



***sunways***

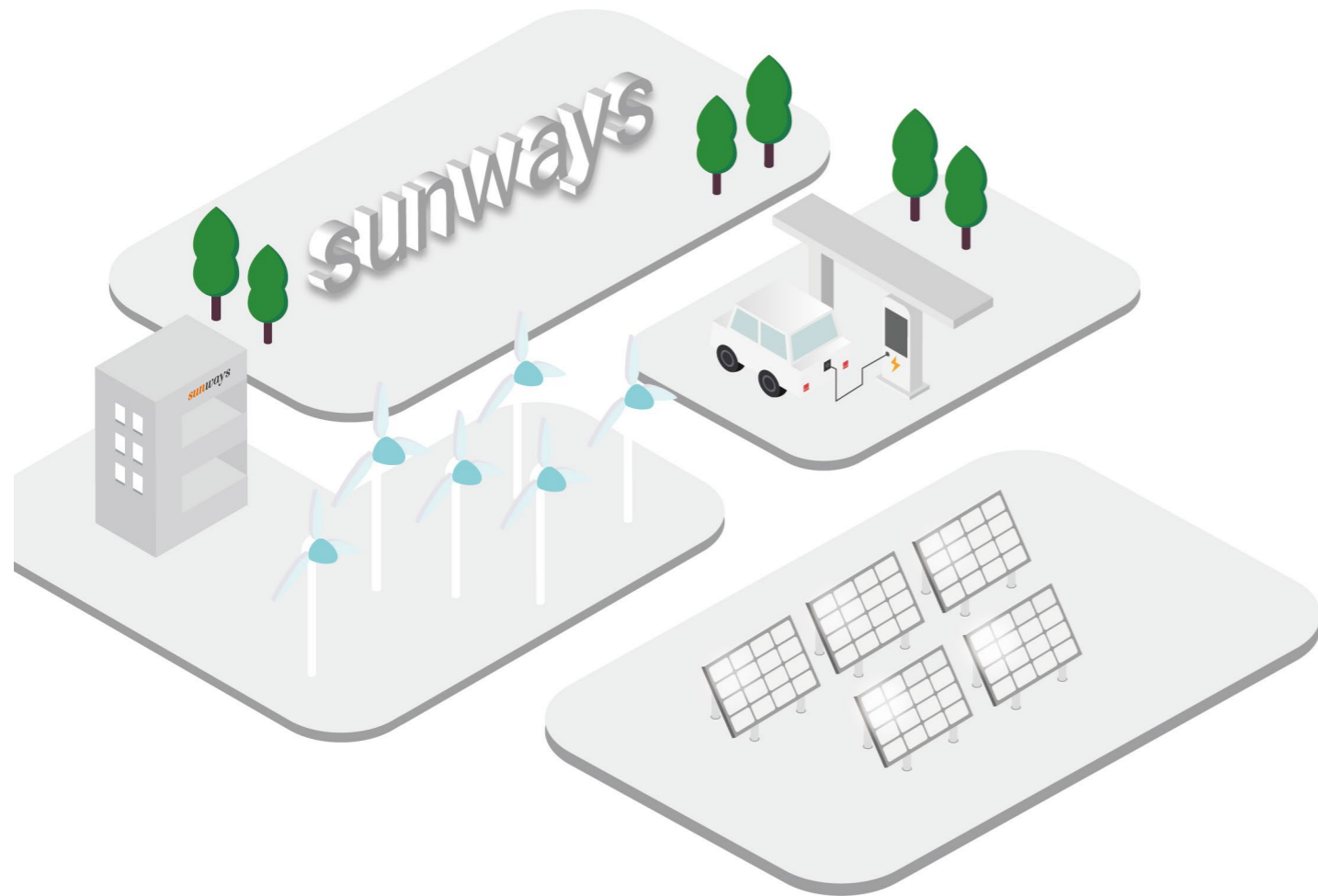
German Heritage Since **1993**

[www.sunways-tech.com](http://www.sunways-tech.com)

# CONNECTS

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# 01 COMPANY PROFILE



Sunways Energie GmbH, a leading manufacturer of photovoltaic inverters with over 30 years of experience in the industry. Since our founding, we have been committed to providing high-quality, reliable, and efficient products. Our state-of-the-art manufacturing facility and rigorous quality control processes ensure that each of our products meets the highest standards of excellence. At the same time, we are constantly improving our international organization, which can bring more complete service experience to our customers.

At Sunways, we offer a wide range of photovoltaic inverters, including grid-tied and hybrid models, designed to meet the unique needs of residential, commercial, and industrial customers.

With a commitment to sustainability, our goal is to provide our customers with innovative solutions that efficiently match their energy demands with supply. By creating an integrated energy system through our rich product layout and smart energy solutions, we enable our clients to effectively manage their energy needs.

At Sunways, we believe that Energy Connects All, and we are dedicated to providing top-notch energy solutions that enhance our customers' lives while promoting sustainability.

GERMAN HERITAGE SINCE 1993



**1993 Founded**  
Konstanz, Germany  
R&D Center



**7GW**  
Production Capacity



**Frankfurt, Germany**  
Operation Center



**Ningbo, China**  
HQ & Manufacturer Base



**Netherlands**  
Warehouse



**60+**  
Footprint

# WHO WE ARE

## Sunways Company's Milestones



Foundation of Sunways GmbH in Konstanz

### 1993

Transformation into "Aktiengesellschaft" (joint stock corporation)

### 1999

### 2001

Listing on the Frankfurt stock exchange

### 2003

Award as "TOP 100" company for outstanding innovation management



Opening of office in Barcelona (Spain)

### 2004

Opening of Sunways Production GmbH in Arnstadt (Germany)

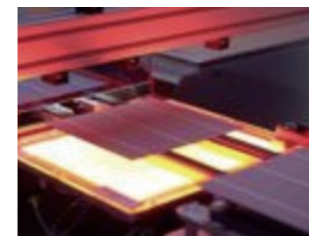
### 2005

### 2008

Winner of "Solar Technology fast 50" company

### 2012

The innovative storage solution has been issued



New manufacturing site launched in Ningbo, build a new production line

### 2018

Industry-leading products coverage. Sunways product range is expanded to 1~125kW for on-grid and 3~33kW for hybrid making a new stage

### 2021

### 2022

Reboot in Germany by establishing operation center in Frankfurt and R&D center in Konstanz, and global sales and service offices opened in more and more countries

### 2023

Activate new manufacturing center, launch new low-voltage hybrid series and micro inverter, celebrate 30th Anniversary





# WHERE WE ARE



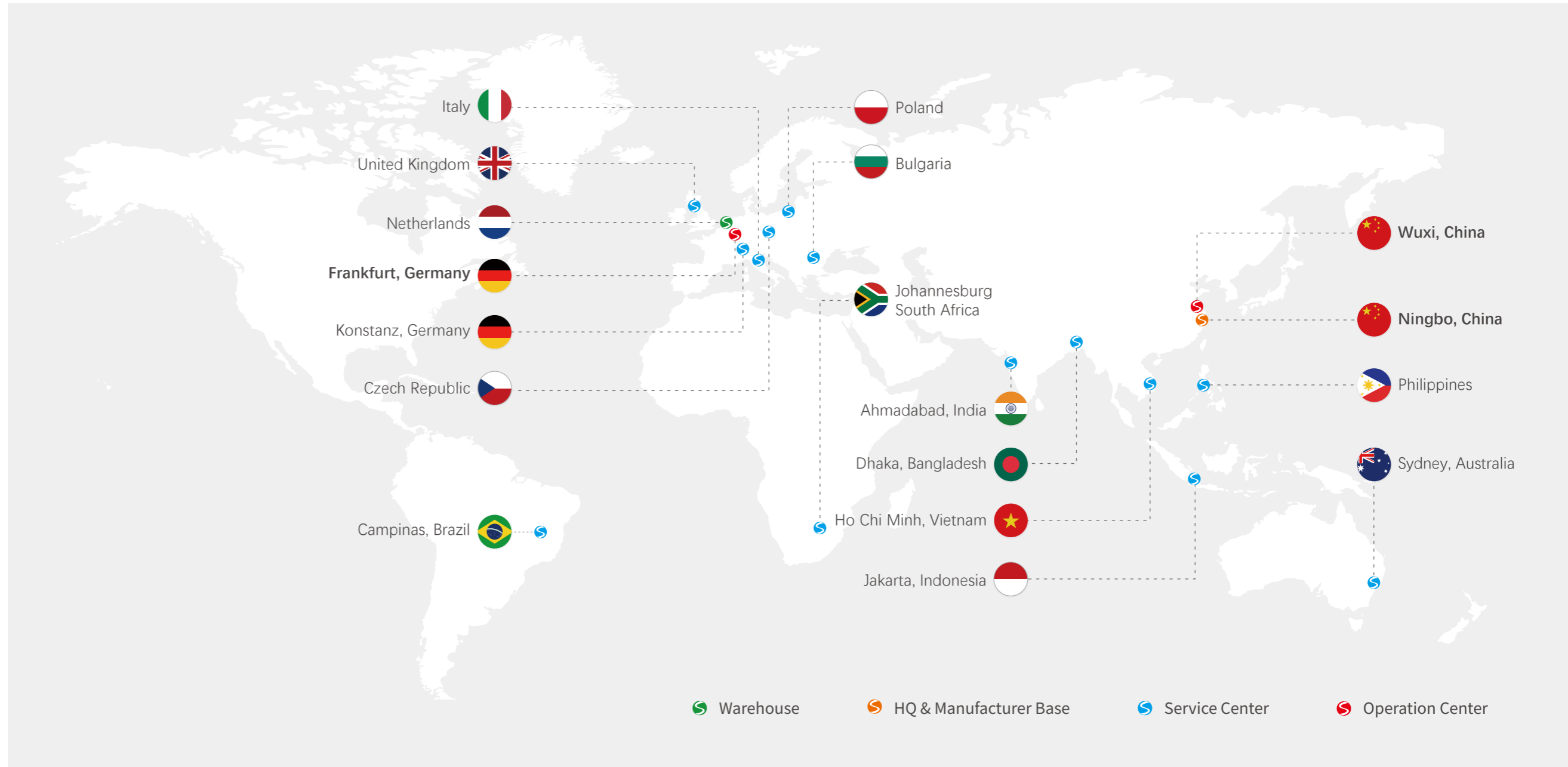
**Professional**



**Rapid**



**Local**



# WHY CHOOSE SUNWAYS

## CERTIFICATES

C10-11      EN61000      EN50549      SAA

EN62109      IEC62109      CEI 0-21      RD1699

For more latest certificates, please visit us at [www.sunways-tech.com](http://www.sunways-tech.com) to download.

