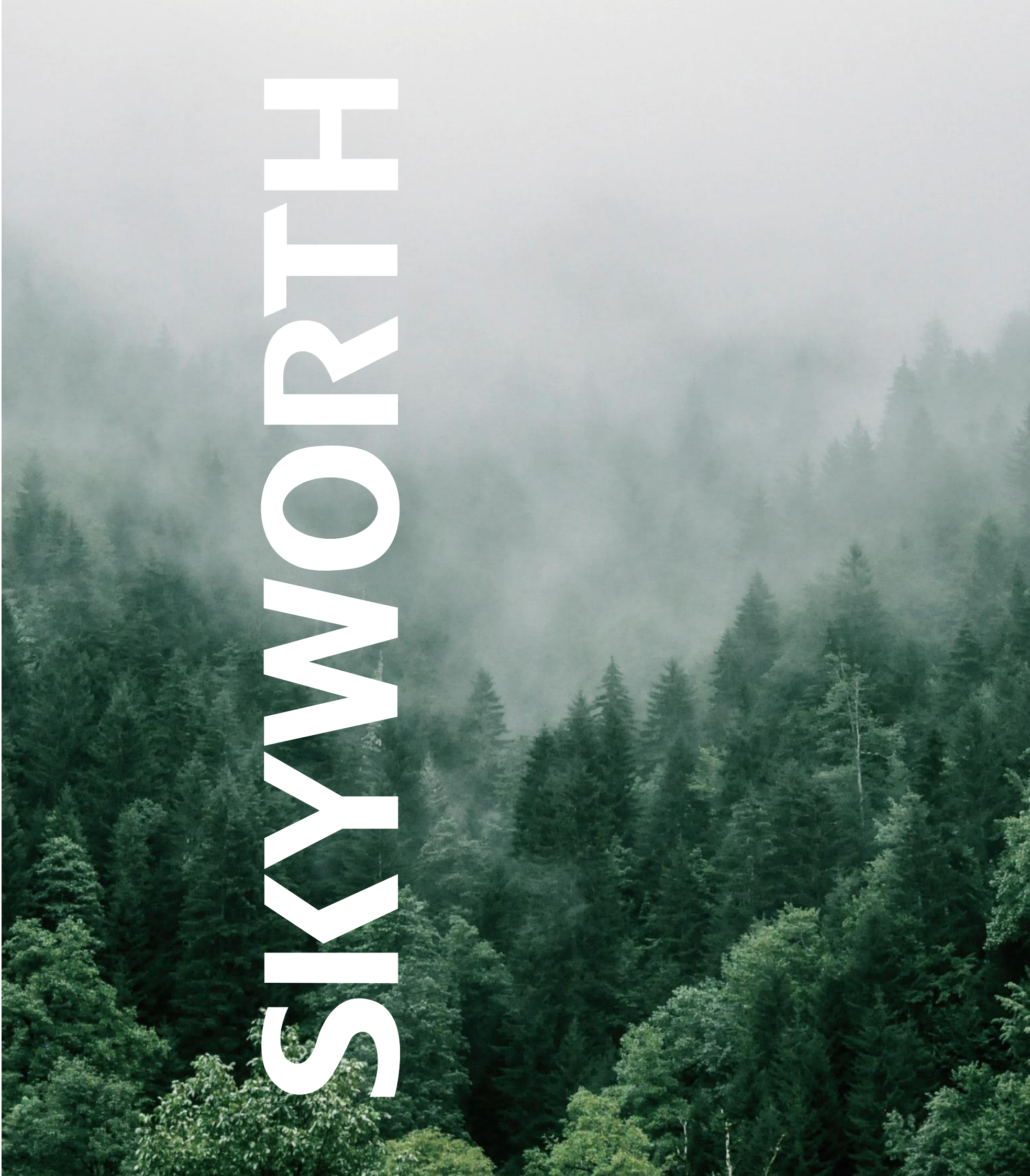




SKYWORTH

SKYWORTH Group

2 Listed Company

SKYWORTH Group (00751.HK)

SKYWORTH Digital (000810.SZ)

Skyworth Group, founded in 1988, is a globally competitive smart home appliances and information technology backbone enterprise ranking 271st in **[the Fortune China 500 in 2025]**. Skyworth specializes in four key domains: New Energy, Smart Household Appliances, intelligent system technology, modern service & others.



30,000⁺

Employees (2023)



120⁺

Countries and Regions



9.6⁺

Billion USD (2023)

About SKYWORTH

Skyworth Photovoltaic — a pioneering brand under Skyworth Group, stands at the forefront of global renewable energy innovation, delivering end-to-end solar solutions tailored for residential, commercial, and industrial applications. As an industry leader, we offer comprehensive one-stop solar solutions that integrates expert consultation, precision engineering, and full lifecycle operations and maintenance. Our self-developed solutions include high-efficiency solar panels, inverters, energy storage systems, and reliable mounting systems.

Leveraging Skyworth's legacy of innovation and quality control, Skyworth Photovoltaic delivers solutions that are efficient, reliable, and of the highest quality. Skyworth Photovoltaic's commitment to originality and excellence has earned us recognition in international markets such as Germany, Italy, the UK, Brazil, and Senegal.



200⁺
Technical R&D team



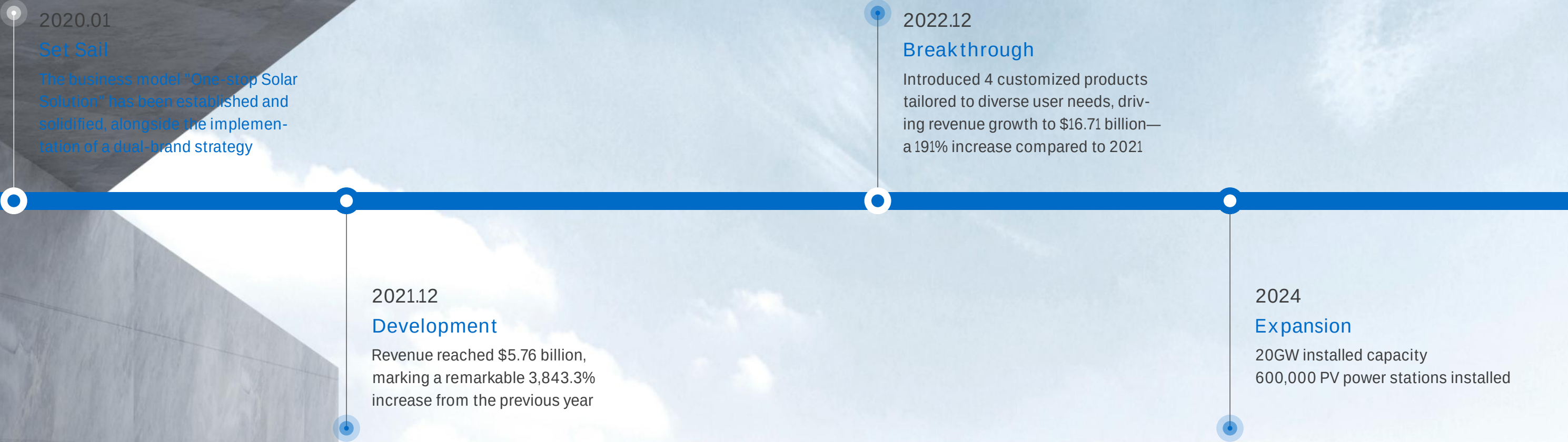
1,000⁺
Project team



4,500⁺
Operation and service team

Milestone of SKYWORTH Photovoltaic

Established in 2020, Skyworth embarked on a mission to pioneer the Zero Carbon Smart Life initiative through the implementation of the "Skyworth PV and Solavita Dual Brand Strategy".



Core Business Models

As a leading global renewable energy developer, service provider and energy solutions provider, Skyworth photovoltaic is actively shaping the future of energy. With a strong presence in EPC services and one-stop product solutions, Skyworth photovoltaic delivers high-quality, reliable, and innovative energy solutions. Skyworth's commitment to originality and excellence has earned widespread recognition in international markets such as Germany, Italy, the UK, Brazil, and Senegal.



Technology -Embedded EPC Services

Skyworth photovoltaic delivers end-to-end Engineering, Procurement, and Construction (EPC) solutions, encompass the entire project lifecycle from conceptual design to completion, ensuring seamless project execution.



Construction Mastery

Turnkey installation | Real-time progress tracking
Professional Team
Systematic construction process



Smart Procurement

Global supplier network | Tier-1 component selection
Inventory management
Cost-competitive equipment sourcing



Engineering Precision

Site feasibility analysis | AI-powered system design
Grid compliance & permitting | Customized system design



Financial Service

Solar Revenue
Solar Project investment

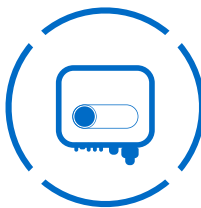
Platform-Based Product Solution

As one of only few manufacturers globally mastering the full-chain R&D of solar+storage systems, Skyworth's in house products covers:



PV Modules

High Efficiency
High Reliability
High ROI
Low Degradation



Inverters

High Efficiency
IP65 / 66 Protection
Modular Design
AC and DC Surge Protection



Mounting Systems

Easy installation
Stable structure
Environmental Friendly
Long Lifespan

SKYWORTH SMART R&D

Skyworth brings together experienced experts and industry scholars, establishing a three-level technical team led by industry pioneers and supported by researchers with deep R&D expertise.

A blue circular graphic with a dashed border containing the text "200+" in white.

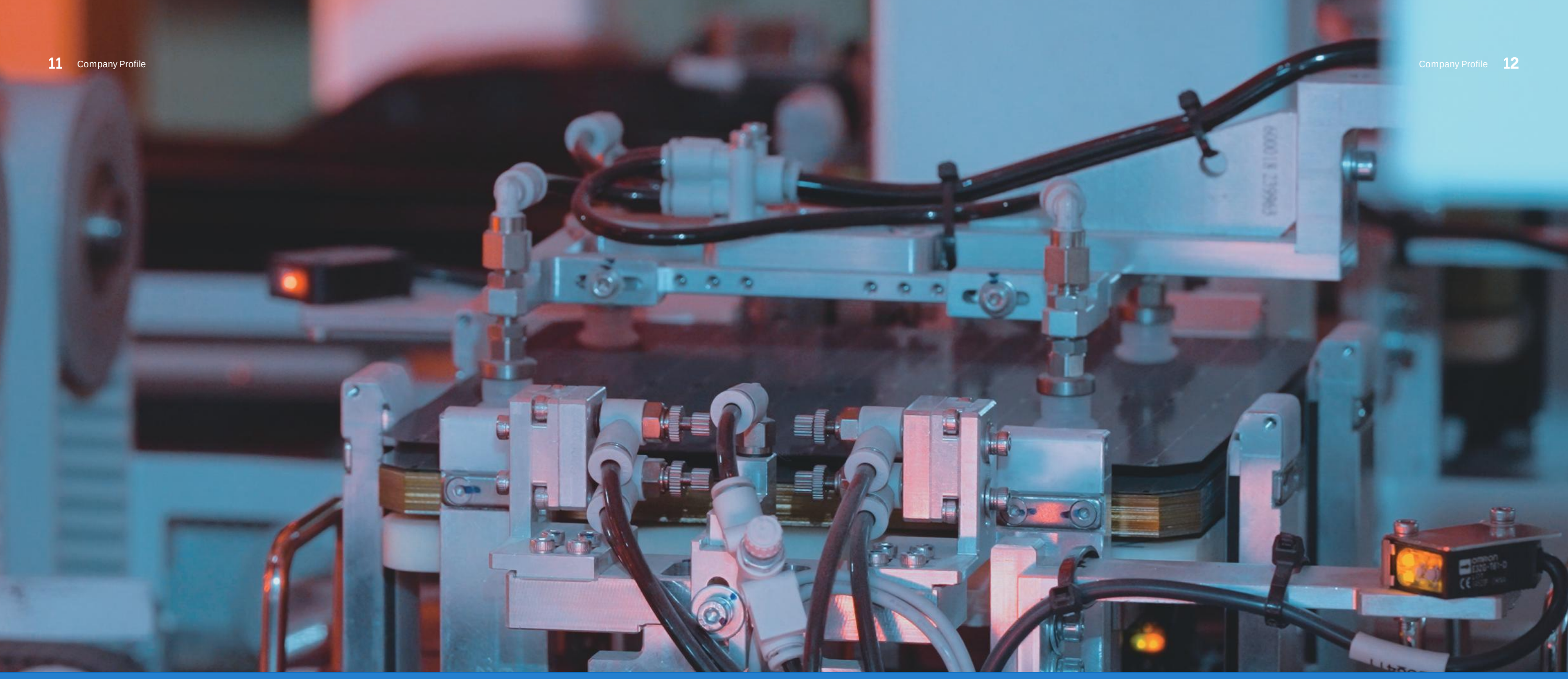
**Talent team
members**

A blue circular graphic with a dashed border containing the text "100+" in white.

