



RESIDENTIAL PV/ESS PLANT

SYSTEM SOLUTION

SUNGROW
Clean power for all



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2020 / 2021

ABOUT SUNGROW





Sungrow Power Supply Co., Ltd (“Sungrow”) is the world’s most bankable inverter brand with over 100 GW installed worldwide as of December 2019. 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, and residential applications, as well as internationally recognized floating PV plant solutions. With a strong 23-year track record in the PV space, Sungrow products power installations in over 60 countries, maintaining a worldwide market share of over 15%.

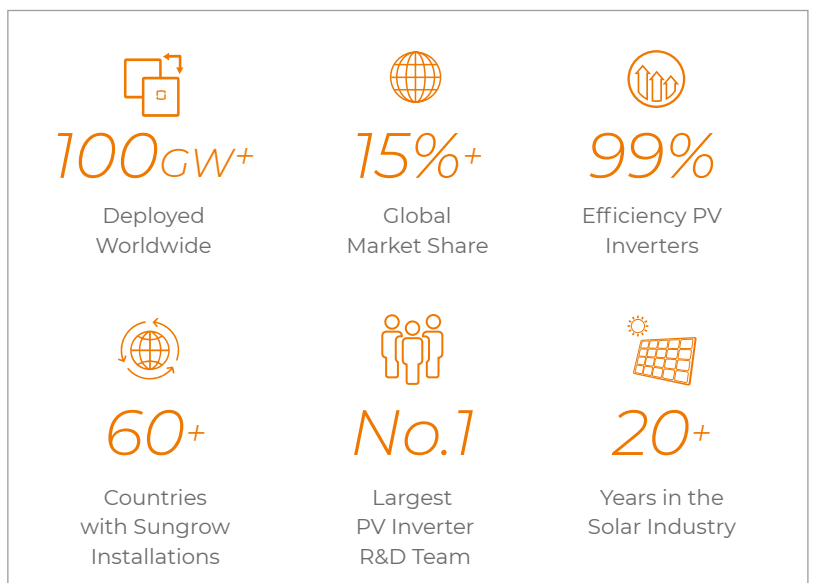
As a leader of innovation in the solar industry, Sungrow possesses a dynamic R&D team which consists of over 1000 employees. The Company has also invested its own in-house testing center approved by UL, CSA, TÜV Rheinland, and TÜV SÜD. In 2019, Sungrow launched the world’s largest inverter factory, once fully operational, the global annual production capacity will reach 50 GW, including 3 GW of India factory.

