SUNGROW
Clean power for all

Clean Power For a Carbon-Free Life

Sungrow Residential Solution



2026-2027


SUNGROW



COMPANY INTRODUCTION

As a globally renowned renewable energy company, Sungrow specializes in R&D, production, sales and services of renewable energy equipment. Its product portfolio includes PV inverters, energy storage systems, wind converters and motor drivers, floating PV systems, motor controllers and on-board chargers for EV, EV charging equipment, renewable hydrogen production systems. The Company is also engaged in the investment and development of renewable energy power plants and has initiated AIDC power supply business.

Founded in 1997, Sungrow has been dedicated to advancing clean power conversion technology. With strategic presence across key sectors such as solar energy, wind energy, energy storage, electric vehicles and charging, and hydrogen energy, Sungrow is committed to increasing the application of clean energy conversion, creating more creative ways to use energy, delivering a more friendly experience.
Sungrow operates in more than 100 countries and regions worldwide, with over 20 international subsidiaries, four major manufacturing bases, and seven R&D centers. The Company maintains a global leadership position in the cumulative shipments of its core products, namely PV inverters and energy storage systems. As of the end of December 2025, Sungrow's total installed capacity of power electronic converters worldwide has exceeded 1000 GW, about 600 million tons CO_2 emissions can be avoided annually together with customers.

Driven consistently by market demand, Sungrow treats technological innovation as the core engine for its growth. The Company has built a professional R&D team with extensive experience and strong independent innovation capabilities. Currently, R&D technical personnel account for 40% of its workforce, and Sungrow has filed more than 11,000 patents cumulatively, making it one of the very few companies in the industry to possess multiple proprietary core technologies. The Company has been honored with numerous awards, including "Global Top 500 New Energy Enterprises", "Forbes China Top 50 Most Innovative Companies", "Deloitte China Best Managed Companies", "Best Employer Brand among Globalized Enterprises", and "MSCI ESG Rating AAA". Its comprehensive strength firmly positions it within the top tier of the global renewable energy industry.

Looking ahead, Sungrow will remain committed to its mission of "Clean power for all". The Company will accelerate the development of clean energy power generation system based on the renewable energy equipment business, innovate and expand new fields within clean power conversion technology, and maintain close engagement with customers, Sungrow aims to bridge to a sustainable future and build a trusted, world-renowned brand.

Continuing Forward Over 29 Years

0.72Million+ pcs

Shipment by Distribution Channels in 2025

43GWh

Global ESS Shipment in 2025

143GW

Global PV Inverter Shipment in 2025

NO.1

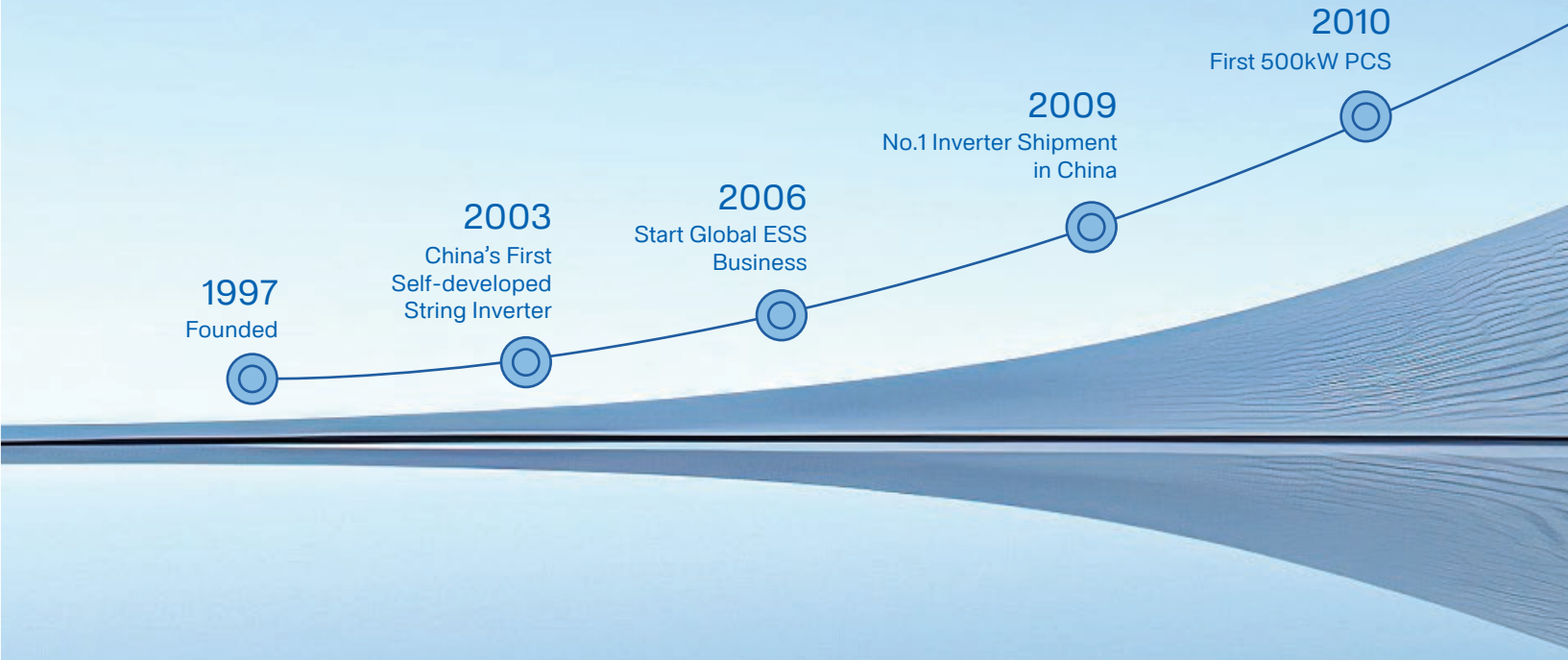
Global ESS and PCS Bankability Ranking

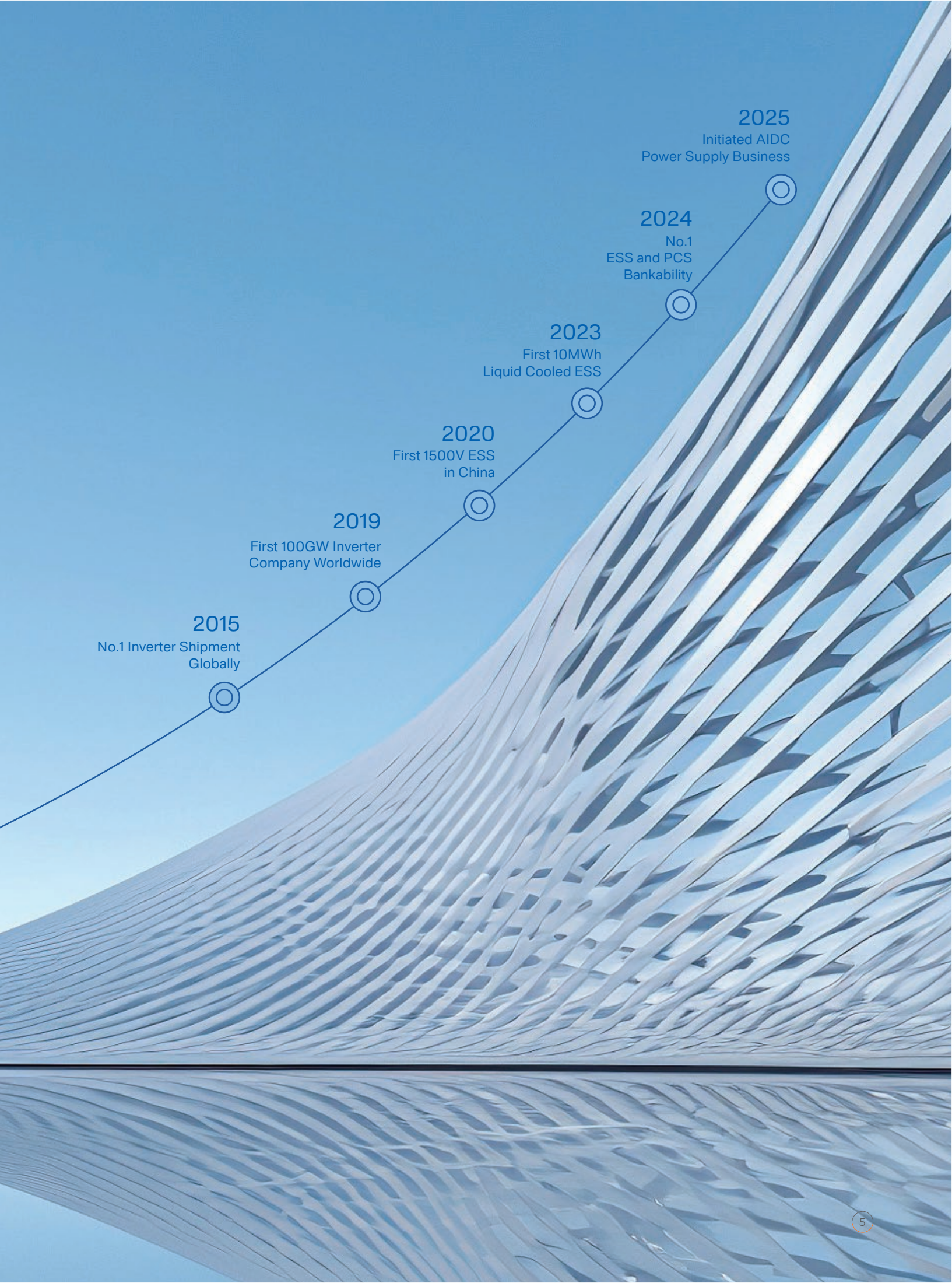
Source: BloombergNEF

NO.1

Global PV Inverter Bankability Ranking

Source: BloombergNEF




2025
Initiated AIDC
Power Supply Business
2024
No.1
ESS and PCS
Bankability
2023
First 10MWh
Liquid Cooled ESS
2020
First 1500V ESS
in China
2019
First 100GW Inverter
Company Worldwide
2015
No.1 Inverter Shipment
Globally

Corporate Honors

Top 100
Global
New Energy Leaders

Top 50
Most Innovative Companies
in Forbes China

AAA
2025 MSCI
ESG Leader

Professional Service

100+
Countries / Regions
Coverage

20+
International
Subsidiaries

520+
Service
Outlets

4 Manufacturing Bases
China, India, Thailand,
Poland



R&D Capabilities

444 million

R&D Investment in 2024 (USD)

40%

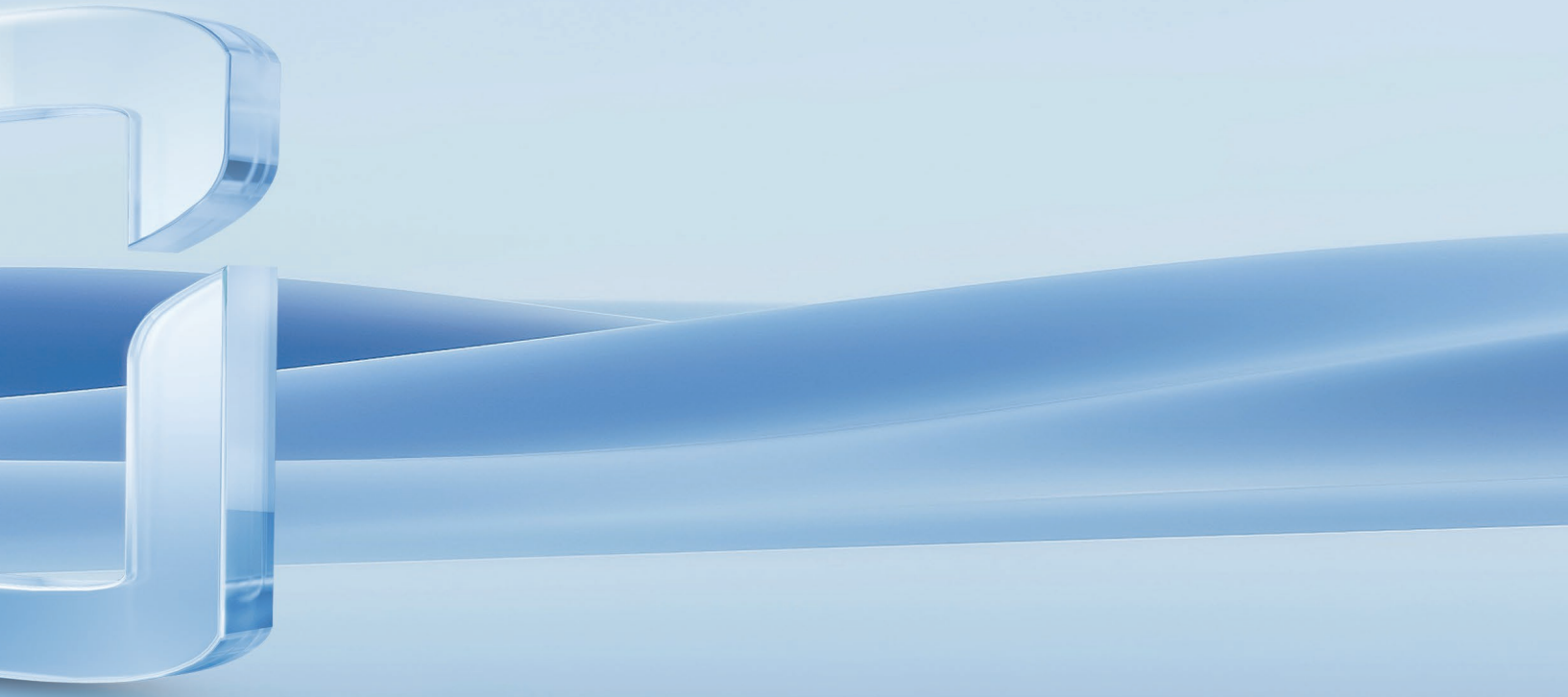
R&D Personnel

11000+

Cumulative Patent Applications

90+

National Key Science and Technology Programs



Carbon-Free Life

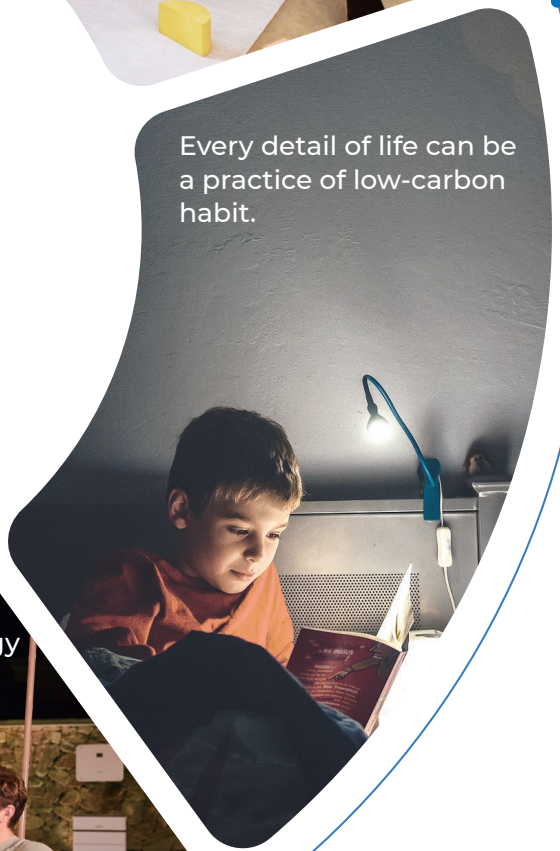
A crucial step toward achieving a zero-carbon future is enabling clean power for the entire home.