**Technology
Patents**

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**Solar Industry
Experience**



SKYWORTH Quality Manufacturing

AI is leveraged to enhance the production of solar panels, inverters, and energy storage systems, strengthening product competitiveness and providing a comprehensive one-stop solution.

6GW

Inverters

3GWh

Energy
Storage System

5GW

Module

500,000 tons

Mounting System

Global Presence



41 → Global Branches

19 → Manufacturing Bases

15 → R&D Centers

30 → Regions & Countries

With a comprehensive global network, Skyworth's robust infrastructure empowers Skyworth to deliver localized expertise, efficient supply chains, and pioneering renewable energy technologies tailored to diverse markets.



On-grid Inverter

Single Phase On-grid Inverter

Three Phase On-grid Inverter

Single-phase On-grid Inverter

SW1/1.5/2
/2.5/3/3.3 kW

SW1000TL-S1-AM11 SW1500TL-S1-AM11
SW2000TL-S1-AM11 SW2500TL-S1-AM11
SW3000TL-S1-AM11 SW3300TL-S1-AM11



- Small and light, easy to install
- Stylish appearance
- IP66 rated for outdoor use
- Flexible optional monitoring modes

Model	SW1000TL-S1-AM11	SW1500TL-S1-AM11	SW2000TL-S1-AM11	SW2500TL-S1-AM11	SW3000TL-S1-AM11	SW3300TL-S1-AM11
DC Input						
Max. Input Power [W]	1500	2250	3000	3750	4500	4950
Max. Input Voltage [V]	550					
MPPT Voltage Range [V]	60-520					
Rated Voltage [V]	360					
Start-up Voltage [V]	70					
No. of MPPT Trackers	1					
No. of PV Strings per MPPT	1					
Max. Input Current per MPPT [A]	16					
Max. Short Circuit Current per MPPT [A]	20					

AC Output						
Rated Output Power [W]	1000	1500	2000	2500	3000	3300
Max. Output Appearent Power [VA]	1100	1650	2200	2750	3300	3630
Max. Output Current [A]	5	7.5	10	12.5	15	16.5
Rated Grid Voltage [V]	L/N/PE, 220/230/240					
Rated Grid Frequency [Hz]	50/60					
Power Factor [cos ϕ]	1(+/-0.8, adjustable)					

Efficiency	
Max. Efficiency	97.4%
EU Efficiency	96.9%

Protection	
DC Switch	Integrated
Insulation Resistance Monitoring	Integrated
Input Reverse Polarity Protection	Integrated
Anti-island Protection	Integrated
Residual Current Monitoring	Integrated
AC Overcurrent Protection	Integrated
AC Short-Circuit Protection	Integrated
DC Surge Protection	Integrated (Type II)
AC Surge Protection	Integrated (Type II)
24-hour load monitoring	Optional
AFCI	Optional

General Data	
Dimensions (W*H*D) [mm]	346*350*122
Weight [kg]	9
Display	LED+LCD/ Bluetooth+App
Communication	RS485/WIFI/LAN/4G (Optional)
Operating Temperature Range [°C]	-30~+60
Relative Humidity	0~100%
Operation Altitude [m]	≤4000(if >2000 derating)
Topology	Transformerless
Type of Cooling	Natural Cooling
Ingress Protection	IP66

Single-phase On-grid Inverter

SW3.6/4/4.6/5/6 kW

SW3680TL-S1 SW4000TL-S1
SW4600TL-S1 SW5000TL-S1
SW6000TL-S1



 Aesthetically designed, compact and lightweight appearance

 Fanless design for low noise

 Two MPPT trackers for more flexible configuration

 110% overloading

Model	SW3680TL-S1	SW4000TL-S1	SW4600TL-S1	SW5000TL-S1	SW6000TL-S1
DC Input					
Max. Input Power [W]	5520	6000	6900	7500	9000
Max. Input Voltage [V]			550		
MPPT Voltage Range [V]			60-520		
Rated Voltage [V]			360		
Start-up Voltage [V]			70		
No. of MPPT Trackers			2		
No. of PV Strings per MPPT			1		
Max. Input Current per MPPT [A]			16		
Max. Short Circuit Current per MPPT [A]			20		

AC Output					
Rated Output Power [W]	3680	4000	4600	5000	6000
Max. Output Apparent Power [VA]	4048	4400	5060	5500	6600
Max. Output Current [A]	18.4	20	23	25	30
Rated Grid Voltage [V]			L/N/PE, 220/230/240		
Rated Grid Frequency [Hz]			50/60		
Power Factor [cos ϕ]			1(+/-0.8, adjustable)		

Efficiency	
Max. Efficiency	97.9%
EU Efficiency	97.2%

Protection	
DC Switch	Integrated
Insulation Resistance Monitoring	Integrated
Input Reverse Polarity Protection	Integrated
Anti-island Protection	Integrated
Residual Current Monitoring	Integrated
AC Overcurrent Protection	Integrated
AC Short-Circuit Protection	Integrated
DC Surge Protection	Integrated (Type II)
AC Surge Protection	Integrated (Type II)
IV Curve scanning	Integrated
24-hour load monitoring	Optional
AFCI	Optional

General Data	
Dimensions (W*H*D) [mm]	420*370*133
Weight [kg]	11
Display	LED+LCD/ Bluetooth+App
Communication	RS485/WiFi/LAN/4G (Optional)
Operating Temperature Range [℃]	-30~+60
Relative Humidity	0~100%
Operation Altitude [m]	≤4000(if >2000 derating)
Topology	Transformerless
Type of Cooling	Natural cooling
Ingress Protection	IP66

Single-phase On-grid Inverter

SW7/8/9/10 kW

SW7000TL-S1-CM33 SW8000TL-S1-CM33
SW9000TL-S1-CM33 SW010KTL-S1-CM33



98% Aesthetically designed, compact and lightweight appearance

AC/DC DC/AC Surge Protection: Type II

Wide voltage range and low starup voltage

1.5 150% oversizing

Model	SW7000TL-S1-CM33	SW8000TL-S1-CM33	SW9000TL-S1-CM33	SW010KTL-S1-CM33
DC Input				
Max. Input Power [W]	10500	12000	13500	15000
Max. Input Voltage [V]			550	
MPPT Voltage Range [V]			60-520	
Rated Voltage [V]			360	
Start-up Voltage [V]			70	
No. of MPPT Trackers			3	
No. of PV Strings per MPPT			1	
Max. Input Current per MPPT [A]			16	
Max. Short Circuit Current per MPPT [A]			20	

AC Output				
Rated Output Power [W]	7000	8000	9000	10000
Max. Output Appearent Power [VA]	7000	8000	9000	10000
Max. Output Current [A]	31.8	36.4	40.9	45.5
Rated Grid Voltage [V]			L/N/PE, 220/230/240	
Rated Grid Frequency [Hz]			50/60	
Power Factor [cos ϕ]			1(+/-0.8, adjustable)	

Efficiency				
Max. Efficiency			98.0%	
EU Efficiency			97.5%	

Protection				
DC Switch			Integrated	
Insulation Resistance Monitoring			Integrated	
Input Reverse Polarity Protection			Integrated	
Anti-island Protection			Integrated	
Residual Current Monitoring			Integrated	
AC Overcurrent Protection			Integrated	
AC Short-Circuit Protection			Integrated	
DC Surge Protection			Integrated (Type II)	
AC Surge Protection			Integrated (Type II)	
IV Curve scanning			Integrated	
24-hour load monitoring			Optional	
AFCI			Optional	

General Data				
Dimensions (W*H*D) [mm]			446*400*161	
Weight [kg]			17	
Display			LED+LCD/ Bluetooth+App	
Communication			RS485/WiFi/LAN/4G (Optional)	
Operating Temperature Range [°C]			-30~+60	
Relative Humidity			0~100%	
Operation Altitude [m]			≤4000(if >2000 derating)	
Topology			Transformerless	
Type of Cooling			Natural cooling	
Ingress Protection			IP66	

Three-phase On-grid Inverter

SW10/12/15
/17/20/25 kW

SW010KTL-T1-BM22 SW012KTL--T1-BM22
SW015KTL-T1-BM24 SW017KTL-T1-BM24
SW020KTL-T1-BM24 SW025KTL-T1-BM24



- DC/AC Surge Protection: Type II
- 150% oversizing
- Flexible optional monitoring modes
- 110% overloading

Model	SW010KTL-T1-BM22	SW012KTL--T1-BM22	SW015KTL-T1-BM24	SW017KTL-T1-BM24	SW020KTL-T1-BM24	SW025KTL-T1-BM24
DC Input						
Max. Input Power [W]	15000	18000	22500	25500	30000	37500
Max. Input Voltage [V]	1100					
MPPT Voltage Range [V]	160-1000					
Rated Input Voltage [V]	600					
Start-up Voltage [V]	200					
No. of MPPT Trackers	2					
No.of PV Strings per MPPT	1	1	2	2	2	2
Max. Input Current Per MPPT [A]	20	20	40	40	40	40
Max. Short Circuit Current Per MPPT [A]	25	25	50	50	50	50

AC Output						
Rated Output Power [W]	10000	12000	15000	17000	20000	25000
Max. Output Appearent Power [VA]	11000	13200	16500	18700	22000	27500
Max. Output Current [A]	15.9	19.1	25.1	27	32	40
Rated Grid Voltage [V]	3L/N/PE; 220/380, 230/400					
Rated Grid Frequency [Hz]	50/60					
Power Factor [cos ϕ]	1 (+/- 0.8, adjustable)					

Efficiency	
Max. Efficiency	98.6%
EU Efficiency	98.2%

Protection	
DC Switch	Integrated
Insulation Resistance Monitoring	Integrated
Input Reverse Polarity Protection	Integrated
Anti-island Protection	Integrated
Residual Current Monitoring	Integrated
AC Overcurrent Protection	Integrated
AC Short-Circuit Protection	Integrated
DC Surge Protection	Integrated (Type II)
AC Surge Protection	Integrated (Type II)

General Data	
Dimensions (W*H*D) [mm]	405*375*213
Weight [kg]	23
Display	LED/APP
Communication	WiFi / RS485 / 4G (Optional)
Operating Temperature Range [°C]	-25~+60
Relative Humidity	0~100%
Operation Altitude [m]	≤4000 (>2000 derating)
Topology	Transformerless
Type of Cooling	Smart Fan-cooling
Ingress protection	IP66

