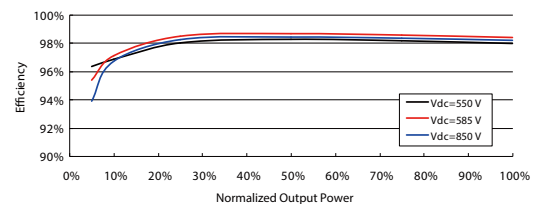
PROVEN SAFETY

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG50CX
Input (DC)	
Recommended max. PV input power	76 kW
Max. PV input voltage	1100 V **
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Rated PV input voltage	585 V
MPP voltage range	200 – 1000 V
No. of independent MPP inputs	5
No. of PV strings per MPPT	2
Max. PV input current	130 A (26 A / 26 A / 26 A / 26 A / 26 A)
Max. DC short-circuit current	200 A (40 A / 40 A / 40 A / 40 A / 40 A)
Output (AC)	
Max. AC Output power	50 kVA
Rated AC output apparent power	50 kVA
Max. AC output current	80.5 A
Rated AC voltage	3 / N / PE, 230 / 400 V
AC voltage range	312 – 528 V
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 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-PE
Efficiency	
Max. efficiency / European efficiency	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
DC Terminal Protective Cover	Yes
Communication dongle (EyeM4)	Yes
Surge Protection	DC Type II / AC Type II
General Data	
Dimensions (W*H*D)	782*645*310 mm
Weight	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 / WLAN / Optional: Ethernet
DC connection type	MC4 (Max. 6 mm ²)
AC connection type	OT or DT terminal (Max.70 mm ²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC 61000-6-3, AS/NZS 4777.2:2020
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.



SG30CX Premium

Multi-MPPT String Inverter for 1000 Vdc System

AU



HIGH YIELD

- 3 MPPTs with max. efficiency 98.6%
- Compatible with bifacial module
- Built-in PID recovery function

SMART O&M

- Touch free commissioning and remote firmware upgrade
- Smart IV curve scanning *
- Fuse free design with smart string current monitoring

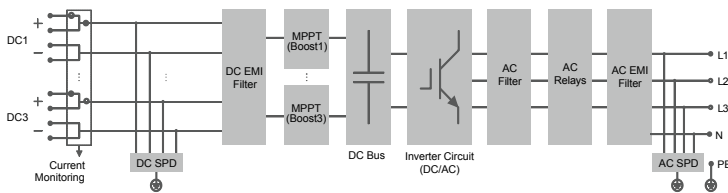
SAVED INVESTMENT

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

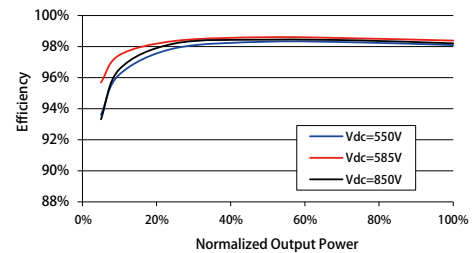
PROVEN SAFETY

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

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG30CX
Input (DC)	
Recommended max. PV input power	45 kW
Max. PV input voltage	1100 V **
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Rated PV input voltage	585V
MPP voltage range	200 – 1000 V
No. of independent MPP inputs	3
No. of PV strings per MPPT	2
Max. PV input current	78 A (26 A / 26 A / 26 A)
Max. DC short-circuit current	120 A (40 A / 40 A / 40 A)
Output (AC)	
Max. AC Output power	29.9 kVA
Rated AC output apparent power	29.9 kVA
Max. AC output current	48.15 A
Rated AC voltage	3 / N / PE, 230 / 400 V
AC voltage range	312 – 528 V
Rated grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 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-PE
Efficiency	
Max. efficiency / European efficiency	98.6 % / 98.3 %
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
DC Terminal Protective Cover	Yes
Communication dongle (EyeM4)	Yes
Surge Protection	DC Type II / AC Type II
General Data	
Dimensions (W*H*D)	702 * 595 * 310 mm
Weight	50 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 / WLAN / Optional: Ethernet
DC connection type	MC4 (Max. 6 mm ²)
AC connection type	OT or DT terminal (Max.70 mm ²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC 61000-6-3, AS/NZS 4777.2:2020
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.