From the morning sun streaming through the curtains to the evening when the lights turn on, 24-hour green power is bringing the zero-carbon concept into daily life, every moment, in thousands of homes.





Green values, growing alongside our children.



Every detail of life can be a practice of low-carbon habit.



Let clean energy witness each unforgettable moment.

Sungrow Residential Solution
Clean Power for a Carbon-Free Life



Thanks to our PV+ESS+EV Charging Solutions, we bring families 24-hour green power and unlock a new carbon-free life.



Full-Home Energy Solution

Sungrow is a pioneer within the industry realizing a all-inclusive home energy solution, meeting the demand of residential renewable energy and popularizing the green lifestyle around the world.



Residential PV

3/5/10kW String Inverter SG3.0/5.0/10RS

5~20kW String Inverter SG5.0~20RT-P2



Residential ESS

5/10kW 1-Phase Hybrid Inverter MG5/10RL

5kW 1-Phase Hybrid Inverter SH5.0RS-20

10/25kW 3-Phase Hybrid Inverter SH10/25T

16kWh Battery MBL160



Residential ESS

10~40kWh Battery
SBH100~400

5kWh Battery
SBS050





O&M System

O&M System
iSolarCloud App/Web



Reliable Energy, Smartly Used

Empower Energy Freedom



Experience Energy Freedom

- Faster charging & discharging current, one hour for whole night
- Large scale of battery capacity, design energy storage plan accordingly

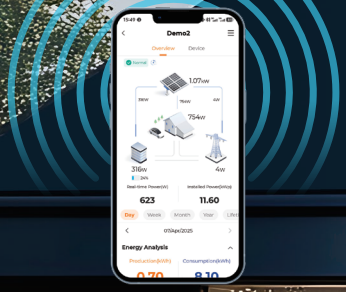
Maximize Solar Utilization



More MPPTs for complex roofs,
more orientations, more power

Triple Safety Design, for Peace of Mind

Empower Safe Guarding

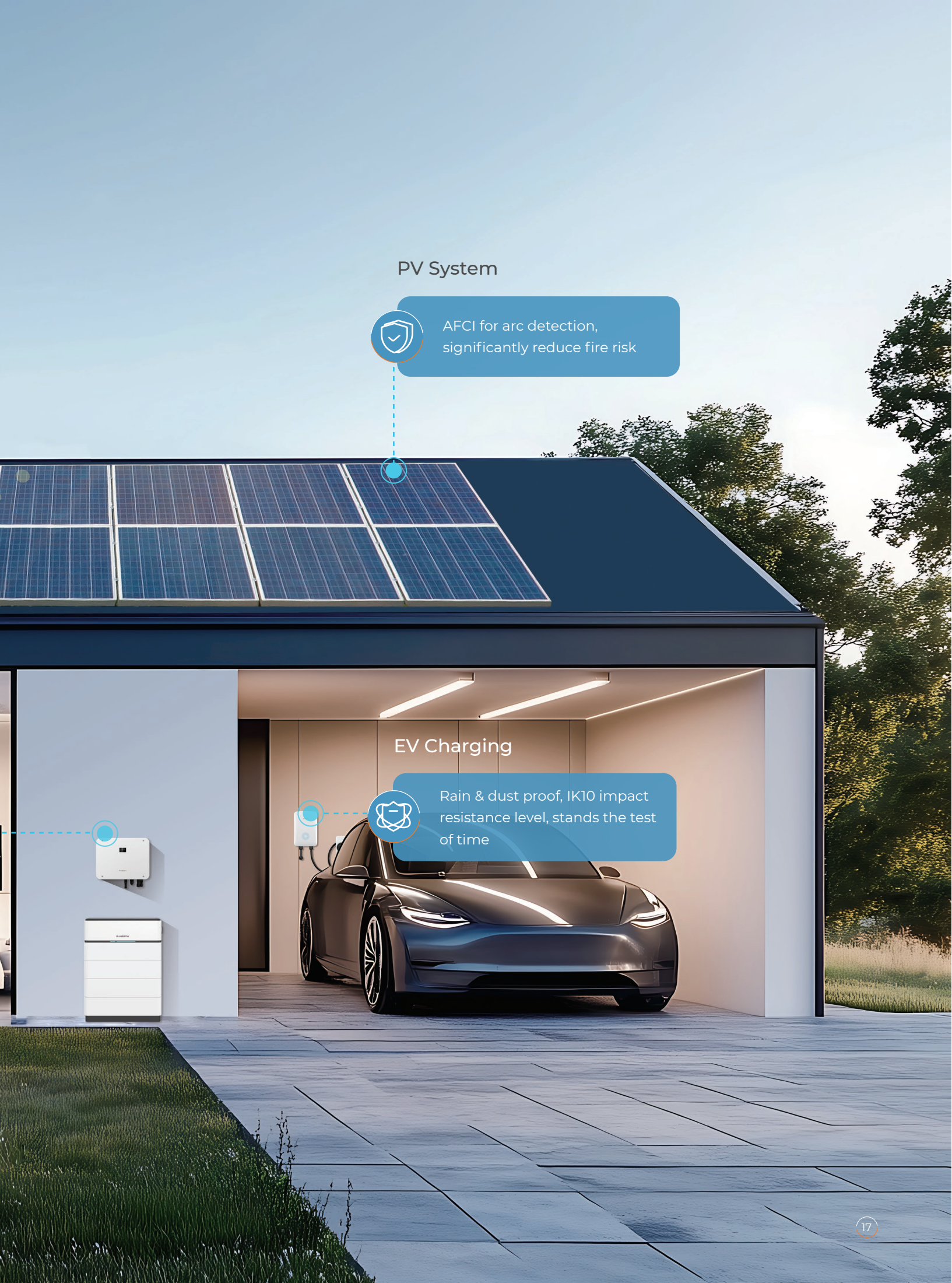


iSolarCloud/iHomeManager

- Certified by IEC62443 and General Data Protection Regulations
- HTTPS encryption, ensure secure data transmission and storage

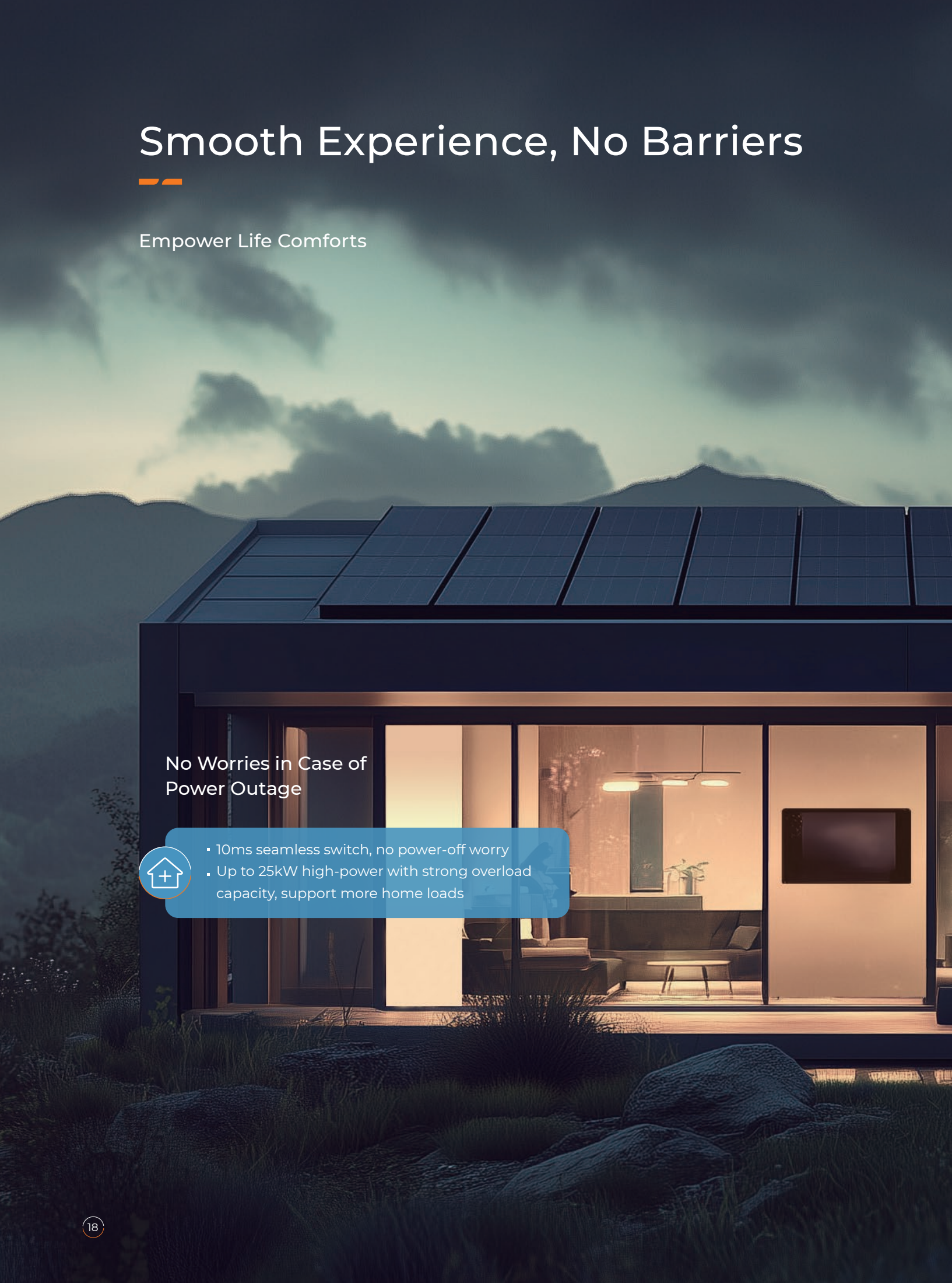
Inverter&Battery

Rack-level BMS on battery, total EMS on inverter, flexible monitoring and management


PV System
AFCI for arc detection, significantly reduce fire risk
EV Charging
Rain & dust proof, IK10 impact resistance level, stands the test of time

Smooth Experience, No Barriers

Empower Life Comforts



No Worries in Case of Power Outage

- 10ms seamless switch, no power-off worry
- Up to 25kW high-power with strong overload capacity, support more home loads



Responsive Service

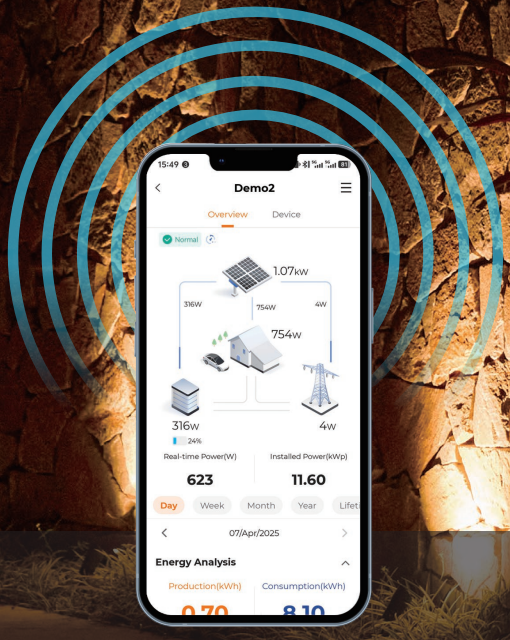
Chatbot always online, local service support

Diverse Configuration for All Scenarios

Designed for easy replacement and expansion to effortlessly adapt to a family's changing needs

iSolarCloud Accurate Monitoring Solution

Empower Smart Control



One-Cloud, Simple and Clear

Human-centric design with minimal disruption, track and manage everything of your solar system together

- Data refresh in seconds ensures real-time monitoring
- Display key information directly on one screen



- Intelligent analysis assists O&M and fast troubleshoot
- Diagnose inefficiencies, maximize power output

SG3.0RS/SG5.0RS

Double-MPPT String Inverter for 600 Vdc System

HIGH YIELD

- Compatible with high power PV modules and bifacial modules
- Lower startup & wider MPPT voltage range
- Built-in smart PID recovery function

SAFE AND RELIABLE

- Integrated arc fault circuit interrupter
- Built-in Type II DC&AC SPD
- Corrosion protection rating at C5

USER FRIENDLY SETUP

- Plug and play installation
- One-click access to iSolarCloud monitoring platform
- Light and compact with optimized heat dissipation design

SMART MANAGEMENT

- Real time data (10 seconds refresh sample)
- 24/7 live monitoring both online and with integrated display
- Online IV curve scan and diagnosis