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

The World's Most Bankable Inverter Brand

No.1 supplier in financed projects • 100% bankable

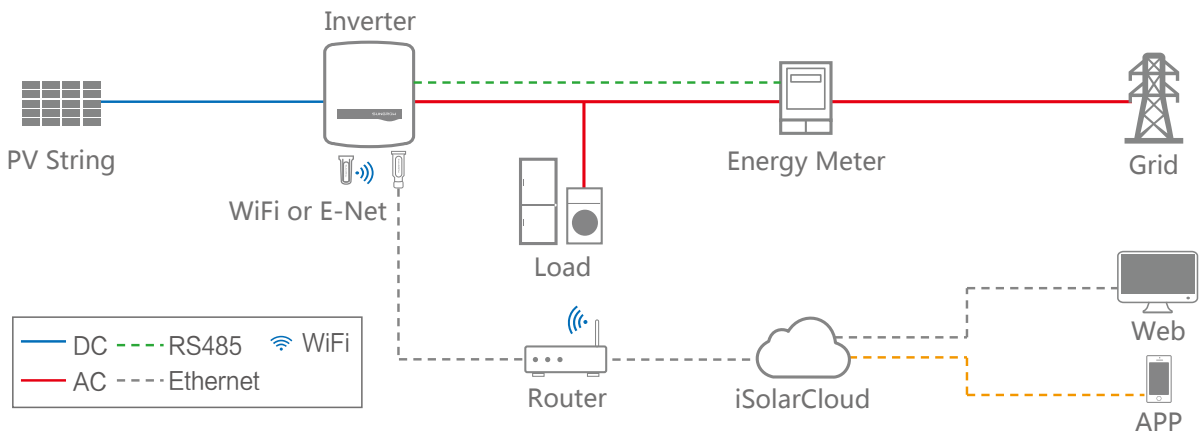
Source: BloombergNEF



Residential PV Plant System Solution



Solar System for Your Home



Recommend Products

Single Phase

Three Phase



SG2K/2K5/3K-S
SG3K/5K/8K-D
Premium



SG5/10KTL-MT



WiFi



E-Net



iSolarCloud



Single-phase
meter

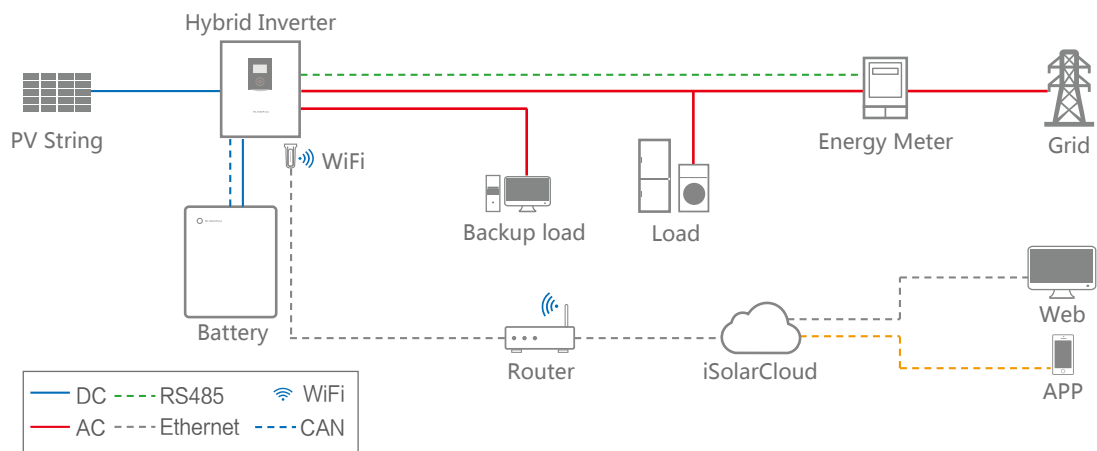


Three-phase
meter

Residential Energy Storage System Solution



Solar Batteries for Your Home



Recommend Products

Single Phase

Three Phase



SH5K-30



SH5.0/
8.0/10RT



SBP4K8
Battery



WiFi



iSolarCloud



Single-phase
meter

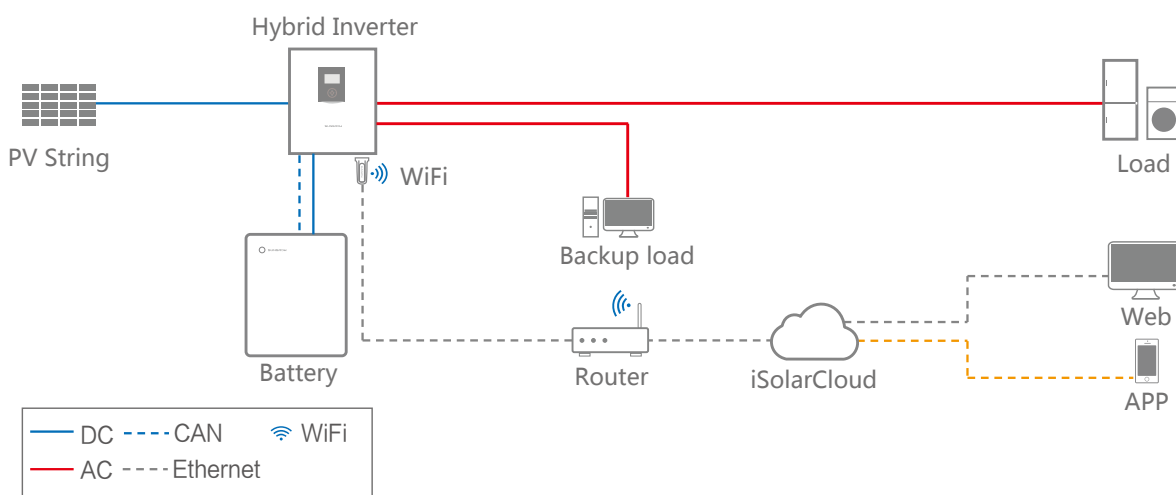


Three-phase
meter

Residential Energy Storage System Solution



Off-grid solution



Recommend Products

Single Phase



SH5K-30

Three Phase



SH5.0/
8.0/10RT



SBP4K8
Battery



WiFi

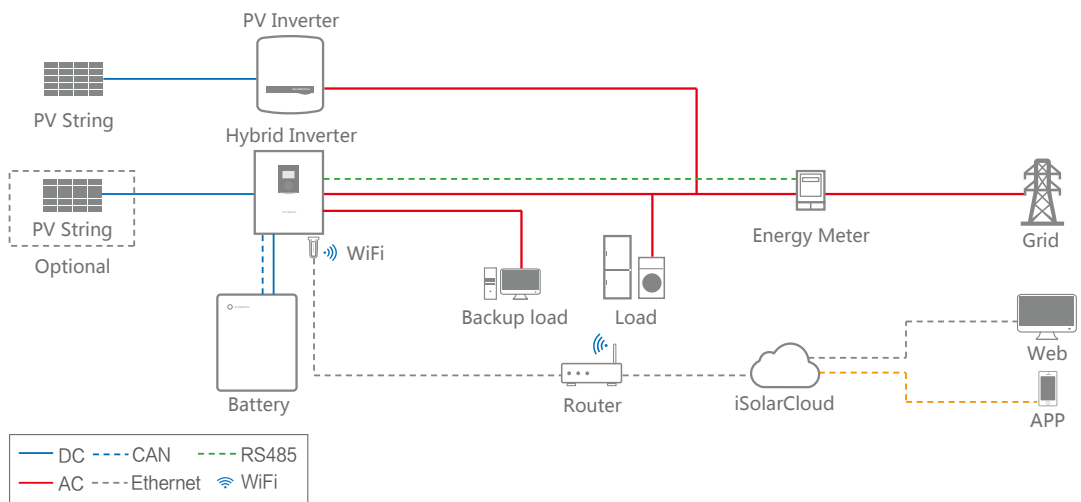


iSolarCloud

Residential Energy Storage System Solution



Retrofitting Solution



Recommend Products

Single Phase

Three Phase



SH5K-30



SH5.0/
8.0/10RT



SBP4K8
Battery



WiFi



iSolarCloud



Single-phase
meter



Three-phase
meter

SG2K-S/SG2K5-S/SG3K-S

SUNGROW

Residential Single Phase Inverter Premium



HIGH YIELD

- Higher yield with Max. efficiency 98.2 %, European efficiency 97.7 %
- 12.5 A MPPT current, and compatible with bifacial modules
- Flexible PV string configurations, DC/AC ratio up to 1.4

SMART MANAGEMENT

- 24H real-time loads monitoring
- Easy local and online monitoring via App or Web

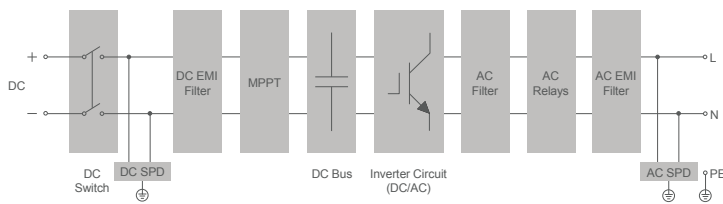
SAFE AND DURABLE

- Quick Arc Fault Circuit Interrupter
- Built-in Type II DC&AC surge protection device
- Built-in certified PV isolator