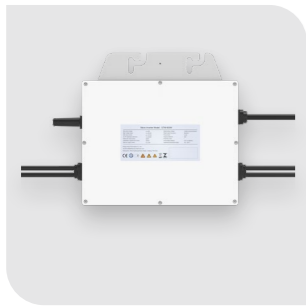
## EXCELLENT RELIABILITY

Sunways is fully certified by professional and authoritative third-party testing organizations.

## STRATEGIC PARTNERS

# 02 PRODUCTS

## Micro Inverter

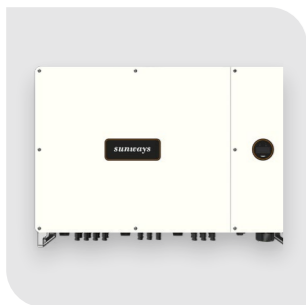


- Max 96.5% Efficiency
- IP67 protection
- Safer for solar stations

### Micro Inverter

Model	STM-600W	STM-800W
Operating Voltage (V)	350-360	350-360
Power Rating (kW)	0.6	0.8

## On-grid Inverter



- Max 98.8% Efficiency
- >160% DC oversizing
- 110% overloading

### Single-phase Inverter

Model	STS-1K~3.3KTL-S-P	STS-3K~6KTL-SE	STS-7K~11KTL
Operating Voltage (V)	80-450	100-550	80-550
Power Rating (kW)	1/1.5/2/2.5/3/3.3	3/3.6/4.2/4.6/5/6	7/8/9/10/11

### Three-phase Inverter

Model	STT-4K~25KTL-P	STT-30K~60KTL	STT-80K~110KTL	STT-100~136KTL-SE
Operating Voltage (V)	160-1000	180-1000	200-950	200-950
Power Rating (kW)	4/5/6/8/10/12/ 15/17/20/25	29.9/30/33/36/ 40/45/50/60	80/100/110	100/136

## Hybrid Inverter



- Max 98.2% Efficiency
- >200% DC oversizing
- 110% overloading

### Single-phase Inverter

Model	STH-3~10KTL-LS(LV)	STH-3~8KTL(HV)
Operating Voltage (V)	100-550	100-550
Power Rating (kW)	3/3.6/4.2/4.6/5/6/7/8/10	3/3.6/4.2/4.6/5/6/7/8

### Three-phase Inverter

Model	STH-4K~12KTL-HT-P(HV)	STH-15K~33KTL-HT(HV)
Operating Voltage (V)	150-850	200-850
Power Rating (kW)	4/5/6/8/10/12	15/17/20/25/29.9/30/33

## All In One



- 5kw AC output
- Wiring pretreatment
- Scalable battery capacity

Model	STA 3-8K-HS	STA 4-12K-HS
Operating Voltage (V)	100-550	150-850
Power Rating (kW)	3/3.6/4.2/4.6/5/6/7/8	4/5/6/8/10/12

## STE Battery



- Active Heat Dissipating Equalization with "Z" Type Cell Manufacturing Craft
- Operating Temperature: 0°C-50°C
- >6,000 Cycles @ 90% DOD

Model	STE-BS	STE-ES	STE-FS	STE-LS
Battery Usable Energy (kWh)	2.56×2 ~ 2.56×8	5.12×1 ~ 5.12×6	10.24×1 ~ 10.24×5	5.12
Nominal Voltage (V)	102.4 ~ 409.6	102.4 ~ 614.4	102.4~512	51.2

## WiFi/LAN/GPRS/4G Module



## Data logger



## Smart Meter, CT





- MAX. EFFICIENCY 97.5%
- IP65 PROTECTION

**STS 1~3.3kW**

Single Phase | 1 MPPT | ON Grid

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex power grid
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 97.5%
- European weighted efficiency 97%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- Single MPPT design with precise MPPT algorithm

**HIGH YIELD**



- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

**EASY TO USE**



Model	STS-1KTL-S-P	STS-1.5KTL-S-P	STS-2KTL-S-P	STS-2.5KTL-S-P	STS-3KTL-S-P	STS-3.3KTL-S-P*
<b>Input</b>						
Max. Input Power (W)	1,600	2,400	3,200	4,000	4,800	4,800
Start-up Voltage (V)	60	60	60	60	60	60
Min. DC Voltage (V)	55	55	55	55	55	55
Max. DC Input Voltage (V)	500	500	500	500	500	500
Rated DC Input Voltage (V)	360	360	360	360	360	360
MPPT Voltage Range (V)	80-450	80-450	80-450	80-450	80-450	80-450
Number of MPP Trackers	1	1	1	1	1	1
Number of DC Inputs per MPPT	1	1	1	1	1	1
Max. Input Current (A)	16	16	16	16	16	16
Max. Short-circuit Current (A)	20	20	20	20	20	20
<b>Output</b>						
Rated Output Power (W)**	1,000	1,500	2,000	2,500	3,000	3,300
Max. Output Power (W)	1,100	1,650	2,200	2,750	3,300	3,300
Max. Apparent Power (VA)	1,100	1,650	2,200	2,750	3,300	3,300
Rated Output Voltage (V)**	220/230					
Rated AC Frequency (Hz)	50/60 45-55/55-65					
Max. Output Current (A)	4.8	7.2	9.6	12	14.4	14.4
Power Factor	0.8 leading...0.8 lagging					
THDi @ Rated Power	< 3%					
DCI	< 0.5%In					
<b>Efficiency</b>						
Max. Efficiency	97.3%	97.3%	97.5%	97.5%	97.5%	97.5%
Euro Efficiency	96.4%	96.4%	97.0%	97.0%	97.0%	97.0%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>						
DC Reverse Polarity Protection	Integrated					
Insulation Resistance Detection	Integrated					
DC Switch	Optional					
Surge Protection	Integrated					
Over-temperature Protection	Integrated					
Residual Current Protection	Integrated					
Anti-islanding Protection	Integrated					
AC Short-circuit Protection	Integrated					
AC Over-voltage Protection	Integrated					
<b>General Data</b>						
Dimensions [W*H*D] (mm)	327*297*114					
Weight (kg)	6.5					
Protection Degree	IP65					
Self-consumption at Night (W)	< 1					
Topology	Transformerless					
Operating Temperature Range (°C)	-30~60					
Relative Humidity (%)	0~100					
Operating Altitude (m)	4000 (derating > 3000)					
Cooling	Natural Convection					
Noise Level (dB)	< 25					
Display	OLED & LED					
Communication	RS485/WiFi/GPRS/LAN (Optional)					

\* STS 3.3KTL-S-P is only available for India.

\*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.



- MAX. EFFICIENCY 98.1%
- IP66 PROTECTION

**STS 3~6kW**

Single Phase | 2 MPPTs | ON Grid

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex grid environments
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 98.1%
- European weighted efficiency 97.6%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- With a max input current of 20A, compatible with high-power panels

**HIGH YIELD**



- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

**EASY TO USE**



Model	STS-3KTL-SE	STS-3.6KTL-SE	STS-4KTL-SE	STS-4.6KTL-SE	STS-5KTL-SE	STS-6KTL-SE
<b>Input</b>						
Max. Input Power (W)	4800	5760	6400	7360	8000	9600
Start-up Voltage (V)	80	80	80	80	80	80
Min. DC Voltage (V)	100	100	100	100	100	100
Max. DC Input Voltage (V)	600	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360	360
MPPT Voltage Range (V)	100~550	100~550	100~550	100~550	100~550	100~550
No. of MPP Trackers	2	2	2	2	2	2
No. of DC Inputs per MPPT	1/1	1/1	1/1	1/1	1/1	1/1
Max. Input Current (A)	20/20	20/20	20/20	20/20	20/20	20/20
Max. Short-circuit Current (A)	25/25	25/25	25/25	25/25	25/25	25/25
<b>Output</b>						
Rated Output Power (W)**	3000	3680	4000	4600	5000/4990	6000
Max. Output Power (W)	3300	3680	4400	5060	5500/4990	6600
Max. Apparent Power (VA)	3300	3680	4400	5060	5500/4990	6600
Rated Output Voltage (V)**	220/230					
Rated AC Frequency (Hz)	50/60					
Max. Output Current (A)	15	16	20	23	25/21.7	30
Power Factor	0.8 leading...0.8 lagging					
THDi @ Rated Power	<3%					
DCI	<0.5%ln					
<b>Efficiency</b>						
Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%	98.1%
Euro Efficiency	97.3%	97.3%	97.3%	97.3%	97.5%	97.6%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>						
DC Reverse Polarity Protection	Integrated					
Insulation Resistance Detection	Integrated					
AFCl	Optional					
Surge Protection	Integrated					
Over-temperature Protection	Integrated					
Residual Current Protection	Integrated					
Anti-islanding Protection	Integrated					
AC Short-circuit Protection	Integrated					
AC Over-voltage Protection	Integrated					
<b>General Data</b>						
Dimensions [W*H*D] (mm)	410*360*120					
Weight (kg)	11.5					
Protection Degree	IP66					
Self-consumption at Night (W)	<1					
Topology	Transformerless					
Operating Temperature Range (°C)	-30~60					
Relative Humidity (%)	0~100					
Operating Altitude (m)	3000 (derating > 2000)					
Cooling	Natural Convection					
Noise Level (dB)	< 25					
Display	OLED(Optional)					
Communication	RS485/WiFi/GPRS/LAN (Optional)					