Three Phase On-grid Inverter

SW30/33 kW

SW030KTL-T1-DM35 SW030KTL-T1-DM36
SW033KTL-T1-DM36



 DC/AC Surge Protection: Type II

 110% overloading

 Supports remote firmware upgrades

 Wide voltage range and low startup voltage

Model	SW030KTL-T1-DM35	SW030KTL-T1-DM36	SW033KTL-T1-DM36
DC Input			
Max. Input Voltage [V]	1100		
MPPT Voltage Range [V]	160-1000		
Rated Input Voltage [V]	600		
Start-up Voltage [V]	200		
No. of MPPT Trackers	3		
No.of PV Strings per MPPT	2/1/2	2/2/2	
Max. Input Current Per MPPT [A]	40/20/40	40/40/40	
Max. Short Circuit Current Per MPPT [A]	50/30/50	50/50/50	

AC Output			
Rated Output Power [W]	30000	30000	33000
Max. Output Apparent Power [VA]	33000	33000	36300
Max. Output Current [A]	48	48	52.6
Rated Grid Voltage [V]	3L/N/PE; 220/380, 230/400		
Rated Grid Frequency [Hz]	50/60		
Power Factor [cos φ]	1 (+/-0.8, adjustable)		

Efficiency	
Max. Efficiency	98.6%
EU Efficiency	98.2%

Protection	
DC Switch	Integrated
Insulation Resistance Monitoring	Integrated
Input Reverse Polarity Protection	Integrated
Anti-island Protection	Integrated
Residual Current Monitoring	Integrated
AC Overcurrent Protection	Integrated
AC Short-Circuit Protection	Integrated
DC Surge Protection	Integrated (Type II)
AC Surge Protection	Integrated (Type II)

General Data	
Dimensions (W*H*D) [mm]	475*415*220
Weight [kg]	24
Display	LED/APP
Communication	WiFi / RS485 / 4G (Optional)
Operating Temperature Range [°C]	-25~+60
Relative Humidity	0~100%
Operation Altitude [m]	≤4000(>2000 derating)
Topology	Transformerless
Type of Cooling	Smart Fan-cooling
Ingress Protection	IP66

Three Phase On-grid Inverter

SW40/50/60 kW

SW040KTL-T1-EM36 SW040KTL-T1-EM48
SW050KTL-T1-EM48 SW060KTL-T1-EM48



 150% oversizing

 Compatible with 650W+ modules

 Optional PID recovery

 Optional DC Arc Protection

Model	SW040KTL-T1-EM36	SW040KTL-T1-EM48	SW050KTL-T1-EM48	SW060KTL-T1-EM48
DC Input				
Max. Input Power [W]	60000	60000	75000	90000
Max. Input Voltage [V]	1100			
MPPT Voltage Range [V]	180-1000			
Rated Input Voltage [V]	600			
Start-up Voltage [V]	200			
No. of MPPT Trackers	3	4		
No.of PV Strings per MPPT	2	2		
Max. Input Current per MPPT [A]	40	40		
Max. Short Circuit Current Per MPPT [A]	50	50		

AC Output				
Rated Output Power [W]	40000	40000	50000	60000
Max. Output Appearent Power [VA]	44000	44000	55000	66000
Max. Output Current [A]	66	66	83	100
Rated Grid Voltage [V]	3L/N/PE; 220/380, 230/400			
Rated Grid Frequency [Hz]	50/60			
Power Factor [cos ϕ]	1 (+/-0.8, adjustable)			

Efficiency	
Max. Efficiency	98.8%
EU Efficiency	98.3%

Protection	
DC Switch	Integrated
Insulation Resistance Monitoring	Integrated
Input Reverse Polarity Protection	Integrated
Anti-island Protection	Integrated
Residual Current Monitoring	Integrated
AC Overcurrent Protection	Integrated
AC Short-circuit Protection	Integrated
String Detection	Integrated
DC Surge Protection	Integrated (Type II)
AC Surge Protection	Integrated (Type II)
AFCI	Optional
IV Curve Scanning	Optional
PID Recovery	Optional

General Data	
Dimensions (W*H*D) [mm]	623*523*235
Weight [kg]	35.9
Display	LED& Bluetooth+APP
Communication	WiFi/LAN/RS485/4G (Optional)
Operating Temperature Range [°C]	-30 ~ +60
Relative Humidity	0~100%
Operation Altitude [m]	≤4000(>3000 derating)
Topology	Transformerless
Type of Cooling	Smart Fan-cooling
Protection Class	IP66



Hybrid Inverters

Single-phase Hybrid Inverter (high voltage)

Single-phase Hybrid Inverter (low voltage)

Three-phase Hybrid Inverter (high voltage)

Communication Accessories

Single-phase Hybrid Inverer (High Voltage)

SWH3/4/5/6 kW

SWH3000H-S1 SWH4000H-S1
SWH5000H-S1 SWH6000H-S1



 150% oversizing

 Switching time <10ms

 97% EU efficiency up to 97%

 Fanless design, maintenance-free



Model	SWH3000H-S1	SWH4000H-S1	SWH5000H-S1	SWH6000H-S1
PV Input				
Recommended Max. PV Input Power [Wp]	4500	6000	7500	9000
Max. Input Voltage [V]	600			
MPPT Voltage Range [V]	80-580			
Rated Voltage [V]	360			
Start-up Voltage [V]	90			
No. of MPPT Trackers	1	2	2	2
No. of PV Strings per MPPT	1	1/1	1/1	1/1
Max. Input Current per MPPT [A]	14	14/14	14/14	14/14
Max. Short Circuit Current per MPPT [A]	18	18/18	18/18	18/18
AC Output				
Rated Output Power [W]	3000	4000	5000	6000
Rated Output Current [A]	13.6	18.2	22.7	27.3
Max. Output Current [A]	15	20	25	30
Max. Apparent Output Power [VA]	3300	4400	5500	6600
Rated Output Voltage [V]	220/230/240			
Rated Grid Frequency [Hz]	50/60			
Power Factor	1(0.8leading~ 0.8lagging)			
THDi (Rated Output Power)	< 3%			
AC Input (Grid)				
Max. Apparent Input Power [VA]	6000	8000	10000	12000
Max. Input Current [A]	27.3	36.4	45.5	54.5
Rated Output Voltage [V]	220/230/240			
Rated Grid Frequency [Hz]	50/60			
Battery				
Battery Module Type	Lithium Iron Phosphate(LFP)			
Battery Voltage Range [V]	80-450			
Max. Charge/Discharge Current [A]	25			
Max. Charge Power [W]	4500	6000	7500	9000
Max Discharge Power [W]	3000	4000	5000	6000
Battery Communication	CAN/RS485			
AC Output (Off-grid)				
Rated Output Power [W]	3000	4000	5000	6000
Rated Output Voltage [V]	220/230/240			
Rated Output Frequency [Hz]	50/60			
Rated Output Current [A]	13.6	18.2	22.7	27.3
THDU (Rated Output Power, R Load)	< 3%			
Switch Time [ms]	10			
Peak Apparent Power , Duration [VA, s]	4500,60	6000,60	7500,60	7500,60
Efficiency				
Max. Efficiency	97.8%			
EU Efficiency	97%			
Battery Charged/Discharged to AC Max. Efficiency	98.5%@Charge/97.0%@Discharge			
Protection				
DC Switch	Integrated			
Insulation Resistance Detection	Integrated			
Input Reverse Polarity Protection	Integrated			
Anti-island Protection	Integrated			
Residual Current Monitoring	Integrated			
Overtemperature Protection	Integrated			
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			
General Data				
Dimensions (W*H*D) [mm]	536*444*173			
Weight [kg]	18.5			
Display	LCD/WEB/APP			
Communication	WIFI/RS485/LAN			
Operating Temperature Range [°C]	-25~-+60; if>45°C, Power Reduction Needed			
Relative Humidity	0%~100%, Non-condensing			
Operation Altitude [m]	0~4000, if ≥2000, Power Reduction Needed			
Self Consumption (night) [W]	< 8			
Topology	Transformerless			
Cooling Concept	Natural Cooling			
Protection level	IP66			
Noise	< 30dB			

Single-phase Hybrid Inverter (Low Voltage)

SWH3/3.6
/4/4.6/5/6 kW

SWH3000L-S1-BM11 SWH3680L-S1-BM22
SWH4000L-S1-BM22 SWH4600L-S1-BM22
SWH5000L-S1-BM22 SWH6000L-S1-BM22



-  160% oversizing
-  Switching time <4ms
-  Fanless design, maintenance-free
-  Max.18A PV input current to match high-power PV module
-  AFCI Optional

Model	SWH3000L-S1-BM11 SWH3680L-S1-BM22 SWH4000L-S1-BM22 SWH4600L-S1-BM22 SWH5000L-S1-BM22 SWH6000L-S1-BM22					
PV Input						
Recommended Max. PV Input Power [Wp]	4800	5888	6400	7360	8000	9600
Max. Input Voltage [V]	500					
MPPT Voltage Range [V]	100~450					
Rated Input Voltage [V]	360					
Start-up Voltage [V]	120					
No. of MPPT Trackers	1	2	2	2	2	2
No. of PV Strings per MPPT	1	1/1	1/1	1/1	1/1	1/1
Max. Input Current per MPPT [A]	18	18/18	18/18	18/18	18/18	18/18
Max. Short Circuit Current per MPPT [A]	27	27/27	27/27	27/27	27/27	27/27
AC Output						
Rated Output Power [W]	3000	3680	4000	4600	5000	6000
Rated Output Current [A]	13	16	17.4	20	21.7	26.1
Max. Output Current [A]	14.3	16	19.1	20	23.9	28.7
Max. Apparent Output Power [VA]	3300	3680	4400	4600	5500	6600
Rated Output Voltage [V]	220/230/240					
Rated Grid Frequency [Hz]	50/60					
Power Factor [cos ϕ]	1(0.8 leading~0.8 lagging)					
THDi (Rated Output Power)	<3%					
AC Input (Grid)						
Max. Apparent Input Power [VA]	6000	7360	8000	9200	9200	9200
Max. Input Current [A]	26.1	32	34.8	40	40	40
Rated Output Voltage [V]	220/230/240					
Rated Grid Frequency [Hz]	50/60					
Battery						
Battery Module Type	Lithium-ion/Lead-acid					
Battery Voltage Range [V]	40-60					
Maximum Charge/Discharge Current [A]	70	90	90	120	120	135
Battery Communication	CAN/RS485					
AC Output (Backup)						
Rated Output Power [W]	3000	3680	4000	4600	5000	6000
Rated Output Voltage [V]	220/230/240					
Rated Output Frequency [Hz]	50/60					
Rated Output Current [A]	13	16	17.4	20	21.7	26.1
THDi (Rated Output Power)	< 3%					
Switch Time [ms]	4					
Peak Apparent Power, Duration [VA, s]	6000,10	7360,10	8000,10	9200,10	10000,10	12000,10
Efficiency						
Max. Efficiency	97.6%					
Euro Efficiency	96.5%					
Battery Charged/Discharged to AC Max. Efficiency	96.0%@Charge/95.0%@Discharge					
Protection						
DC Switch	Integrated					
Insulation Resistance Detection	Integrated					
PV Input Reverse Polarity Protection	Integrated					
Anti-island Protection	Integrated					
Residual Current Monitoring	Integrated					
Overtemperature Protection	Integrated					
DC Surge Protection	Integrated (Type II)					
AC Surge Protection	Integrated (Type II)					
AFCI	Optional					
Remote Shutdown	Optional					
General Data						
Dimensions (W*H*D) [mm]	400*520*223.5					
Weight [kg]	18.5					
Display	LCD/WEB/APP					
Communication	RS485/WiFi/LAN					
Operating Temperature Range [°C]	-30~+60 (if >45°C, output power derating)					
Relative Humidity	0%~100%, Non-condensing					
Operation Altitude [m]	≤3000 (if ≥2000 output power derating)					
Self Consumption (night) [W]	< 10					
Topology	Non-Isolated					
Cooling Concept	Natural Convection					
Protection Level	IP66					
Noise	< 30dB					