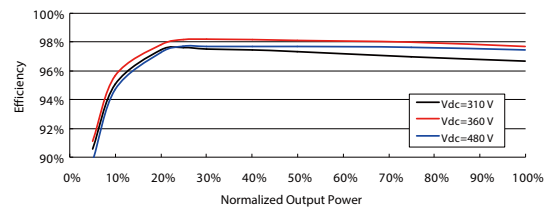
EASY AND USER FRIENDLY

- 8.5 kg compact design, plug and play installation
- Fast commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG2K-S	SG2K5-S	SG3K-S
Input (DC)			
Max. PV input voltage		600 V	
Min. PV input voltage / Startup voltage		90 V / 120 V	
Nominal input voltage		360 V	
MPP voltage range		90 V – 560 V	
MPP voltage range for nominal power	210 V – 480 V	260 V – 480 V	310 V – 480 V
No. of MPPTs		1	
Max. number of PV strings per MPPT		1	
Max. PV input current		12.5 A	
Max. PV short-circuit current		15 A	
Output Side Data			
AC output power	2000 VA	2500 VA	3000 VA
Max. AC output current	9.1 A	11.3 A	13.7 A
Nominal AC voltage		230 Vac	
AC voltage range		180 Vac – 276 Vac	
Nominal grid frequency		50 Hz / 60 Hz	
Grid frequency range		45 Hz – 55 Hz / 55 Hz – 65 Hz	
Total harmonic distortion (THD)		< 3 % (of nominal power)	
Power factor		> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / Connection phases		1 / 1	
Efficiency			
Max. efficiency		98.2 %	
European efficiency	97.2 %	97.5%	97.7 %
Protection			
PV reverse connection protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
Grid monitoring		Yes	
PV string current monitoring		Yes	
DC switch		Yes (meet AS60947.3:2018)	
AFCI		Yes	
Overvoltage protection		DC Type II / AC Type II	
General Data			
Dimensions (W*H*D)		300*370*125 mm	
Weight		8.5 kg	
Isolation method		Transformerless	
Ingress protection rating		IP65	
Power loss in night mode		< 3 W	
Operating ambient temperature		-25 °C to 60 °C (>45 °C derating)	
Allowable relative humidity		0 – 100 %	
Cooling method		Natural cooling	
Max. operating altitude		4000 m (> 2000 m derating)	
Display / Communication		LCD / WLAN	
PV connection type		MC4 (max. 6 mm ²)	
AC connection type		Plug and play connector (max. 6 mm ²)	
Certification	IEC62109-1, IEC62109-2, IEC62116, IEC61727, EN 61000-6-2, EN 61000-6-3, AS / NZS 4777.2		



Residential Single Phase Inverter



HIGH YIELD

- Higher yield with Max. efficiency 98.4 %, European efficiency 98.0 %
- 12.5 A MPPT current, and compatible with bifacial modules
- Flexible PV string configurations, DC/AC ratio up to 1.4

SMART MANAGEMENT

- 24H real-time loads monitoring
- Easy local and online monitoring via App or Web

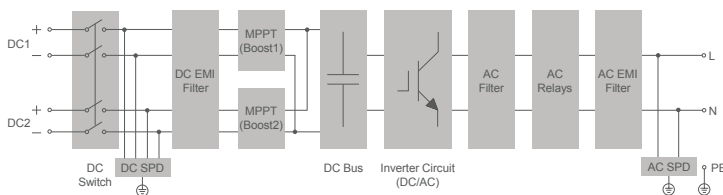
SAFE AND DURABLE

- Quick Arc Fault Circuit Interrupter
- Built-in Type II DC&AC surge protection device
- Built-in certified PV isolator

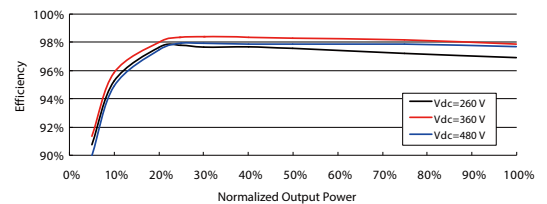
EASY AND USER FRIENDLY

- 11.5 kg compact design, plug and play installation
- Fast commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG3K-D	SG5K-D
Input (DC)		
Max. PV input voltage	600 V	
Min. PV input voltage / Startup voltage	90 V / 120 V	
Nominal input voltage	360 V	
MPP voltage range	90 V – 560 V	
MPP voltage range for nominal power	160 V – 480 V	260 V – 480 V
No. of MPPTs	2	
Max. number of PV strings per MPPT	1	
Max. PV input current	25 A (12.5 A / 12.5 A)	
Max. PV short-circuit current	30 A (15 A / 15 A)	
Output Side Data		
AC output power	3000 VA	4999 VA
Max. AC output current	13.7 A	21.7 A
Nominal AC voltage	230 Vac	
AC voltage range	180 Vac – 276 Vac	
Nominal grid frequency	50 Hz / 60 Hz	
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz	
Total harmonic distortion (THD)	< 3 % (of nominal power)	
Power factor	> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / Connection phases	1 / 1	
Efficiency		
Max. efficiency	98.4 %	
European efficiency	97.7 %	98.0 %
Protection		
PV reverse connection protection	Yes	
AC short circuit protection	Yes	
Leakage current protection	Yes	
Grid monitoring	Yes	
PV string current monitoring	Yes	
DC switch	Yes (meet AS60947.3:2018)	
AFCI	Yes	
Overvoltage protection	DC Type II / AC Type II	
General Data		
Dimensions (W*H*D)	360*390*133 mm	
Weight	11.5 kg	
Isolation method	Transformerless	
Ingress protection rating	IP65	
Power loss in night mode	< 3 W	
Operating ambient temperature	-25 °C to 60 °C (>45 °C derating)	
Allowable relative humidity	0 – 100 %	
Cooling method	Natural cooling	
Max. operating altitude	4000 m (> 2000 m derating)	
Display / Communication	LCD / WLAN	
PV connection type	MC4 (max. 6 mm ²)	
AC connection type	Plug and play connector (max. 6 mm ²)	
Certification	IEC62109-1, IEC62109-2, IEC62116, IEC61727, EN 61000-6-2, EN 61000-6-3, AS / NZS 4777.2	



Residential Single Phase Inverter



HIGH YIELD

- Higher yield with Max. efficiency 98.5 %, European efficiency 98.0 %
- 12.5 A MPPT current, and compatible with bifacial modules
- Flexible PV string configurations, DC/AC ratio up to 1.4

SMART MANAGEMENT

- 24H real-time loads monitoring
- Easy local and online monitoring via App or Web

