

Solavita

# 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 351th in **[Top 500 Chinese Enterprises in 2024]**.

Skyworth specializes in four key domains: new energy, smart household appliances, intelligent system technology, modern service & others.



30,000<sup>+</sup>

Employees (2023)



120<sup>+</sup>

Countries and Regions



9.587<sup>+</sup>

Billion USD (2023)

# 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".

2020.01

## Set Sail

The business model "One-stop Solar Solution" has been established and solidified, alongside the implementation of a dual-brand strategy

2021.12

## Development

Revenue reached \$5.76 billion, marking a remarkable 3,843.3% increase from the previous year

2022.12

## Breakthrough

Introduced 4 customized products tailored to diverse user needs, driving revenue growth to \$16.71 billion—a 191% increase compared to 2021

2024

## Expansion

20GW installed capacity  
600,000 PV power stations installed

# About Solavita

Solavita, the cutting-edge PV brand under Skyworth Group, is a global leader in providing comprehensive one-stop solar solutions. Comprehensive end-to-end services are provided, encompassing consulting, design, and product O&M, all supported by a portfolio of self-developed solutions. This includes high-efficiency solar panels, inverters, energy storage systems, and reliable mounting systems.

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



**200<sup>+</sup>**  
Technical R&D team



**1,000<sup>+</sup>**  
Project team



**4,500<sup>+</sup>**  
Operation and service team



# Core Business Models

As a leading global renewable energy developer, service provider and energy solutions provider, Solavtia is actively shaping the future of energy. With a strong presence in EPC services and one-stop product solutions, Solavita delivers high-quality, reliable, and innovative energy solutions. Solavita'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

Solavita delivers end-to-end Engineering, Procurement, and Construction (EPC) solutions, encompass the entire lifecycle project from conception through completion, ensure seamless project execution.



### Construction Mastery

Turnkey installation | Real-time progress tracking  
Zero-safety-incident record | Professional Team  
Systematic construction process



### Smart Procurement

Global supplier network | Fast delivery  
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

Free Equipment | Solar Revenue  
Solar Project investment

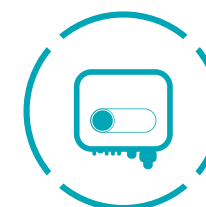
## Platform-Based Product Solution

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



### PV Modules

High Efficiency  
High Reliability  
High ROI  
Low Degradation  
Low Risk of Hot Spot



### Inverters

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



### Mounting Systems

Easy installation  
Stable structure  
Environmental Friendly  
Long Lifespan

# Solavita

## SMART R&D

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Solavita 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 teal circular graphic with a dashed border containing the text "200<sup>+</sup>".

200<sup>+</sup>

**Talent team  
members**

A teal circular graphic with a dashed border containing the text "100<sup>+</sup>".