SG15/20RT

Multi-MPPT String Inverter for 1000 Vdc System



HIGH YIELD

- Lower startup & wider MPPT voltage
- Compatible with bifacial modules
- Built-in PID recovery function

SMART MANAGEMENT

- Smart IV curve scanning
- 24 / 7 Live Monitoring
- Over-the-air firmware updates

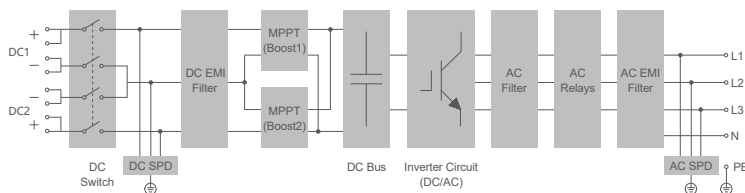
SAFE AND DURABLE

- Quick arc fault circuit interrupter
- Build-in Type II DC & AC SPD
- High anti-corrosion rating C5

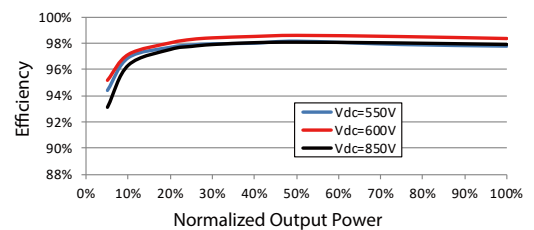
EASY AND USER FRIENDLY

- 21 kg compact design
- Unique push-in connectors
- Fast and easy commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG15RT	SG20RT
Input (DC)		
Recommended max. PV input power	22.5 kWp	30 kWp
Max. PV input voltage	1100 V *	
Min. PV input voltage / Start-up input voltage	180V / 180V	
Rated PV input voltage	600 V	
MPP voltage range	160 V – 1000 V	
No. of independent MPP inputs	2	
No. of PV strings per MPPT	2 / 2	
Max. PV input current	50 A (25 A / 25 A)	
Max. DC short-circuit current	72 A (36 A / 36 A)	
Max. current for input connector	30 A	
Output (AC)		
Rated AC output power	15000 W	20000 W
Max. AC output apparent power	15000 VA	20000 VA
Rated AC output apparent power	15000 VA	20000 VA
Max. AC output current	22.7 A	30.3 A
Rated AC output current(at 230V)	21.7 A	29 A
Rated AC voltage	3 / N / PE, 230 / 400 V	
AC voltage range	180 V – 276 V / 311 V – 478 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 % / 98.1 %	
Protection&Function		
Grid monitoring	Yes	
DC reverse connection protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
Surge Protection	DC Type 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	
DC terminal protective cover	Yes	
General Data		
Dimensions (W*H*D)	370*480*195 mm	
Weight	21 kg	
Mounting method	Wall-mounting bracket	
Topology	Transformerless	
Degree of protection	IP65	
Corrosion	C5	
Operating ambient temperature range	-25 °C to 60 °C	
Allowable relative humidity range (non-condensing)	0% – 100%	
Cooling method	Smart forced air cooling	
Max. operating altitude	4000 m	
Display	LED	
Communication	WLAN / Ethernet / RS485 / DI / DO	
DC connection type	MC4 (Max. 6 mm ²)	
AC connection type	Plug and play	
Compliance	IEC / EN 61000-6-1/2/3/4, IEC 61000-3-2/3/11/12, IEC / EN62109-1/2, IEC 61727, IEC 62116, IEC 61683, IEC 60068-2-1/2/14/30/64/27, IEC TS 62910, EN50530, AS/NZS 4777.2:2020, VDE-AR-N-4105, DIN VDE0126-1-1/A1, EN50549-1, DEWA, VFR 2019, UTE C15-712-1, PSE NC RfG, NTS 2.0, UNE 206006/7 IN, UNE 217002, MEA/PEA, G98	
Country of manufacture	China	

* 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.