Single-phase Hybrid Inverter (Low Voltage)

SWH8/10/12 kW

SWH008KL-S1-SR SWH010KL-S1-SR
SWH012KL-S1-SR



-  Efficiency Up to 22A*2 PV input current
-  Outputs high-quality pure sine wave AC power
-  With IP65 protection degree
-  Up to 200A charging current
-  Time-slot function to save cost with peak-valley



Model	SWH008KL-S1-SR	SWH010KL-S1-SR	SWH012KL-S1-SR
Inverter Output			
Rated Output Power [W]	8800	10000	12000
Max. Peak Power [VA]	17600	20000	24000
Rated Output Voltage [Vac]	220/230/240 single-phase / three-phase (parallel)		
Load Capacity of Motors	5HP	6HP	
Output Frequency Range [Hz]	50 ± 0.3/60 ± 0.3		
Number of Parallel	1-6 units		
AC Output (Grid)			
Rated Output Power [W]	8800	10000	12000
Max. Apparent Power [VA]	8800	10000	12000
Max. Output Current [A]	40	45.5	54.5
Rated Output Voltage [Vac]	220/230/240		
THDI	< 3%		
Power Factor	0.8 leading to 0.8 lagging		
Frequency [Hz]	50/60		
Battery			
Battery Type	Lead-acid / Li-ion / User-defined		
Rated Battery Voltage [V]	48		
Battery Voltage Range [Vdc]	40-60		
Max. Generator Charging Current [A]	60		
Max. Grid Charging Current [A]	120		
Max. PV Charging Current [A]	200		
Max. Hybrid Charging Current [A]	200		
PV Input			
Num. of MPPT Trackers	2		
Max.PV Array Power [W]	5500+5500	6600+6600	
Max. Input Current [A]	22+22		
Max. Voltage of Open Circuit [Vdc]	500+500		
MPPT Operating Voltage Range [Vdc]	125-425		
Mains/Generator Input			
Input Voltage Range [Vac]	90-280		
Frequency Range [Hz]	50/60		
Bypass Overload Current [A]	63		
Efficiency			
MPPT Tracking Efficiency	99.9%		
Max. Efficiency	97.5%		
European Efficiency	97.0%		
General			
Dimension (W*H*D) [mm]	440*670*240		
Weight [Kg]	37		
Protection Degree	IP65		
Operating Temperature Range	-25~60°C (>45°C derating)		
Humidity Range	0%-100%		
Cooling Method	Forced air cooling		
Communication			
Embedded Interfaces	RS485 / CAN / USB / Dry contact		
External Module (optional)	Wi-Fi / GPRS		
Certification			
Safety	IEC62109-1, IEC62109-2		
EMC	EN61000-6-1, EN61000-6-3, FCC15 classB		
RoHS	Yes		

Three-phase Hybrid Inverter (High Voltage)

SWH5/8
/10/12/15 kW

SWH005KH-T1 SWH008KH-T1
SWH010KH-T1 SWH012KH-T1
SWH015KH-T1



 Low starting voltage, wide operating voltage range

 Switching time <10ms

 Flexible monitoring mode

 AC and DC surge protection

Model	SWH005KH-T1	SWH008KH-T1	SWH010KH-T1	SWH012KH-T1	SWH015KH-T1
PV Input					
Recommended Max. PV Power [Wp]	6500	10400	13000	15600	18750
Max. Input Voltage [V]			1000		
MPPT Voltage Range [V]			180-950		
Rated Voltage [V]			600		
Start-up Voltage [V]			200		
No. of MPPT Trackers			2		
No. of PV Strings per MPPT		1/1		2/1	
Max. Input Current per MPPT [A]		15/15		30/15	
Max. Short Circuit Current per MPPT [A]		18/18		36/18	
AC Output					
Rated Output Power [W]	5000	8000	10000	12000	15000
Rated Output Current [A]	7.2	11.6	14.5	17.4	21.7
Max. Output Current [A]	7.9	12.7	15.9	19.1	23.8
Max. Apparent Output Power [VA]	5500	8800	11000	13200	16500
Rated Output Voltage [V]			220/380; 230/400; 240/415		
Rated Grid Frequency [Hz]			50/60		
Power Factor			1/0.8(leading)~0.8(lagging)		
THDi (Rated Output Power)			< 3%		
AC Input (Grid)					
Max. Apparent Input Power [VA]	5500	8800	11000	13200	16500
Max. Input Current [A]	7.9	12.7	15.9	19.1	23.8
Rated Input Voltage [V]			220/380; 230/400; 240/415		
Rated Grid Frequency [Hz]			50/60		
Battery					
Battery Type			Lithium Iron Phosphate(LFP)		
Battery Voltage Range [V]			150-600		
Max. Charge/Discharge Current [A]			25		
Battery Communication			CAN		
AC Output (Off-grid)					
Rated Output Power [W]	5000	8000	10000	12000	15000
Rated Output Voltage [V]			220/380; 230/400; 240/415		
Rated Output Frequency [Hz]			50/60		
Rated Output Current [A]	7.2	11.6	14.5	17.4	21.7
THDi (Rated Output Power)			< 3%		
Switch Time [ms]			10		
Peak Apparent Power , Duration [VA, s]	7500, 30	12000, 30	15000, 30	18000, 30	22500, 30
Efficiency					
Max. Efficiency			98.7%		
EU Efficiency			97.8%		
Battery Charged/Discharged to AC Max. Efficiency			98.5%@Charge/97.0%@Discharge		
Protection					
DC Switch			Integrated		
Insulation Resistance Detection			Integrated		
Input Reverse Polarity Protection			Integrated		
Anti-island Protection			Integrated		
Residual Current Monitoring			Integrated		
Overtemperature Protection			Integrated		
DC Surge Protection			Integrated (Type II)		
AC Surge Protection			Integrated (Type II)		
General Data					
Dimensions (W*H*D) [mm]			498*563*200		
Weight [kg]			28		29
Display			LCD/WEB/APP		
Communication			WIFI/RS485/LAN		
Operating Temperature Range [°C]			-25~+60		
Relative Humidity			0%~100%, Non-condensing		
Operation Altitude [m]			≤4000, if >2000, Power Reduction Needed		
Self Consumption (night) [W]			< 15		
Topology			Transformerless		
Cooling Concept			Natural Convection		Smart Fan-cooling
Protection level			IP66		

Three-phase Hybrid Inverter (High Voltage)

SWH29.9
/30/40/50 kW

SWH029KH-T1-BM48 SWH030KH-T1-BM48
SWH040KH-T1-BM510 SWH050KH-T1-BM510



- PV Side**
Max. 5 MPPTs
2 times oversizing
- Battery Side**
55A*3 independent input
Support 3 in 1 or 3 different battery connection
Perfectly compatible with 280/314Ah cell
- AC Side**
2 times rated power input
100% unbalanced output
GEN port for diesel generator/smart load/AC couple connection
- Protection**
Support smart RSD connection
AFCI optional
IP66 degree
- User friendly**
Scalable to 150kW system
Low noise less than 60dB

Model	SWH029KH-T1-BM48	SWH030KH-T1-BM48	SWH040KH-T1-BM510	SWH050KH-T1-BM510
PV Input				
Recommended Max. PV Input Power [W]	59800	60000	80000	100000
Max. Input Voltage [V]		1000		
MPPT Voltage Range [V]		180-850		
Rated Voltage [V]		600		
Start-up Voltage [V]		200		
No. of MPPT Trackers	4		5	
No. of PV Strings per MPPT		2		
Max. Input Current per MPPT [A]		40		
Max. Short Circuit Current per MPPT [A]		60		
Battery				
Battery Module Type		Lithium-ion		
Battery Voltage Range [V]		160-800		
Maximum Charge/Discharge Current [A]		55*3		
Maximum Charge/Discharge Power [W]		1.1 times of rated Power		
No. of Battery Input		3		
BMS Communication		Self-adaption BMS, CAN/RS485		
AC Input/Output (Grid)				
Rated Input/Output Power [W]	29900	30000	40000	50000
Max. Input Power [W]	59800	60000	80000	100000
Max. Input Current [A]	86.3	86.6	115.5	144.3
Max. Output Power [W]	29900	33000	44000	55000
Max. Output Current [A]	43.2	47.6	63.5	79.4
Rated Voltage [V]		3L/N/PE 220/380, 230/400		
Rated Frequency [Hz]		50/60		
Max. Continuous AC Passthrough(A)		200A		
Power Factor [cos φ]		1(0.8leading~ 0.8lagging)		
THDi (Rated Output Power)		<3%		
DC Injection		<0.5%In		
AC Output (Backup)				
Rated Output Power [W]	29900	30000	40000	50000
Rated Output Current [A]	43.2	43.3	57.7	72.2
Max. Output Power [W]	29900	33000	44000	55000
Max. Output Current [A]	43.2	47.6	63.5	79.4
Peak Output Power [W]		1.2 times of rated power, 60s / 1.5 times of rated power, 30s		
Rated Output Voltage [V]		3L/N/PE 220/380, 230/400		
Rated Output Frequency [Hz]		50/60		
THDv (Rated Output Power)		< 3%		
UPS Switch Time [ms]		<10ms		
AC Input/Output (GEN)				
Rated Input/Output Power [W]	29900	30000	40000	50000
Max. Input Power [W]	59800	60000	80000	100000
Max. Input Current [A]	86.3	86.6	115.5	144.3
Max. Output Power [W]	29900	33000	44000	55000
Max. Output Current [A]	43.2	47.6	63.5	79.4
Rated Voltage [V]		3L/N/PE 220/380, 230/400		
Rated Frequency [Hz]		50/60		
Efficiency				
Max. Efficiency		97.80%		
Euro Efficiency		97.40%		
MPPT Efficiency		99.9%		
Battery Charged by PV Max. Efficiency		98.5%		
Battery Charge/Discharge to AC Max. Efficiency		97.5%		
General Data				
Dimensions (W*H*D)		580x920x300mm (Excluding connectors and brackets)		
Weight		93kg		
Display		OLED+LED & APP		
Communication		WiFi&LAN /4G/Bluetooth		
Operating Temperature Range		- 30 ~ + 60 ° C(if>45° C,output power derating)		
Relative Humidity		0%~100%, Non-condensing		
Operation Altitude		≤ 4000m(if ≥ 3000m output power derating)		
Self Consumption (night)		< 35W		
Topology		Transformerless		
Cooling Concept		Smart Fan		
Protection level		IP66, C5L		
Noise		<60dB		
Installation Method		Wall Mounted		
Warranty		5 Years (10 Years Optional)		
No. of Parallel		3		
Certificate				
Safety		IEC 62109-1/2		
EMC		IEC 61000-1/2/3/4		
Grid		VDE 4105,CEI 0-21,NRS097,EN 50549-1/10,IEC 61683/EN 50530,IEC 62116/IEC 61727		
Protection				
DC Switch,Insulation Resistance Detection,PV Input Reverse Polarity Protection,Battery Input Reverse Polarity Protection,AC/DC Surge Protection,Grid Detection Protection,Anti-island Protection,AC Over Voltage Protection,AC Over Load Protection,Short Current Protection,Grounding Fault Protection,Residual Current Monitoring,Overtemperature Protection,Smart RSD,PID, AFCI(Optional)				