100<sup>+</sup>

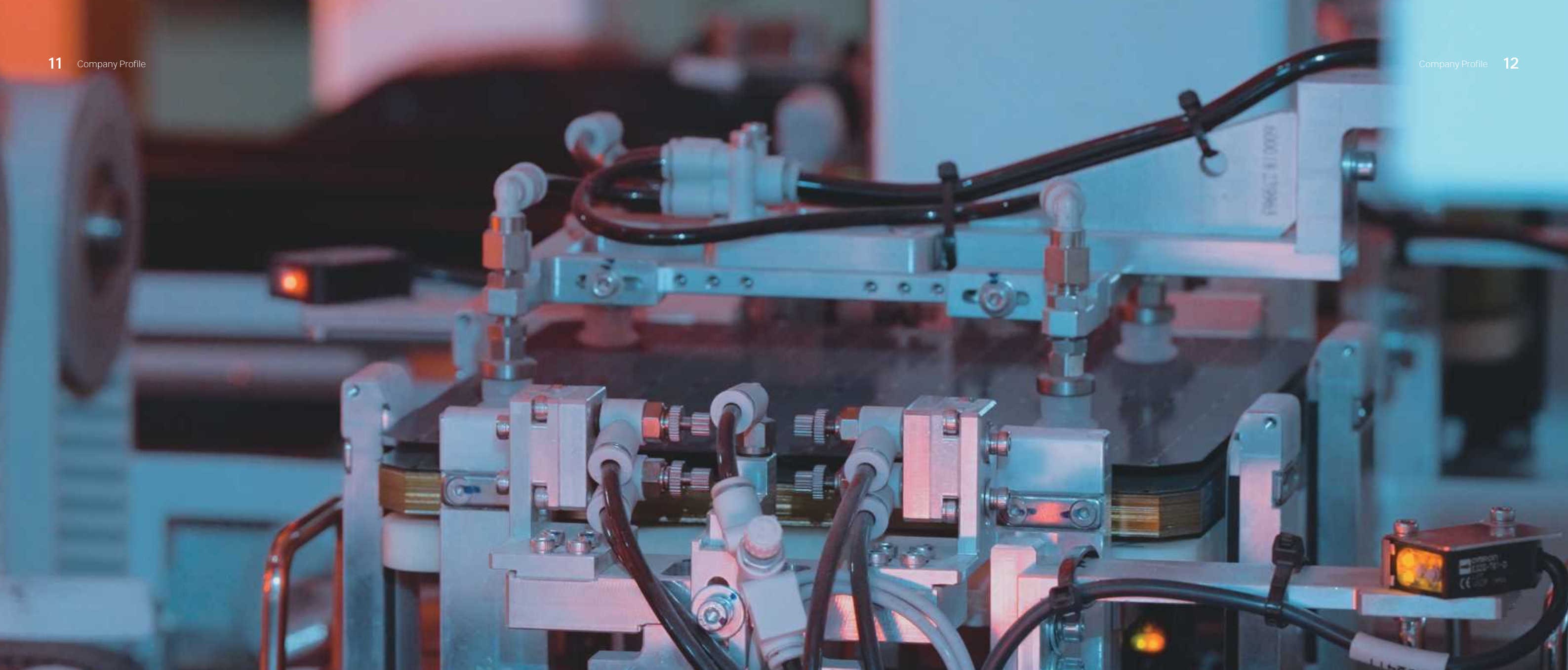
**Technology  
Patents**

A teal circular graphic with a dashed border containing the text "20<sup>+</sup> Years".

20<sup>+</sup> Years

**Solar Industry  
Experience**





## Solavita 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  
Storegy System

5GW

Module

500,000 tons

Mounting System

# Solavita 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 Solavita 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

SV1/1.5/2  
/2.5/3/3.3 kW

SV1000TL-S1-AM11 SV1500TL-S1-AM11  
SV2000TL-S1-AM11 SV2500TL-S1-AM11  
SV3000TL-S1-AM11 SV3300TL-S1-AM11



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

Model	SV1000TL-S1-AM11	SV1500TL-S1-AM11	SV2000TL-S1-AM11	SV2500TL-S1-AM11	SV3000TL-S1-AM11	SV3300TL-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 Appearant 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]			16/16		
Max. Short Circuit Current per MPPT [A]			20/20		

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 [°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

SV7/8/9/10 kW

SV7000TL-S1-CM33 SV8000TL-S1-CM33  
SV9000TL-S1-CM33 SV010KTL-S1-CM33



98% Aesthetically designed, compact and lightweight appearance

AC/DC DC/AC Surge Protection: Type II

V Wide voltage range and low starup voltage

1.5 150% oversizing

Model	SV7000TL-S1-CM33	SV8000TL-S1-CM33	SV9000TL-S1-CM33	SV010KTL-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 Inverer


SV10/12/15  
/17/20/25 kW


SV010KTL-T1-BM22 SV012KTL-T1-BM22  
SV015KTL-T1-BM24 SV017KTL-T1-BM24  
SV020KTL-T1-BM24 SV025KTL-T1-BM24



 DC/AC Surge Protection: Type II

 150% oversizing

 Flexible optional monitoring modes

 110% overloading



Model	SV010KTL-T1-BM22	SV012KTL-T1-BM22	SV015KTL-T1-BM24	SV017KTL-T1-BM24	SV020KTL-T1-BM24	SV025KTL-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


SV30/33 kW


SV030KTL-T1-DM35 SV030KTL-T1-DM36  
SV033KTL-T1-DM36



 DC/AC Surge Protection: Type II

 110% overloading

 Supports remote frmware upgrades

 Wide voltage range and low starup voltage

Model	SV030KTL-T1-DM35	SV030KTL-T1-DM36	SV033KTL-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 Appearent 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