Type designation	SG3.0RS	SG5.0RS
Input (DC)		
Recommended max. PV input power	4.5 kWp	7.5 kWp
Max. PV input voltage	600 V	
Min. operating PV voltage / Start-up input voltage	40 V / 50 V	
Rated PV input voltage	360 V	
MPP voltage range	40 V – 560 V	
No. of independent MPP inputs	2	
Default No. of PV strings per MPPT	1	
Max. PV input current	32 A (16 A / 16 A)	
Max. DC short-circuit current	40 A (20 A / 20 A)	
Output (AC)		
Rated AC output power	3000 W	5000 W *
Max. AC Output power	3000 VA	5000 VA *
Rated AC output current (at 230 V)	13.1 A	21.8 A **
Max. AC output current	13.7 A	22.8 A **
Rated AC voltage	220 V / 230 V / 240 V	
AC voltage range	154 V - 276 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	1 / 1	
Efficiency		
Max. efficiency / European efficiency	97.9 % / 97.0 %	97.9 % / 97.3 %
Protection		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
Surge Protection	DC type II / AC type II	
DC switch	Yes	
PV string current monitoring	Yes	
Arc fault circuit interrupter (AFCI)	Yes	
PID Zero function	Yes	
Optimizer compatibility *	Optional	
General Data		
Dimensions (W * H * D)	410 mm * 270 mm * 150 mm	
Weight	10 kg	
Mounting method	Wall-mounting bracket	
Topology	Transformerless	
Degree of protection	IP65	
Operating ambient temperature range	-25 ℃ to 60 ℃	
Allowable relative humidity range (non-condensing)	0 % - 100 %	
Cooling method	Natural cooling	
Max. operating altitude	4000 m	
Display	LED digital display & LED indicator	
Communication	Ethernet / WLAN / RS485 / DI (Ripple control & DRM)	
DC connection type	MC4 (Max. 6 mm^2)	
AC connection type	Plug and play connector (Max. 6 mm^2)	
Grid compliance	IEC / EN62109-1/2, IEC / EN62116, IEC / EN61727, IEC / EN61000-6-2/3, EN50549-1, AS4777.2, ABNT NBR 16149, ABNT NBR 16150, UNE 217002:2020, NTS V2 TypeA, CEI 0-21:2020, VDE0126-1-1/A1 (VFR-2019), UTE C15-712, C10/11, G98/G99,	
Grid Support	Active & reactive power control and power ramp rate control	

* AS 4777.2 4999 W , 4999 VA
** AS 4777.2 :Rated and Max. AC current is 21.7 A
*** For optimizer compatbility, please consult Sungrow before placing an oder

SG10RS

Multi-MPPT String Inverter for 600 Vdc System

HIGH YIELD

- Compatible with high power PV modules and bifacial modules
- Lower startup & wider MPPT voltage range
- Built-in smart PID Zero function

SAFE AND DURABLE

- Integrated arc fault circuit interrupter
- Built-in Type II DC & AC SPD
- Corrosion protection rating at C5

User Friendly Setup

- Plug and play installation
- One-click access to iSolarCloud monitoring platform
- Light and compact with optimized heat dissipation design

SMART MANAGEMENT

- Real time data
- 24 / 7 live online monitoring and with integrated display
- Online IV curve scan and diagnosis



Type designation	SG10RS
Input (DC)	
Recommended max. PV input power	15 kWp
Max.PV input voltage*	600 V
Min. operating PV voltage / Start-up input voltage	40 V / 50 V
Rated PV input voltage	360 V
MPPT operating voltage range **	40 - 560 V
No. of independent MPP trackers	3
No. of PV strings per MPPT	1
Max. PV input current	48 A (16 A / 16 A / 16 A)
Max. DC short-circuit current	60 A (20 A / 20 A / 20 A)
Output (AC)	
Rated AC output power	10000 W
Max. AC output apparent power	10000 VA
Rated AC output current (at 230V)	43.5 A
Max. AC output current	45.5 A
Rated AC voltage	220 V / 23V / 240 V
AC voltage range	154 V - 276 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	1 / 1
Efficiency	
Max. efficiency / European efficiency	97.8 % / 97.4%
Protection	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Surge protection	DC type II / AC type II
DC switch	Yes
PV string current monitoring	Yes
Arc fault circuit interrupter (AFCI)	Yes
PID Zero	Yes
General data	
Dimensions (W * H * D)	490 * 340 * 170 mm
Weight	19 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP65
Night power consumption	< 3 W
Operating ambient temperature range	-25 to 60 ℃
Allowable relative humidity range (non-condensing)	0 - 100 %
Cooling method	Natural cooling
Max. operating altitude	4000 m
Display	LED digital display & LED indicator
Communication	Ethernet / WLAN / RS485 / DI (Ripple control & DRM)
DC connection type	MC4 (Max. 6 mm^2)
AC connection type	Plug and play connector (Max. 6 mm^2)
Grid compliance	IEC / EN62109-1 / 2, IEC62116, IEC / EN61727, IEC / EN61000-6-2 / 3,AS / NZS 4777.2, G99
Grid Support	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

SG5.0/10/15/20RT-P2

Multi-MPPT String Inverter for 1000 Vdc System

HIGH YIELD

- Lower startup & wider MPPT voltage
- Compatible with 500W+ PV modules
- Built-in PID recovery function

SMART MANAGEMENT

- 24/7 Live Monitoring
- Remote firmware updates
- PV module-level optimisation and safety

SAFE AND DURABLE

- Quick arc fault circuit interrupter
- Build-in Type II DC&AC SPD
- C5 anti-corrosion & IP65

EASY AND USER

- Light and compact design
- Plug and play connectors
- Fast and easy commissioning via App



Type designation	SG5.0RT-P2	SG10RT-P2	SG15RT-P2	SG20RT-P2
Input (DC)				
Recommended max. PV input power	7.5 kWp	15 kWp	22.5 kWp	30 kWp
Max. PV input voltage	1100 V *			
Min. PV input voltage / Start-up input voltage	180V / 180V			
Rated input voltage	600 V			
MPP voltage range	160 V – 1000 V			
No. of independent MPP inputs	2			
No. of PV strings per MPPT	1 / 1	2 / 1	2 / 2	2 / 2
Max. PV input current	32 A (16 A / 16 A)	48 A (32 A / 16 A)	64 A (32 A / 32 A)	64 A (32 A / 32 A)
Max. DC short-circuit current	40 A (20 A / 20 A)	60 A (40 A / 20 A)	80 A (40 A / 40 A)	80 A (40 A / 40 A)
Output (AC)				
Rated AC power (@230V,50Hz)	5000 W	10000 W	15000 W	20000 W
Max. AC output power	5500 VA**	11000 VA**	16500 VA **	22000 VA **
Rated AC output apparent power	5500 VA**	11000 VA**	16500 VA **	22000 VA **
Max. AC output current	8.3 A	16.7 A**	25 A	31.9 A
Rated AC voltage	3 / N / PE, 220 / 380 V 3 / N / PE, 230 / 400 V 3 / N / PE, 240 / 415 V			
AC voltage range	175 V – 276 V / 304 V – 478 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 / Ajustable power factor	> 0.99 / 0.8 leading – 0.8 lagging			
Feed-in phases / Connection phases	3 / 3-PE			
Efficiency				
Max. efficiency	98.30 %	98.30 %	98.30 %	98.30 %
European efficiency	97.20 %	97.80 %	97.90 %	97.90 %
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			
DC switch	Yes			
Arc fault circuit interrupter (AFCI)	Yes			
PID recovery function	Yes			
Optimizer compatbility ***	Optional			
General Data				
Dimensions (W*H*D)	370 * 480 * 195 mm			
Mounting method	Wall-mounting bracket			
Weight	18 kg	18 kg	22 kg	22 kg
Topology	Transformerless			
Degree of protection	IP65			
Operating ambient temperature range	-25 ℃ to 60 ℃			
Allowable relative humidity range (noncondensing)	0 % – 100 %			
Cooling method	Natural cooling			
Max. operating altitude	4000 m			
Display	LED			
Communication	WLAN / Ethernet / RS485 / DI / DO			
DC connection type	MC4 (Max. 6 mm²)			
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, DINVDE0126-1-1/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.
** For Belgium& Germany, Max. AC output power: SG5.0RT-P2 is 5000VA, SG6.0RT-P2 is 6000VA, SG7.0RT-P2 is 7000VA, SG8.0RT-P2 is 8000VA, SG10RT-P2 is 10000VA, SG12RT-P2 is 12000VA, SG15RT-P2 is 15000VA, SG17RT-P2 is 17000VA, SG20RT-P2 is 20000VA
** For Jordan, Max. AC output current: SG10RT-P2 is 16A
*** For optimizer compatbility, please consult Sungrow before placing an oder

SH5.0RS-20

Residential Hybrid Single Phase Inverter

FLEXIBLE APPLICATION

- 80 V - 460 V wide battery voltage range
- Ideal for both retrofitting and new installations
- Built-in smart PID Zero function

ENERGY INDEPENDENCE

- Seamless switch to backup mode
- 50A fast charge/discharge current
- Built-in intelligent EMS

FRIENDLY SETUP

- Plug and play installation
- iSolarCloud monitoring available on App and Web
- Lightweight and compact

SMART MANAGEMENT

- Support 10s real-time data refresh
- 24/7 live online monitoring and with integrated display
- Online IV curve scan and diagnosis



Type designation	SH5.0RS-20
Input (DC)	
Recommended max. PV input power *	7500 Wp
Max. PV input voltage **	600 V
Min. PV input voltage / Startup input voltage	40 V / 50 V
Rated PV input voltage	360 V
MPPT operating voltage range ***	40 V – 560 V
MPP voltage range for rated power	235 V - 480 V
No. of independent MPP trackers	2
No. of PV strings per MPPT	1 / 1
Max. PV input current	32 A (16 A / 16 A)
Max. DC short-circuit current	40 A (20 A / 20 A)
Max. current for input connector	20 A
Battery data	
Battery type	Li-ion battery
Battery voltage range	80 V - 460 V
Max. charge **** / discharge current ****	50 A / 50 A
Max. charge / discharge power	
Input / output (AC)	
Max. AC power from grid	12000 VA
Rated AC output power	5000 W
Max. AC output apparent power	5000 VA
Max. AC output current	22.8 A
Rated AC voltage	220 V / 230 V / 240 V
AC voltage range	154 V – 276 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)	< 3 % (of rated power)
Power factor at rated power / Adjustable power factor	> 0.99 at default value at rated power
Feed-in phases / connection phases	1 / 1
Backup data （on grid mode）	
Max. output power for backup load *****	6000 W
Max. output current for backup load ******	27.3 A
Backup data （off-grid mode）	
Rated voltage	220 V / 230 V / 240 V (± 2 %)
Rated frequency	50 Hz / 60 Hz (± 0.2 %)
THDV(@Linear load)	< 2 %
Backup switch time	< 10 ms
Rated output power	5000W / 5000 VA
Peak output power	8400 VA, 10 s
Efficiency	
Max. efficiency / European efficiency	97.7% / 97.3%
Protection & Function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
DC switch(solar)	Yes
Surge protection	DC Type II / AC Type II
PID Zero	Yes
Parallel operation on grid port / Max. No of inverters	Master-slave mode / 3
General data	
Topology (Solar / Battery)	Transformerless / Transformerless
Degree of protection	IP65
Dimensions (W * H * D)	490 mm * 340 mm * 170 mm
Weight	18.5 kg
Mounting method	Wall-mounting bracket
Operating ambient temperature range	-25 ℃ - 60 ℃
Allowable relative humidity range	0 % – 100 %
Cooling method	Natural convection
Max. operating altitude	4000 m
Noise (typical)	< 45 dB (A)
Display	LED digital display & LED indicator
Communication	RS485 / Ethernet / WLAN / CAN
DI / DO	DI * 4 / DO * 1 / DRM
DC connection type	Plug and Play (PV: MC4 compatible connector, Max. 6 mm^2; Battery: Max. 10 mm^2)
AC connection type	Plug and Play (Grid Max. 16 mm^2, Backup Max. 6 mm^2)
Grid compliance	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-3-11, IEC/EN 61000-3-12, EN 62477-1, NRS 097-2-1

* Max. input PV power for SH5.0RS-20 is 12,000 Wp, for SH6.0RS-20 is 13,000 Wp

** Input voltage exceeding the MPPT operating voltage range triggers inverter protection

*** Please refer to the user manual for the full load MPPT voltage range

**** The actual maximum charge/discharge current is related to the connected battery

***** Please refer to the user manual and modify the settings based on actual load power

****** Calculated based on 220V grid voltage

SH10/25T

Hybrid Three Phase Inverter

FULL BACKUP

- Built-in 63A bypass for full house backup
- 10ms seamless switch
- Peak output up to 36500VA(10s) in backup mode(SH25T)

FLEXIBLE APPLICATION

- Support 100% unbalance output up to 1/3 rated power per phase in backup and on grid mode
- Max. 32A DC input current per MPPT, compatible with mainstream PV modules.
- 50A fast charge / discharge current

FRIENDLY INSTALLATION

- Plug & Play installation
- Fanless design for quiet operation and less maintenance (SH15-20T)