Communication Accessories

SWDA-WL-S1



 Flexible Networking via WiFi or Ethernet

 Bluetooth as Standard, Easy Maintenance with APP

 IP65 Rated for Harsh Environments

 Status LEDs for Easy Monitoring



ModelSWDA-WL-S1	
WIFI Parameters	
Standard	IEEE802.11b/g/n
Operating channel frequency	2.4~2.5G (2412~2484Mhz)
Electrical Parameters	
Data rate	Serial port: 115200 bps
Operating voltage	5V (±10%)
Maximum current	0.8A
Average power	2W
General Parameters	
Dimensions (L*W*H) [mm]	150*50*35
Weight [g]	80
Environmental Parameters	
Degree of protection	IP65
Operating temperature range	-30°C~65°C
Operating humidity range	10% -90% RH, non-condensing
Storage temperature range	-40°C~70°C
Storage humidity range	<40%
Application Parameters	
Communication protocol (inverter)	USB (USRT serial port)
Communication protocol (Cloud)	TCP/IP
Support Network	2.4G
User configuration interface	APP/WEB
Data upload cycle	5 minutes (1-5 minutes can be customized)



Battery System

Residential Energy Storage System (high voltage)

High Voltage Battery

Low Voltage Battery

Smar-Energy Storage Outdoor Cabinet

Residential Energy Storage System (High Voltage)

SWES3/4/5/6 kW

Inverer
SWH3000H-S1 | SWH4000H-S1
SWH5000H-S1 | SWH6000H-S1

Battery
SWR5120-S1



-  Global Shadow Scanning
-  Tri-color Ring Ambient Light Design
-  Internal Non-turbulent Fan
-  Quiet and Low Noise <30dB
-  Higher System Efficiency

Model	SWES3000H-S1		SWES4000H-S1		SWES5000H-S1		SWES6000H-S1	
Inverter								
Model	SWH3000H-S1		SWH4000H-S1		SWH5000H-S1		SWH6000H-S1	
Recommended Max. PV Power [Wp]	4500		6000		7500		9000	
Max. Input Voltage [V]					600			
MPPT Voltage Range [V]					80-560			
Rated Input Voltage [V]					360			
Start-up Voltage [V]					90			
No. of MPPT Trackers	1				2			
No. of PV Strings per MPPT	1				1/1			
Max. Input Current per MPPT [A]	14				14/14			
Max. Short Circuit Current per MPPT [A]	18				18/18			
Rated Output Voltage [V]					220/230/240			
Rated Grid Frequency [Hz]					50/60			
Rated Output Power [W]	3000		4000		5000		6000	
Max. Apparent Output Power [VA]	3300		4400		5500		6600	
Rated Output Voltage [V] (Backup)					220/230/240			
Rated Output Frequency [Hz] (Backup)					50/60			
Rated Output Power [W] (Backup)	3000		4000		5000		6000	
Max. Output Apparent Power [VA] (Backup)	3300		4400		5500		6600	
Rated Output Current [A] (Backup)	15		20		25		30	
Peak Output Power, Duration [VA, s] (Backup)	4500, 60		6000, 60		7500, 60		7500, 60	
Switch Time [ms]					< 10			
Topology					Transformerless			
Dimensions (W*H*D) [mm]					536*444*173			
Weight [kg]					18.5			

Battery	
Model	SWR5120-S1
Battery type	Lithium Iron Phosphate(LFP)
Nominal Capacity [kWh]	5.12
Depth of Discharge	90%
Dimensions (W*H*D) [mm]	536*335*190
Weight [kg]	50
Safety Regulation	IEC62619, IEC62040-1, IEC63056, VDE2510, CE, CEC

System Parameters	
System Configuration	SWH3000~6000H-S1+N*SWR5120-S1
Communication	WiFi/RS485/LAN
Operating Temperature Range [°C]	-25~+60
Relative Humidity	0%~100%, Non-condensing
Operation Altitude [m]	≤2000
Cooling Concept	Natural Convection
Protection Level	IP66

High Voltage Battery

SWR

SWR5.12-H1 SWR7.68-H1 SWR10.24-H1
SWR12.80-H1 SWR15.36-H1 SWR17.92-H1
SWR20.48-H1



 Modular design, easy installation

 IP65 outdoor design

 90% discharge depth

 Supports up to 8 batteries in series

Model	SWR5.12-H1	SWR7.68-H1	SWR10.24-H1	SWR12.80-H1	SWR15.36-H1	SWR17.92-H1	SWR20.48-H1
Features							
Battery Module Type	Lithium Iron Phosphate (LFP)						
Battery Module Quantity	2	3	4	5	6	7	8
Total Energy [kWh]	5.12	7.68	10.24	12.8	15.36	17.92	20.48
Usable Energy(90%DOD) [kWh]	4.61	6.91	9.21	11.52	13.82	16.13	18.43
Rated Voltage [V]	102.4	153.6	204.8	256	307.2	358.4	409.6
Operating Voltage Range [V]	80-116.8	120-175.2	160-233.6	200-350.4	320-467.2	360-525.6	400-584
Maximum Discharge Current [A]	50						
Battery Roundtrip Efficiency	> 95%						
Recommended Depth of Discharge	90%						
Scalability	Support up to 8 batteries in series						

Operating Conditions							
Installation	Stacked						
Operation Temperature [°C]	-10~50						
Storage Temperature [°C]	-20~50						
Communication	CAN						
Cooling Concept	Natural Cooling						
Humidity	5%~85% (Non-condensing)						
Altitudes [m]	≤2000						

General Data							
Dimensions(W*H*D) [mm]	500*484*380	500*626*380	500*768*380	500*910*380	500*1052*380	500*1194*380	500*1336*380
Weight [kg]	68.4	96.8	125.2	153.6	182	210.4	238.8

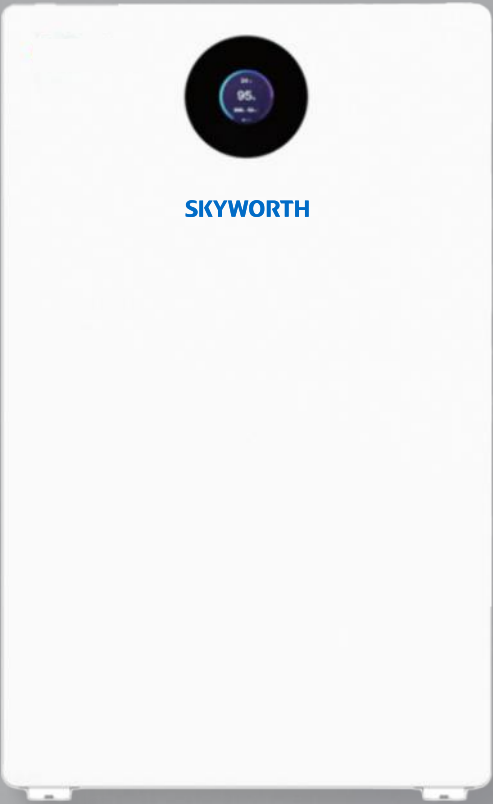
Certification							
Safety Regulation	IEC62619, IEC60730, IEC62477						
EMC	EN IEC 61000-6-1/-2/-3/-4						
Deliveries	UN38.3						
Protection Level	IP65						

Low Voltage Battery

SWR5.12/10.24kWh

SWR5.12-L1-SW

SWR10.24-L1-SW



-  Up to 16 in parallel connection
-  Reliable lithium-ion battery management solutions for 6000 cycles
-  Plug-and-play, wiring can be done from either side
-  Minimum width of just 10 cm, saving space in the home

Model	SWR5.12-L1-SW	SWR10.24-L1-SW
Maininfo		
Rated Voltage [V]	51.2	
Rated Capacity [Ah]	100	200
Battery Power [kWh]	5.12	10.24
Battery Type	LFP	
Crycling Lifespan	6000 Cycles	
Lifetime	20 Years	
Max. Parallel Capacity	16 units	

Charge&Dischrage		
Max. Charging Voltage [V]	57.6	
Over Discharging Voltage [V]	44.8	
Max. Charging Current [A]	100	150
Peak Charging Current [A]	110 (1.1C,3s)	200 (3s)
Max. Discharging Current [A]	100 (1C)	200
Peak Discharging Current [A]	110 (1.1C,3s)	220 (3s)

General Data		
Weight [kg]	47	88
Dimension (W*H*D) [mm]	460*725*100 mm	620*1014*205 mm
Communication	CAN / RS485 / USB / WiFi / Bluetooth	
Storage Condition	6 months @25°C; 3 months @35°C; 1 months @45°C	
Charging Temp. Range [°C]	0~45	
Discharging Temp. Range [°C]	-10~45	
Cooling Method	Neutral Cooling	
Protection Grade	IP65	

Certification		
Transportation	UN38.3, MSDS	
Safety	IEC 62619:2017, EN IEC 61000-6, UL1973	EN 55032, EN 55024, EN 61000-3-2, EN 61000-3-3

Smart-Energy Storage Outdoor Cabinet

SWS

SWS-P30E100-AC SWS-P40E100-AC
SWS-P50E100-AC SWS-P30E72-AC
SWS-P40E86-AC



-  Support multi-stage parallel, diesel port can be in parallel, off-grid port can be in parallel
-  Lightning protection Integrated (Type II)
-  ALL-IN-ONE modularized design
-  Intelligent operation management
-  Built-in EMS function for improved energy efficiency management



Model	SWS-P30E100-AC	SWS-P40E100-AC	SWS-P50E100-AC	SWS-P30E72-AC	SWS-P40E86-AC
PV input parameters					
Maximum input power [W]	60000	80000	100000	60000	80000
Maximum input voltage [V]			1000		
MPPT operating voltage range [V]			180-900		
Maximum input current per circuit [A]			40		
Maximum short-circuit current per circuit [A]			60		
MPPT quantity	3	4	4	3	4
Number of input group strings per MPPT			2		
Grid-connected output parameters (AC)					
Power rating [W]	30000	40000	50000	30000	40000
Maximum vision in power [VA]	33000	44000	55000	33000	44000
Rated voltage			380V/400V, 3L/N/PE		
Nominal Frequency			50Hz/60Hz		
Maximum current [A]	43.3	57.7	72.2	43.3	57.7
Power factor range			0.8 ind...0.8 cap		
Current total harmonic distortion (@ rated power)			< 3%		
Off-grid output parameters (AC)					
Rated voltage			380V/400V, 3L/N/PE		
Nominal Frequency			50Hz/60Hz		
Rated output current [A]	43.3	57.7	72.2	43.3	57.7
Rated output rating [W]	30000	40000	50000	30000	40000
Maximum view at output power @60s [VA]	36000	48000	60000	36000	48000
Maximum view at output power @30s [VA]	45000	60000	75000	45000	60000
And switch time off the grid			< 10ms		
Battery parameters					
Operating voltage range [V]		324.8-397.6		232-284	278.4-340.8
Battery model			SWC14.34-H1		
Rated charge / discharge current [A]			140A/140A		
Maximum charge / discharge current [A]			200A/200A		
Battery quantity		7		5	6
Single pack battery capacity [kWh]			14.3		
Rated capacity [kWh]		100.1		71.5	85.8
Active volume [kWh]		90.1		64.4	77.2
Temperature controlling system					
Temperature controlling system			Temperature constant humidity air conditioning		
Fire extinguisher system					
Active fire fighting			Detector + thermal aerosol fire extinguishing device		
Passive fire fighting			Thermal aerosol fire-extinguishing unit		
Essential parameter					
Dimensions (W*H*D) [mm]			1000*2050*1200		
Weight [t]			1.3		
Levels of protection			IP55		
Anti-corrosion grade			C4		
Certification					
Transportation			UN38.3		
Safety			IEC62109-1/2、IEC-62477-1		