SV40/50/60 kW

SV040KTL-T1-EM36 SV040KTL-T1-EM48  
SV050KTL-T1-EM48 SV060KTL-T1-EM48



 150% oversizing

 Compatible with 650W+ modules

 Optional PID recovery

 Optional DC Arc Protection

Model	SV040KTL-T1-EM36	SV040KTL-T1-EM48	SV050KTL-T1-EM48	SV060KTL-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 Apparent 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

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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

 EU efcieny 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)

SVH3/3.6  
/4/4.6/5/6 kW

SVH3000L-S1-BM11    SVH3680L-S1-BM22  
SVH4000L-S1-BM22    SVH4600L-S1-BM22  
SVH5000L-S1-BM22    SVH6000L-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	SVH3000L-S1-BM11	SVH3680L-S1-BM22	SVH4000L-S1-BM22	SVH4600L-S1-BM22	SVH5000L-S1-BM22	SVH6000L-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		
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		
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		
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		
Protection level			IP66		
					Smart Fan-cooling



Three-phase Hybrid Inverter (High Voltage)

SVH29.9  
/30/40/50 kW

SVH029KH-T1-BM48    SVH030KH-T1-BM48  
SVH040KH-T1-BM510    SVH050KH-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	SVH029KH-T1-BM48	SVH030KH-T1-BM48	SVH040KH-T1-BM510	SVH050KH-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

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Residential Energy Storage System (high voltage)

High Voltage Battery

Low Voltage Battery

Smarter 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 Efcieny

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						

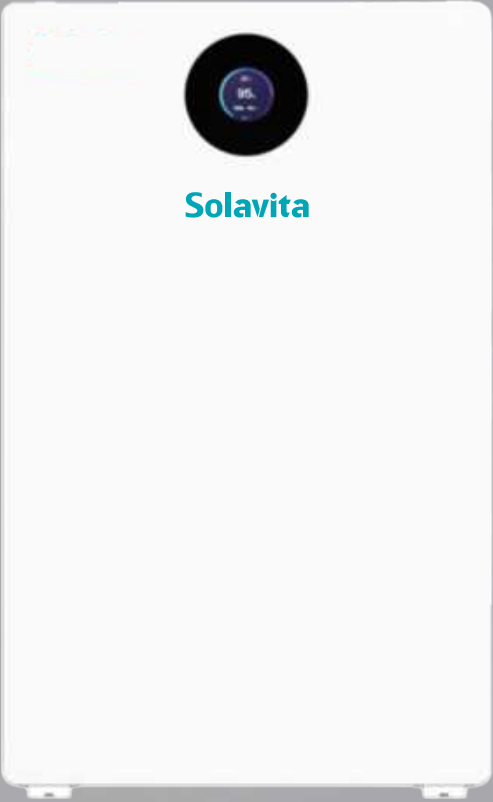






Low Voltage Battery

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&DISCHARGE		
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	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		