ST2007kWH(L)-1000TL

Energy Storage System



HIGH INTEGRATION

- Highly integrated ESS with outdoors cabinet design provides high protection class
- Advanced integration technology ensures optimal system performance and lower cost



SAFE AND RELIABLE

- DC electric circuit safety management includes fast breaking and anti-arc protection
- Multi-state monitoring and linkage actions ensure battery system safety



EFFICIENT AND FLEXIBLE

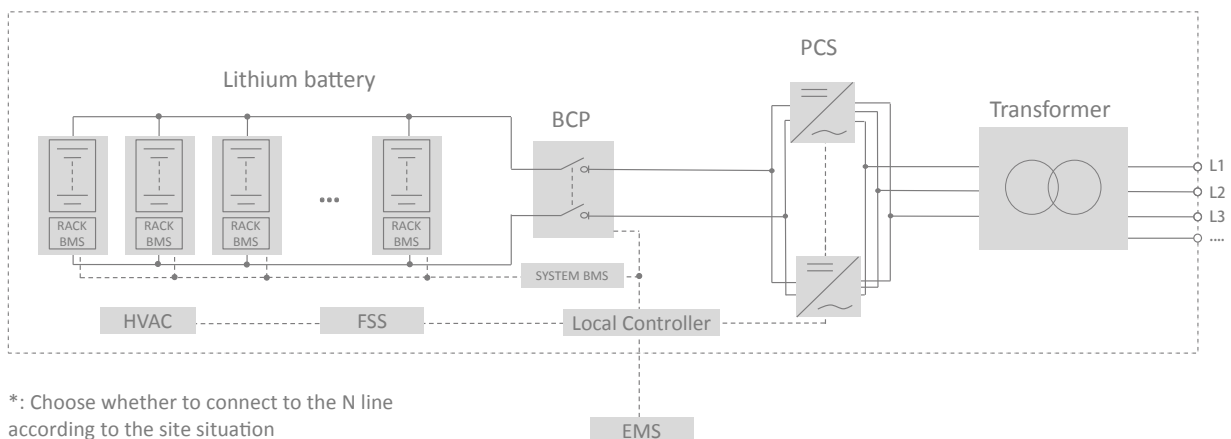
- Top-mounted HVAC and cell-level temperature control ensures longer battery life cycle
- Modular design supports parallel connection and easy system expansion



SMART AND FRIENDLY

- Integrated local controller enables single point of communication interface
- Fast state monitoring and faults record enables prealarm and faults location

CIRCUIT DIAGRAM



*: Choose whether to connect to the N line according to the site situation



System Type	ST2007kWH(L)-1000TL
Battery Data	
Cell type	LFP, 280Ah
Configuration of system	224S10P
Battery capacity (BOL)	2,007 kWh
Battery voltage range	604.8 – 817.6 V
BMS communication interfaces	RS485, Ethernet
BMS communication protocols	Modbus RTU, Modbus TCP
AC Data	
Nominal AC power	1000 kVA
Max. THD of current	< 3 % (at nominal power)
DC component	< 0.5 % (at nominal power)
Nominal grid voltage	400 V (with transformer)
Grid voltage range	360 – 440 V
Power factor	> 0.99
Adjustable power factor	1 leading – 1 lagging
Nominal grid frequency	50 Hz
Grid frequency range	45 – 55 Hz
Isolation method	With transformer
General Data	
Dimensions (W * H * D)	12,192 * 2,896 * 2,438 mm
Weight (with / without battery)	38 T / 23 T
Degree of protection	IP54
Operating temperature range	-30 to 60 °C (> 50 °C derating)
Relative humidity	0 ~ 95 % (non-condensing)
Max. working altitude	1,000 m (standard) / > 1,000 m (optional)
Cooling concept of battery chamber	Heating, ventilation and air conditioning
Cooling concept of PCS chamber	Temperature controlled forced air cooling
Fire suppression system of battery unit	FK5112 extinguishment system
Communication interfaces	RS485, Ethernet
Communication protocols	Modbus RTU, Modbus TCP, IEC 104
Certificates	AS4777.2 / AS62040.1.1



ST500CP-50HV×5 Preliminary

PowerStack Liquid Cooling Energy Storage System

NEW



LOW COSTS

- Highly integrated ESS for easy transportation and O&M
- All pre-assembled, no battery module handling on site
- 8 hour installation to commission



SAFE AND RELIABLE

- DC electric circuit safety management includes fast breaking and anti-arc protection
- Multi level battery protection layers formed by discreet standalone systems offer impeccable safety
- Intelligent leakage protection and liquid refilling system



EFFICIENT AND FLEXIBLE

- Intelligent liquid cooling ensures higher efficiency and longer battery cycle life
- Modular design supports parallel connection and easy system expansion



SMART AND ROBUST

- Fast state monitoring and faults record enables pre-alarm and faults location
- Integrated battery performance monitoring and logging