PV Modules Series

Revolutionary ABC Module

All Black Series

High Efficiency Series

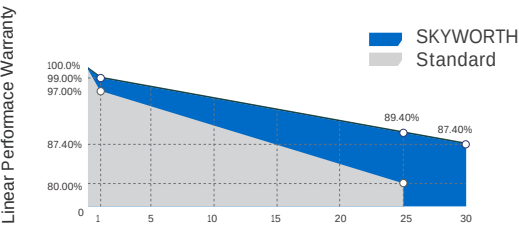
Anti-dust Series

Customizable Colors Panel Series

Revolutionary ABC Module

ABC

QM182AHCD640-670W-78



15 YEARS 15-year product warranty
30 YEARS 30-year performance warranty
0.35% year 2-30 power degration

 Partial Shading Optimisation

 Better Temperature Coefficient

 High Temperature Restriction

 Micro–crack Resistance

 Higher Power

 Lower BOS

 More Aesthetic Values

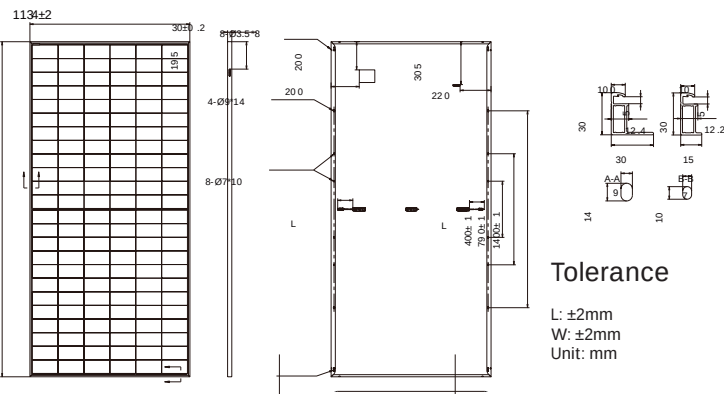
 Infinite Technology



Installation Guide

Operation Temperature	-40℃ - +85℃
Maximum Series Fuse Rating	25A
Protection Class	Class II
Voc and Isc Tolerance	±3%
Maximum System Voltage	DC1500V
Maximum Static Loading	Front 5400Pa Back 2400Pa
Hail Test	40 mm diameter hail at 23 m/s
Fire Rating	IEC Class C

Technical drawing



Electrical Characteristics (STC: AM1.5 1000W/m² 25℃ NOCT: AM1.5 800W/m² 20℃ 1m/s) Power Tolerance:0~ + 3%

Module Type	QM182AHCD640-78		QM182AHCD645-78		QM182AHCD650-78		QM182AHCD655-78		QM182AHCD660-78		QM182AHCD665-78		QM182AHCD670-78	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power[W]	640	482	645	486	650	490	655	493	660	497	665	501	670	505
Maximum Power Voltage[V]	54.20	51.18	54.30	51.28	54.40	51.37	54.50	51.47	54.60	51.56	54.70	51.66	54.80	51.75
Maximum Power Current[A]	44.90	42.40	45.00	42.50	45.10	42.59	45.20	42.69	45.30	42.78	45.40	42.87	45.50	42.97
Open circuit voltage[V]	15.00	12.13	15.06	12.18	15.12	12.23	15.18	12.28	15.24	12.32	15.30	12.37	15.36	12.42
Short Circuit Current[A]	14.26	11.38	14.34	11.44	14.42	11.51	14.50	11.57	14.57	11.63	14.65	11.69	14.73	11.76
Module Efficiency	23.7%		23.9%		24.0%		24.2%		24.4%		24.6%		24.8%	

Product Specification

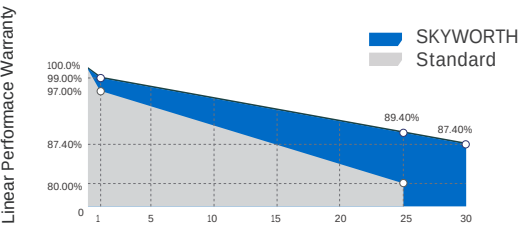
Cell Type	N-Type ABC
Glass	3.2mm tempered glass
Frame	Anodized aluminum
Cable	4mm²(IEC) 12AWG(UL) +350mm,-280mm/±1400mm or Customized Length
No. of Cells	144(6*24)
Junction Box	IP68, 3 bypass diodes
Connector	MC4 Compatible/MC4-Evo2
Weight	28.1kg±3%
Dimension	2382*1134*30mm
Package Detail	36pcs per pallet / 144pcs per 20'GP / 720pcs per 40'HC

Temperature Ratings (STC)

Temperature Coefficient of Isc	+ 0.05%/ °C
Temperature Coefficient of Voc	- 0.22%/ °C
Temperature Coefficient of Pmax	- 0.26%/ °C

N⁺ series

All-Black Solar Panels-54
425-445W



15 YEARS 15-year product warranty
30 YEARS 30-year linear power output warranty
0.4% year 2-30 power degration

QUALITY SYSTEM

IEC 61215(2021), IEC 61730(2018)
ISO 9001:2015: Quality management systems
ISO 14001:2015: Environmental management systems
ISO 45001:2018: Occupational health and safety management systems

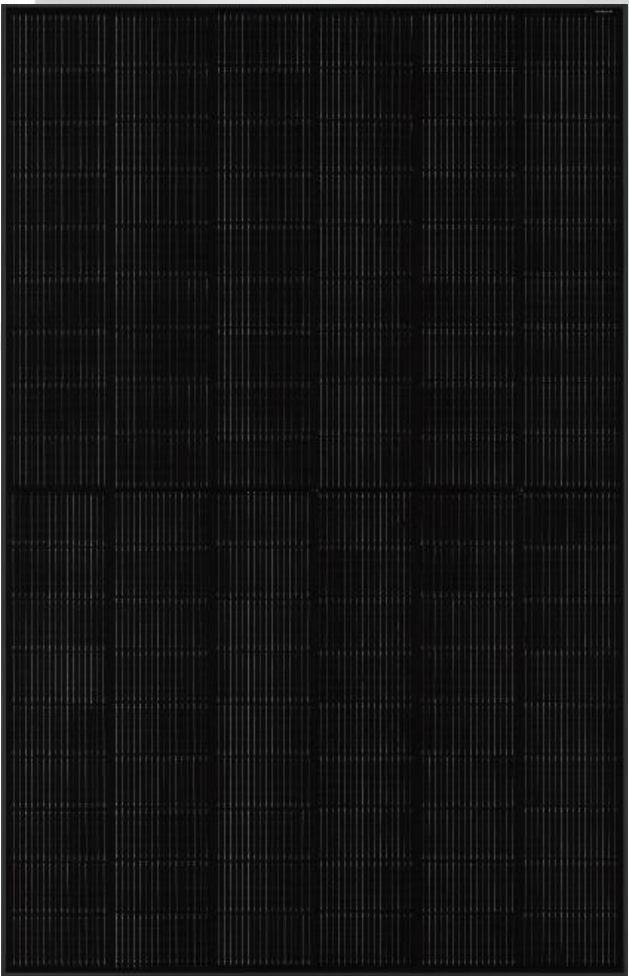
Bifacial Energy Yield | N-type Silicon Wafer
Bifacial rate of up to 80%, module additional power generation of up to 10% over regular modules

Better low irradiance response
Superior power generation under shading conditions

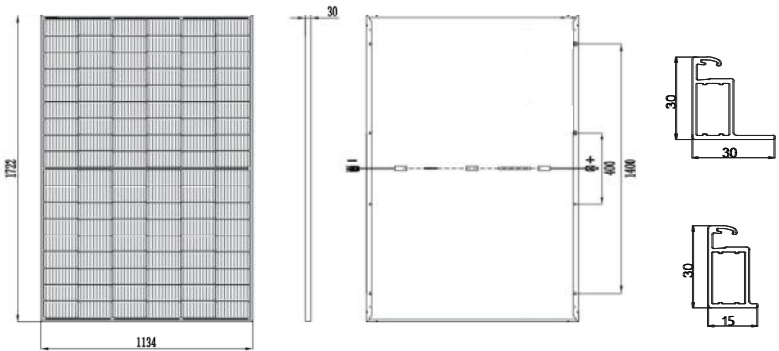
Improvement in power generation performance
Conversion efficiency up to 22.82%

Highly Anti PID
linear power warranty with first year ≤1% degradation and an annual degradation rate of up to 0.4% after that

Highly reliable
15-year product warranty,30-year linear power output warranty



Technical drawing



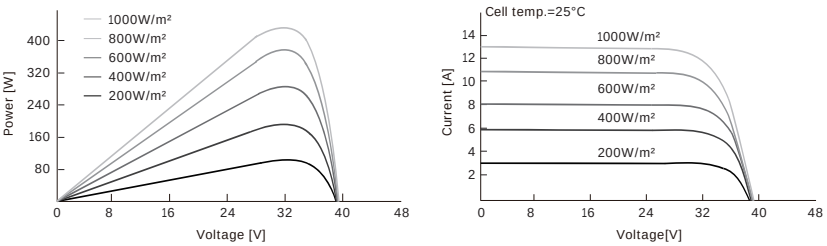
Mechanical Specifications

Solar Cells	108(54×2)
Dimension	1722×1134×30mm
Weight	23.8kg
Front Glass	2.0mm tempered Glass, high transparency
Back Glass	2.0mm heat-tempered glass
Frame	anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Output Cables	4mm ² / +300mm -300mm (Customized Length)

Electrical Characteristics

Module Type	QM182THCD425-54	QM182THCD430-54	QM182THCD435-54	QM182THCD440-54	QM182THCD445-54
	STC	STC	STC	STC	STC
Maximum Power [W]	425	430	435	440	445
Maximum Power Voltage [V]	34.08	34.19	34.30	34.41	34.52
Maximum Power Current [A]	12.46	12.57	12.68	12.79	12.89
Open circuit voltage [V]	39.05	39.18	39.31	39.44	39.57
Short Circuit Current [A]	13.17	13.28	13.39	13.50	13.61
Module Efficiency [%]	21.79	22.05	22.31	22.56	22.82
Operating Temperature	-40°C~+85°C				
Maximum System Voltage	DC1500V				
Maximum Series Fuse Rating	25A				
Power Tolerance[W]	0~+5W				
Voc Temperature Coefficient	-0.28%/°C				
Pmax Temperature Coefficient	-0.29%/°C				
Isc Temperature Coefficient	0.04%/°C				
Nominal Opearting Cell Temperature	45±2°C				

Characteristic



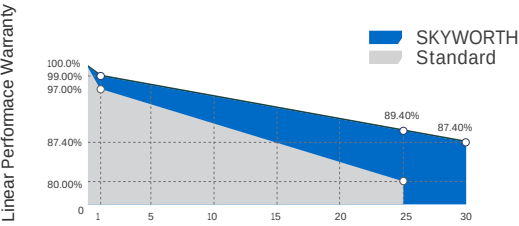
Level

Fire Performance	C
Security Protection	Class II
Packing Configuration	
Pallet	36pcs/Pallet
Container	936pcs/40HQ Container

N⁺series

High Efficiency-72

570-595W



15 YEARS 15-year product warranty

30 YEARS 30-year linear power output warranty

0.4% year 2-30 power degration

QUALITY SYSTEM

IEC 61215(2021), IEC 61730(2018)