## PV Modules Series

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All Black Series

High Efficiency Series

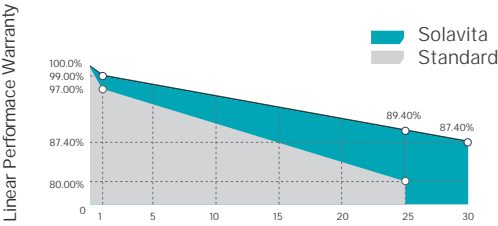
Anti-dust Series

Customizable Colors Panel Series



N<sup>+</sup> series

All-Black Solar Panels-54  
420-440W



**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

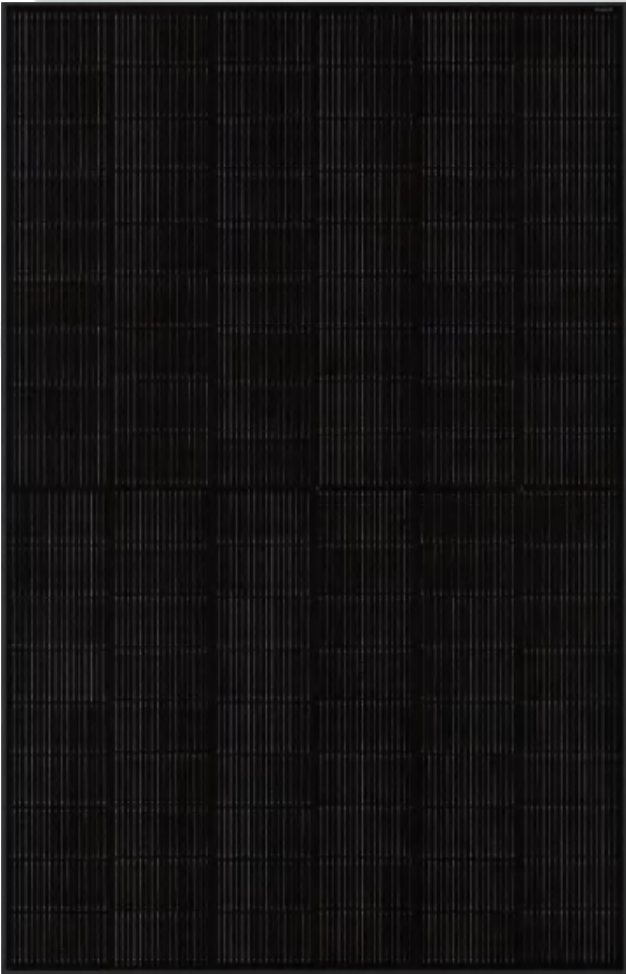
**Bifacial Energy Yield | N-type Silicon Wafer**  
Bifacial rate of up to 80%, module additional power generation  
of up to 10% over regular modules

**Better low irradiance response**  
Superior power generation under shading conditions

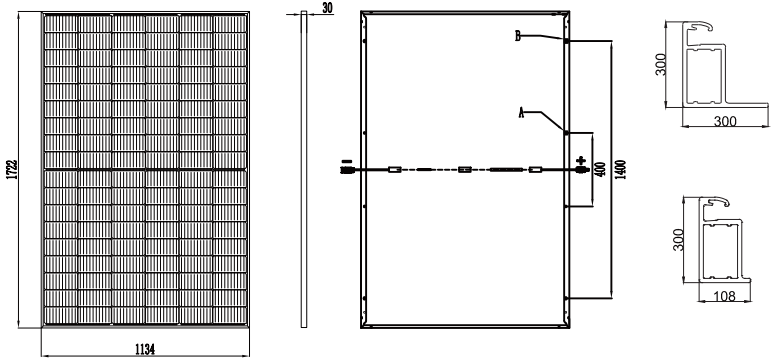
**Improvement in power generation performance**  
Conversion efficiency up to 22.02%

**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



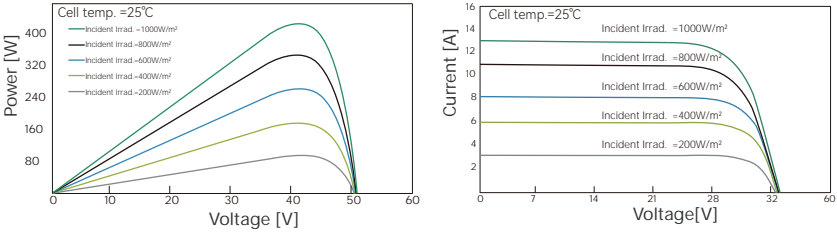
Mechanical Specifications

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 <sup>2</sup> / +300mm -300mm (Customized Length)

Electrical Characteristics

Module Type	182THCD420-54	182THCD425-54	182THCD430-54	182THCD435-54	182THCD440-54
	STC	STC	STC	STC	STC
Maximum Power[W]	420	425	430	435	440
Maximum Power Voltage[V]	33.97	34.08	34.19	34.30	34.41
Maximum Power Current[A]	12.37	12.48	12.59	12.68	12.79
Open circuit voltage[V]	38.94	39.06	39.19	39.31	39.44
Short Circuit Current[A]	13.06	13.17	13.29	13.39	13.50
Module Efficiency	21.51%	21.76%	22.02%	22.27%	22.53%
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