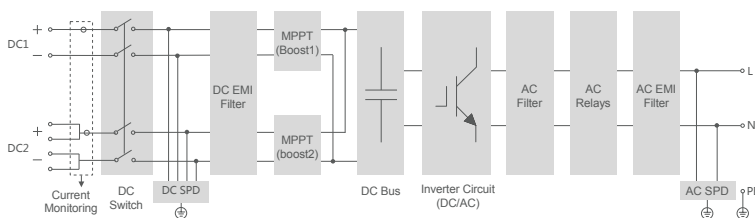
SAFE AND DURABLE

- Quick Arc Fault Circuit Interrupter
- Built-in Type II DC&AC surge protection device
- Built-in certified PV isolator

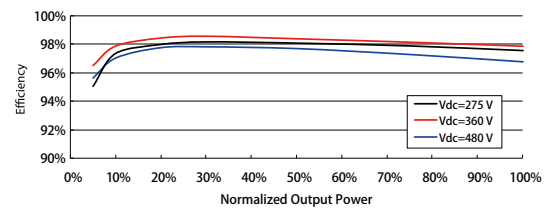
EASY AND USER FRIENDLY

- 15.5 kg compact design, plug and play installation
- Fast commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG8K-D
Input (DC)	
Max. PV input voltage	600 V
Min. PV input voltage / Startup voltage	90 V / 120 V
Nominal input voltage	360 V
MPP voltage range	90 V – 540 V
MPP voltage range for nominal power	275 V – 480 V
No. of MPPTs	2
Max. number of PV strings per MPPT	1 / 2
Max. PV input current	12.5 A / 25 A
Max. PV short-circuit current	15 A / 30 A
Output Side Data	
AC output power	8000 VA
Max. AC output current	34.8 A
Nominal AC voltage	230 Vac
AC voltage range	180 Vac – 276 Vac
Nominal grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz – 55 Hz / 55 Hz – 65 Hz
Total harmonic distortion (THD)	< 3 % (of nominal power)
Power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	1 / 1
Efficiency	
Max. efficiency	98.5 %
European efficiency	98.0 %
Protection	
PV reverse connection protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
PV string current monitoring	Yes
DC switch	Yes (meet AS60947.3:2018)
AFCI	Yes
Overvoltage protection	DC Type II/AC Type II
General Data	
Dimensions (W*H*D)	360*390*148 mm
Weight	15.5 kg
Isolation method	Transformerless
Ingress protection rating	IP65
Power loss in night mode	< 3 W
Operating ambient temperature	-25 °C to 60 °C (>45 °C derating)
Allowable relative humidity	0 – 100 %
Cooling method	Natural cooling
Max. operating altitude	4000 m (> 2000 m derating)
Display / Communication	LCD / WLAN
PV connection type	MC4 (max. 6 mm ²)
AC connection type	Plug and play connector (max. 6 mm ²)
Certification	IEC62109-1, IEC62109-2, EN 61000-6-2, EN 61000-6-3, AS / NZS 4777.2



SG5KTL-MT

Residential Three Phase Inverter



HIGH YIELD

- Industry leading efficiency of 98.4%
- Flexible PV string configurations with DC/AC ratio up to 1.4

SAFE AND DURABLE

- Built-in surge arresters and residual current protection
- High anti-corrosion rating at C5

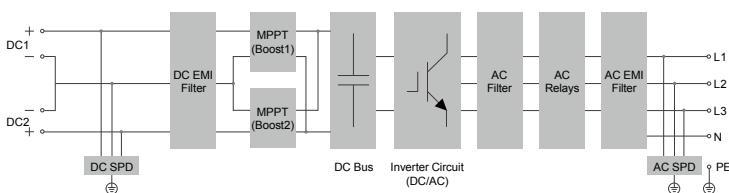
SMART MANAGEMENT

- Feature-rich online monitoring via App or Web
- Over-the-air firmware updates
- Gain energy flow transparency with Sungrow smart meter
- Accurate dynamic feed-in control

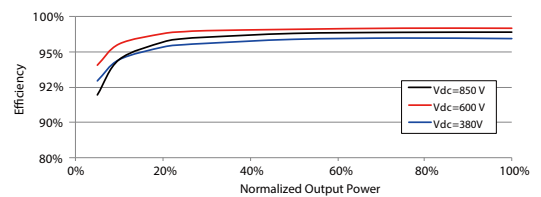
EASY AND USER FRIENDLY

- 20kg compact design
- Push-in connectors for time-saving installation
- Mounting plate with built-in level
- Fast and easy commissioning via App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG5KTL-MT
Input (DC)	
Max. PV input voltage	1100 V
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Nominal PV input voltage	600 V
MPP voltage range	200 – 1000 V
MPP voltage range for nominal power	240 – 850 V
No. of independent MPP inputs	2
Max. number of PV strings per MPPT	1
Max. PV input current	22A (11A / 11A)
Max. current for input connector	15 A
Max. DC short-circuit current	30 A (15A / 15A)
Output (AC)	
Nominal AC power	5500 VA@ 35 °C / 5000 VA @ 45 °C
Max. AC output current (at 35 °C)	8.5A
Nominal AC voltage	3 / N / PE, 230 / 400 V
AC voltage range	270 - 480 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 - 55 Hz, 60 Hz / 55 - 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % I _n
Power factor at nominal power	>0.99
Adjustable power factor	0.8 leading - 0.8 lagging
Feed-in phases / connection phases	3 / 3
Efficiency	
Max. efficiency / European efficiency	98.4% / 97.6%
Protection	
LVRT	Yes
Islanding Protection	Yes
DC reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
DC switch	No
AC switch	No
PV string current monitoring	Yes
Overvoltage protection	DC Type II / AC Type II
General Data	
Dimensions (W*H*D)	370*485*160 mm
Weight	20 kg
Isolation method	Transformerless
Degree of protection	IP65
Night power consumption	< 1 W
Operating ambient temperature range	-25 to 60 °C (> 45 °C derating)
Allowable relative humidity range	0 – 100 % (non-condensing)
Cooling method	Natural cooling
Max. operating altitude	4000 m (> 3000 m derating)
Display / Communication	LED, Bluetooth + APP / RS485, (optional: WiFi, Ethernet)
DC connection type	MC4 (Max. 6 mm ²)
AC connection type	Plug and play connector (Max. 6 mm ²)
Compliance	EN 62109-1, EN 62109-2, IEC 61727, IEC 62116, IEC 61000-3-11, IEC 61000-3-12, VDE-AR-N 4105:2018, AS/NZS 4777.2, EN 50549-1:2019, EN 50438, C10/11, G59/3
Grid Support	Active & reactive power control and power ramp rate control