SAFE AND DURABLE

- Support precise AFCI
- IP65/C5



Type designation	SH10T	SH25T
Input (DC)		
Recommended max. PV input power	20000 Wp	50000 Wp
Max. PV input voltage *	1000 V	
Min. PV input voltage / Startup input voltage	150 V / 180 V	
Rated PV input voltage	600 V	
MPPT operating voltage range **	150 V - 950 V	
No. of independent MPP trackers	2	3
No. of PV strings per MPPT	2 / 1	2 / 2 / 1
Max. PV input current	48A (32A / 16A)	80 A (32 A / 32 A / 16 A)
Max. DC short-circuit current	60A (40A / 20A)	100 A (40 A / 40 A / 20 A)
Max. current for input connector	30 A	
Battery data		
Battery type	Li-ion battery	
Battery voltage range	100 V - 700 V	
Max. charge / discharge current ***	50 A / 50 A	
Max. charge / discharge power	15000W/10600W	30000 W / 25000 W
Input and Output (AC)		
Max. AC power from grid ****	43000 VA	
Rated AC output power	10000 W	25000 W
Max. AC output apparent power	10000 VA	25000 VA
Max. AC output current	15.2 A	37.9 A
Rated AC voltage	3 / N / PE, 220 V / 380 V ; 230 V / 400 V; 240 V / 415 V	
AC voltage range	270 V - 480 V	
Rated grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 Hz - 55 Hz / 55 Hz - 65 Hz	
Harmonic (THD)	< 3 % (of rated power)	
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading to 0.8 lagging	
Feed-in phases / connection phases	3 / 3-N-PE	
Backup data(on grid mode)		
Max. output power for backup load ****	43000 W	
Max. output current for backup load	3 * 63 A	
Backup data(off-grid mode)		
Rated voltage	3 / N / PE, 220 V / 380 V; 230 V / 400 V; 240 V / 415 V (± 2 %)	
Rated frequency	50 Hz / 60 Hz (± 0.2 %)	
THDV (@Linear load)	< 2 %	2 %
Backup switch time	< 10 ms	
Rated output power	10000 W / 10000 VA	25000 W / 25000 VA
Peak output power *****	15000 W / 15000 VA,10s	36500 W / 36500 VA , 10 s
Efficiency		
Max. efficiency / European efficiency	98.0 % / 97.5 %	98.2 % / 97.8 %
Protection & Function		
Grid monitoring	Yes	
DC reverse polarity protection	Yes	
AC short-circuit protection	Yes	
Leakage current protection	Yes	
DC switch (solar)	Yes	
Arc fault circuit interrupyer (AFCI)	Yes	
Anti-islanding	Yes	
Surge protection	DC Type II / AC Type II	
PID zero	Yes	
Battery input reverse polarity protection	Yes	
General data		
Topology (solar / battery)	Transformerless / Transformerless	
Degree of protection	IP65	
Dimensions (W * H * D)	620 mm * 480 mm * 195 mm	620 mm * 480 mm * 245 mm
Weight	32 kg	40 kg
Mounting method	Wall-mounting bracket	
Operating ambient temperature range	-25 ℃ to 60 ℃	
Allowable relative humidity range(Non-condensing)	0 % - 100 %	
Cooling method	Natural convection	Fan cooling
Max. operating altitude	2000 m	
Noise(Typical)	35 dB (A)	50 dB (A)
Display	LED	
Communication	RS485, WLAN, Ethernet, CAN	
DI / DO	DI * 4 / DO * 2 / DRM0	
DC connection type	MC4 (PV, Max.6 mm^2) / Plug and play connector (battery, Max.10 mm^2)	
AC connection type	Plug and play connector (Max.16 mm^2)	
Compliance	IEC / EN 62109, IEC 61000-6, EN 62477-1, IEC 61727, IEC 62116, IEC 62920, EN 55011, CISPR 11, VDE-AR-N-4105, EN 50549-1, NRS 097, AS 4777.2-2020, TOR Type A, R25, CEI 0-21	

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection

** Please refer to the user manual for the full load MPPT voltage range

*** Depending on the connected battery

**** Please refer to the user manual and modify the settings based on actual load power

***** Can be reached only if PV and battery power is sufficient

MG5RL NEW

Robust Power Performance

- 100% full power backup output, delivering stable performance even at temperatures above 45°C
- Whole-home backup with 40 A bypass switch

Robust Backup Power

- 4ms Seamless Switch[1)]
- 10 seconds of 200% backup peak power capability

Robust Solar Generation

- Industry-leading Max. 20A PV input per string
- Wider MPPT voltage range

Robust Safety Features

- Dual-system pressure relief structure

Robust Control Interface

- 4.3-inch large LCD touchscreen
- Multi-functional interface for Generator, Smart load control or Sungrow string inverter



Technical Data Sheet	MG5RL
Input (DC)	
Recommended max. PV input power	10000 Wp
Max. usable PV input power	8000 Wp
Max. PV input voltage	500 V
Min. PV input voltage / Startup input voltage	40 V / 50 V
Rated PV input voltage	360 V
MPPT operating voltage range[2]	40 V – 425 V
No. of independent MPP trackers	2
No. of PV strings per MPPT	1 / 1
Max. PV input current	40 A (20 A / 20 A)
Max. DC short-circuit current	50 A (25 A / 25 A)
Max. current for DC connector	25 A
Battery data	
Battery type	Li-ion battery
Battery voltage range	40 V – 60 V
Max. charge / discharge current[3]	120 A / 120 A
Max. charge / discharge power	5000 W / 5000 W
Input / Output (AC)	
Max. AC power from grid	8800 W
Rated AC output power	5000 W
Max. AC output apparent power	5000 VA
Max. AC output current	22.7 A
Rated AC voltage	220 V / 230 V / 240 V
AC voltage range	154 V – 276 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)	< 3% (of rated power)
Power factor at rated power / Adjustable power factor	> 0.99 at default value at rated power / 0.8 leading to 0.8 lagging
Feed-in phases / Connection phases	1 / 1
Backup Data (on grid mode)	
Max. output power for backup load[4]	8800 W
Max. output current for backup load	40 A
Backup Data (off-grid mode)	
Rated voltage	220 V / 230 V / 240 V
Rated frequency	50 Hz / 60 Hz
THDV (@ Linear load)	< 2 %
Backup switch time	≤ 4 ms
Rated output power	5000 W
Max. output power for backup load	5500 W
Peak output power	2 times of rated power, 10 s
Efficiency	
Max. efficiency / European efficiency	97.6 % / 96.7 %
Protection & Function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
DC switch (solar)	Yes
Surge protection	DC Type II / AC Type II
PID Zero	Yes
Micro-inverter compatibility[5]	Optional
Arc fault circuit interrupter (AFCI)	Optional
General Data	
Topology (Inverter)	Non-isolated
Topology (Battery BDC)	Isolated
Degree of protection	IP65
Dimensions (W * H * D)	532 mm * 386 mm * 210 mm
Weight	≤ 18 kg
Mounting method	Wall-mounting bracket
Operating ambient temperature range	-25 ℃ to 60 ℃
Allowable relative humidity range	0 % – 95 %
Cooling method	Natural convection
Max. operating altitude	2000 m
Noise (typical)	≤ 35 dB (A)
Display	LCD digital touchable display & LED indicator
Communication	CAN, RS485, Ethernet, WLAN
DI / DO	DI * 1 / DO * 1
DC connection type	MC4 compatible (Max. 6 mm²)
Battery connection type	OT terminal (35 mm² – 50 mm²)
AC connection type	Plug and Play (Max. 8 AWG)
Scalability[6]	8 in parallel
Grid compliance	IEC 62109-1/-2, IEC/EN 61000-6-1/-3, IEC 62116, IEC 61727, NRS 097-2-1, MEA, PEA, DEWA

[1] Available in typical conditions
[2] Please refer to the user manual for the full load MPPT voltage range
[3] The system's charging and discharging capability is also limited by the battery's charging and discharging performance
[4] Please refer to the user manual and modify the settings based on actual load power
[5] For micro-inverter compatibility, it is only available for the grid-connection port of the inverter
[6] If the number of inverters in parallel exceeds 4, please consult SUNGROW

MG10RL NEW

Robust Power Performance

- 100% full power backup output, delivering stable performance even at temperatures above 45°C
- Whole-home backup with 63A bypass switch

Robust Backup Power

- 4ms Seamless Switch[1)]
- 10 seconds of 200% backup peak power capability

Robust Solar Generation

- Industry-leading Max. 20A PV input per string
- Wider MPPT voltage range

Robust Safety Features

- Dual-system pressure relief structure

Robust Control Interface

- 4.3-inch large LCD touchscreen
- Multi-functional interface for Generator, Smart load control or Sungrow string inverter



Type designation	MG10RL
Input (DC)	
Recommended max. PV input power	20000 Wp
Max. usable PV input power	16000 Wp
Max. PV input voltage	500 V
Min. PV input voltage / Startup input voltage	40 V / 50 V
Rated PV input voltage	360 V
MPPT operating voltage range[2]	40 V – 425 V
No. of independent MPP trackers	3
No. of PV strings per MPPT	1 / 1 / 1
Max. PV input current	60 A (20 A / 20 A / 20 A)
Max. DC short-circuit current	75 A (25 A / 25 A / 25 A)
Max. current for DC connector	25 A
Battery data	
Battery type	Li-ion battery
Battery voltage range	40 V – 60 V
Max. charge / discharge current[3]	220 A / 220 A
Max. charge / discharge power	10000 W / 10000 W
Input / Output (AC)	
Max. AC power from grid	13860 W
Rated AC output power	10000 W
Max. AC output apparent power	10000 VA
Max. AC output current	45.5 A
Rated AC voltage	220 V / 230 V / 240 V
AC voltage range	154 V – 276 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)	< 3 % (of rated power)
Power factor at rated power / Adjustable power factor	> 0.99 at default value at rated power / 0.8 leading to 0.8 lagging
Feed-in phases / Connection phases	1 / 1
Backup Data (on grid mode)	
Max. output power for backup load[4]	13860 W
Max. output current for backup load	63 A
Backup Data (off-grid mode)	
Rated voltage	220 V / 230 V / 240 V
Rated frequency	50 Hz / 60 Hz
THDV (@ Linear load)	< 2 %
Backup switch time	≤ 4 ms
Rated output power	10000 W
Max. output power for backup load	11000 W
Peak output power	2 times of rated power, 10 s
Efficiency	
Max. efficiency / European efficiency	97.6 % / 96.7 %
Protection & Function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
DC switch (solar)	Yes
Surge protection	DC Type II / AC Type II
PID Zero	Yes
Micro-inverter compatibility[5]	Optional
Arc fault circuit interrupter (AFCI)	Optional
General Data	
Topology (Inverter)	Non-isolated
Topology (Battery BDC)	Isolated
Degree of protection	IP65
Dimensions (W * H * D)	552 mm * 448mm * 250 mm
Weight	≤ 25 kg
Mounting method	Wall-mounting bracket
Operating ambient temperature range	-25 ℃ to 60 ℃
Allowable relative humidity range	0 % – 95 %
Cooling method	Fan cooling
Max. operating altitude	2000 m
Noise (typical)	≤ 45 dB (A)
Display	LCD digital touchable display & LED indicator
Communication	CAN, RS485, Ethernet, WLAN
DI / DO	DI * 1 / DO * 1
DC connection type	MC4 compatible (Max. 6 mm²)
Battery connection type	OT terminal (35 mm² – 95 mm²)
AC connection type	OT terminal (Max.16 mm²)
Scalability[6]	8 in parallel
Grid compliance	IEC 62109-1/-2, IEC/EN 61000-6-1/-3, IEC 62116, IEC 61727, NRS 097-2-1, MEA, PEA, DEWA

[1] Available in typical conditions
[2] Please refer to the user manual for the full load MPPT voltage range
[3] The system's charging and discharging capability is also limited by the battery's charging and discharging performance
[4] Please refer to the user manual and modify the settings based on actual load power
[5] For micro-inverter compatibility, it is only available for the grid-connection port of the inverter
[6] If the number of inverters in parallel exceeds 4, please consult SUNGROW

MBL160 NEW

LONG LIFESPAN

- Up to 8,000-cycle lifespan ensures reliable, long-term use

SAFETY

- High-safety LFP battery
- Supports up to 5 types of safety detection

FLEXIBILITY

- Supports parallel connection of 2 to 20 modules, scalable up to 320 kWh

EASY INSTALLATION

- Touchscreen for easy operation
- Equipped with wheels for effortless transport



Technical properties	MBL160
System Data	
Battery type	LiFePO4
Nominal energy	16.08 kWh
Battery cycles	8000 @ (25 °C, 90 % DOD, 0.5P, 70 % SOH)
Nominal voltage	51.2 V
Voltage range	44.8 V – 57.6 V
Nominal charging / discharging current	157 A
Max. charging / discharging current	200 A
Peak charging / discharging current (3 s)	220 A
Min. discharging current	2 A
Communication	
Display	LCD touchscreen
Communication interface	CAN / RS485
Protection	
Over / under voltage protection	Yes
Over current protection	Yes
Over / under temperature protection	Yes
DC breaker	Yes
General Data	
Dimensions (W * H * D)	432 mm * 855 mm * 243 mm
Weight	114.2 kg
Degree of protection	IP20
Mounting method	Floor-mounted (built-in casters)
Installation location	Indoor
Operating ambient temperature range	Charge : 0 to 55 ℃ (32 ˚F to 131 ˚F) Discharge : -20 to 55 ℃ (-4 ˚F to 131 ˚F)
Allowable relative humidity range	5 % to 95 % no condensing
Storage condition	6 months @ 25 ℃; 3 months @ 35 ℃; 1 month @ 45 ℃
Max. operating altitude	2000 m
Cooling method	Natural convection
Max. parallel units	20
Certification	CE, IEC 62619, UN 38.3, MSDS, RoHS, REACH
Compatible inverters	MG5 / 6 / 8 / 10RL

SBH100/150/200/250/300/350/400

High Voltage LFP Battery

HIGH POWER

- Up to 50A continuous charge and discharge current
- Max.power exceeding 25kW

SAFETY

- Lithium Iron Phosphate (LFP) Cell
- Refined battery management

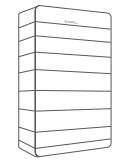
FLEXIBILITY

- Extendable as needed
- Support 2-8 modules per unit, max.4 units in parallel (160kWh)

EASY INSTALLATION

- Stackable & modular design
- Plug-and-play, no cable between battery modules



Type designation	SBH100	SBH150	SBH200	SBH250	SBH300	SBH350	SBH400
Technical properties	 2 modules	 3 modules	 4 modules	 5 modules	 6 modules	 7 modules	 8 modules
System data							
Battery type	LiFePO4 Prismatic Cell						
Battery module	5.0 kWh , 45 kg						
Energy (useable) *	10.0 kWh	15.0 kWh	20.0 kWh	25.0 kWh	30.0 kWh	35.0 kWh	40.0 kWh
Nominal voltage	140.8 V	211.2 V	281.6 V	352.0 V	422.4 V	492.8 V	563.2 V
Operating voltage	118.8V-160.6V	178.2V-240.9V	237.6V-321.2V	297V-401.5V	356.4V-481.8V	415.8V-562.1V	475.2V-642.4V
Max. charge / discharge current: continuous	50 A						
Depth of discharge	Max. 100 % DOD (settable)						
Display	SOC indicator , Status indicator						
Communication interface	CAN						
Protection							
Over/under voltage protection	Yes						
Over current protection	Yes						
Over/under temperature protection	Yes						
DC breaker	Yes						
General data							
Dimensions (W*H*D)	675 * 580 * 350 mm	675 * 740 * 350 mm	675 * 900 * 350 mm	675 * 1060 * 350 mm	675 * 1220 * 350 mm	675 * 1380 * 350 mm	675 * 1540 * 350 mm
Weight	106 kg	151 kg	196 kg	241 kg	286 kg	331 kg	376 kg
Installation location	Indoor / Outdoor						
Mounting method	Floor stand						
Operating ambient temperature range	Charge：0 ℃ - 50 ℃ Discharge：-20 ℃ - 50 ℃						
Degree of protection	IP55						
Allowable relative humidity range	0 % - 95 % no condensing						
Max. operating altitude	Max. 2000 m						
Cooling method	Natural convection						
Certificates	CE, CEC, IEC 62619, IEC 62040, UN 38.3, VDE 2510-50, IEC 62477, IEC 63056						
Warranty **	10 Years						