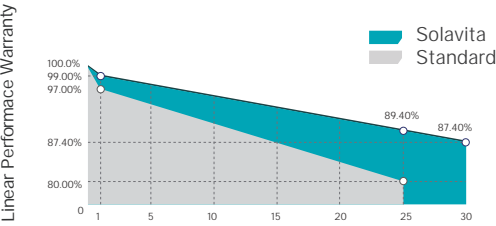
Level

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



# N<sup>i</sup>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

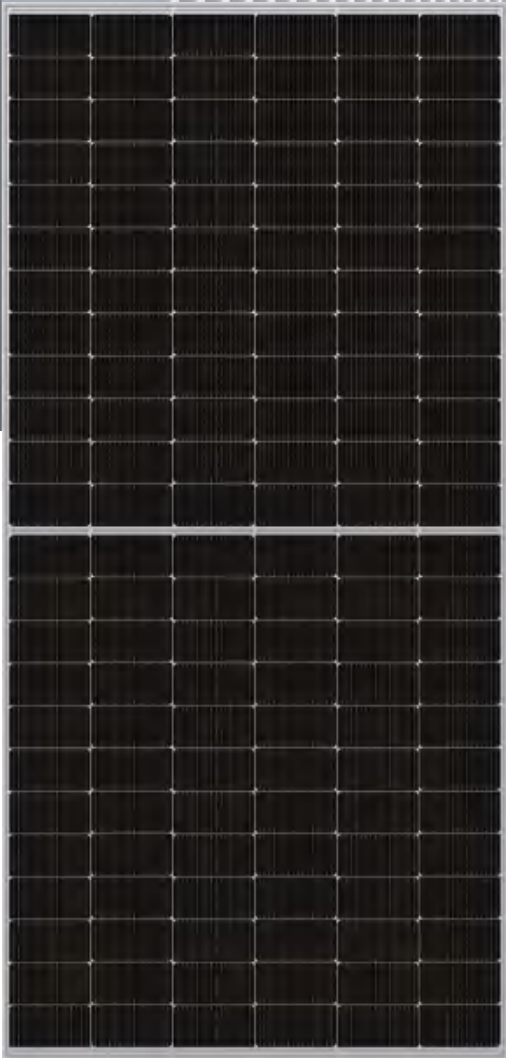
**Bifacial Energy Yield | N-type Silicon Wafer**  
Additional power generation from the backside of bifacial modules increases the overall energy yield

**Better low irradiance response**  
Superior power generation under shading conditions

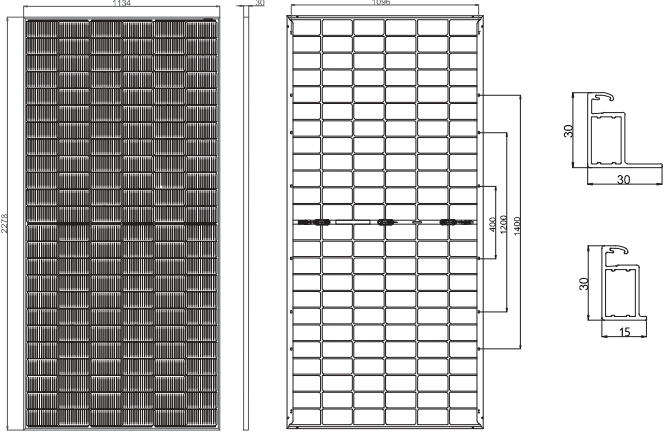
**Improvement in power generation performance**  
Conversion efficiency reached 22.84%

**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



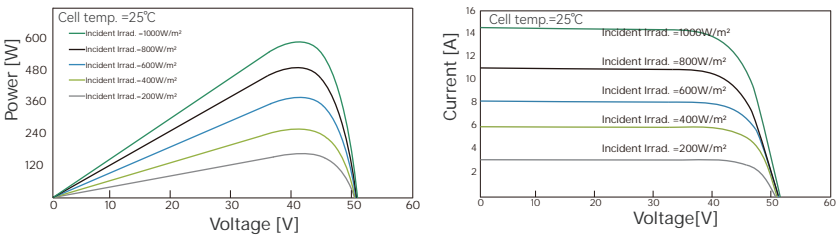
## Mechanical Specifications

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	4mm² / +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

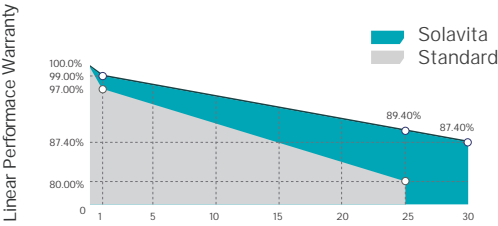


## Level

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

N<sup>+</sup> 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

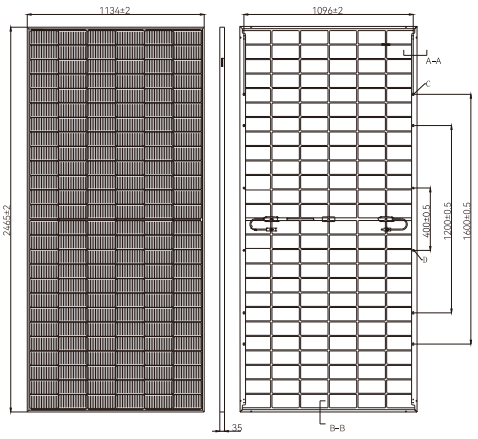
**Lower O&M Costs**  
Improving life-cycle power generation Reduces cleaning frequency and cost