SG10KTL-MT

Residential Three Phase Inverter



HIGH YIELD

- Max. efficiency 98.6%, European efficiency 98.1%
- 4 string inputs, flexible PV configuration

SMART MANAGEMENT

- Touch free commissioning and monitoring with smartphone
- One-click local and remote firmware update
- Export power control with smart energy meter

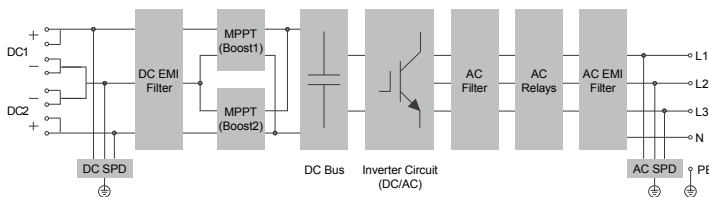
SAFE AND DURABLE

- High anti-corrosion with aluminum alloy die casting
- Built-in SPD and residual current protection

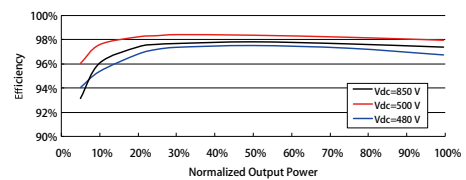
EASY INSTALLATION

- Plug and play connectors
- 24kg compact design

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SG10KTL-MT
Input (DC)	
Max. PV input voltage	1100 V
Min. PV input voltage / Start-up input voltage	200 V / 250 V
Nominal PV input voltage	600 V
MPP voltage range	200 – 1000 V
MPP voltage range for nominal power	320 – 850 V
No. of independent MPP inputs	2
Max. number of PV strings per MPPT	2
Max. PV input current	44 A (22 A / 22 A)
Max. current for input connector	15 A
Max. DC short-circuit current	60 A (30 A / 30 A)
Output (AC)	
AC output power	10000 VA @ 45 °C
Max. AC output current	16.5 A
Nominal AC voltage	3 / N / PE, 230 / 400 V
AC voltage range	270 V – 480 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % I _n
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / connection phases	3 / 3
Efficiency	
Max. efficiency / Euro. efficiency	98.6 % / 98.1 %
Protection	
DC reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
DC switch	No
AC switch	No
PV string current monitoring	Yes
Overvoltage protection	DC Type II / AC Type II
General Data	
Dimensions (W*H*D)	370*485*210 mm
Weight	24 kg
Isolation method	Transformerless
Degree of protection	IP65
Night power consumption	< 1 W
Operating ambient temperature range	-25 to 60 °C (> 45 °C derating)
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: WiFi, Ethernet
DC connection type	MC4 (Max. 6 mm ²)
AC connection type	Plug and play connector (Max. 16 mm ²)
Compliance	EN 62109-1, EN 62109-2, IEC61000-6-2, IEC 61000-6-3, IEC 62116, AS 4777.2
Grid Support	Active & reactive power control and power ramp rate control



Residential Hybrid Single Phase Inverter for Low Voltage Battery



FLEXIBLE APPLICATION

- Convenient for new installation and retrofit
- Compatible with both lithium-ion and lead-acid batteries
- Energy trading ready with 3rd-party EMS to maximise ROI

SMART MANAGEMENT

- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings

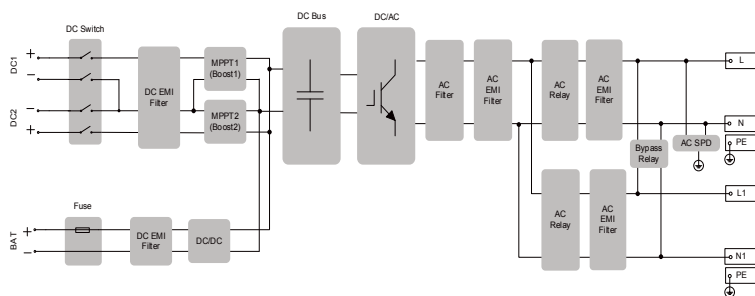
SAFE AND RELIABLE

- Built-in surge arresters and residual current protection
- Durable finish with high anti-corrosion enclosure

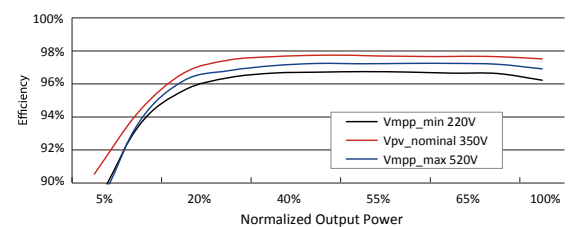
EASY INSTALLATION

- Cleaner and simpler install with EPS built-in to inverter
- Custom-fit mounting plate with built-in level
- Fast and easy commissioning via front panel LCD or App