* Test conditions: 25 ℃ , 100 % depth of discharge (DOD), 0.2C charge&discharge

** Refer to battery warranty letter for conditional application

SBS050

High Voltage LFP Battery

HIGH-PERFORMANCE

- Single module supports 5 kW off grid output
- Up to 100 % usable energy

SAFETY

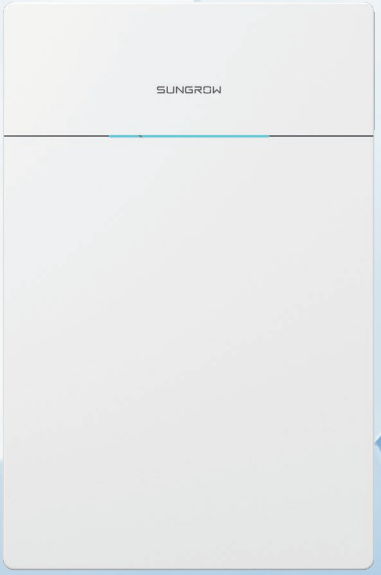
- Lithium Iron Phosphate (LFP) Cell
- Refined battery management

FLEXIBILITY

- Supports 1-4 modules parallel (20.48 kWh)
- No need a junction box for expansion

EASY INSTALLATION

- Slim design with a depth of only 182 mm
- Plug and play design



Technical properties	SBS050
System data	
Battery type	LiFePO4 Prismatic Cell
Battery module	5.12 kWh
Nominal voltage	102.4 V
Operating voltage	86.4 V - 116.8 V
Recommended charging/discharging current: continuous	30 A (charging) / 50 A (discharging)
Max. charging/discharging current *	50 A (charging) / 50 A (discharging)
Depth of discharge	Max. 100 % DOD (settable)
Display	SOC indicator, Status indicator
Communication interface	CAN
Protection	
Over / under voltage protection	Yes
Over current protection	Yes
Over / under temperature protection	Yes
DC breaker	Yes
General data	
Dimensions (W*H*D)	515 mm * 780 mm * 182 mm
Weight	58 kg
Installation location	Indoor / Outdoor
Mounting method	Floor stand / Wall-mounted
Operating ambient temperature range	Charge: 0 ℃ - 55 ℃ Discharge: -20 ℃ ~ 55 ℃
Degree of protection	IP65
Allowable relative humidity range	0 % - 95 % no condensing
Max. operating altitude	Max. 2000 m
Cooling method	Natural convection
Certificates	UN 38.3, IEC 62619

*Test conditions: 25°C, 100% depth of discharge (DoD), charge and discharge at 0.2 C

WiNet-S2

Wireless Communication Module

SMART AND FLEXIBLE

- Supporting DHCP, and automatic network transmission without configuration
- Applicable to scenarios in which wireless communication is inaccessible

SIMPLE AND EFFICIENT

- Support of local and remote parameter setting and firmware updates
- Support fast distribution network, automatic station building, and data interval in seconds
- Plug and play, quick installation

SAFE AND RELIABLE

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



Type designation	WiNet-S2
Basic data	
Supported device number	1
LED display	LED * 3
Communication	
Ethernet	10/100 Mbps self-adaption , Communcation distance ≤ 100 m
WLAN	2.4 GHz , 802.11 b/g/n
Power supply	
DC input	5 VDC , 2.1 A
Power consumption	Typ. 1.3 W
Ambient conditions	
Operating temperature	-30 °C ~ 60 °C
Allowable relative humidity range	≤ 95 % , non-condensing
Max. operating altitude	≤ 4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W*H*D)	48 * 132 * 36 mm
Installation	Plug and play

iSolarCloud

Monitoring System

INTELLIGENT AND FLEXIBLE

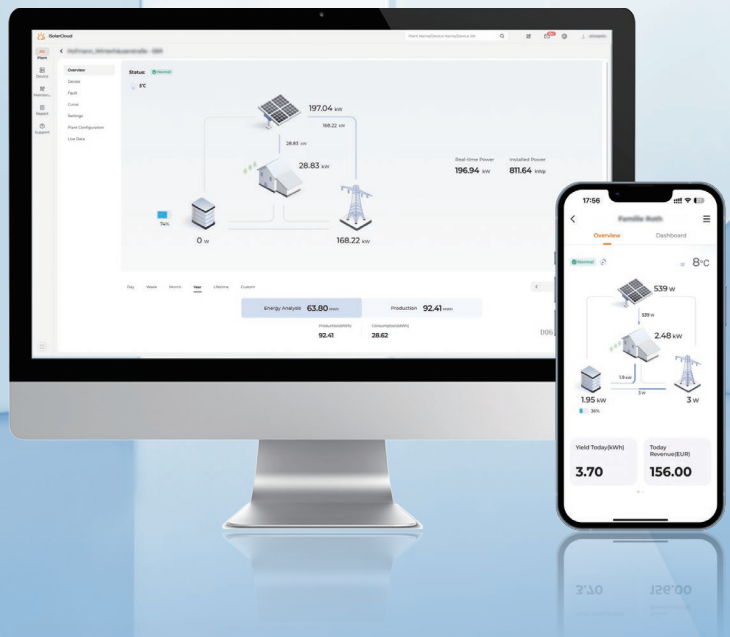
- Integrated management of multiple energy sources
- Regional operation and maintenance, classified management
- Real-time analysis of cloud-based big data to avoid missing any valuable data

SAFE AND RELIABLE

- Industry-leading cloud computing platform, financial grade security of the system
- Full life cycle management, disaster tolerance, data backup, ensuring data security
- Permission control, operations can be traced

EFFECTIVE

- Accurate alarm positioning, efficient troubleshooting with the knowledge base
- Intelligent data analysis, real-time notification of results, reducing troubleshooting time
- Module-level monitoring, fine-grained digitization, solving mismatches in series / parallel connection
- Smart IV curve diagnosis enables fast positioning of single and compound faults
- One-touch plant construction, convenient commissioning, fast and efficient mobile operation, and maintenance



Type designation	iSolarCloud
Intelligent devices	
Device type	Inverter, EV Charger, PVS, meteo station, electricity meter, transformer, circuit breakers and other devices in the plant
Maximum access capacity	> 100 GW
Acquisition environment	
Devices	Insight monitoring system, Logger, Eye, WiFi, COM100, and other acquisition devices
Interval	5 minutes
Methods	2G, 3G, 4G, WLAN, wired broadband
Client environment	
Lowest browser version	IE 11, Chrome 65, Safari 11, Firefox 60
Lowest system version	Android 5.0, iOS 13.0
Languages	Chinese, English, German, French, Spanish, Portuguese (Brazil), Italian, Dutch, Polish, Japanese, Korean, Vietnamese, Traditional Chinese
Browser resolution	1366 * 768, 1920 * 1080 (recommended)
Mobile device resolution	1920 * 1080, 2001 * 1125, 1280 * 720
System parameters	
Reliability	99.99 %
Storage specifications	> 100 PB



S100

Single-phase Smart Energy Meter



Type designation	S100
Electrical Parameter	
Nominal voltage	240 Vac
Input voltage range	180 Vac – 286 Vac
Power consumption	<2W (10 VA)
Max. operating current	100 A
Grid frequency	50 Hz
Measurement accuracy	Class 1
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-25 ℃ ~ 75 ℃
Relative humidity	0 – 95 %
Mechanical Data	
Dimensions (W * H * D)	18 * 117 * 65 mm
Weight	0.2 kg
Installation	35 mm DIN-rail

Flexible Commercial PV & ESS Solution

The DC-coupling solution designed for power distribution businesses primarily targets medium and large C&I scenarios, including various types of light industrial facilities and energy-intensive small businesses.





SG50CX-P2



SH125CX



SG125CX-P2



SG150CX



ST255CS-2H



ST510CS-4H

Flexible Design
Improved Efficiency and Reduced Investments

- High input current, compatible with all PV modules
- DC/AC ratio up to 2.0, allowing increased PV module capacity
- DC coupling reduces losses by minimizing energy conversion processes

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Flexible Scalability
From Kilowatt to Megawatt

- Up to 24 pcs in Parallel
- Max. 3MW AC output capacity
- Max. 6MWh ESS capacity

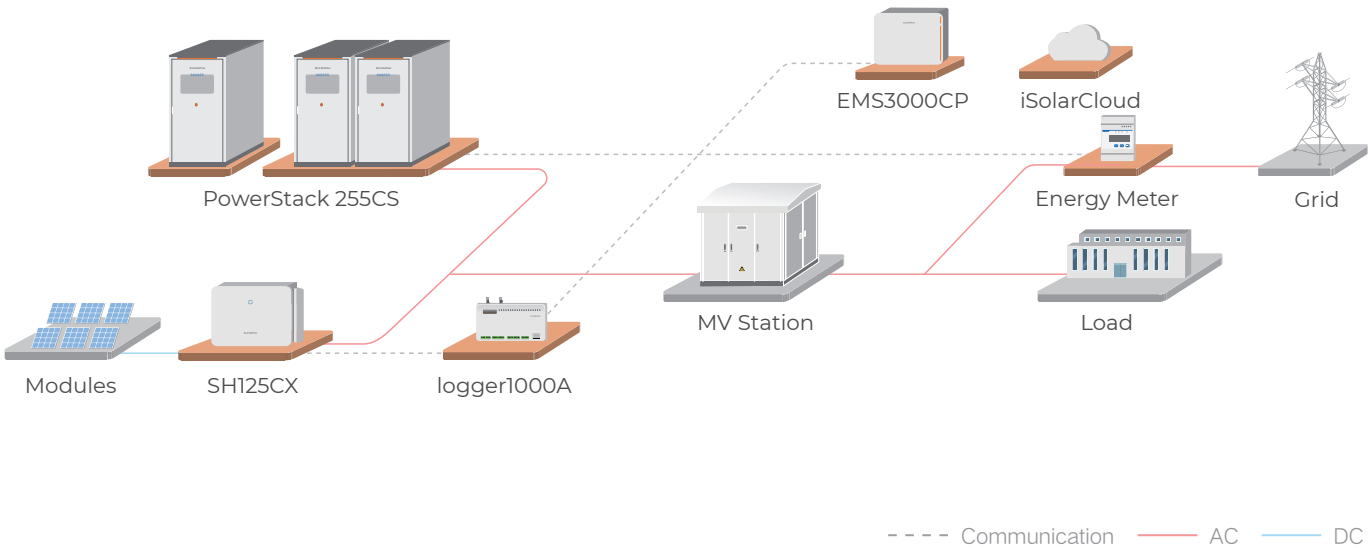
Flexible Retrofitting
Transform into a Power Storage Hub Instantly

- Replacing PV inverter with hybrid Inverter directly, reducing cable & installation costs

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Flexible Adaptation
Efficient Operation in All Scenarios

- IP66 and C5 anti-corrosion for harsh environments
- Logger EMS with multi-mode for different energy dispatch scenarios



Long-Term Returns

Advanced fully self R&D PV+ESS+EV Charging high-efficiency power systems, enabling intelligent synergy management for maximized green energy adoption and delivers stable long-term returns.

98.8% Max. Efficiency

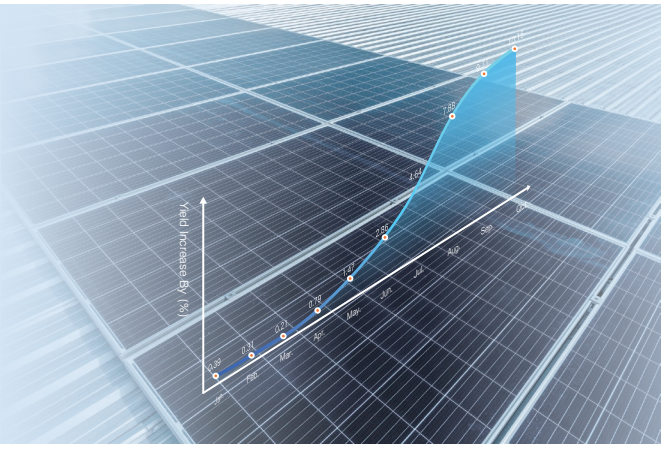
Sungrow new SG150CX string inverter with 98.8% maximum efficiency at 400V.



PID Recovery

25-Year Guaranteed Module Performance

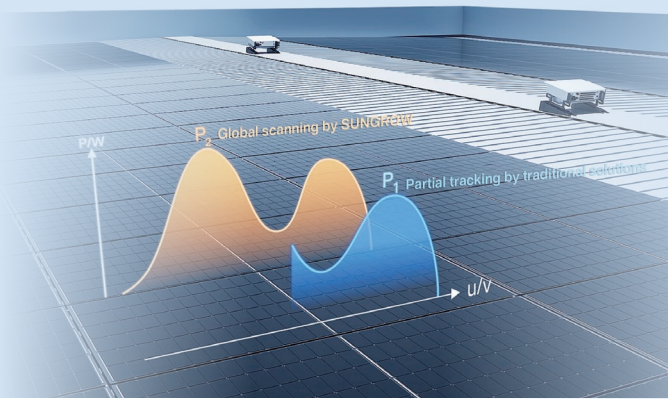
Increases power generation by raising PV-to-ground voltage and restoring PID effects.