Type designation	ST500CP-SC50HV×5
Battery cabinet data	
Cell type	LFP
Battery capacity (BOL) at DC side	537 kWh
System output voltage range	810 – 1095 V
Dimensions of battery unit (W * H * D)*	2180 * 2450 * 1730 mm
Weight of battery unit *	6300 kg
Degree of protection	IP54
Anti-corrsion grade	C3
Relative humidity	0 – 95 % (non-condensing)
Operating temperature range	-30 to 50 °C (> 45 °C derating)
Max. working altitude	3000 m
Cooling concept of battery chamber	Liquid cooling
Fire safety equipment	Aerosol ,flammable gas detector and exhausting system
Communication interfaces	Ethernet
Communication protocols	Modbus TCP
Compliance	IEC62619,IEC63056,IEC62040,IEC62477,UN38.3, UL9540,UL9540A
PCS cabinet data	
Nominal AC power	250 kVA@45 °C
Max.THD of curretn	< 3 % (at nominal power)
DC component	< 0.5 % (at nominal power)
Nominal grid voltage	400 V
Nominal grid voltage range	360 V – 440 V
Nominal grid frequency	50 Hz
Nominal grid frequency range	45 Hz – 55 Hz
Dimensions(W*H*D)*	1800 * 2450 * 1230 mm
Weight*	1700 kg
Degree of protection	IP54
Anti-corrsion grade	C3
Allowable relative humidity range	0 – 95 % (non-condensing)
Operating temperature range	-30 to 50 °C (> 45 °C derating)
Max. working altitude	3000 m
Communication interfaces	Ethernet
Communication protocols	Modbus TCP
Compliance	IEC61000, IEC62477, AS4777.2

*: The actual product received shall prevail.



ST101/106/111/115/120/ 124/129CP-50HV

Battery Outdoor Cabinet / AC Outdoor Cabinet



SCALABLE CONFIGURATION

- Support the parallel use of multiple systems, covering wide power range from 50 kW to 1 MW
- 2-5 hours for a variety of configuration options



SMART AND FRIENDLY

- Cloud technology enables remote maintenance and monitoring
- Built-in EMS, multiple operation mode selection increasing revenue



EASY INSTALLATION

- Outdoor cabinet design, easy for transportation and on-site installation
- C5 anti-corrosion grade to meet off-shore scenarios



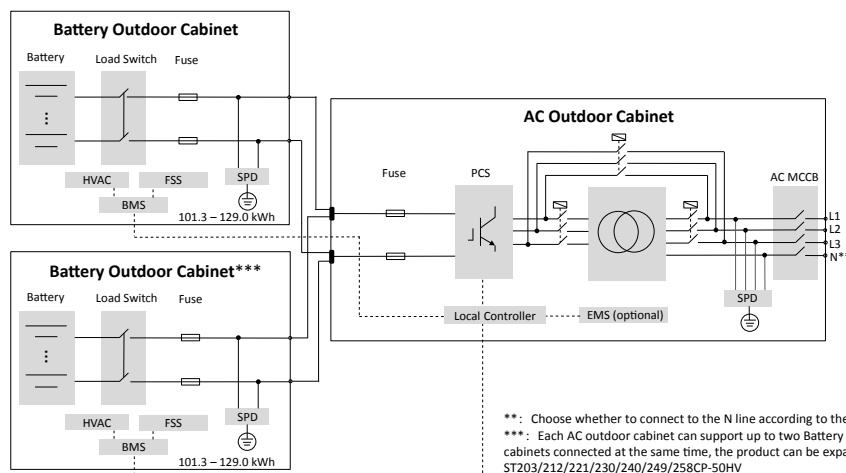
ECONOMIC AND RELIABLE

- 100% DOD, 15 years performance life under standard conditions
- Efficient thermal management design, hierarchical linkage protection to ensure system safety