**Improvement in power generation performance**  
Conversion efficiency reached 22.89%

**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



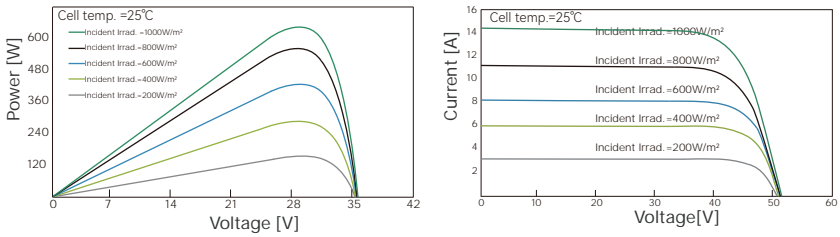
Mechanical Specifications

Solar Cells	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	4mm² / +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



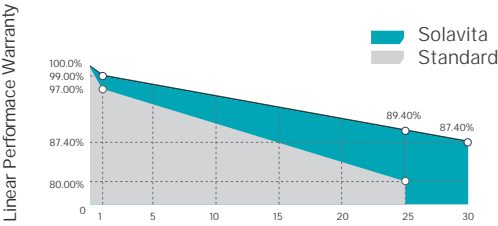
Level

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



# N<sup>+</sup> series

Modul mit anpassbaren Farben-54  
340-360W



**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

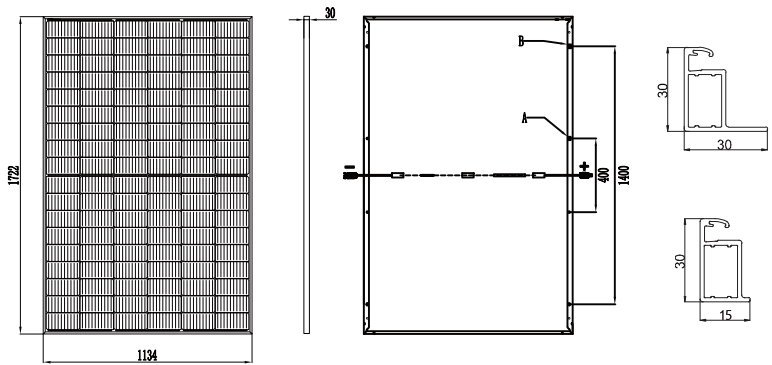
**Variety of colours (customizable)**  
Suitable for coloured construction

**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



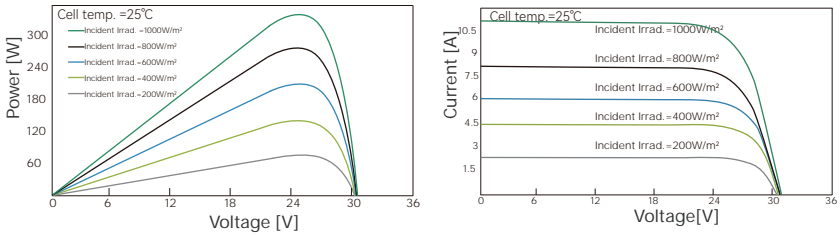
## Mechanical Specifications

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	4mm² / +300mm -300mm (Customized Length)

## Electrical Characteristics

Module Type	QM182THCD340-54	QM182THCD345-54	QM182THCD350-54	QM182THCD355-54	QM182THCD360-54
	STC	STC	STC	STC	STC
Maximum Power[W]	340	345	350	355	360
Maximum Power Voltage[V]	32.01	32.11	32.21	32.31	32.41
Maximum Power Current[A]	10.62	10.74	10.87	10.99	11.11
Open circuit voltage[V]	38.26	38.39	38.52	38.65	38.78
Short Circuit Current[A]	11.04	11.16	11.28	11.40	11.52
Module Efficiency	17.41%	17.66%	17.92%	18.17%	18.43%
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
<b>Packing Configuration</b>	
Pallet	36pcs/Pallet
Container	936pcs/40HQ Container