Global MPPT

2% Yield Increase

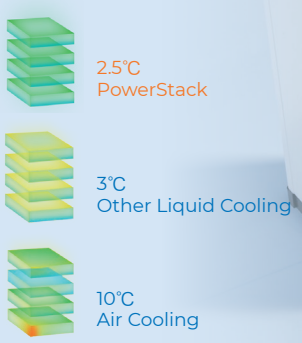
SUNGROW's global MPPT scanning tracks the maximum power point to increase the generation yield of the system.



Intelligent Liquid-Cooling Temperature Control

Longer System Life

Liquid cooling is more efficient and balanced heat dissipation from pack to system. The cell temperature difference ≤ 2.5℃ , the lower temperature difference, the longer cell lifetime.

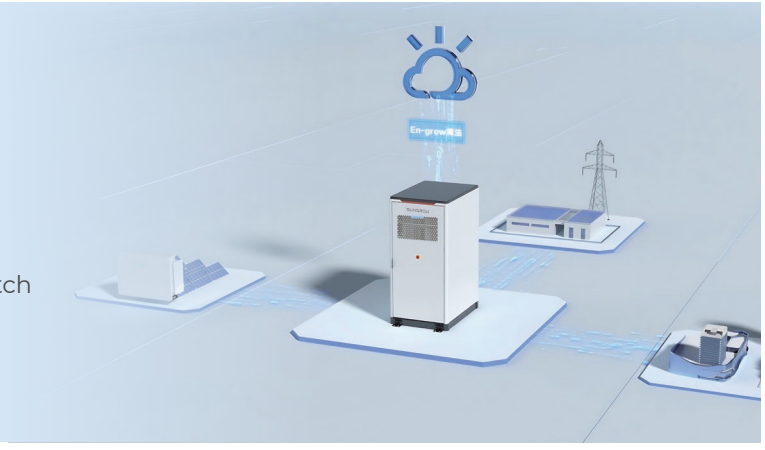




Higher Efficiency System

Revenue Optimization

- Built-in PCS , Max. efficiency ≥ 98.5%
- Intelligent EMS computation for better dispatch
- Max. RTE ≥ 90%, more efficient power supply



AI Controlled Thermal Balance

Reduces 33% Auxiliary Power Consumption

AI-controlled heat balance technology intelligently adjusts the cooling power by analyzing cell temperature and operating condition data.

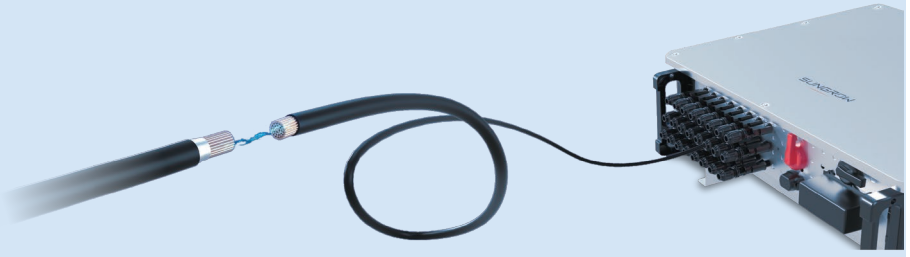


Safety Assured

Construct an intelligent safety protection system for the entire PV+ESS+EV Charging to ensure stable power station operation and safeguard business.

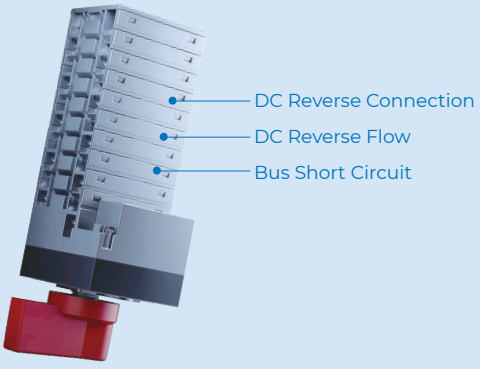
AFCI 3.0
Active, Rapid, Precise

- Max. 48A input current
- 200ms rapid shutdown
- 450M cable detection



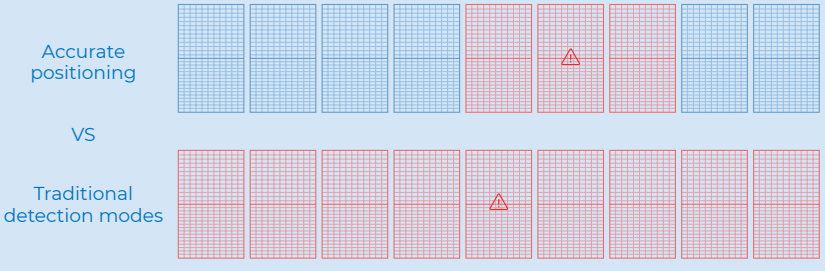
Intelligent String-Level Disconnection
Millisecond Shutdown, Safe without Delay

- 20ms active rapid shutdown
- Intelligent fault identification



Module-Level Insulation Positioning

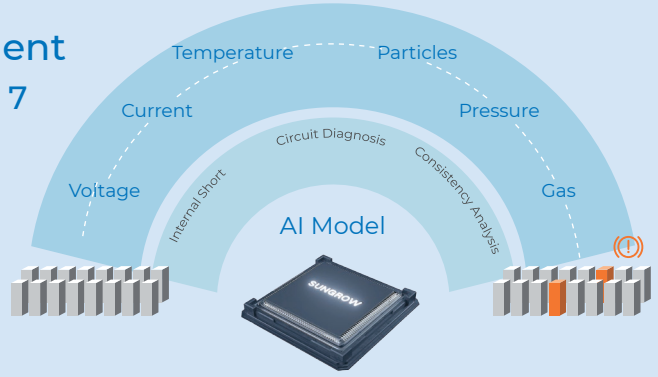
- Save time on inspection and maintenance X7
- Module fault location range ±1



AI-Based Cell Health Management

Warning of Battery Cell Abnormality 7 Days in Advance

- Cabinet-level fuse protection
- Cell health real-time assessment
- Faulty cell early-warning



Fire Safety Design

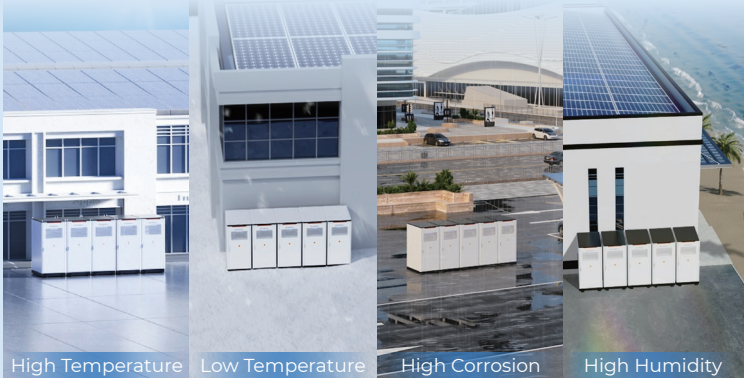
Accurate Warning, Timely Fire Portection

- Warning: Accurate detection and timely warning
- Fire Protection: Extinguish fire immediately to reduce damage



All Scenario Applications

- **High-level protection complete machine**
  C5 anti-corrosion、IP55 overall protection
- **High-level protection of components**
  IP65 Pack protection、IP66 PCS protection



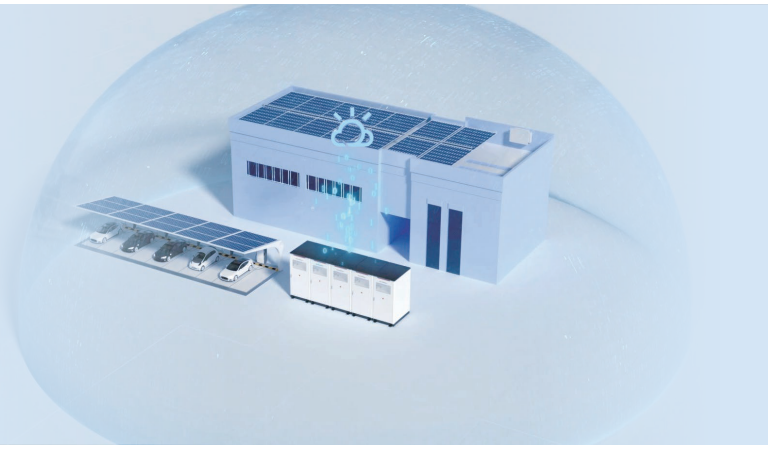
Simple O&M & Smart Design

Providing one-stop full-process service spanning power plant design, on-grid and O&M to streamline green energy adoption for commercial business.

iSolarCloud

Complete Control in the Cloud

- Fault recording
- Smart I-V diagnosis
- Dispersion analysis

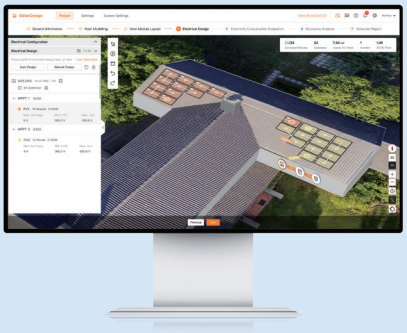




iSolarDesign

Flexible Plant Design for Business

- One-click application for rapid plant construction
- Best string connection suggestions based on boundary limits
- Automatic calculations on cable length and loss
- Recommends suitable Sungrow solutions





SG150CX

Multi-MPPT String Inverter for 1000 Vdc System

HIGH YIELD

- Higher current input, adaptable to all PV modules for more design flexibility
- Global MPPT scanning, increasing generation yield by over 2%
- Intelligent PID recovery function

SAFE AND DURABLE

- AFCI 3.0, intelligent DC arc interrupter, with a detection range of 450m
- Active fault identification, intelligent string-level protection switch, ensuring equipment safety

SMART MANAGEMENT

- Air duct self-cleaning, reduced maintenance and increased O&M efficiency
- IP66 protection and C5 Anti-corrosion, suitable for various harsh environments
- High-precision string detection and I-V diagnosis, accurately locating abnormal strings



Type designation	SG150CX
Input (DC)	
Recommended max. PV input power	210 kWp
Max. PV input voltage *	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V (380 V / 400 V / 415 V); 720 V (480 V)
MPPT voltage range **	180 V – 1000 V
No. of independent MPP inputs	7
No. of PV strings per MPPT	3 / 3 / 3 / 3 / 3 / 3 / 3
Max. PV input current	336 A (48 A * 7)
Max. DC short-circuit current	462 A (66 A * 7)
Max. current for DC connector	30 A
Output (AC)	
Rated AC output power	150 kW
Max. AC output apparent power	165 kVA
Max. AC output current	250.7 A @ 380 Vac ; 240.6 A @ 400 Vac / 415 Vac ; 200.5 A @ 480 Vac
Rated AC output current	227.9 A @ 380 Vac ; 216.5 A @ 400 Vac / 415 Vac ; 180.4 A @ 480 Vac
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V , 240 V / 415 V , 277 V / 480 V
AC voltage range	320 V - 480 V (380 V / 400 V / 415 V) ; 380 V - 552 V (480 V)
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)	≤ 1 % (at 400 V AC voltage and rated power) ≤ 2 % (at 480 V AC voltage and 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	98.8%
European efficiency	98.2% (380 V / 400 V / 415 V); 98.4 % (480 V)
Protection & function	
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
Intelligent DC arc interrupter	Yes
Arc fault circuit interrupter (AFCI)	Yes
PID recovery function	Yes
RSD compatibility ***	Optional
General data	
Dimensions (W * H * D)	1025 mm * 795 mm * 360 mm
Weight	≤ 100 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	≤ 7 W
Corrosion	C5
Operating ambient temperature range	-30 ℃ – 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 / WLAN (optional) / Ethernet (optional)
DC connection type	EVO2 (Max. 6 mm^2)
AC connection type	OT / DT terminal (120~400 mm^2)
AC cable specification	Outside diameter 18 mm – 38 mm
Grid compliance	IEC EN 62109-1/-2; IEC 60529; IEC 61000-6-1/-2/-3/-4; EN55011; CISPR 11; IEC 63027; EN 50549-1-10/-2-10; IEC 61727; IEC 62116; IEC 61683; EN 50530; IEC 60068-1/-2/-14/-27/-30/-64; IEC/EN 61000-3-11/12; IEC 62920; VDE4110; VDE4120; PSE 2018; NC RFG; TOR Erzeuger Typ A; TOR Erzeuger Typ B; OVE-Richtlinie R25/03.20; G99; CEI 0-16; CEI 0-21; VDE0126; NTS UNE217001/217002; NTS 631; IEC60947.2; PEA; MEA; IEC 62910; DEWA; NRS 097; IRR-DCC-MV
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 SR20D-M RSD compatibility, please consult Sungrow before placing an order

SG125CX-P2

Multi-MPPT String Inverter for 1000 Vdc System

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



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
MPPT voltage range **	180 V – 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	30 A
Output (AC)	
Rated AC output power	125 kW
Max. AC output apparent power	125 kVA
Max. AC output current	181.1 A
Rated AC output current(at 230V)	181.1 A
Rated AC voltage	3 / N / PE, 220 V / 380 V; 230 V / 400 V
AC voltage range	320 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 & function	
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)	1020 mm * 795 mm * 360 mm
Weight	≤ 95 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 5 W
Corrosion	C5
Operating ambient temperature range	-30 ℃ - 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 / WLAN (optional) / Ethernet (optional)
DC connection type	EVO2 (Max. 6 mm²)
AC connection type	OT / DT terminal (Max. 240 mm²)
AC cable specification	Outside diameter 30 mm - 60 mm
Grid compliance	IEC 62109-1/2, EN/IEC 61000-6-1/2/3/4, IEC 61727, IEC 62116, EN 50549-1/2/10, IEC 63027, IEC 61000-3, IEC 61683 IEC 60068 EN 50530, IEC 62093, IEC 62910, IEC 61920, IEC 60529, EN 300 328, EN301489, EN 62311, 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, CEI 0-16 2019, NRS-097-2-1, TOR typeA+B and OVE R25, DEWA, VDE 4110 4120, IRR-DCC-MV, PSE 2018, UNE 217001, PEA, MEA
Grid support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate controlramp 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 SP600S optimizer & SR20D-M RSD compatibility, please consult Sungrow before placing an order