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- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex grid environments
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 98.1%
- European weighted efficiency 97.6%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- With a max input current of 15A, compatible with high-power panels

**HIGH YIELD**



- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485/WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

**EASY TO USE**



Model	STS-7KTL	STS-8KTL	STS-9KTL	STS-10KTL	STS-11KTL*
<b>Input</b>					
Max. Input Power (W)	11,200	12,800	14,400	16,000	16,000
Start-up Voltage (V)	80	80	80	80	80
Max. DC Input Voltage (V)	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360
MPPT Voltage Range (V)	80~550	80~550	80~550	80~550	80~550
Number of MPPT Trackers	2	2	2	2	2
Number of DC Inputs per MPPT	1/2	1/2	1/2	1/2	1/2
Max. Input Current (A)	15/30	15/30	15/30	15/30	15/30
Max. Short-circuit Current (A)	20/40	20/40	20/40	20/40	20/40
<b>Output</b>					
Rated Output Power (W)**	7,000	8,000	9,000	10,000	11,000
Max. Output Power (W)	7,700	8,800	9,900	11,000	11,000
AC Output Rated Apparent Power (VA)	7,000	8,000	9,000	10,000	11,000
Max. Apparent Power (VA)	7,700	8,800	9,900	11,000	11,000
Rated Output Voltage (V)**	220/230				
Rated AC Frequency (Hz)	50/60				
AC Output Rated Current (A)	30.4	34.8	39.1	43.5	47.8
Max. Output Current (A)	33.5	38.3	43	47.8	47.8
Power Factor	0.8 leading...0.8 lagging				
THDi @ Rated Power	<3%				
DCI	< 0.5%In				
<b>Efficiency</b>					
Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%
Euro Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>					
DC Reverse Polarity Protection	Integrated				
Insulation Resistance Detection	Integrated				
DC Switch	Optional				
Surge Protection	Integrated				
Over-temperature Protection	Integrated				
Residual Current Protection	Integrated				
Anti-islanding Protection	Integrated				
AC Short-circuit Protection	Integrated				
AC Over-voltage Protection	Integrated				
<b>General Data</b>					
Dimensions [W*H*D] (mm)	550*410*175				
Weight (kg)	24				26
Protection Degree	IP65				
Self-consumption at Night (W)	< 1				
Topology	Transformerless				
Operating Temperature Range (°C)	-30~60				
Relative Humidity (%)	0~100				
Operating Altitude (m)	4000 (derating > 3000)				
Cooling	Natural Convection		Smart Fan Cooling		
Noise Level (dB)	< 25		< 40		
Display	OLED & LED				
Communication	RS485/WiFi/GPRS/LAN (Optional)				

\* STS 11KTL is only available for Brazil.

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- MAX. EFFICIENCY 98.6%
- IP65 PROTECTION

**STT 4~25kW**

Three Phase | 2 MPPTs | ON Grid

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex grid environments
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 98.6%
- European weighted efficiency 98.2%
- Longer working hours due to the lower start-up voltage and wider MPPT range
- Up to 10% continuous output overloading capacity
- With a max input current of 15A, compatible with high-power panels

**HIGH YIELD**



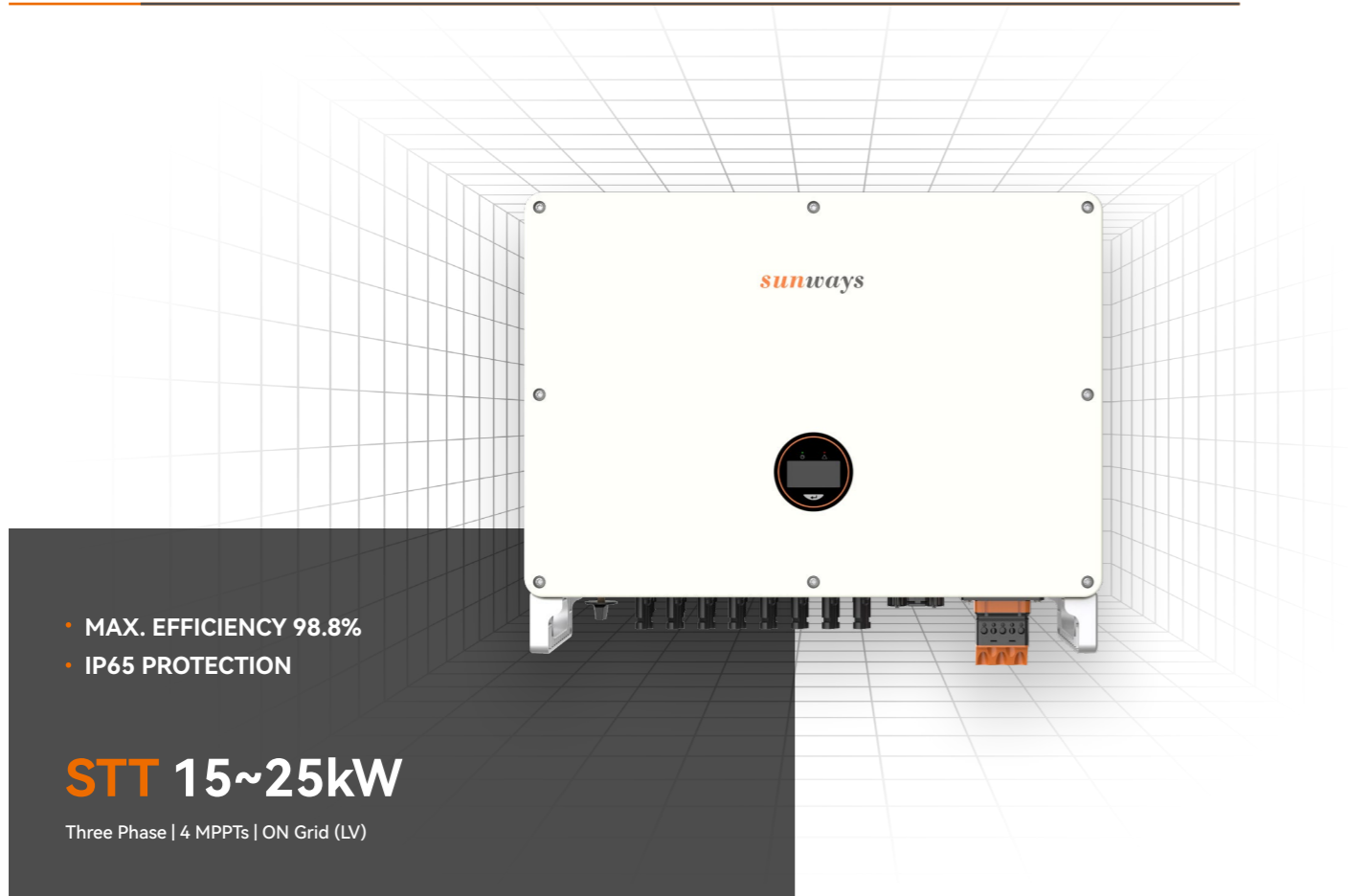
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

**EASY TO USE**



Model	STT-4KTL-P	STT-5KTL-P	STT-6KTL-P	STT-8KTL-P	STT-10KTL-P	STT-12KTL-P	STT-15KTL-P	STT-17KTL-P	STT-20KTL-P	STT-25KTL-P	
<b>Input</b>											
Max. Input Power (W)	6,400	8,000	9,600	12,800	16,000	19,200	24,000	27,200	32,000	40,000	
Start-up Voltage (V)	180	180	180	180	180	180	180	180	180	180	
Min. DC Voltage (V)	150	150	150	150	150	150	150	150	150	150	
Max. DC Input Voltage (V)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100	
Rated DC Input Voltage (V)	620	620	620	620	620	620	620	620	620	620	
MPPT Voltage Range (V)	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	160-1000	
Number of MPP Trackers	2	2	2	2	2	2	2	2	2	2	
Number of DC Inputs per MPPT	1	1	1	1	1	1	1/2	2	2	2	
Max. Input Current (A)	15/15	15/15	15/15	15/15	15/15	15/15	15/30	30/30	30/30	30/30	
Max. Short-circuit Current (A)	20/20	20/20	20/20	20/20	20/20	20/20	20/40	40/40	40/40	40/40	
<b>Output</b>											
Rated Output Power (W)**	4,000	5,000	6,000	8,000	10,000	12,000	15,000	17,000	20,000	25,000	
Max. Output Power (W)	4,400	5,500	6,600	8,800	11,000	13,200	16,500	18,700	22,000	25,000	
Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200	16,500	18,700	22,000	25,000	
Rated Output Voltage (V)**	3L/N/PE, 230/400V										
Rated AC Frequency (Hz)	50/60 45-55/55-65										
Max. Output Current (A)	6.7	8.4	10	13.3	16.5	20	25	28.4	31.9	39	
Power Factor	0.8 leading...0.8 lagging										
THDi @ Rated Power	< 3%										
DCI	< 0.5%ln										
<b>Efficiency</b>											
Max. Efficiency	98.1%	98.1%	98.3%	98.3%	98.6%	98.6%	98.6%	98.6%	98.6%	98.6%	
Euro Efficiency	97.9%	97.9%	98.0%	98.0%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	
<b>Protection</b>											
DC Reverse Polarity Protection	Integrated										
Insulation Resistance Detection	Integrated										
DC Switch	Optional										
Surge Protection	Integrated										
Over-temperature Protection	Integrated										
Residual Current Protection	Integrated										
Anti-islanding protection	Integrated										
AC Short-circuit Protection	Integrated										
AC Over-voltage Protection	Integrated										
<b>General Data</b>											
Dimensions [W*H*D] (mm)	550*410*175										
Weight (kg)	23			26				29			
Protection Degree	IP65										
Self-consumption at Night (W)	< 1										
Topology	Transformerless										
Operating Temperature Range (°C)	-30~60										
Relative Humidity (%)	0~100										
Operating Altitude (m)	4000 (derating > 3000)										
Cooling	Natural Convection							Smart Fan Cooling			
Noise Level (dB)	< 25							< 40			
Display	OLED & LED										
Communication	RS485, WiFi/GPRS/LAN (Optional)										

\*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.