CIRCUIT DIAGRAM



EFFICIENCY CURVE



Type designation	SH5K-30
DC Input Data	
Max. PV input power	6700 W
Max. PV input voltage	600 V
Startup voltage	125 V
Nominal input voltage	350 V
MPP voltage range	125 V – 560 V
MPP voltage range for nominal power	240 V – 520 V
No. of MPPTs	2
Max. number of PV strings per MPPT	1 / 1
Max. PV input current	22 A (11 A / 11 A)
Max. current for input connector	12 A
Short-circuit current of PV input	24 A (12 A / 12 A)
AC Input and Output Data	
Nominal AC output power	5000 W *1
Nominal AC output current	22.7 A *2
Max. AC output apparent power	5000 VA
Max. AC output current	22.7 A *2
Max. AC input power	8000 W
Max. AC input current	36.4 A *3
Nominal AC voltage	220 Vac / 230 Vac / 240 Vac
AC voltage range	176 Vac~276 Vac
Nominal grid frequency	50 Hz / 60 Hz
Grid frequency range	45~55 Hz / 55~65 Hz (this may vary with grid standards)
THD (Total Harmonic Distortion)	<3 % (of nominal power)
DC current injection	<0.5 % (of nominal current)
Power factor	>0.99 / 0.8 leading to 0.8 lagging
Protection	
Anti-islanding protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
DC switch (solar)	Yes (meet AS60947.3:2018)
DC fuse (battery)	Yes
Overvoltage Category	III [MAIN], II [PV] [BATTERY]
Battery Data	
Battery type	Li-ion* battery / Lead-acid battery
Battery voltage	48 V (32 V~70 V)
Max. charge / discharge current	65 A / 65 A
System Data	
Max. efficiency	> 97.7 %
Max. European efficiency	> 97.1 %
Max. charge / discharge efficiency	> 94.0 %
Isolation method (solar)	Transformerless
Isolation method (battery)	HF
Ingress protection rating	IP65
Operating ambient temperature range	-25 °C~60 °C (>45 °C derating)
Relative humidity range	0%~100%
Cooling method	Natural convection
Max. operating altitude	2000m
Display	Graphic LCD
Communication	2 × RS485, WiFi, CAN, Ethernet
Power management	1 × Digital Output
PV connection type	MC4
AC connection type	Clamping yoke connector
Certification	AS/NZS 4777.2, IEC 62109-1, IEC62109-2, IEC62477-1, EN 61000-6-1/-3
Mechanical Data	
Dimensions (W * H * D)	457 mm * 515 mm * 170 mm
Mounting method	Wall-mounting bracket
Weight	22 kg
Backup Data	
Nominal voltage	220 Vac / 230 Vac / 240 Vac
Frequency range	50 Hz / 60 Hz
Switch time to emergency mode	<20 ms
Backup nominal AC output power	3000 W / 3000 VA
Max. output power	5000W / 5000 VA
Max. output power (battery)	3000 W / 3000 VA
Peak output power,Duration	6000 VA, 10S

*: sungrow provides Samsung SDI battery as standard solution.

*1: AS4777 : 4990 W, 4990 VA / *2: AS4777 : 21.7 A / *3: AS4777 : 34.8 A



SH5.0/8.0/10RT **New**

SUNGROW

Residential Hybrid Three Phase Inverter for High Voltage Battery



FLEXIBLE APPLICATION

- 150–600V wide battery voltage range
- Supports parallel connection with full communication between inverters
- Provides 100% unbalance loads in backup mode

ENERGY INDEPENDENCE

- Seamless transition to backup mode for protection against power outages
- Fast charging / discharging to meet the demand of higher consumption

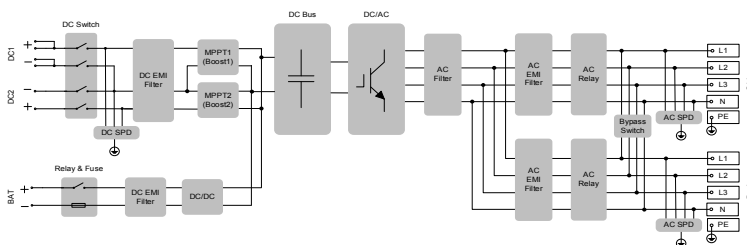
SMART MANAGEMENT

- High self-consumption with optimised built-in EMS
- Free online monitoring to enhance energy management for end user, installer and retailer
- Remote firmware update and customisable settings

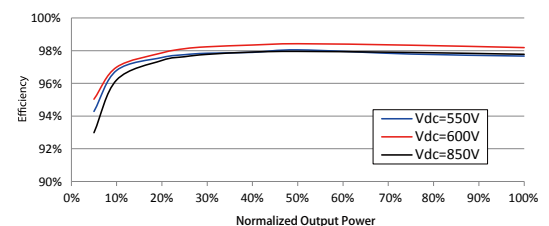
EASY INSTALLATION

- Unique push-in connectors for time-saving installation
- Touch free commissioning with smartphone
- Lightweight and compact

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SH10RT)



Type designation	SH5.0RT	SH8.0RT	SH10RT
PV Input			
Max. PV input power	7500 W	12000 W	15000 W
Max. PV input voltage	1000 V	1000 V	1000 V
Startup voltage	180 V	250 V	250 V
Nominal input voltage	600 V	600V	600 V
MPP voltage range	150V – 950 V	200 V – 950 V	200 V – 950 V
MPP voltage range for nominal power	210V – 850 V	330V – 850V	280 V – 850 V
No. of MPPTs		2	
Max. number of PV strings per MPPT	1 / 1	1 / 1	1 / 2
Max. PV input current	25 A (12.5 A / 12.5 A)	25 A (12.5 A / 12.5 A)	37.5 A (12.5 A / 25 A)
Max. current for input connector		16A	
Short-circuit current of PV input	32 A (16 A / 16 A)	32 A (16 A / 16 A)	48 A (16 A / 32 A)
AC Input and Output			
Nominal AC output power	5000 W	8000 W	10000 W
Nominal AC output current	7.3 A	11.6 A	14.5 A
Max. AC output apparent power	5000 VA	8000 VA	10000 VA
Max. AC output current	7.6 A	12.1 A	15.2 A
Nominal AC voltage		3 / N / PE, 220 / 380 V; 230 / 400 V; 240 / 415 V	
AC voltage range		270 – 480V	
Nominal grid frequency / Grid frequency range		50Hz / 45 – 55Hz, 60Hz / 55 – 65Hz	
THD		<3% (of nominal power)	
DC current injection		<0.5% In	
Power factor		>0.99 / 0.8 leading to 0.8 lagging	
Protection			
LVRT		Yes	
Anti-islanding protection		Yes	
AC short circuit protection		Yes	
Leakage current protection		Yes	
DC switch (solar)		Yes	
DC fuse (battery)		Yes	
Overvoltage category		III [MAINS], II [PV] [BATTERY]	
SPD		DC Type II / AC Type II	
Battery Data			
Battery type		Li-ion battery	
Battery voltage		150 V – 600 V	
Max charge / discharge current		30 A* / 30 A*	
Max charge / discharge power	7500 W / 6000 W	10600 W / 10600 W	10600 W / 10600 W
System Data			
Max. efficiency	98.0 %	98.4 %	98.4 %
European efficiency	97.2 %	97.9 %	97.9 %
Isolation method (solar / battery)		Transformerless / Transformerless	
Ingress protection rating		IP65	
Operating ambient temperature range		-25 °C to 60 °C	
Allowable relative humidity range (non-condensing)		0% – 100%	
Cooling method		Natural convection	
Max. operating altitude		4000 m (>3000 m derating)	
Display		LED	
Communication		RS485, WLAN, Ethernet, CAN, 4×DI, 1×DO	
DC connection type		0% – 100%	
AC connection type		Plug and play connector	
Compliance		IEC / EN 62109-1, IEC / EN 62109-2, IEC / EN 61000-6-1, IEC / EN 61000-6-3, IEC / EN 61000-3, EN 62477-1, VDE-AR-N-4105, AS/NZS 4777.2	
Mechanical Data			
Dimensions (W * H * D)		460 * 540 * 170 mm	
Mounting method		Wall-mounting bracket	
Weight		27 kg	
Backup Data			
Nominal voltage		3 / N / PE, 220 Vac / 230 Vac / 240 Vac	
Frequency range		50 Hz / 60 Hz	
Total harmonic factor output voltage		2%	
Switch time to emergency mode		< 20ms	
Nominal output power	5000 W / 5000 VA	8000 W / 8000 VA	10000 W / 10000 VA
Peak output power	6000 W / 6000 VA, 5 min 10000 W / 10000 VA, 10 s	12000 W / 12000 VA, 5 min	12000 W / 12000 VA, 5 min
Parallel operation		Yes / 2	