Type designation	ST101CP-50HV	ST106CP-50HV	ST111CP-50HV	ST115CP-50HV	ST120CP-50HV	ST124CP-50HV	ST129CP-50HV
Battery outdoor cabinet data							
Battery Type	LiFePO4 Prismatic Cell						
Battery Module	4.6 kWh, 40 kg						
Battery Module Number	22 modules	23 modules	24 modules	25 modules	26 modules	27 modules	28 modules
Nominal Energy	101.3 kWh	105.9 kWh	110.5 kWh	115.2 kWh	119.8 kWh	124.4 kWh	129.0 kWh
Nominal voltage	844.8 V	883.2 V	921.6 V	960.0 V	998.4 V	1036.8 V	1075.2 V
Operating voltage	712.8 – 963.6 V	745.2 – 1007.4 V	777.6 – 1051.2 V	810.0 – 1095.0 V	842.4 – 1138.8 V	874.8 – 1182.6 V	907.2 – 1226.4 V
Max. charging / discharging rate	≤0.5C						
Depth of discharge	100 %						
Dimensions (W*H*D)	1300*2400*1000 mm						
Weight	1760 kg	1800 kg	1840 kg	1880 kg	1920 kg	1960 kg	2000 kg
Installation Location	Outdoor						
Degree of protection	IP54						
Anticorrosion grade	C5						
Allowable relative humidity range	0 % – 95 % (non-condensing)						
Operating temperature range	-30 °C to 50 °C (> 45 °C derating)						
Operating altitude	3000 m (> 2000 m derating)						
Communication interfaces	CAN2.0B						
Cooling concept	Heating, ventilation and air conditioning						
Compliance	IEC 63056, IEC 62619, IEC 62477, IEC 62040, IEC 61000, UN 38.3						
Ac outdoor cabinet data							
Nominal AC power	50 kVA						
Max. THD of current	< 3 % (at nominal power)						
DC component	< 0.5 % (at nominal power)						
Nominal grid voltage	400 V						
Grid voltage range	360 – 440 V						
Nominal grid frequency	50 Hz						
Grid frequency range	45 – 55 Hz						
Isolation method	Transformer						
Dimensions (W*H*D)	1000*2400*1000 mm						
Weight	1000 kg						
Degree of protection	IP54						
Anticorrosion grade	C5						
Allowable relative humidity range	0 % – 95 % (non-condensing)						
Operating temperature range	-30 °C to 50 °C (> 45 °C derating)						
Operating altitude	3000 m (> 2000 m derating)						
Communication interfaces	RS485, Ethernet						
Communication protocols	Modbus RTU, Modbus TCP						
Compliance	IEC 61000, IEC 62477, AS 4777.2, NRS 097-2-1						

CIRCUIT DIAGRAM



WiNet-S

LAN 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[1]
- 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 devices	1
LED display	LED * 3
Communication Mode	
Internet communication	Channel * 1, 10/100Mbps self-adaption, Communication distance ≤100m
WLAN communication	802.11 b/g IEEE802.11n HT20@2.4GHz IEEE802.11n HT40@2.4GHz 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



EyeM4

Wireless Communication Module for Multiple Inverter



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



Logger1000A

The Logger1000 is a data acquisition, protocol conversion device suitable for inverters, combiner boxes, meteo stations, and energy meters in PV power plants. It supports power control, acts as gateway and assists with plant maintenance.



FLEXIBLE NETWORKING

- Support of RS485, Ethernet, 4G, WLAN communication
- Support of energy meter, meteo station, sensors and other equipment access



CONVENIENT O&M

- Inverter batch parameter setting and firmware updates
- Plant maintenance by remote Web access, optimized OPEX
- Active and reactive power control
- Local monitoring



EASY OPERATION

- Automatic Modbus address distribution
- Built-in Web server for monitoring and configuration, by PC or smartphone browser; no APP required

Type designation	Logger1000A
Communication	
Max. number of devices	30
Communication ports	
RS485 interface	3
Ethernet	1*RJ45, 10 / 100Mbps
Digital input	5, Max. 24V DC
Analog input	4, support 4 – 20 mA or 0 – 10 VDC
Wireless communication	
4G Band	LTE(FDD): B1, B3, B5, B8 LTE(TDD): B40 WCDMA: B1, B8
WiFi communication	802.11 b / g / n / ac HT20 / 40 / 80 MHz 2.4GHz / 5GHz
Power Supply	
DC input	24 VDC, 1.2 A
DC output	24 VDC, 0.5 A
Power consumption	<10 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	IP20
Mechanical parameters	
Dimensions (W * H * D)	200 * 110 * 60 mm
Weight	500 g
Mounting type	Top-hat rail mounting / wall mounting



EMS3000CP

The products are suitable for industrial and commercial energy storage power plant



AI DISPATCH

- 36GW of renewable energy assets can be connected to the cloud, and 100TB of massive data can be provided every day for the training of multiple sets of AI algorithms, with high prediction accuracy
- Diversified forecasting models cover power forecasting, load forecasting, scheduling management, production planning and other business scenarios, proactively predict and analyze customer power consumption behavior, provide optimal scheduling solutions, and increase energy storage revenue