- MAX. EFFICIENCY 98.8%
- IP65 PROTECTION

**STT 15~25kW**

Three Phase | 4 MPPTs | ON Grid (LV)

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex grid environments
- High anti-corrosion ability with aluminum alloy enclosure
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 98.8%
- European weighted efficiency 98.3%
- Up to 10% continuous output overloading capacity
- 4 MPPT design, lower PV string mismatch loss

**HIGH YIELD**



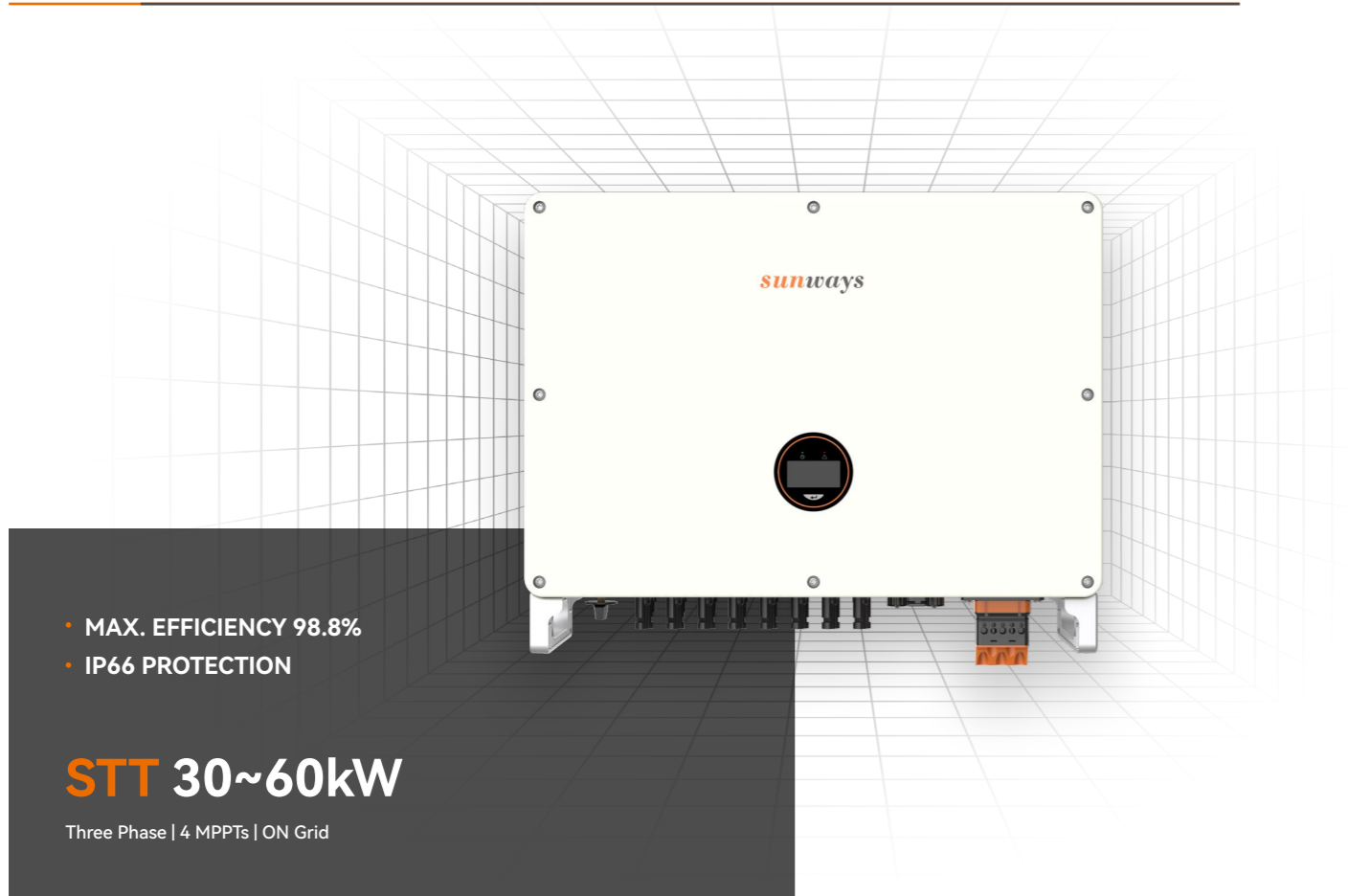
- String monitoring, improve O&M efficiency
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available

**EASY TO USE**



Model	STT-15KTL-LV	STT-20KTL-LV	STT-25KTL-LV
<b>Input</b>			
Max. Input Power (W)	24,000	32,000	40,000
Start-up Voltage (V)	180	180	180
Max. DC Input Voltage (V)	600	600	600
Rated DC Input Voltage (V)	360	360	360
MPPTVoltageRange(V)	180-550	180-550	180-550
No. of MPP Trackers	4	4	4
No. of DC Inputs per MPPT	2	2	2
Max.InputCurrent(A)	26/26/26/26	26/26/26/26	26/26/26/26
Max. Short-circuit Current (A)	40/40/40/40	40/40/40/40	40/40/40/40
<b>Output</b>			
Rated Output Power (W)**	15,000	20,000	25,000
Max. Output Power (W)	18,210	21,870	27,317
AC Output Rated Apparent Power (VA)	15,000	20,000	25,000
Max. Apparent Power (VA)	18,210	21,870	27,317
Rated Output Voltage (V)**	3 L/N/ PE, 127/ 220V		
Rated AC Frequency (Hz)	50/60	50/60	50/60
AC Output Rated Current (A)	40	52.5	65.7
Max. Output Current (A)	47.8	57.4	71.7
Power Factor	0.8 leading...0.8 lagging		
THDi @ Rated Power	<3%		
DCI	<0.5%ln		
<b>Efficiency</b>			
Max. Efficiency	98.8%	98.8%	98.8%
Euro Efficiency	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%
<b>Protection</b>			
DC Reverse Polarity Protection	Integrated		
Insulation Resistance Detection	Integrated		
DC Switch	Integrated		
Surge Protection	Integrated		
Over-temperature Protection	Integrated		
Residual Current Protection	Integrated		
Anti-islanding protection	Integrated		
AC Short-circuit Protection	Integrated		
AC Over-voltage Protection	Integrated		
<b>General Data</b>			
Dimensions [W*H*D] (mm)	600*400*270		
Weight (kg)	42		
Protection Degree	IP65		
Self-consumption at Night (W)	<1		
Topology	Transformerless		
Operating Temperature Range (°C)	-30~60		
Relative Humidity (%)	0~100		
Operating Altitude (m)	4000 (derating > 3000)		
Cooling	Smart Fan Cooling		
Display	OLED & LED		
Communication	RS485, WiFi/ GPRS/LAN(Optional)		

\*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.



- MAX. EFFICIENCY 98.8%
- IP66 PROTECTION

**STT 30~60kW**

Three Phase | 4 MPPTs | ON Grid

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex grid environments
- High anti-corrosion ability with aluminum alloy die casting technology
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 98.8%
- European weighted efficiency 98.3%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- DC 2 in 1 connection enabled, compatible with high-power panels

**HIGH YIELD**



- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy configuration via App or OLED display

**EASY TO USE**



Model	STT-29.9KTL*	STT-30KTL	STT-33KTL	STT-36KTL	STT-40KTL	STT-45KTL	STT-50KTL-M	STT-60KTL-M
<b>Input</b>								
Max. Input Power (W)	47,840	48,000	52,800	57,600	64,000	72,000	80,000	96,000
Start-up Voltage (V)	180	180	180	180	180	180	180	180
Max. DC Input Voltage (V)	1,100	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Rated DC Input Voltage (V)	620	620	620	620	620	620	620	620
MPPT Voltage Range (V)	180-1000	180-1000	180-1000	180-1000	180-1000	180-1000	180-1000	180-1000
Number of MPP Trackers	4	4	4	4	4	4	4	4
Number of DC Inputs per MPPT	2	2	2	2	2	2	2	2
Max. Input Current (A)	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32	32/32/32/32
Max. Short-circuit Current (A)	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40	40/40/40/40
<b>Output</b>								
Rated Output Power (W)**	29,900	30,000	33,000	36,000	40,000	45,000	50,000	60,000
Max. Output Power (W)	29,900	33,000	36,300	39,600	44,000	49,500	55,000	66,000
AC Output Rated Apparent Power (VA)	29,900	30,000	33,000	36,000	40,000	45,000	50,000	60,000
Max. Apparent Power (VA)	29,900	33,000	36,300	39,600	44,000	49,500	55,000	66,000
Rated Output Voltage (V)**	3 L / N / PE, 380 / 400V							
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
AC Output Rated Current (A)	43.3	43.5	47.8	52.2	58.0	65.2	72.5	87.0
Max. Output Current (A)	43.3	47.8	52.6	57.4	63.8	71.7	79.7	95.7
Power Factor	0.8 leading...0.8 lagging							
THDi @ Rated Power	<3%							
DCI	<0.5%In							
<b>Efficiency</b>								
Max. Efficiency	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%
Euro Efficiency	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>								
DC Reverse Polarity Protection	Integrated							
Insulation Resistance Detection	Integrated							
DC Switch	Integrated							
Surge Protection	Integrated							
Over-temperature Protection	Integrated							
Residual Current Protection	Integrated							
Anti-islanding protection	Integrated							
AC Short-circuit Protection	Integrated							
AC Over-voltage Protection	Integrated							
<b>General Data</b>								
Dimensions [W*H*D] (mm)	600*400*270							
Weight (kg)	42							
Protection Degree	IP66							
Self-consumption at Night (W)	<1							
Topology	Transformerless							
Operating Temperature Range (°C)	-30~60							
Relative Humidity (%)	0~100							
Operating Altitude (m)	4000 (derating > 3000)							
Cooling	Smart Fan Cooling							
Display	OLED & LED							
Communication	RS485, WiFi/ GPRS/LAN(Optional)							

\* STT 29.9KTL is only available for Australia.