Variety of colours (customizable)



# Mounting System

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For Slate Roof

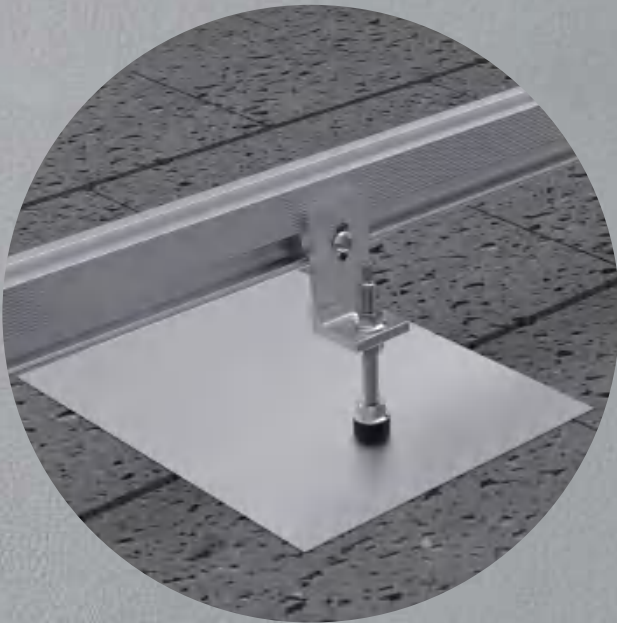
For Tile Roof

PV Cables - Durable and Safe

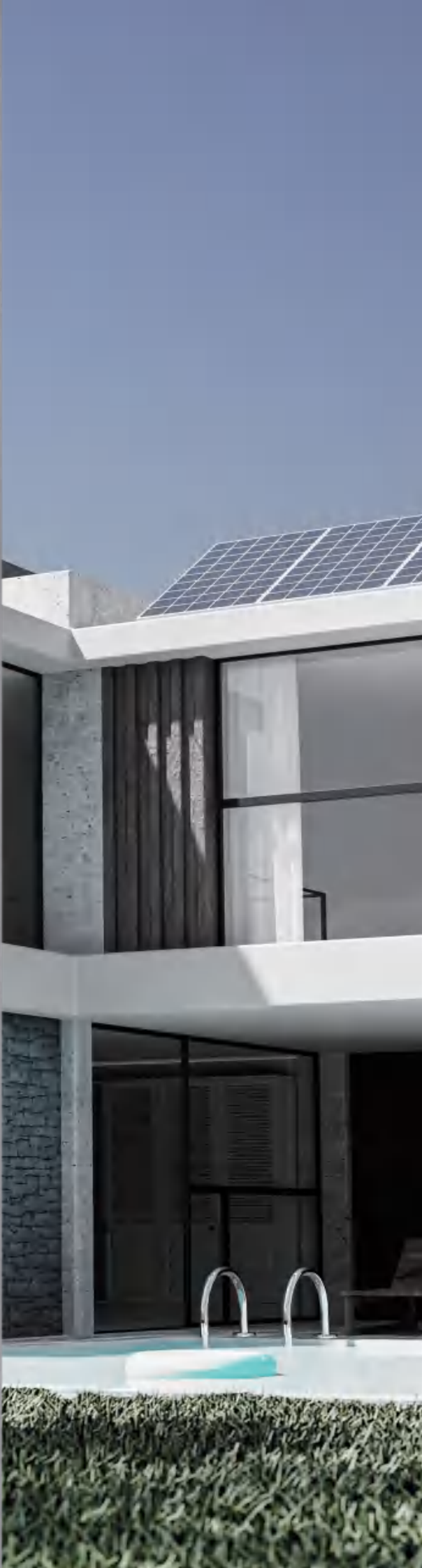


# Mounting Support System Solution




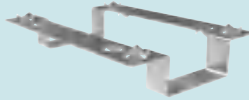
For Slate Roof



- 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

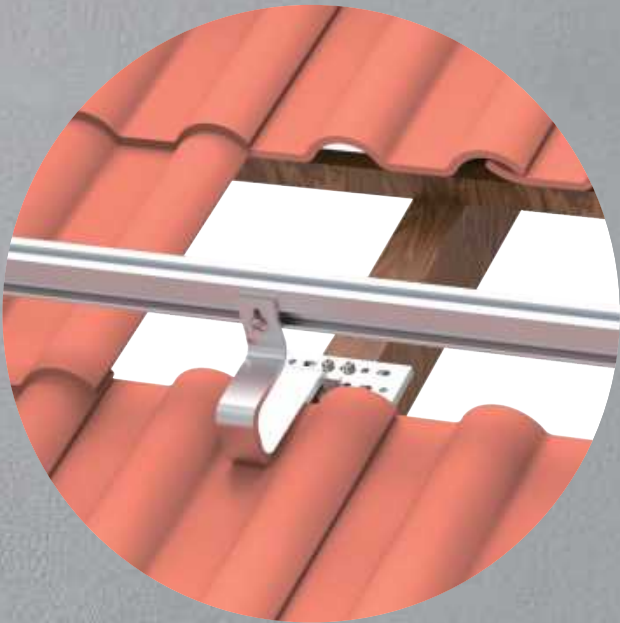
Component Details	
 <div><b>Waterproof Flashing</b> GM-CH-L4 AL6005-T6/SUS304</div>	 <div><b>Rail splice</b> GM-RS-79-100-GCL AL6005-T5/SUS304</div>
 <div><b>Rail</b> GM-R79 AL6005-T5</div>	 <div><b>Mild Clamp</b> GM-MC-35-GCL AL6005-T5/SUS304</div>
 <div><b>End Clamp</b> GM-EC-35-GCL AL6005-T5/SUS304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



Mounting System

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



PV Cables - Durable and Safe

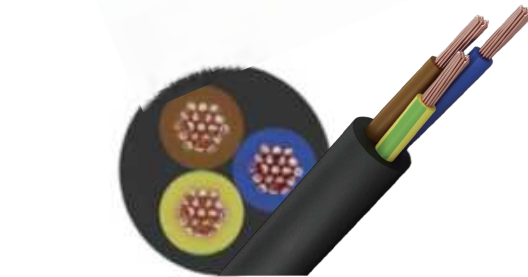


**Safe**  
Quality Assurance,  
TUV/VED certified

**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



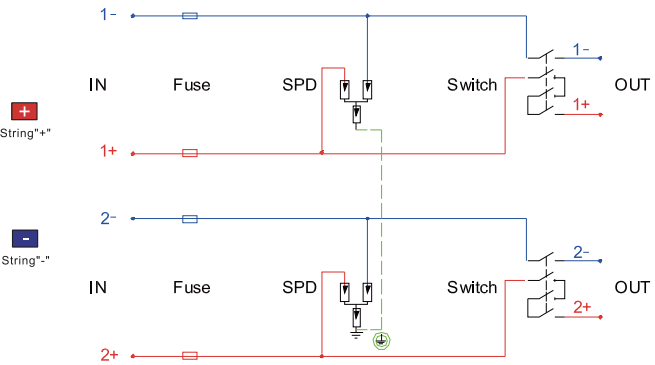