SG125CX-P3

HIGH YIELD

- Higher current input, adaptable to all PV modules for more design flexibility
- Global MPPT scanning, increasing generation yield by over 2%
- Intelligent PID recovery function

SMART MANAGEMENT

- Air duct self-cleaning, reduced maintenance and increased O&M efficiency
- IP66 protection and C5 Anti-corrosion, suitable for various harsh environments
- High-precision string detection and I-V diagnosis, Module-Level Insulation Positioning

SAFE AND DURABLE

- AFCI 3.0+, intelligent DC arc interrupter, with a detection range of 600m
- Active fault identification, intelligent string-level protection switch, ensuring equipment safety
- PV- Ground Fault Protection



Type designation	SG125CX-P3
Input (DC)	
Recommended max. PV input power	198 kWp
Max. PV input voltage*	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPPT voltage range**	180 V – 1000 V
No. of independent MPP inputs	10
No. of PV strings per MPPT	2
Max. PV input current	400 A (40 A * 10)
Max. DC short-circuit current	500 A (50 A * 10)
Max. current for DC connector	30 A
Output (AC)	
Rated AC output power	125 kW
Max. AC output apparent power	125 kVA
Max. AC output current (at 220V)	189.9 A
Rated AC output current (at 230V)	181.1 A
Rated AC voltage	3 / N / PE, 220 V / 380 V; 230 V / 400 V
AC voltage range	320 V – 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Harmonic (THD)	< 2 % (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	98.5 %
European efficiency	98.3 %
Protection & function	
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
General data	
Dimensions (W * H * D)	1025 mm * 795 mm * 360 mm
Weight	≤ 88 kg
Mounting method	Wall-mounting bracket
Topology	Transformerless
Degree of protection	IP66
Night power consumption	< 5 W
Corrosion	C5
Operating ambient temperature range	- 30 °C – 60 °C
Allowable relative humidity range (non-condensing)	0 – 95 %
Cooling method	Smart forced air cooling
Max. operating altitud	3000 m
Display	LED, Bluetooth + APP
Communication	RS485 / WLAN (optional) / Ethernet (optional)
DC connection type	MC4 (4 - 6 mm^2)
AC connection type	OT / DT terminal (Max. 240 mm^2)
AC cable specification	Outside diameter 30 ~ 60 mm
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, 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

SG50CX-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	SG50CX-P2
Input (DC)	
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
Output (AC)	
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 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	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 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

SH125CX

Multi-MPPT Commercial & Industrial Hybrid Inverter

SUPERIOR YIELD

- Up to 200 % PV oversizing
- 40 A x 10 MPPTs with 182 / 210 mm high-power PV modules
- PID Zero® anti-PID technology

ROBUST PERFORMANCE

- 150 % off-grid overload (10 s)
- Up to 200 A charge / discharge current
- Built-in ≤ 10 ms UPS level on / off-grid switching

FLEXIBLE APPLICATION

- Smart trading ready for intelligent TOU, dynamic pricing, and VPP participation
- DC coupled solution for new installation and retrofit upgrades
- 100 % three-phase unbalance output

ACTIVE SAFETY

- AFCI 3.0, intelligent DC arc interrupter, with a detection range of 450 m
- Intelligent string-level protection switch & PV-to-Ground fault protection
- IP66, C5, and self-cleaning air ducts function



Type designation	SH125CX
Input (DC)	
Max. PV input power	250 kWp
Max. PV input voltage *	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPPT voltage range **	180 V - 1000 V
No. of independent MPP inputs	10
No. of PV strings per MPPT	2
Max. PV input current	40 A * 10
Max. DC short-circuit current	50 A * 10
Max. current for DC connector	30 A
Battery input data	
Battery type	Lithium-ion battery
Battery Voltage Range***	129 V - 880 V
Communication	CAN
Max. charge / discharge current****	200 A / 200 A
Max. charge / discharge power	125 kW / 125 kW
Input and output (AC)	
Max. AC power from grid	160 kVA @ 230 V
Rated AC output power	125 kW
Max. AC output apparent power	125 kVA
Max. AC output current	189.9 A
Rated AC output current	180.4 A
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V
AC voltage range	270 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 400 V AC voltage and 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
Backup data	
Rated voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V
Rated frequency	50 Hz / 60 Hz
THDv (@ Linear load)	< 2 % (at rated power)
Backup switch time	≤ 10 ms
Rated output power	125 kW
Peak load power	1.5 times of rated power, 10 s
Efficiency	
Max. efficiency / European efficiency	98.6 % / 98.3 %
Protection & function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
DC switch	Yes
Ground fault monitoring	Yes
PV string current monitoring	Yes
Arc fault circuit interrupter (AFCI)	Yes
Surge protection	DC Type I+II / AC Type II
PID zero	Yes
Battery input reverse polarity protection	Yes
General data	
Topology	Transformerless
Degree of protection	IP66
Dimensions (W * H * D)	1095 mm * 795 mm * 360 mm
Weight	≤ 128 kg
Mounting method	Wall-mounting bracket
Operating ambient temperature range	-30 ℃ ~ 60 ℃
Allowable relative humidity range (non-condensing)	0 - 100 %
Corrosion	C5
Cooling method	Smart forced air cooling
Max. operating altitude	3000 m
Noise (Typical)	≤ 65 dB (A)
Grid compliance	IEC 62109-1/-2, IEC 62477-1, IEC 62920, EN 55011, IEC 63027, VDE-AR-N 4105, VDE-AR-N 4110, NRS 097-2-1, UNE 207002, UNE 207001, NTS 2.1, CEI 0-16, CEI 0-21, EN 50549, EN 50530, IEC 61683, IEC 62116, IEC 61727, IEC 60068, IEC 61000-6-3, IEC 63027
Interface	
Display	LED, Bluetooth + APP
Communication with battery	CAN
Communication with Logger	RS485
Communication between Logger and iSolarCloud	WLAN / Ethernet
DI / DO	DI * 2 / DO * 3
DC connection type	MC4 (Max. 6 mm²)
AC connection type*****	OT / DT terminal (Max. 300 mm²)

* Input voltage exceeding the MPPT operating voltage range triggers inverter protection
** Please refer to the user manual for the full load MPPT voltage range
*** Minimum battery voltage for black-start : 270 V
**** Depending on the connected battery
***** Please refer to the user manual for detail information

ST255CS-2H NEW

PowerStack Liquid Cooled C&I Energy Storage System

LOWER COST

- Integrated Pre-installation: High-degree integrated system with pre-installation and pre-commissioning reduces on-site commissioning work
- AI-Controlled Heat Saving: Innovative AI-controlled thermal balance cuts down daily system heat loss by 33%
- Precise Liquid-Cooling Temperature Equalization: Liquid-cooled balanced heat dissipation keeps the cell temperature difference ≤ 2.5℃

SAFE AND RELIABLE

- AI-Monitored Cell Health: AI monitors cell health and gives early warnings for thermal runaway
- Three-level over-current Protection: Three -level over-current protection for PACK, RACK, and PCS
- Three-level fire-prevention Design: Three-level fire-prevention design with accurate early warnings for thermal runaway to prevent fires

EFFICIENT AND FLEXIBLE

- High-efficiency Power Conversion: DC/AC power converter unit features a high efficiency of up to 98.5%
- Seamless Installation: Cabinets can be installed side by side seamlessly for a smooth appearance
- Flexible Grid Connection: Supports on-grid, off-grid, and automatic switching

SMART AND ROBUST

- Cloud-based Intelligent Monitoring: Monitor via iSolarCloud App or web cloud for real-time alarms and troubleshooting
- Wireless Intelligent Operation and Maintenance: Near-far-end wireless intelligent operation and one-key remote upgrade reduce operation and maintenance costs



Product Name	ST255CS-2H
DC side	
Cell type	LFP 3.2 V / 314 Ah
System battery configuration	256S1P
Nominal capacity	257 kWh
Nominal voltage range	691.2 V ~ 934.4 V
Depth of charge and discharge	0 % ~ 100 %
AC side (On-Grid)	
Nominal power	125 kW
Nominal voltage	400 V
Access way	3P4L
Voltage range	340 V ~ 440 V
Nominal frequency	50 Hz / 60Hz
Frequency range	45 Hz ~ 55 Hz / 55 Hz ~ 65 Hz
Max.THD of current	≤ 3 % (Nominal power)
DC component	≤ 0.5 % (Nominal power)
Power factor range	1.0 leading ~ 1.0 lagging
AC side (Off-Grid)	
Nominal AC voltage	400 V
Nominal AC frequency	50 Hz / 60Hz
Max.THD of voltage	≤ 3 % (Linear load)
Unbalance load capacity	100 %
System parameter	
Dimensions (W * H * D)	1150 mm * 2450 mm * 1610 mm
Weight	≤ 2900 kg
Degree of protection	IP55
Auxiliary power supply	Internal power supply (Default) External power supply (Optional)
Anti-corrosion degree	C4 (Default) C5 (Optional)
Operation humidity range	0 % ~ 100 %
Operation temperature range	-30 ℃ ~ 50 ℃ (> 45 ℃ derating)
Max. operating altitude	3000 m
Temperature control method	Intelligent liquid cooling
Noise	≤ 65 dB @ 1 m
Fire suppression system	Combustible gas detector, Smoke detector, Heat detector, Alarm sounder, Hot aerosol fire extinguishing equipment
Communication interface	Ethernet
Communication protocol	Modbus TCP
Standard	IEC62619, IEC63056, IEC62040, IEC62477, IEC61000, IEC62933, UN 38.3, UL9540A
Max.Parallel quantity	On-Grid: 25 pcs Off-Grid: 20 pcs

ST510CS-4H NEW

PowerStack Liquid Cooled C&I Energy Storage System

LOWER COST

- Integrated Pre-installation: High-degree integrated system with pre-installation and pre-commissioning reduces on-site commissioning work
- AI-Controlled Heat Saving: Innovative AI-controlled thermal balance cuts down daily system heat loss by 33%
- Precise Liquid-Cooling Temperature Equalization: Liquid-cooled balanced heat dissipation keeps the cell temperature difference ≤ 2.5℃

SAFE AND RELIABLE

- AI-Monitored Cell Health: AI monitors cell health and gives early warnings for thermal runaway
- Three-level over-current Protection: Three -level over-current protection for PACK, RACK, and PCS
- Three-level fire-prevention Design: Three-level fire-prevention design with accurate early warnings for thermal runaway to prevent fires

EFFICIENT AND FLEXIBLE

- High-efficiency Power Conversion: DC/AC power converter unit features a high efficiency of up to 98.5%
- Seamless Installation: Cabinets can be installed side by side seamlessly for a smooth appearance
- Flexible Grid Connection: Supports on-grid, off-grid, and automatic switching

SMART AND ROBUST

- Cloud-based Intelligent Monitoring: Monitor via iSolarCloud App or web cloud for real-time alarms and troubleshooting
- Wireless Intelligent Operation and Maintenance: Near-far-end wireless intelligent operation and one-key remote upgrade reduce operation and maintenance costs



Technical data	ST510CS-4H
DC side	
Cell type	LFP 3.2 V / 314 Ah
System battery configuration	256S2P
Nominal capacity	514 kWh
Nominal voltage range	691.2 V ~ 934.4 V
Depth of charge and discharge	0 % ~ 100 %
AC side (On-Grid)	
Nominal power	125 kW
Nominal voltage	400 V
Access way	3P4L
Voltage range	340 V ~ 440 V
Nominal frequency	50 Hz / 60Hz
Frequency range	45 Hz ~ 55 Hz / 55 Hz ~ 65 Hz
Max.THD of current	≤ 3 % (Nominal power)
DC component	≤ 0.5 % (Nominal power)
Power factor range	1.0 leading ~ 1.0 lagging
AC side (Off-Grid)	
Nominal AC voltage	400 V
Nominal AC frequency	50 Hz / 60Hz
Max.THD of voltage	≤ 3 % (Linear load)
Unbalance load capacity	100 %
System parameter	
Dimensions (W * H * D)	2152 mm * 2470 mm * 1610 mm
Weight	≤ 5300 kg
Degree of protection	IP55
Auxiliary power supply	Internal power supply (Default) External power supply (Optional)
Anti-corrosion degree	C4 (Default) C5 (Optional)
Operation humidity range	0 % ~ 100 %
Operation temperature range	-30 ℃ ~ 50 ℃ (> 45 ℃ derating)
Max. operating altitude	3000 m
Temperature control method	Intelligent liquid cooling
Noise	≤ 65 dB @ 1 m
Fire suppression system	Combustible gas detector, Smoke detector, Heat detector, Alarm sounder, Hot aerosol fire extinguishing equipment
Communication interface	Ethernet
Communication protocol	Modbus TCP
Standard	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, IEC 62933, UN 38.3, UL9540A
Max.Parallel quantity	On-Grid: 25 pcs Off-Grid: 20 pcs

EMS3000CP

EMS3000CP is designed for a wide range of business scenarios, with diverse control strategies and high-precision algorithms. It provides an efficient O&M solution, along with top-rank personalized services, which increase the revenue of the ESS.