ISO 9001:2015: Quality management systems

ISO 14001:2015: Environmental management systems

ISO 45001:2018: Occupational health and safety management systems

Bifacial Energy Yield | N-type Silicon Wafer

Additional power generation from the backside of bifacial modules increases the overall energy yield

Better low irradiance response

Superior power generation under shading conditions

Improvement in power generation performance

Conversion efficiency reached 23.03%

Highly Anti PID

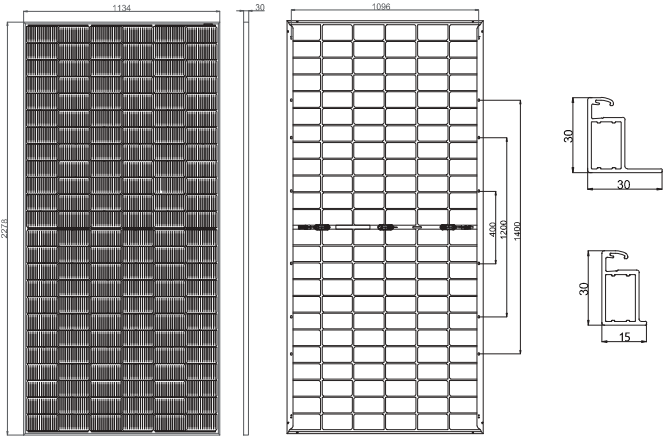
linear power warranty with first year ≤1% degradation and an annual degradation rate of up to 0.4% after that

Mechanical load enhancement

Maximum wind load (3600Pa) / Maximum snow load (5400Pa)



Technical drawing



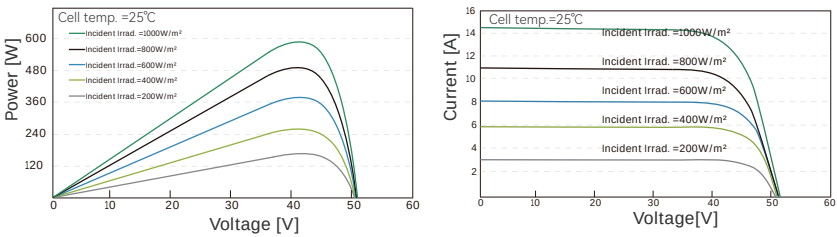
Mechanical Specifications

Solar Cells	144(72×2)
Dimension	2278×1134×30mm
Weight	31.3kg
Front Glass	2.0mm tempered Glass, high transparency
Back Glass	2.0mm heat-tempered glass
Frame	anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Output Cables	4mm ² / +300mm - 300mm (Customized Length)

Electrical Characteristics

Module Type	QM182THCD570-72	QM182THCD575-72	QM182THCD580-72	QM182THCD585-72	QM182THCD590-72	QM182THCD595-72
	STC	STC	STC	STC	STC	STC
Maximum Power[W]	570	575	580	585	590	595
Maximum Power Voltage[V]	44.49	44.66	43.83	45.00	45.17	45.34
Maximum Power Current[A]	12.84	12.90	12.94	13.00	13.06	13.12
Open circuit voltage[V]	51.84	52.04	52.24	52.43	52.63	52.83
Short Circuit Current[A]	13.52	13.58	13.62	13.69	13.75	13.82
Module Efficiency	22.06%	22.26%	22.45%	22.65%	22.84%	23.03%
Operating Temperature	-40℃~+85℃					
Maximum System Voltage	DC 1500V					
Maximum Series Fuse Rating	25A/30A					
Power Tolerance[W]	0~+5W					
Voc Temperature Coefficient	-0.28%/℃					
Pmax Temperature Coefficient	-0.29%/℃					
Isc Temperature Coefficient	0.04%/℃					
Nominal Opearting Cell Temperature	45±2℃					

Characteristic

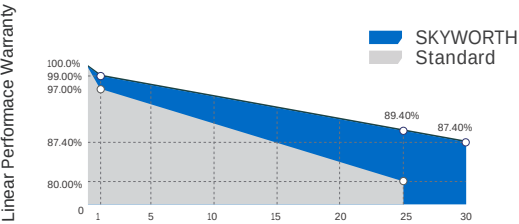


Level

Fire Performance	C
Security Protection	Class II
Packing Configuration	
Pallet	36pcs/Pallet
Container	720pcs/40HQ Container

N⁺ series

Anti-dust accumulation Solar Panels-78
620-645W



15 YEARS 15-year product warranty
30 YEARS 30-year linear power output warranty
0.4% year 2-30 power degration

QUALITY SYSTEM

IEC 61215(2021), IEC 61730(2018)
ISO 9001:2015: Quality management systems
ISO 14001:2015: Environmental management systems
ISO 45001:2018: Occupational health and safety management systems

Anti-dust accumulation design
Reducing the impact of dust accumulation

Lower O&M Costs
Improving life-cycle power generation Reduces cleaning frequency and cost

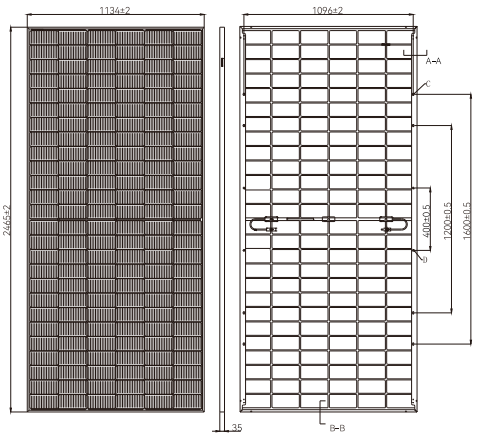
Improvement in power generation performance
Power gerneration up to 5%

PID Highly Anti PID
linear power warranty with first year ≤1% degradation and an annual degradation rate of up to 0.4% after that

Mechanical load enhancement
Maximum wind load (2400Pa) / Maximum snow load (5400Pa)



Technical drawing



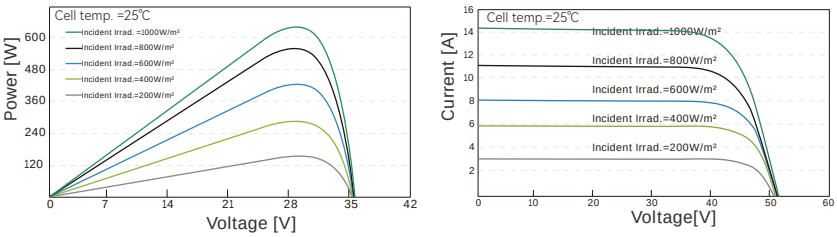
Mechanical Specifications

Solar Cells	156(78×2)
Dimension	2465 × 1134 × 35mm
Weight	34.3kg
Front Glass	2.0mm tempered Glass, high transparency
Back Glass	2.0mm heat-tempered glass
Frame	anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Output Cables	4mm ² / +300mm -300mm (Customized Length)

Electrical Characteristics

Module Type	QM182THCD620-78	QM182THCD625-78	QM182THCD630-78	QM182THCD635-78	QM182THCD640-78	QM182THCD645-78
	STC	STC	STC	STC	STC	STC
Maximum Power[W]	620	625	630	635	640	645
Maximum Power Voltage[V]	47.38	47.55	47.72	47.89	48.08	48.23
Maximum Power Current[A]	13.09	13.15	13.20	13.26	13.32	13.37
Open circuit voltage[V]	56.97	57.17	57.38	57.58	57.79	57.99
Short Circuit Current[A]	13.45	13.51	13.57	13.63	13.69	13.75
Module Efficiency	22.18%	22.30%	22.53%	22.71%	22.89%	23.07%
Operating Temperature	-40℃~+85℃					
Maximum System Voltage	DC1500V					
Maximum Series Fuse Rating	25A/30A					
Power Tolerance[W]	0~+5W					
Voc Temperature Coefficient	-0.28%/℃					
Pmax Temperature Coefficient	-0.29%/℃					
Isc Temperature Coefficient	0.04%/℃					
Nominal Opearting Cell Temperature	45±2℃					

Characteristic

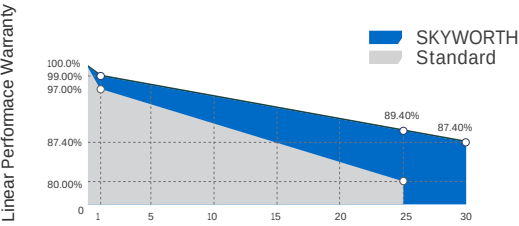


Level

Fire Performance	C
Security Protection	Class II
Packing Configuration	
Pallet	31pcs/Pallet
Container	496pcs/40HQ Container

N⁺ series

Customizable colors panel-54
340-385W



15 YEARS 15-year product warranty
30 YEARS 30-year linear power output warranty
0.4% year 2-30 power degration

QUALITY SYSTEM

IEC 61215(2021), IEC 61730(2018)
ISO 9001:2015: Quality management systems
ISO 14001:2015: Environmental management systems
ISO 45001:2018: Occupational health and safety management systems

Bifacial Energy Yield | N-type Silicon Wafer
Additional power generation from the backside of bifacial modules increases the overall energy yield

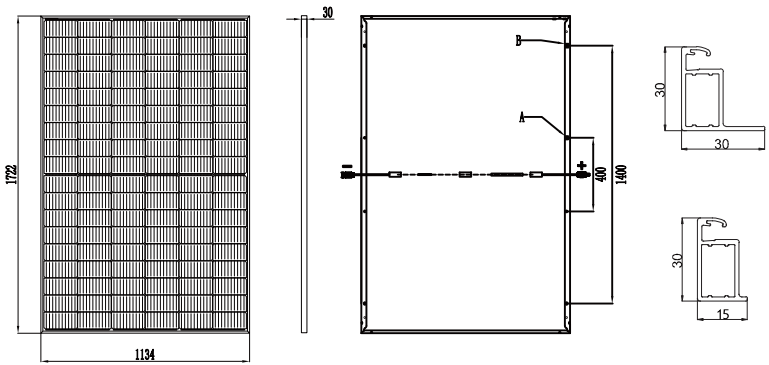
Better low irradiance response
Superior power generation under shading conditions

Variety of colours (customizable)
Suitable for coloured construction

PID Highly Anti PID
linear power warranty with first year ≤1% degradation and an annual degradation rate of up to 0.4% after that

Mechanical load enhancement
Maximum wind load (2400Pa) / Maximum snow load (5400Pa)

Technical drawing



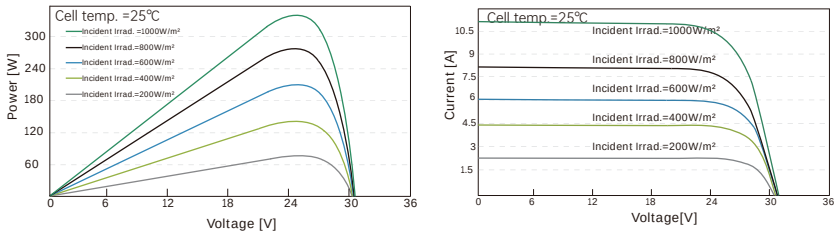
Mechanical Specifications

Solar Cells	108(54×2)
Dimension	1722 × 1134 × 30mm
Weight	23.8kg
Front Glass	2.0mm tempered Glass, high transparency
Back Glass	2.0mm heat-tempered glass
Frame	anodized aluminium alloy
Junction Box	IP68 / 3 diodes
Output Cables	4mm ² / +300mm -200mm (Customized Length)