\*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.



- MAX. EFFICIENCY 98.8%
- IP65 PROTECTION

**STT 50~60kW**

Three Phase | 6 MPPTs | ON Grid

- High reliability due to good heat dissipation design
- Integrated lightning protection for both DC and AC
- Adapt to complex grid environments
- High anti-corrosion ability with aluminum alloy enclosure
- Wider working temperature and altitude, adapt to various installation environments

**SAFE & RELIABLE**



- High yield with Max. Efficiency 98.8%
- European weighted efficiency 98.3%
- Up to 10% continuous output overloading capacity
- Six MPPT design, lower PV string mismatch loss
- DC 2 in 1 connection enabled, compatible with high-power panels

**HIGH YIELD**



- String monitoring, improve O&M efficiency
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available

**EASY TO USE**

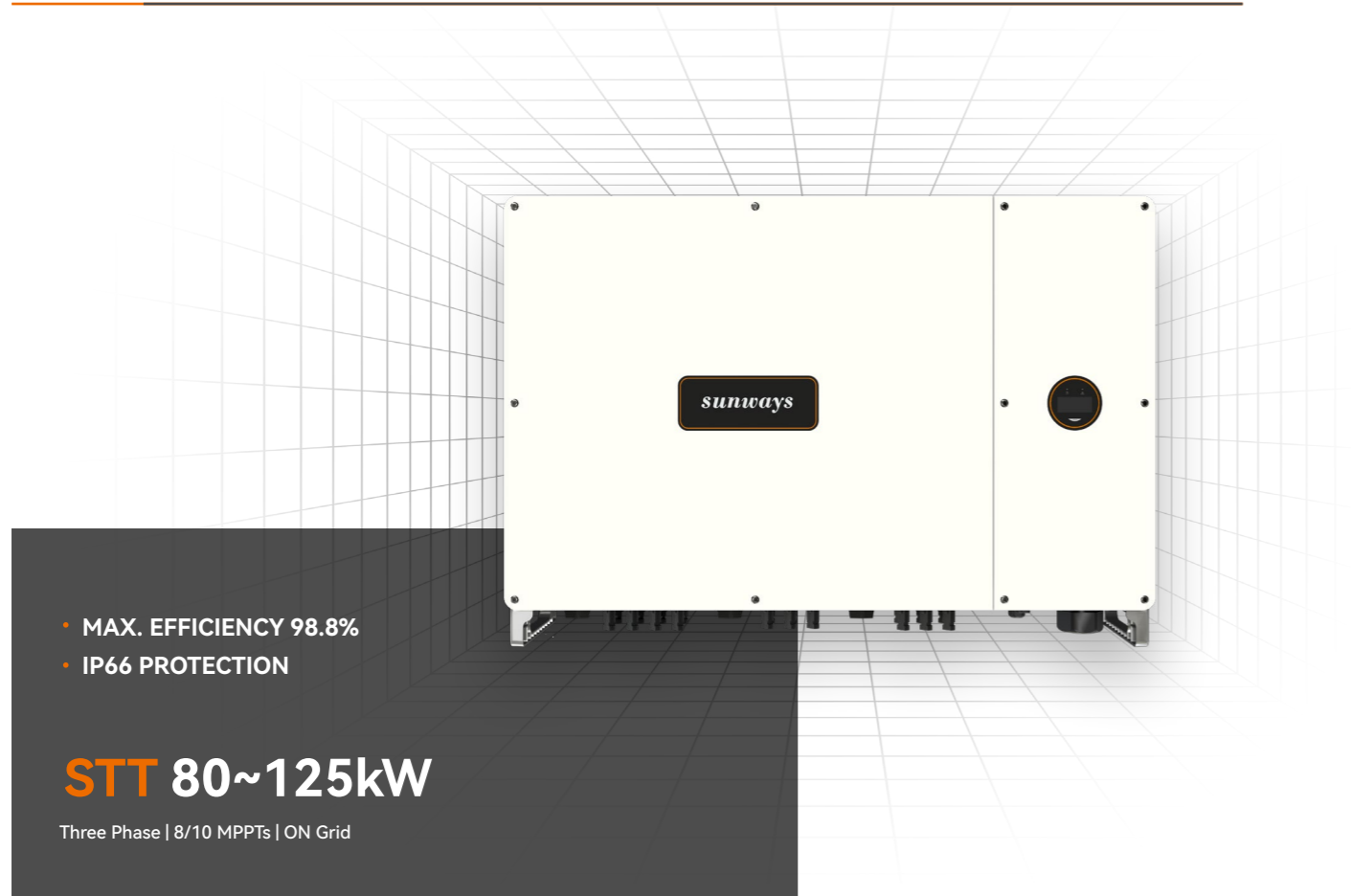


Model	STT-50KTL-P	STT-60KTL-P
<b>Input</b>		
Max. Input Power (W)	80,000	96,000
Start-up Voltage (V)	200	200
Max. DC Input Voltage (V)	1,100	1,100
Rated DC Input Voltage (V)	620	620
MPPT Voltage Range (V)	160-1000	160-1000
Number of MPP Trackers	6	6
Number of DC Inputs per MPPT	2	2
Max. Input Current (A)	26/26/26/26/26/26 <sup>①</sup>	26/26/26/26/26/26 <sup>①</sup>
Max. Short-circuit Current (A)	40/40/40/40/40/40	40/40/40/40/40/40
<b>Output</b>		
Rated Output Power (W)**	50,000	60,000
Max. Output Power (W)	55,000	66,000
Max. Apparent Power (VA)	55,000	66,000
Rated Output Voltage (V)**	3L/N/PE, 230/400V	
Rated AC Frequency (Hz)	50/60 45-55/55-65	
Max. Output Current (A)	83.6	95.3
Power Factor	0.8 leading...0.8 lagging	
THDi @ Rated Power	<3%	
DCI	< 0.5% In	
<b>Efficiency</b>		
Max. Efficiency	98.8%	98.8%
Euro Efficiency	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%
<b>Protection</b>		
DC Reverse Polarity Protection	Integrated	
Insulation Resistance Detection	Integrated	
DC Switch	Optional	
Surge Protection	Integrated	
Over-temperature Protection	Integrated	
Residual Current Protection	Integrated	
Anti-islanding protection	Integrated	
AC Short-circuit Protection	Integrated	
AC Over-voltage Protection	Integrated	
<b>General Data</b>		
Dimensions [W*H*D] (mm)	850*520*290	
Weight (kg)	58	
Protection Degree	IP65	
Self-consumption at Night (W)	< 1	
Topology	Transformerless	
Operating Temperature Range (°C)	-30~60	
Relative Humidity (%)	0~100	
Operating Altitude (m)	4000 (derating > 3000)	
Cooling	Smart Fan Cooling	
Noise Level (dB)	< 55	
Display	OLED & LED	
Communication	RS485, WiFi/GPRS/LAN (Optional)	

① STT-50/60KTL series maximum input current per MPPT is 22A, products deliver upon the order.

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- MAX. EFFICIENCY 98.8%
- IP66 PROTECTION

**STT 80~125kW**

Three Phase | 8/10 MPPTs | ON Grid

- Real-time fault curve recording, improve O&M efficiency
- IP68 intelligent fans, lower operation temperature, longer lifespan
- Intelligent quad-core processor, information processing more comprehensive, fast, and efficient

**INTELLIGENT**



- High yield with Max. Efficiency 98.8%
- Up to 10% continuous output overloading capacity
- 8/10 MPPT design, lower PV string mismatch loss
- DC 2 in 1 connection enabled, compatible with high-power panels