*: Depending on the connected battery



SBP4K8

SUNGROW

48V Lithium ion Battery



INNOVATIVE AND RELIABLE

- High reliability and safety with prismatic cells from Samsung
- Robust BMS provides multi-protection at both cell level and system level
- Over 95% depth of discharge to maximise the usable capacity

EASY INSTALLATION

- Suitable for both free-standing and wall-mountable installation
- Simple setup for multiple batteries
- One-click online firmware update

INTELLIGENT MANAGEMENT

- Remote monitoring of battery status with App and web portal
- Smart hibernation technology to maintain battery state of health



Type designation	SBP4K8
Data	
Total energy capacity	4.8 kWh
Battery capacity	94 Ah
Nominal voltage	51.52 V
Battery type	Lithium ion
Voltage range	44.8 V–58.1 V
Max. charge current	47 A
Max. discharge current	80 A
Round-trip efficiency (RTE)	> 95 %
Depth of discharge (DOD)	> 95 %
Cell balance technique	Bi-directional active cell balancing
Cell balance current	5 A
Scalability	Yes, up to 14.4 kWh
Over/under voltage protection	Yes
Over current protection	Yes
Over/under temperature protection	Yes
Short-circuit protection	Yes
Mounting type	Free-standing / wall-mountable
Weight	48 kg
Dimensions (W x H x D)	510 mm x 565 mm x 190 mm
Communication	CAN
Firmware upgrade	Local and remote
Current consumption in sleep mode	< 30 μ A
Noise	< 30 dB
Ingress protection rating	IP55
Relative humidity range	0–85 %, non-condensing
Operating temperature	-10°C to 45°C
Storage temperature	-20°C to 50°C
Altitude	< 2000 m
Storage period	Less than 6 months
Cooling strategy	Natural convection
Certification	UN38.3, IEC62619, IEC-61000-6-1/3, SAA
Applicable inverter type	SH3K6, SH4K6, SH5K-20, SH5K-30



Sungrow Energy Meter Selection Guide

The Sungrow Energy Meter presents a clear overview of energy consumption in combination with Sungrow iSolarCloud. The Sungrow Energy Meter is ideally suited for use with the Sungrow single-phase inverters and three-phase string inverters.

Type	Inverter type of application	CT requirement
S100	SG2/2.5/3K-S, SG3/5/8K-D, SH5K-20, SH5K-30	No, S100 itself owns CT.
DTSU666	SG2/2.5/3K-S, SG3/5/8K-D, SH5K-20, SH5K-30, SG5/10KTL-MT, SG15/20KTL-M, SG30CX, SH5.0/8.0/10RT	No, this meter integrated CT inside.
T65	SH5.0/8.0/10RT	No, this meter integrated CT inside.
DTSD1352-C/1(6)A	SG30CX*, SG50CX, SG110CX. * only applicable for the phase current > 80A	Yes, Sungrow meters are compatible with CTs as below: IPD CTME-3 Series for Single Turn Primary a. 150A, CTME3150 b. 200A, CTME3200 c. 300A, CTME3300 d. 400A, CTME3400 e. 500A, CTME3500 SOCOMEK TCA 21/TCA14 SERIES a. 75A, TCA21-75/5 b. 80A, TCA21-80/5 c. 100A, TCA21-100/5 d. 125A, TCA21-125/5 e. 150A, TCA21-150/5 f. 200A, TCA21-200/5 SOCOMEK TCB 18 - 20 SERIES a. 100A, 192T3310 b. 150A, 192T3315 c. 200A, 192T3320 d. 250A, 192T3325

Above CTs are only recommended for customers. Customers also can select the CTs by themselves.

Selection criteria for choosing the CT's:

- **Primary current**

The CT's primary current should be equal to or greater than the maximum expected AC current from the grid, per phase. The closer the expected AC current is to the chosen primary current value, the more precise the measurement will be.

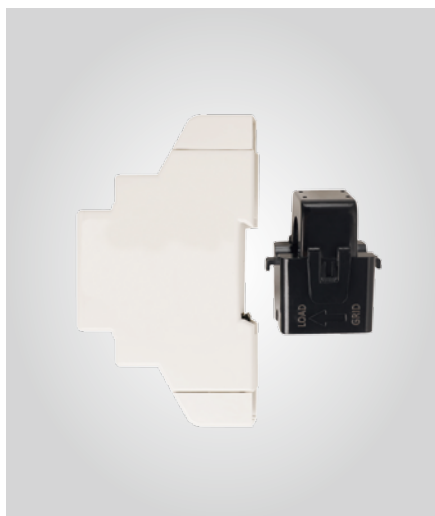
- **Secondary current**

5 A

- **Accuracy class**

Class 0.5 or better (Class 0.2, etc.) is recommended. Class 0.5 is equivalent to a deviation of ± 0.5% of the secondary current at maximum power.