Electrical Characteristics

Module Type	OM182THCDF340-54-OM182THCDF385-54						
Colour	Red	Orange	Yellow	Green	Blue	Indigo	Purple
Maximum Power[W]	260	305	340	350	385	310	340
Maximum Power Voltage[V]	33.88	34.06	34.20	34.24	34.38	34.08	34.20
Maximum Power Current[A]	7.69	8.97	9.96	10.24	11.21	9.26	9.96
Open circuit voltage[V]	39.94	40.12	40.26	40.30	40.44	40.14	40.26
Short Circuit Current[A]	8.20	9.58	10.64	10.94	11.99	9.88	10.64
Module Efficiency	13.31%	15.62%	17.41%	17.92%	19.71%	15.87%	17.41%
Operating Temperature	-40℃~+85℃						
Maximum System Voltage	DC1500V						
Maximum Series Fuse Rating	25A						
Power Tolerance[W]	0~+5W						
Voc Temperature Coefficient	-0.28%/℃						
Pmax Temperature Coefficient	-0.29%/℃						
Isc Temperature Coefficient	0.04%/℃						
Nominal Opearting Cell Temperature	45±2℃						

Characteristic



Level

Fire Performance	C
Security Protection	Class II
Packing Configuration	
Pallet	36pcs/Pallet
Container	936pcs/40HQ Container

Variety of colours (customizable)



Mounting System

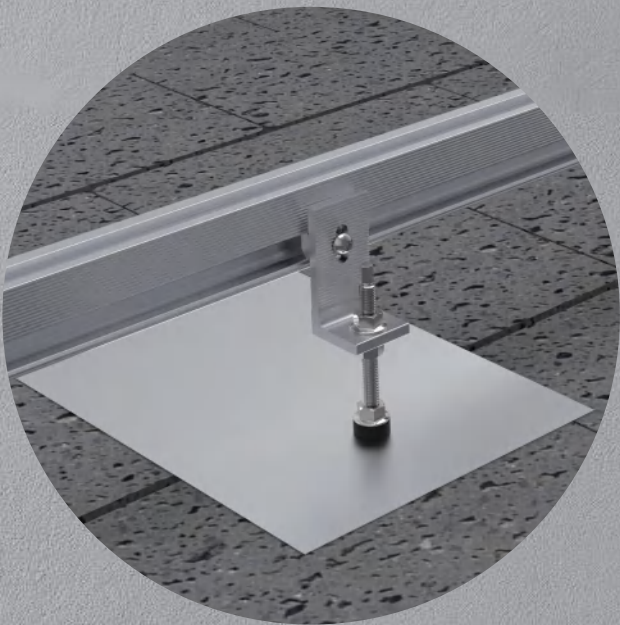
For Slate Roof

For Tile Roof

PV Cables - Durable and Safe

Mounting Support System Solution

For Slate Roof



- Applicable for every 3 solar panels
- Cover various rooftop layout scenarios
- High quality — TÜV Rheinland certified
- Tailored to improve design and logistic efficiency



Technical Parameters

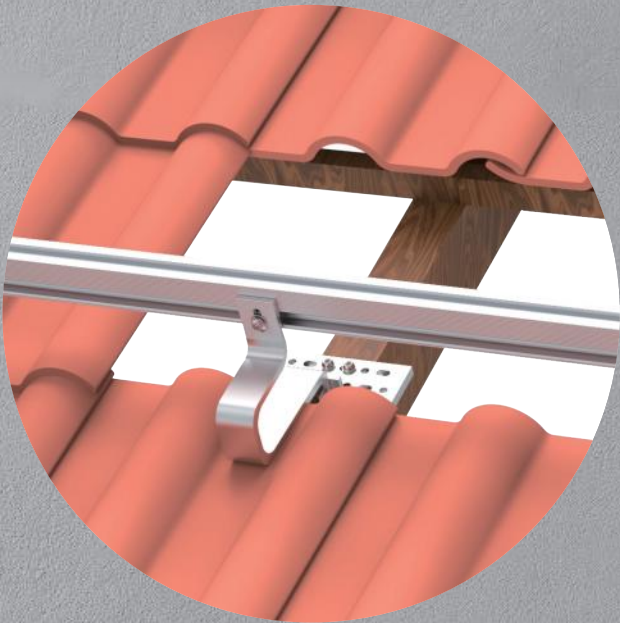
System Name	Fish Scales Tile Solar PV Mounting System	Panel Layout	Portrait/Landscape
Installation Site	Pitched Roof	Material	AL6005-T5(Anodized)
Roof Type	Tile, Flat Tile, Slate Tile, Asphalt Shingle Tile	Fastener	Anodized
Wind Load	0.59KN/M2	Small Components	AL6005-T5(Anodized)
Snow Load	1.4KN/M2	Color	Silver
Applicable Solar Module	Framed/Frameless, Any width panel	Warranty	12 years

Component Details

	Waterproof Flashing GM-CH-L4 AL6005-T6/SUS304		Rail splice GM-RS-79-100-GCL AL6005-T5/SUS304
	Rail GM-R79 AL6005-T5		Mild Clamp GM-MC-35-GCL AL6005-T5/SUS304
	End Clamp GM-EC-35-GCL AL6005-T5/SUS304		Rail Cover GM-BN-C79-GCL Silica
	Earthing Clamp GM-E-EL-16-GCL SUS304		Earth Lug GM-EK-GCL

Mounting Support System Solution

For Tile Roof



- Applicable for every 3 solar panels
- Cover various rooftop layout scenarios
- High quality — TÜV Rheinland certified
- Tailored to improve design and logistic efficiency



Technical Parameters			
System Name	Component Details Solar PV Mounting System	Panel Layout	Portrait/Landscape
Installation Site	Pitched Roof	Material	AL6005-T5(Anodized)
Roof Type	Ceramic tile	Fastener	Anodized
Wind Load	0.59KN/M2	Small Components	AL6005-T5(Anodized)
Snow Load	1.4KN/M2	Color	Silver
Applicable Solar Module	Framed/Frameless, Any width panel	Warranty	12 years

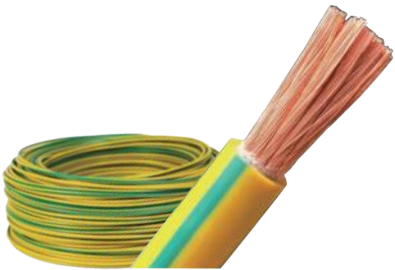
Component Details			
	Rail Splice GM-CH-L4 AL6005-T5/SUS304		Rail GM-RS-79-100-GCL AL6005-T5
	Mild Clamp GM-R79 AL6005-T5/SUS304		End Clamp GM-MC-35-GCL AL6005-T5/SUS304
	Tile Hook GM-EC-35-GCL AL6005-T6/SUS304		Rail Cover GM-BN-C79-GCL Silica
	Hook Plate GM-E-EL-16-GCL ABS		Earthing Clamp GM-E-EL-16-GCL SUS304
	Earth Lug GM-EK-GCL		

PV Cables - Durable and Safe

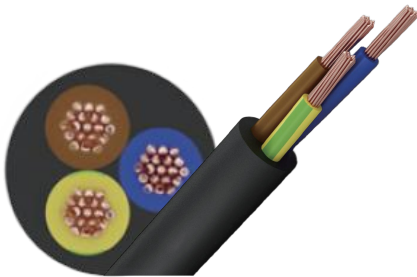


Safe
Quality Assurance,
TUV/VED certified

Durable
UV resistance, ozone resistance, acid and
alkali resistance, heat resistance



Earthing cable (Yellow-Green)
Rated voltage: 450 / 750 V
AC test voltage: 2500V, 5min
Maximum temperature rating: 90°C
Operating frequency: 50Hz



AC output cable
Rated Voltage: 600/1000V
Temperature range: -25°C to +90°C
Maximum voltage output: 1200V
AC test voltage: 3500V/5min



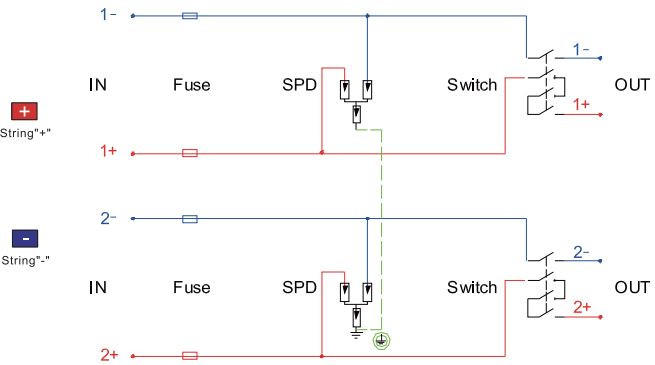
PV cable (Black &Red)
Rated voltage: DC1500V
Temperature range: -40°C~125°C
Outer diameter: 5.5±0.1mm
Test voltage: 6500V, 5min

DC Strings / Combiner Boxes For Residential PV Systems

General Data		DC Surge Arrester	
Model No.	PEJB-2-2	Max Operation Voltage(Ucpv)	1000V
Input	2 String	Standard Compliance with	EN50539
Output	2 String	Maximum Discharge Current	40KA
Maximum Voltage	1000V	Type	2
Max DC Short Circuit Current Per Input	15A~30A (changeable)	Certification	TUV, CE, CB
Maximum Current Output	32A		
Enclosure		DC fuse holder	
Material Type	Polycarbonate/ABS	Rated Working Voltage	1000V
Degree of Protection	IP65	Rated Working Current	15A~32A
Degree of Resistance to Impacts	IK10	Fuse Link	10×38mm
Dimension (WxHxD)	386×230×120mm (18P)	Certification	CB, CE
Cable Input Entry	Cable Gland ∅ 4-8mm or MC4		
Cable Output Entry	Cable Gland ∅ 4-8mm or MC4		
DC Switch Disconnecter		Environment	
Rated Insulation Voltage(Ui)	1000V	Operaling Temperature	-20℃~+60℃
Rated Current(Ie)	32A	Humidity	99%
Category	DC21B/PV1	Altitude	2000M
Standard Compliance with	IEC60947-3	Installation	Wall Mounted
Certification	UL, TUV, SAA, CE, CB		
Packing Data			
Inside box size (L*W*D)(cm)	236 * 115 * 390		
Weight (kg)	3.3		

Solar DC String Box

DC 1000V / 32A, 2 in 2 out





Weifang, China

100MW

Project Case

Huizhou, China

5.94MW



Shenzhen, China

8MW



Shenzhen, China

1.69MW



Project Case

Frankfurt, Germany

2x10kW / 2x11kWh



Frankfurt, Germany

12kW / 14kWh



Frankfurt, Germany

10kW / 11kWh



Lecce, Italy

6kW / 11kWh



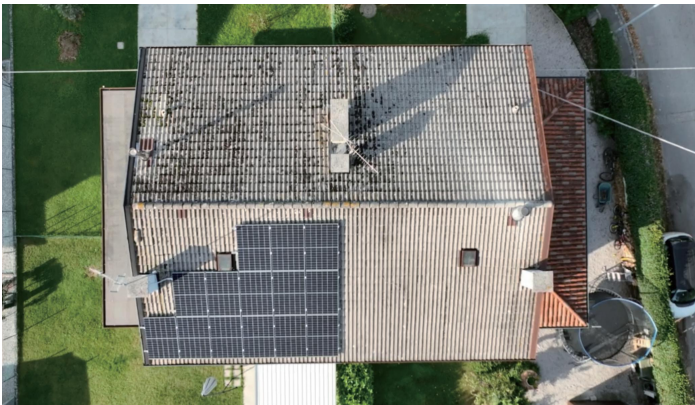
Lecce, Italy

4.6kW / 11kWh



Udine, Italy

6kW / 8kWh



Contact us



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