**HIGH YIELD**



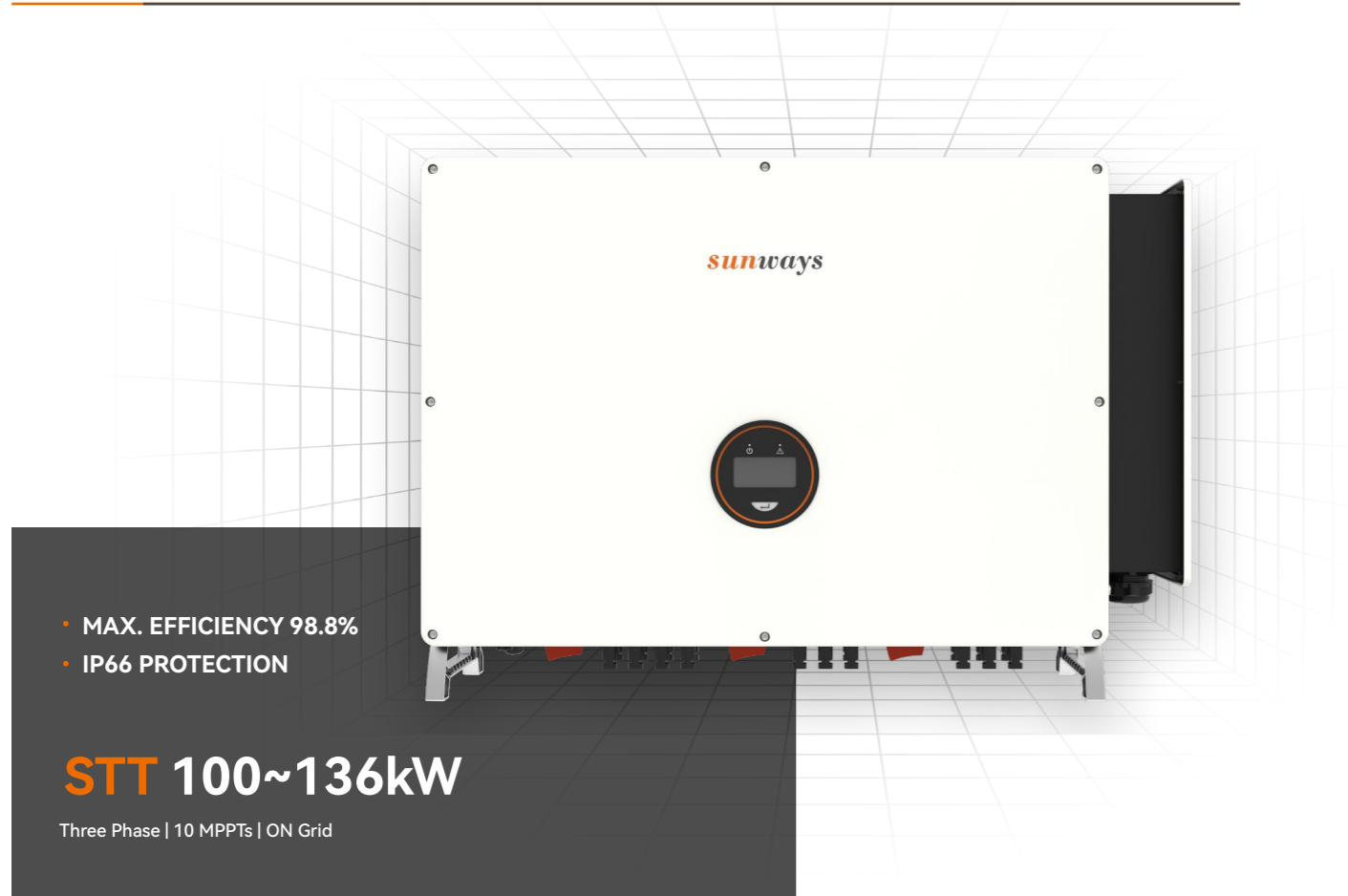
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy commissioning via App or OLED display

**CONVENIENCE**



Model	STT-80KTL	STT-100KTL	STT-110KTL	STT-100KTL-HV	STT-125KTL-HV
<b>Input</b>					
Max. Input Power (W)	128,000	160,000	176,000	160,000	200,000
Start-up Voltage (V)	200	200	200	200	200
Max. DC Input Voltage (V)	1,100	1,100	1,100	1,100	1,100
Rated DC Input Voltage (V)	620	620	620	750	750
MPPT Voltage Range (V)	200-950	200-950	200-950	200-950	200-950
Number of MPP Trackers	8	10	10	10	10
Number of DC Inputs per MPPT	2	2	2	2	2
Max. Input Current (A)	8*32	10*32	10*32	10*32	10*32
Max. Short-circuit Current (A)	8*40	10*40	10*40	10*40	10*40
<b>Output</b>					
Rated Output Power (W)**	80,000	100,000	110,000	100,000	125,000
Max. Output Power (W)	88,000	110,000	121,000	110,000	137,500
Max. Apparent Power (VA)	88,000	110,000	121,000	110,000	137,500
Rated Output Voltage (V)**	3L/N/PE, 230/400V			3L/PE,288/500V	
Rated AC Frequency (Hz)	50/60 45-55/55-65				
Max. Output Current (A)	127	158.8	174.8	127	158.8
Power Factor	0.8 leading...0.8 lagging				
THDi @ Rated Power	<3%				
DCI	< 0.5% In				
<b>Efficiency</b>					
Max. Efficiency	98.8%	98.8%	98.8%	98.8%	98.8%
Euro Efficiency	98.3%	98.3%	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>					
DC Reverse Polarity Protection	Integrated				
Insulation Resistance Detection	Integrated				
DC Switch	Optional				
Surge Protection	Integrated				
Over-temperature Protection	Integrated				
Residual Current Protection	Integrated				
Anti-islanding Protection	Integrated				
AC Short-circuit Protection	Integrated				
AC Over-voltage Protection	Integrated				
<b>General Data</b>					
Dimensions [W*H*D] (mm)	975*680*290				
Weight (kg)	79				82
Protection Degree	IP66				
Self-consumption at Night (W)	< 1				
Topology	Transformerless				
Operating Temperature Range (°C)	-30~60				
Relative Humidity (%)	0~100				
Operating Altitude (m)	4000 (derating > 3000)				
Cooling	Smart Fan Cooling				
Display	OLED & LED				
Communication	RS485, WiFi/GPRS/LAN (Optional)				

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- MAX. EFFICIENCY 98.8%
- IP66 PROTECTION

**STT 100~136kW**

Three Phase | 10 MPPTs | ON Grid

- Real-time fault curve recording, improve O&M efficiency
- IP68 intelligent fans, lower operation temperature, longer lifespan
- Intelligent quad-core processor, information processing more comprehensive, fast, and efficient

**INTELLIGENT**



- High yield with Max. efficiency 98.8%
- Up to 10% continuous output overloading capacity
- 10 MPPT design, lower PV string mismatch loss
- DC 2 in 1 connection enabled, compatible with high-power panels

**HIGH YIELD**



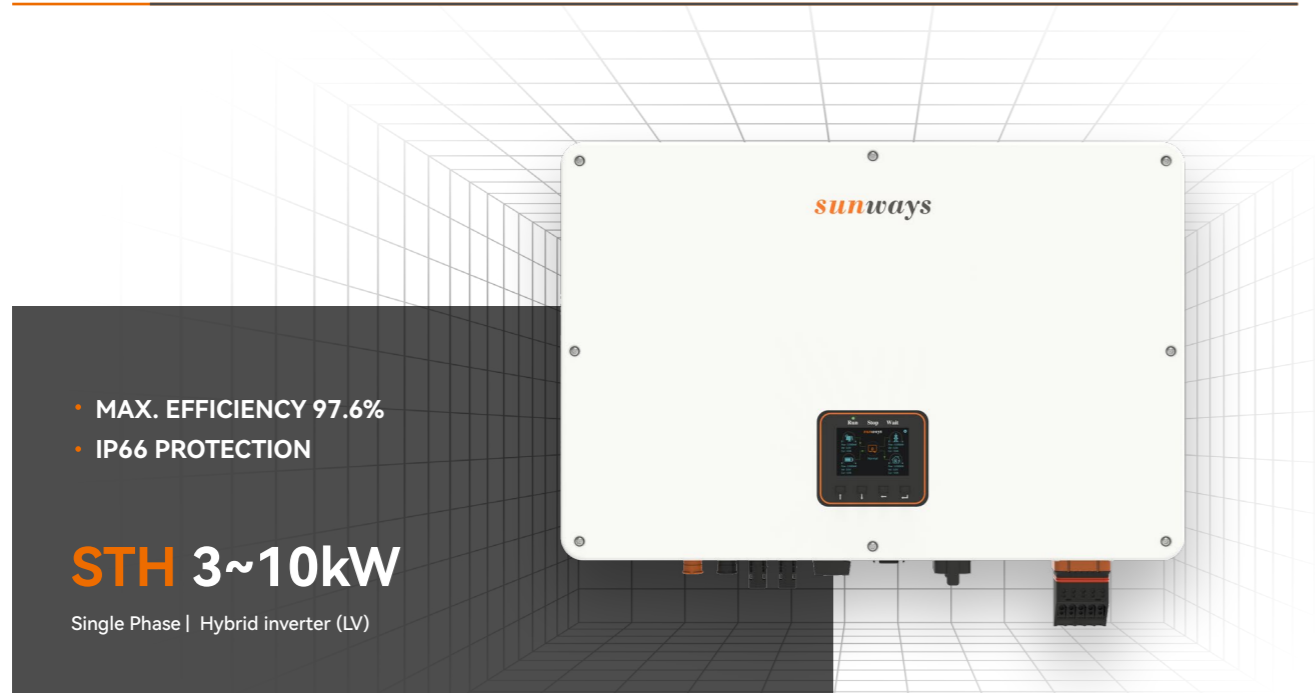
- Support wireless and wired internet connection (RS485, WiFi/GPRS/LAN optional)
- Remote upgrading available
- Fast and easy commissioning via App or OLED display