**PV cable (Black &Red)**  
Rated voltage: DC1500V  
Temperature range: -40°C~125°C  
Outer diameter: 5.5±0.1mm  
Test voltage: 6500V, 5min

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 Ø4-8mm or MC4		
Cable Output Entry	Cable Gland Ø4-8mm 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**  
5.94 MW



- **Shenzhen, China**  
8 MW



- **Shenzhen, China**  
1.69 MW





## Project Case

- **Frankfurt, Germany**

2x10kW / 2x11kWh



- **Frankfurt, Germany**

12kW / 14kWh



- **Frankfurt, Germany**

10 kW / 11 kWh



- **Lecce, Italy**

6 kW / 11 kWh



- **Lecce, Italy**

4.6 kW / 11 kWh



- **Udine, Italy**

6 kW / 8 kWh



# Contact us



## Headquarter



cwgf@skyworth.com



+86-400-063-8989



Shenzhen, China



## Solar Panel Manufacturing Base



cwgf@skyworth.com



+86-400-063-8989



Shenzhen, China



## Inverter Manufacturing Base



info@solavita-ess.com



+86-051265293687



Suzhou, China



## Overseas Branches



service.de@solavita-ess.com



Eschborn, Germany



service.it@solavita-ess.com



ViaNoto10,20141,(MI)Italia