EFFICIENT O&M

- Incorporate different O&M options such as WEB and APP
  Allow local/cloud O&M to ensure stable device operation
- Support one-click update of devices in the whole plant

SAFE AND RELIABLE

- Support ESS SOC balancing control
- Cloud-pipeline-edge three-layer data encryption
- Support real-time device fault alarm



Type designation	EMS3000CP
System	
Configuration	EMS controller, SPD, Power supply unit, Switch, Fiber Splice Box, 4G Router (Optional), IPC (Optional), UPS (Optional), Firewall (Optional)
Max. Number of connections	300
Controller functions	Self-consumption, Time plan, Feed-in Limitation, Peak Shaving, Overload Protection, Dynamic Capacity Expansion, P/Q/PF control, SOC intelligent management, Emergency power backup, Collaborative Control of PV & ESS & EVC, Coordinated Control of DG and ESS
iSolarCloud functions	Real-time monitoring, Remote upgrade, Smart O&M
Communication	
RS485 interface	7
Fiber port	4 * 100 Mbps / 1000 Mbps
Ethernet port	5 * 10 Mbps / 100 Mbps
Fiber splice box	2-Input and 8-Output ST Single mode
IO	
DI/DO	16 / 4
Power supply	
AC Input	100 VAC ~ 264 VAC, 50 Hz / 60 Hz
Power consumption	Max. 100 W
Ambient conditions	
Operating temperature	without UPS: -20 ℃ ~ 50 ℃, with UPS: 0 ℃ ~ 40 ℃
Storage temperature	-40 ℃ ~ 70 ℃
Operating humidity	5 % ~ 95 % (non-condensing)
Operating altitude	≤ 4000 m
Ingress protection	IP66
Anticorrosive class	C5-M
Mechanical parameters	
Dimensions (W*H*D)	860 mm * 610 mm * 272 mm
Weight	≤ 55 kg
Mounting	Wall-mounting, or floor-mounting, both indoors and outdoors
Enclosure Material	Metal
Cable Specification	AC power cable: It is recommended that the cable has a diameter of 1.5 mm^2 and runs a distance of less than 10 m RS485 cable: 0.75 mm^2 ~ 1.5 mm^2 outdoor-type anti-UV twisted-pair cable with a shielding layer and a maximum length of less than 1000 m (baud rate 9600)

COM100E

Smart Communication Box

FLEXIBLE NETWORKING

- Support of RS485, Ethernet and WLAN 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	COM100E
Communication	
Max. number of devices	30
RS485 interface	3
Ehthernet	1×RJ45, 10/100/1000 Mbps
Digital input	5, Max. 24 Vdc
Analog input	4, support 4 mA ~ 20 mA or 0 ~ 10 Vdc
Wireless communication	
WLAN communication	802.11 b/g/n/ac HT20/40/80 MHz 2.4 GHz / 5 GHz
Communication protocol	
Ethernet	Modbus-TCP, IEC 60870-5-104, FTP/SFTP
RS485	Modbus-RTU, DL/T645
Power supply	
AC input	100 Vac ~ 300 Vac, 50 Hz / 60 Hz
Power consumption	Typ. 20 W, Max. 30 W
Night light for maintenance	< 1 W
Ambient conditions	
Operating temperature	-30 ℃ to 60 ℃
Storage temperature	-40 ℃ to 70 ℃
Relative air humidity	≤ 95 % (non-condensing)
Elevation	≤ 4000 m
Protection class	IP66
Mechanical parameters	
Dimensions (W*H*D)	460 mm * 315 mm * 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 mm^2~1.5 mm^2, outside diameter 13 mm~18 mm RS485 cable: outdoor UV protection shielded twisted pair (STP) of 0.75 mm^2~1.5 mm^2, outside diameter 6 mm~18 mm Ethernet: CAT5 cable, outdoor UV protection shielded, outside diameter 6 mm~18 mm AI, DI: outdoor UV protection cable of 0.75 mm^2, outside diameter 4.5 mm~6 mm
Ordering information	
COM100E	The COM100E includes Logger1000B, AC adapter, SPD, Air switch, Night light Support of Ethernet, WLAN, communication Apply to Global

Energy Meter 610
DTSD1352-C/1 (6)A

Three-phase Smart Energy Meter





Type designation	Energy Meter 610
Electrical Parameter	
Nominal voltage	230 Vac
Input voltage range	90 – 277 Vac
Power consumption	<2 W (10 VA)
Max. operating current	5 A (Secondary current)
Grid frequency	50 Hz / 60 Hz
Measurement accuracy	Class 0.5
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-25 to 70 °C
Relative humidity	5 – 95 %, no condensation
Mechanical Data	
Dimensions (W * H * D)	96 * 96 * 78 mm
Weight	0.25 kg
Installation	35 mm DIN-rail

Type designation	DTSD1352-C/1 (6)A
Electrical Parameter	
Nominal voltage	230 Vac / 400 Vac
Input voltage range	57.7 / 100 Vac – 268 / 464 Vac
Power consumption	<2W (10 VA)
Max. operating current	3×1 (6) A (via CTs)
Grid frequency	50 Hz / 60 Hz
Measurement accuracy	Class 0.5 (Active)
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-25 to 55 °C
Relative humidity	0 – 95 %
Mechanical Data	
Dimensions (W * H * D)	126 * 91 * 74 mm
Weight	0.35 kg
Installation	35 mm DIN-rail

* DTSD1352-C/1 (6)A needs to be used with CT externally.

SP1400D

Optimizer

MORE PRODUCTION

- Up to 5-30 % increased power generation
- Maximum single string output power up to 19.5 kW

FLEXIBLE DESIGN AND EASY TO INSTALL

- Patented structure to save installation time up to 45 %
- High current design, long strings supported, effectively reducing BOS

SAFE AND RELIABLE

- Rapid shutdown function within 20 seconds
- Patented FHC (Fault Heat Control) circuit design, lower failure rates, longer service life

EFFICIENT O&M

- Rapid data refresh in 10 seconds
- Supported 7 Module-level IV diagnosis status for lifecycle management *



Type designation	SP1400D
Input	
Max. input voltage	125 V
MPPT voltage range	12.5 V – 105 V
Max. DC short-circuit current per channel (Isc)	30 A
Max. system voltage	1100 V
Overvoltage category	II
Output	
Rated output power	1400 W
Max. output current	23 A
Bypass working mode	Yes
Safety output voltage	1 V
Efficiency	
Max. efficiency	99.5 %
Weighted efficiency	99.0 %
General data	
Dimensions (W * H * D)	143 mm * 86 mm * 53 mm
Weight (including cables)	1.0 kg
Degree of protection	IP 68
Allowable relative humidity range (non-condensing)	0 % – 100 %
Operating ambient temperature range	-40 ℃ to 85 ℃
Max. operating altitude	4000 m
Mounting method	Snap-fit or bolt installation
Communication	PLC (≤ 450 m)
PV input / output connector	Stäubli MC4 / MC4 compatible (Optional)
PV input wire length	1.4 m (+ / -)
Output wire length	0.2 m (+) / 2.95 m (-)
Standard compliance	IEC 61000-6-2, IEC 61000-6-3, IEC 62109-1 (class II safety), IEC 60529
Enclosure material rating	UL94 V-0
Compatible products	SG25 / 30 / 33 / 36 / 40 / 50CX-P2 ** SG125CX-P2 ** SG150CX **
Configuration	
Number of supported PV modules in one string	8 - 50
The difference in the number of optimizers between parallel strings under the same MPPT path **	SG25-50CX-P2、SG125CX-P2: Parallel strings are not supported SG150CX : Maximum of 2 PV strings in parallel per MPPT channel
Maximum number of optimizers supported by a single communication device	240 : Winet-S2 4900*** : Logger1000 / Logger1000-EU

As a reference , the chart below is a recommended configuration of optimizer SP1400D system

Type designation	SG150CX	SG125CX-P2	SG50CX-P2	SG36CX-P2
Max No. of Optimizers per string	25	25	25	25
Min No. of Optimizers per string	4	4	4	4
Max. Power limitation per string	19.5 kW	19.5 kW	19.5 kW	19.5 kW
No. of Strings per inverter				
DC: AC Ratio ＜ 1.1	8-14	7-12	3-4	2-4
DC: AC Ratio 1.1-1.3	8-14	9-12	3-4	2-4

* Currently 7 kinds of typical diagnosis at module level are available

** Please consult Sungrow before placing an order on optimizers and compatible inverters

*** Please use multiple Logger1000 when over 4900 optimizers

Please connect to two RS485 ports when over 3000 optimizers for single Logger1000

SR20D-M

Rapid Shutdown

SAFE AND RELIABLE

- 20s Rapid shutdown, 10s pre-protection preventing risk
- Patented FHC bypass technology, loss reducing, overheat preventing
- 450 m bi-directional PLC communication, flexible in various scenarios

EASY TO INSTALL

- 20 A high current, compatible with diverse PV panels
- Quick-plug installation, saving installation time
- No dismantling of PV module for maintenance, lower O&M costs



Type designation	SR20D-M
Electrical	
Input channels / Number of PV modules	1 / 2
Input voltage range per channel	12 V – 125 V
Output voltage range	12 V – 125 V
Max.PV input current per channel	20 A
Max.DC short-circuit current per channel (Isc)	30 A
Max. system voltage	1100 V
Safety output voltage	1 V
Power consumption	< 1 W
Mechanical	
PV input / output connector	Stäubli MC4 / MC4 compatible (Optional)
Mouting method	Snap-fit or bolt installation
PV input wire length	1.4 m (+ / -)
PV output wire length	0.2 m (+) / 2.95 m (-)
Dimensions (W * H * D)	86 mm * 143 mm * 27 mm
Weight (including cables)	0.9 kg
Environmental & Protection	
Operating ambient temperature range	-40 ℃ – 85 ℃
Allowable relative humidity range (non-condensing)	0 % – 100 %
Degree of protection	IP68
Communication	PLC (≤ 450 m)
Compliance	
Standard compliance *	IEC/EN 62109-1 (class II safety), IEC/EN 61000-6-1/-2/-3/-4
Enclosure material rating	UL94 V-0
Compatibility	
Compatible products	SG25 / 30 / 33 / 36 / 40 / 50CX-P2 SG125CX-P2 SG150CX

* The product SR20D-M is in compliance with the rapid shut down requirements of referenced standards in UL3741 & UL1741

SP600S

Optimizer

MORE PRODUCTION

- Up to 30% increased power generation
- Up to 0.5% increased system efficiency with smart Shade-Proof technology

FLEXIBLE DESIGN AND EASY TO INSTALL

- Patented structure to save installation time up to 45%
- Optimize rooftops with different orientations and tilt angles to increase solar systems capacity

SAFE AND RELIABLE

- Rapid shutdown to 30V within 20 seconds
- IP68 protection and C5 anti-corrosion

EFFICIENT O&M

- Rapid data refresh in 10 seconds
- Module-level IV scanning and diagnosis *



Type designation	SP600S
Input	
Recommend input power	450 W - 730 W **
Max. input voltage	80 V
MPPT voltage range	8 V - 80 V
Max. DC short-circuit current (Isc)	20 A
Overvoltage category	II
Output	
Rated output power	600 W
Max. output voltage	Vmpp of solar panel ***
Max. output current	16 A
Bypass working mode	Yes
Safety output voltage per optimizer	1 V
Efficiency	
Max. efficiency	99.5 %
Weighted efficiency	99.0 %
General data	
Dimensions (W * H * D)	86 mm * 108 mm * 25 mm
Weight (including cables)	0.5 kg
Degree of protection	IP 68
Allowable relative humidity range (non-condensing)	0 % - 100 %
Operating ambient temperature range	-40 ℃ - 85 ℃
Max. operating altitude	4000 m
Mounting method	Push-in or bolt installation
Communication	PLC (< 350 m)
PV input / output connector	Stäubli MC4 / MC4 Compatible
PV wire length (short version)	Input : 150 mm (PV+) 150 mm (PV-) Output : 1200 mm
PV wire length (long version)	Input : 600 mm (PV+) 150 mm (PV-) Output : 1600 mm
Standard compliance	IEC61000-6-2, IEC61000-6-3, IEC62109-1 (class II safety)
Compatible products	SG2.0 / 2.5 / 3.0RS-S **** SG3.0 / 3.6 / 4.0 / 5.0 / 6.0 / 8.0 / 9.0 / 10RS **** SH3.0 / 3.6 / 4.0 / 5.0 / 6.0RS **** SG5.0 / 6.0 / 7.0 / 8.0 / 10 / 12 / 15 / 17 / 20RT-P2 SG25 / 30 / 33 / 36 / 40 / 50 / 125CX-P2 ****

* Currently 4 kinds of typical diagnosis at module level are available

** The rated power of modules under standard test conditions (STC) is recommended to be within 5% higher than the rated input power of the optimizer. If the rated power of modules under standard test conditions (STC) is higher than 700 W, the DC/AC ratio should be higher than 1.25

*** If output voltage of PV panel over 80V, the output voltage of optimizer will be limited to ≤ 80V

**** Please consult Sungrow before placing an order on optimizers and compatible inverters

Service & Support

With localized services at the core and an intelligent platform for support, seamless online and offline collaboration boosts efficiency and responsiveness, ensuring accessible, high-quality service.



520+
Service outlets

1000+
Technical Service Engineers

400+
Authorized Service Providers



Global Service Platform

Multilingual support with integrated service processes, enhancing user experience.

Local Service Centers

Providing fast and convenient spare parts, storage, training, fault analysis, and repair services tailored to local needs.

Call Center

Available 24/7, quickly responding to customer inquiries and providing instant solutions.

Spare Parts Center

Strategically managing global inventory to shorten supply times and promptly meet customer needs.

Training & Practice

Diversified training to empower distributors/partners and enhance overall operational capabilities; hands-on platform for intuitive demonstrations, improving practical skills.

Warranty Services

Customizable coverage up to 25 years, ensuring system availability, safeguarding plant capacity, and 24/7 customer support for stable power generation.

Typical Projects



Thailand

1.2 MW PV Plant



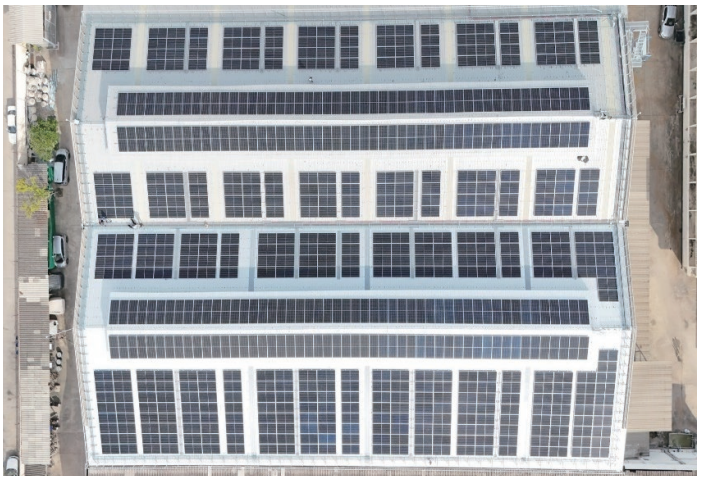
Thailand

250kW / 555kWh, Mircro-grid project,



Nakronphatum

260.61 kWp PV Project



Bangkok

400 kWp PV Project



Nonthaburi

2003 kWp PV Project



Buriram Province

999.35 kWp PV Project

Clean power for all

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