**CONVENIENCE**



Model	STT-100KTL-SE	STT-110KTL-SE	STT-125KTL-SE	STT-136KTL-SE	STT-100KTL-SE-HV	STT-110KTL-SE-HV	STT-125KTL-SE-HV	STT-136KTL-SE-HV
<b>Input</b>								
Max. Input Power (W)	160000	176000	200000	217600	160000	176000	200000	217600
Start-up Voltage (V)	200	200	200	200	200	200	200	200
Max. DC Input Voltage (V)	1100	1100	1100	1100	1100	1100	1100	1100
Rated DC Input Voltage (V)	620	620	620	620	620	620	620	620
MPPT Voltage Range (V)	200-1000	200-1000	200-1000	200-1000	200-1000	200-1000	200-1000	200-1000
Number of MPP Trackers	10	10	10	10	10	10	10	10
Number of DC Inputs per MPPT	2	2	2	2	2	2	2	2
Max. Input Current (A)	5*40 / 5*32				5*40 / 5*32			
Max. Short-circuit Current (A)	5*50 / 5*40				5*50 / 5*40			
<b>Output</b>								
Rated Output Power (W)**	100,000	110,000	125,000	136,000	100,000	110,000	125,000	136,000
Max. Output Power (W)	110,000	121,000	136,000	136,000	110,000	121,000	137,500	149,600
Max. Apparent Power (VA)	110,000	121,000	136,000	136,000	110,000	121,000	137,500	149,600
Grid Type**	3L/N/PE, 230/400V				3L/N/PE, 288/500V			
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	159.4	175.4	197	197	127.3	175.4	159.1	173.1
Power Factor	0.8 leading ...0.8 lagging							
THDi @ Rated Power	<3%							
DCI	<0.5%In							
<b>Efficiency</b>								
Max. Efficiency	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%	98.8%
European Efficiency	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%	98.3%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>								
DC Reverse Polarity Protection	Integrated							
Insulation Resistance Protection	Integrated							
DC Switch	Optional							
Surge Protection	Integrated (Type II)							
Over-temperature Protection	Integrated							
Residual Current Protection	Integrated							
Anti-islanding protection	Integrated							
AC Short-circuit Protection	Integrated							
AC Over-voltage Protection	Integrated							
<b>General Data</b>								
Dimensions [W*H*D] (mm)	1005 * 715 * 300							
Weight (kg)	70							
Protection Degree	IP66							
Self-consumption at Night (W)	<1							
Topology	Transformerless							
Operating Temperature Range (°C)	-30~60							
Relative Humidity (%)	0~100							
Operating Altitude (m)	4000 (derating >3000)							
Cooling	Smart Fan Cooling							
Display	OLED & LED							
Communication	RS485/WiFi/GPRS/LAN (Optional)							

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- MAX. EFFICIENCY 97.6%
- IP66 PROTECTION

**STH 3~10kW**

Single Phase | Hybrid inverter (LV)



Max. Efficiency up to 97.6%.



With AC output ranging from 3kW to 10kW.



Powerful load adaptability, support loads stable access.



Fast and easy data checking and commissioning via App or OLED display.



Fast charging/discharging of up to 190A to meet the demand of higher consumption and energy trading.



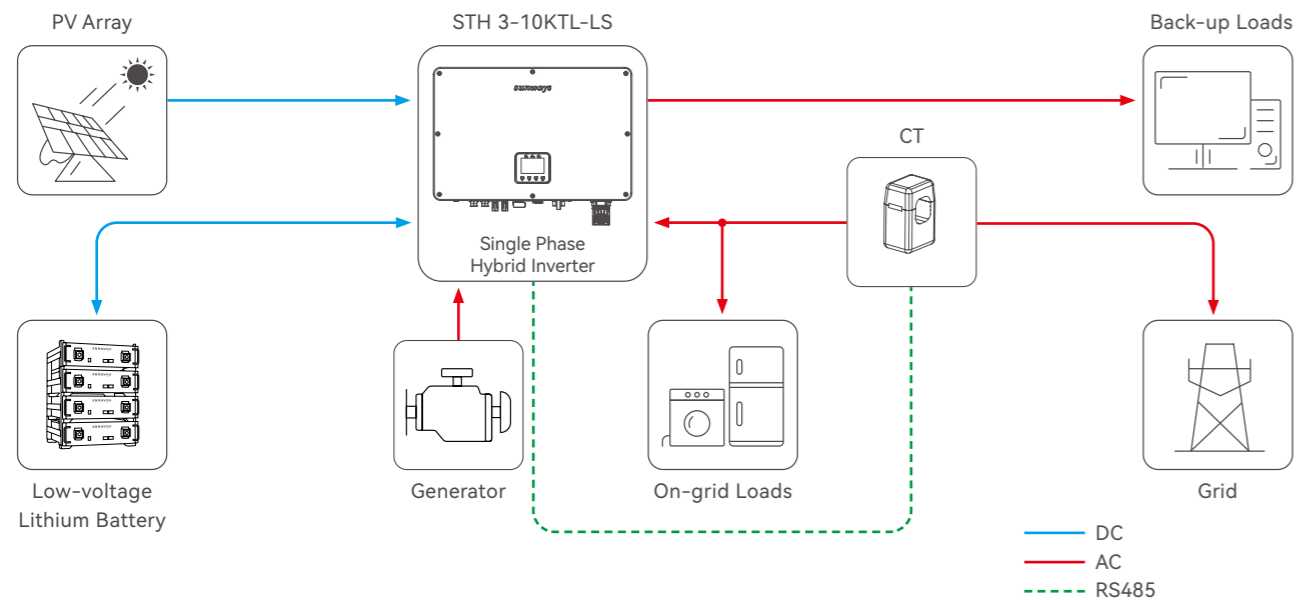
Up to 18A maximum PV input current allows most higher current PV panels connection and lowers the system LCOE.



Uninterruptible power supply, switch to off-grid mode within 10ms.



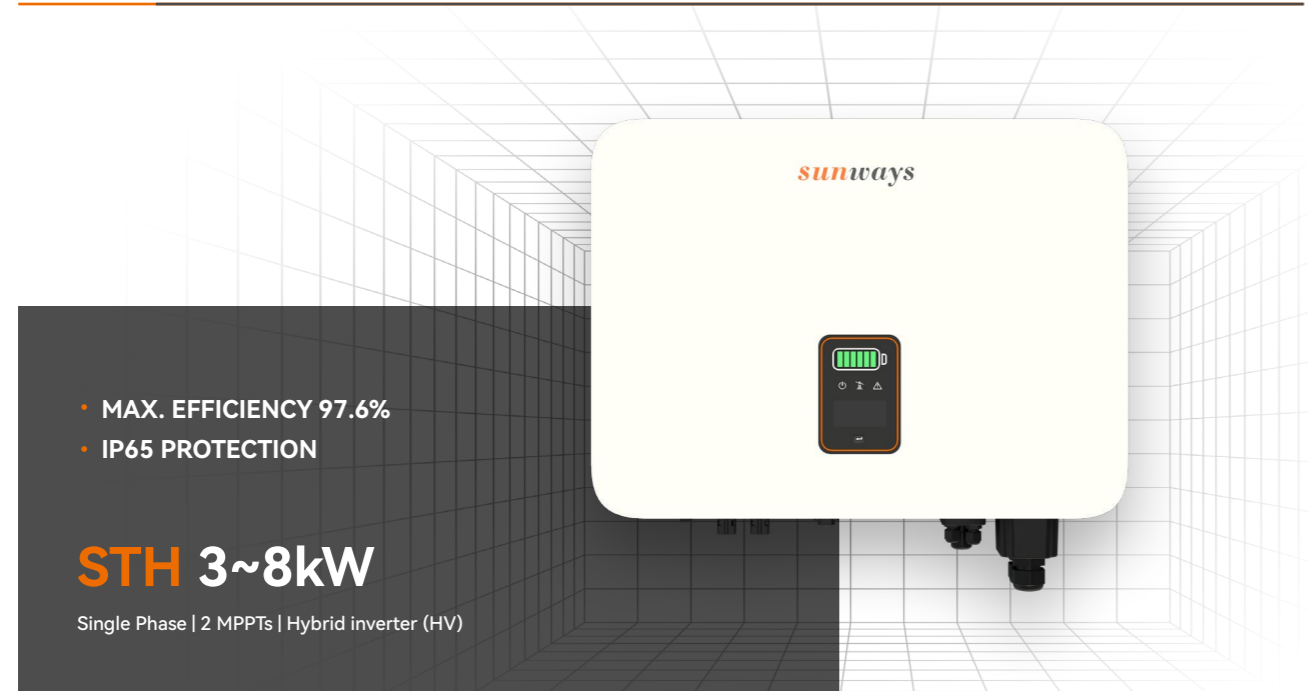
Support Diesel Generator.