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 to 75 °C
Relative humidity	0 - 95 %
Mechanical Data	
Dimensions (W * H * D)	18 * 117 * 65 mm
Weight	0.2 kg
Installation	35 mm DIN-rail

T65 Three-phase Smart Energy Meter



Type designation	T65
Electrical Parameter	
Nominal voltage	230 Vac / 400 Vac
Input voltage range	180 Vac - 286 Vac
Power consumption	<2W (10 VA)
Max. operating current	65 A
Grid frequency	50 Hz
Measurement accuracy	Class 1
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-25 to 70 °C
Relative humidity	0 - 95 %
Mechanical Data	
Dimensions (W * H * D)	85 * 72 * 72 mm
Weight	0.4 kg
Installation	35 mm DIN-rail

DTSU666 Three-phase Smart Energy Meter



Type designation	DTSU666
Electrical Parameter	
Nominal voltage	230 Vac / 400 Vac
Input voltage range	57.7 / 100 Vac - 265 / 460 Vac
Power consumption	< 1.5W (6 VA)
Max. operating current	80 A
Grid frequency	50/60 Hz
Measurement accuracy	Class 1
Interface and communication	RS485
Environmental Condition	
Ingress protection rating	IP20
Operating ambient temperature	-30 °C - +60 °C
Relative humidity	75 %
Mechanical Data	
Dimensions (W * H * D)	72 * 65* 100 mm
Weight	0.4 kg
Installation	35 mm DIN-rail

DTSD1352-C/1 (6)A* Three-phase Smart Energy Meter



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.



WiFi Communication Module



SMART AND FLEXIBLE

- Supporting mainstream WLAN networking protocols, with favourable compatibility

SIMPLE AND EFFICIENT

- Supporting remote operation and maintenance functions including remote upgrading, parameter setting
- Supporting direct connection configuration with APP, quickly and easily
- Plug and play, quick installation

SAFE AND RELIABLE

- Professional design in wireless communication, and high quality signal
- IP65, wide temperature range

Type designation	WiFi
Basic data	
Supported device number	1
Display	LED * 3
Configuration	APP
Communication	
RS485	1 port
WLAN	2.4 GHz 802.11 b / g / n
Power supply	
Input voltage	5.0 ± 0.25 Vdc
Power consumption	Typ. 2 W
Ambient Parameters	
Operating temperature	-25 °C to 60 °C
Allowable relative humidity range (non-condensing)	≤ 95 %
Max. operating altitude	≤ 4000 m
Protection class	IP65
Mechanical parameters	
Dimensions (W * H * D)	48 mm * 97 mm * 36 mm
Installation	Plug-in type

LAN Communication Module



SMART AND FLEXIBLE

- Automatic network configuration with DHCP, transmission without configuration
- Stable data connection where wireless communication is not possible

SIMPLE AND EFFICIENT

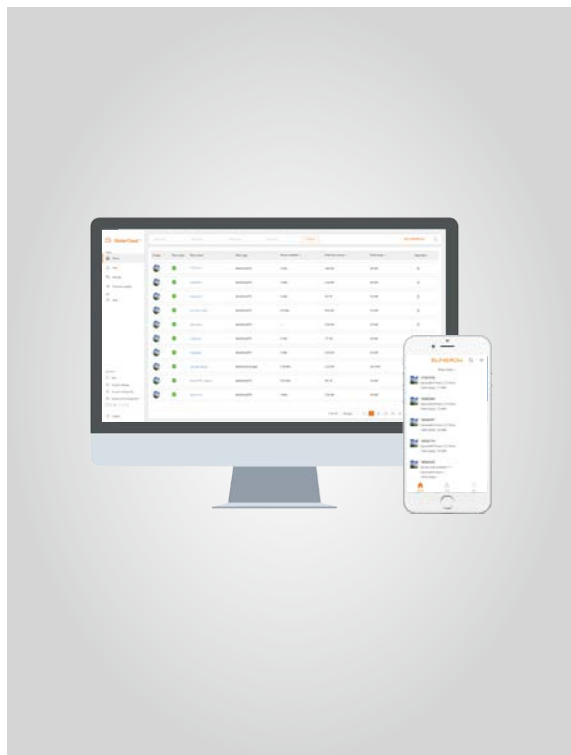
- Support of remote operation and maintenance functions including remote firmware updates and parameter setting
- Plug and play, quick installation

SAFE AND RELIABLE

- Wired transmission, safe and reliable
- IP65, wide temperature range

Type designation	E-Net
Basic data	
Max. number of supported devices	1
LED display	LED × 3
Configuration	Built-in Web server
Communication	
RS485	1 port
Ethernet	1×RJ45, 10/100 Mbps
Power supply	
Input voltage	5 VDC, 0.4 A
Power consumption	<2 W
Ambient conditions	
Operating temperature	-25 °C- 60 °C
Relative air humidity	≤95 % (non-condensing)
Elevation	≤4000 m
Protection class	IP65
Mechanical parameters	
Dimensions (W * H * D)	48 mm * 127 mm * 36 mm
Mounting type	Plug and Play





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

FLEXIBLE AND FRIENDLY

- Centralized power plant management, low O&M cost
- Flexible data access, Web portal and APP, remote or local maintenance
- Easy account management, share plants with co-workers and friends

SIMPLE AND EFFICIENT

- Scan QR to create plant or get support
- Accurate positioning of faults, quick trouble shooting, real-time push of information to reduce the time to resolve faults
- Parameter setting, firmware updates, automated data reports

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, Japanese, German, French, Spanish, Portuguese, Italian, Dutch, Korean
Data storage time	>25 years
Storage capability	>100PB
System reliability	99.99%
Minimum Web requirements	
Browser	IE11, Chrome 56, Safari 11, Firefox 60
Resolution	1366 * 768, 1920 * 1080 recommended
Minimum Operating Environment for APP	
Minimum OS	Android 4.4, iOS 9.3
Resolution	1920 * 1080, 2001 * 1125, 1280 * 720



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