EFFICIENT OPERATIONS

- Proximal mobile monitoring operation and maintenance, real-time monitoring unlimited
- Cloud-side collaboration to achieve remote operation

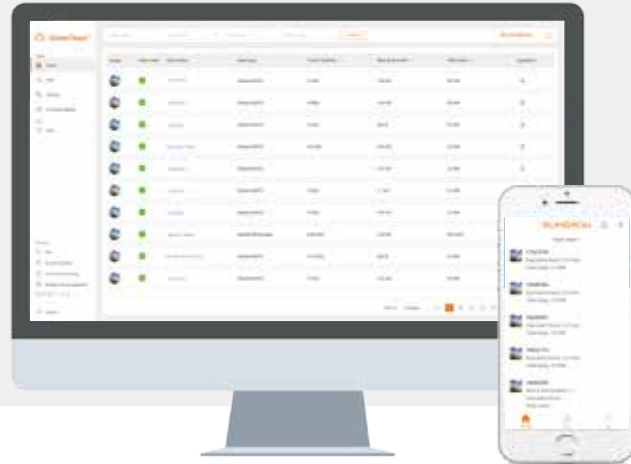
SAFE AND RELIABLE

- Three layers of safety protection, data security does not leak

Type designation	EMS3000CP
System	
Controller	EMS300CP
OS	Linux
Max. number of devices	ES capacity: ≤5 MWh PV capacity: ≤6 MWp
Typical functions	Countercurrent prevention, demand control, time-sharing power, force control, SOC balancing, load forecasting, power forecasting, scheduling management, support for iSolarCloud
Communication	
RS485 interface	7
DI / DO	16 / 4
Fiber port	2*100 / 1000 Mbps
Ethernet port	6*10 / 100 Mbps
Fiber Splice Box	4-Input and 24-Output SC Single mode
WLAN	802.11 b/g n, HT20/40, 2.4 GHz
Power supply	
AC input	100 V ~ 240 V
DC input	24V (±10%)
Power consumption	max. 50 W
Ambient conditions	
Operating Temperature	-30 °C to 60 °C
Storage Temperature	-40 °C to 70 °C
Relative air humidity	5 % – 95 % (non-condensing)
Elevation	≤ 3000 m
Protection class	IP65
Mechanical parameters	
Dimensions (W*H*D)	860 * 610 * 272 mm
Weight	≤35 kg
Mounting type	Wall hanging, rack mounting/ground mounting, outdoor and indoor
Box material	Metal
Cable specification	AC cable: The recommended cable diameter is 1.5mm ² , and the distance is less than 10m DC cable: The recommended cable diameter is 1.5mm ² , and the distance is less than 10m RS485 cable: 0.75-1.5mm ² outdoor twisted-pair cable with uv-shielding layer, the maximum length is less than 1000m (baud rate 9600)
Ordering information	
EMS3000CP	The EMS3000CP includes EMS300CP, SPD, AC adapter, Switch, OTB, Firewall (Optional)

iSolarCloud

Remote Monitoring and O&M Platform



FLEXIBLE AND FRIENDLY

- Centralized power plant management, optimized OPEX
- Flexible data access, Web portal and App, remote or local maintenance
- Easy account management, share plants with co-workers and friends



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	5 minutes
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	
Dimensions (W * H * D)	1920 * 1080, 2001 * 1125, 1280 * 720
Mounting type	Android 5.0, iOS 10.0



Global Reference



99kW PV Plant Hallam, VIC Australia 



303kW PV Plant Cannonvale, QLD Australia 



65.34kW PV Plant Everton Park, QLD Australia 



99.63kW PV Plant Creswick, VIC Australia 



520kW PV Plant Truganina, VIC Australia 🇦🇺



99kW PV Plant Dandenong, VIC Australia 🇦🇺




66kW PV Plant Prestons, NSW Australia 🇦🇺



500kW / 755kWh Mircro-grid project, WA, Australia 




100kW / 411kWh Peak-shaving & Ramp rate control ,  Bundaberg, QLD, Australia



250kW / 548kWh C&I, grid connected, Adelaide, SA, Australia 



68kW / 137kWh Peak-shaving, Ramp rate control & Backup,  Birchchip, VIC, Australia



RE100 EP100

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