Model	STH-3KTL	STH-3.6KT	STH-4.2KTL	STH-4.6KTL	STH-5KTL	STH-6KTL	STH-7KTL	STH-8KTL	STH-10KTL	
	-LSS	L-LS	-LS	-LS	-LS	-LS	-LS	-LS	-LS	
PV Input	Start-up Voltage (V)	160	160	160	160	160	160	160	160	
	Max. DC Input Voltage (V)	600	600	600	600	600	600	600	600	
	Rated DC Input Voltage (V)	360	360	360	360	360	360	360	360	
	MPPT Voltage Range (V)	160-550	160-550	160-550	160-550	160-550	160-550	160-550	160-550	
	No. of MPP Trackers	1	2	2	2	2	2	2	2	
	No. of DC Inputs per MPPT	1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	
	Max. Input Current (A)	18	18/18	18/18	18/18	18/18	18/18	18/18	18/18	
Max.Short-circuit Current (A)	22	22/22	22/22	22/22	22/22	22/22	22/22	22/22		
Battery	Battery Type	Lithium battery or lead-acid battery								
	Battery Communication Mode	CAN / RS485								
	Battery Voltage Range (V)	42-58								
	Max. Charge/Discharge Current (A)	100/100	100/100	100/100	100/100	100/100	120/120	150/150	190/190	190/190
Output (Grid)	Rated Output Power (W)**	3,000	3,600	4,200	4,600	5,000/4,990 <sup>①</sup>	6,000	7,000	8,000	10,000
	Max. Output Power (W)	3,300	3,960	4,600	5,060	5,500/4,990 <sup>①</sup>	6,600	7,700	8,800	11,000
	AC Output Rated Apparent Power (VA)	3,000	3,600	4,200	4,600	5,000/4,990 <sup>①</sup>	6,000	7,000	8,000	10,000
	Max. Apparent Power (VA)	3,300	3,960	4,600	5,060	5,500/4,990 <sup>①</sup>	6,600	7,700	8,800	11,000
	Max. Input Apparent Power (VA)	6,000 <sup>②</sup>	7,200 <sup>②</sup>	8,400 <sup>②</sup>	9,200 <sup>②</sup>	10,000 <sup>②</sup>	12,000 <sup>②</sup>	12,000 <sup>②</sup>	12,000 <sup>②</sup>	12,000 <sup>②</sup>
	Grid Type**	L/N/PE, 220/230V								
	Rated AC Frequency (Hz)	50/60								
	AC Output Rated Current (A)	13	15.7	18.3	20	21.7	26.1	31	35	44
	Max. Output Current (A)	15	18	20	22	25/21.7 <sup>③</sup>	28.7	34	38.3	48
	Maximum Output Overcurrent Protection (A)	50	50	50	50	50	80	80	80	80
Power Factor	0.8 leading...0.8 lagging									
THDi @ Rated Power	<3%									
DCI	<0.5%In									
Output (Back-up)	Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000/4,990 <sup>①</sup>	6,000	7,000	8,000	10,000
	Max. Output Power (W)	3,300	3,960	4,600	5,060	5,500/4,990 <sup>①</sup>	6,600	7,700	8,800	11,000
	Back-up Output Rated Apparent Power (VA)	3,000	3,600	4,200	4,600	5,000/4,990 <sup>①</sup>	6,000	7,000	8,000	10,000
	Max. Apparent Power (VA)	3,300	3,960	4,600	5,060	5,500/4,990 <sup>①</sup>	6,600	7,700	8,800	11,000
	Back-up Output Rated Current (A)	13	15.7	18.3	20	21.7	26.1	31	35	44
	Max. Output Current (A)	15	18	20	22	25/21.7 <sup>③</sup>	28.7	34	38.3	48
	UPS Switching Time (ms)	<10								
	Grid Type	L/N/PE, 220/230V								
	Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
	Peak Output Apparent Power (VA)	3,900 <sup>③</sup> , 60s	4,700 <sup>③</sup> , 60s	5,500 <sup>③</sup> , 60s	6,000 <sup>③</sup> , 60s	6,500 <sup>③</sup> , 60s	7,800 <sup>③</sup> , 60s	9,100 <sup>③</sup> , 60s	10,000 <sup>③</sup> , 60s	13,000 <sup>③</sup> , 60s
THDi @ Rated Power	<3%									
Efficiency	Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	
	Euro Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	
	Battery Charged by PV Max. Efficiency	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	98.0%	
	Battery Charged by AC Max. Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	
	Max Battery Discharge Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	

Protection	General Data
DC Reverse Polarity Protection	Integrated
Battery Input Reverse Polarity Protection	Integrated
Insulation Resistance Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated
Dimensions [W*H*D] (mm)	640*430*202
Weight (kg)	34
Protection Degree	IP66
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (°C)	-30~60
Relative Humidity (%)	0~100
Operating Altitude (m)	4000 (derating > 3000)
Cooling	Smart Fan Cooling
Noise Level (dB)	< 50
Display	TFT3.5 LCD/ OLED
Communication	WiFi/GPRS/LAN(Optional)

① The grid feed in power for AS/NZS 4777.2 is limited 4.99kW & 4.99kVA & 21.7A.  
 ② Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery.  
 ③ The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is relating to the overload power.  
 \*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.



- MAX. EFFICIENCY 97.6%
- IP65 PROTECTION

**STH 3~8kW**

Single Phase | 2 MPPTs | Hybrid inverter (HV)



Max. Efficiency up to 97.6%.



With AC output ranging from 3kW to 8kW.



Powerful load adaptability, support loads stable access.



Fast and easy data checking and commissioning via App or OLED display.



Wide battery voltage range allows more battery modules connection and increases self consumption rate.



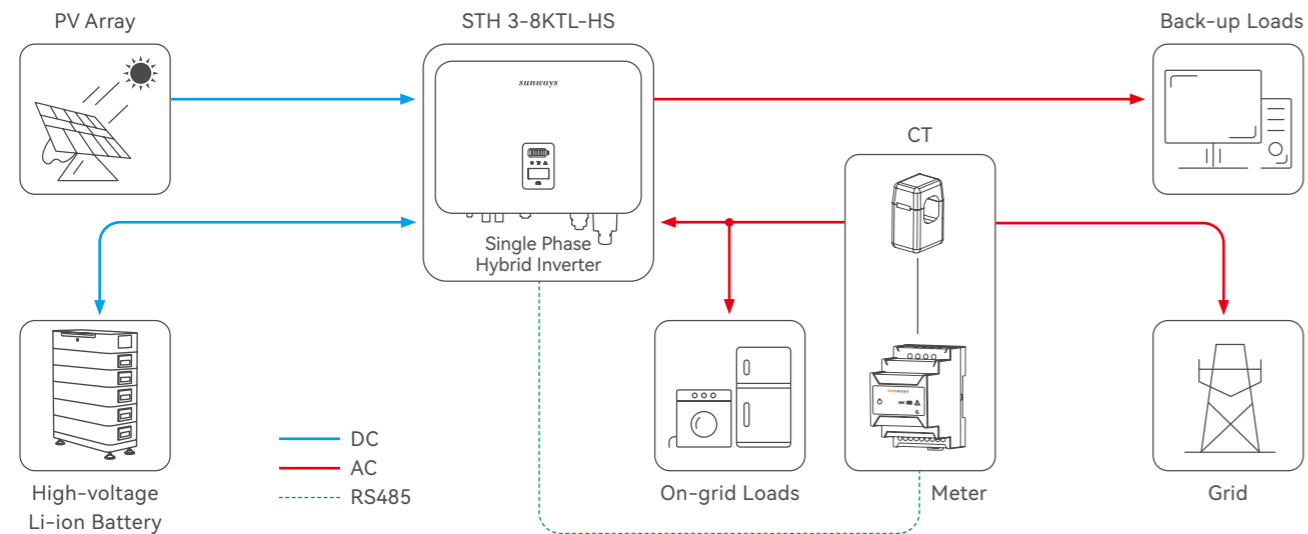
Fast charging/discharging of up to 30A to meet the demand of higher consumption and energy trading.



Up to 15A maximum PV input current allows most higher current PV panels connection and lowers the system LCOE.



Uninterruptible power supply, switch to off-grid mode within 10ms.



Model	STH-3KTL -HSS	STH-3.6KTL -HSS	STH-4.2KTL -HS	STH-4.6KTL -HS	STH-5KTL -HS	STH-6KTL -HS	STH-7KTL -HS	STH-8KTL -HS
<b>PV Input</b>								
Max. Input Power (W)	4,800	5,760	6,720	7,360	8,000	9,600	11,200	12,800
Start-up Voltage (V)	80	80	80	80	80	80	80	80
Max. DC Input Voltage (V)	600	600	600	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360	360	360	360
MPPT Voltage Range (V)	100-550	100-550	100-550	100-550	100-550	100-550	100-550	100-550
Number of MPPT Trackers	1	1	2	2	2	2	2	2
Number of DC Inputs per MPPT	1	1	1	1	1	1	1	1
Max. Input Current (A)	15	15	15/15	15/15	15/15	15/15	15/15	15/15
Max. Short-circuit Current (A)	20	20	20/20	20/20	20/20	20/20	20/20	20/20
<b>Battery</b>								
Battery Communication Mode	CAN / RS485							
Battery Voltage Range (V)	85-500							
Max. Charge/Discharge Current (A)	30/30							
Rated Current of Built-in Fuse (A)	63							
<b>Output(Grid)</b>								
Rated Output Power (W)**	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Max. Input Apparent Power (VA)	6,000 <sup>①</sup>	7,200 <sup>①</sup>	8,400 <sup>①</sup>	9,200 <sup>①</sup>	10,000 <sup>①</sup>	12,000 <sup>①</sup>	12,000 <sup>①</sup>	12,000 <sup>①</sup>
Max. Charging Power of Battery (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Grid Type (V)**	L/N/PE, 220/230/240V							
Rated AC Frequency (Hz)	50/60							
Max. Output Current (A)	15	18	21	21	25/21.7	28.7	35	36.3
Power Factor	0.8 leading...0.8 lagging							
THDi @ Rated Power	<3%							
DCI	<0.5%In							
<b>Output(Back-up)</b>								
Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Back-up Output Rated Apparent Power (VA)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Back-up Output Rated Current (A)	13	15.7	18.3	20	21.7	26.1	31.8	36.3
Max. Output Current (A)	15	18	21	21	25/21.7	28.7	35	36.3
UPS Switching Time (ms)	<10							
Grid Type (V)	L/N/PE, 220/230/240							
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Peak Output Apparent Power (VA)	3,900 <sup>②</sup> , 60s	4,700 <sup>②</sup> , 60s	5,500 <sup>②</sup> , 60s	6,000 <sup>②</sup> , 60s	6,500 <sup>②</sup> , 60s	7,800 <sup>②</sup> , 60s	9,100 <sup>②</sup> , 60s	10,000 <sup>②</sup> , 60s
THDi @ Rated Power	<3%							
<b>Efficiency</b>								
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
Euro Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Max. Battery Charging Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%
Max. Battery Discharge Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%

**Protection**

DC Reverse Polarity Protection	Integrated
Battery Input Reverse Connection Protection	Integrated
Insulation Resistance Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

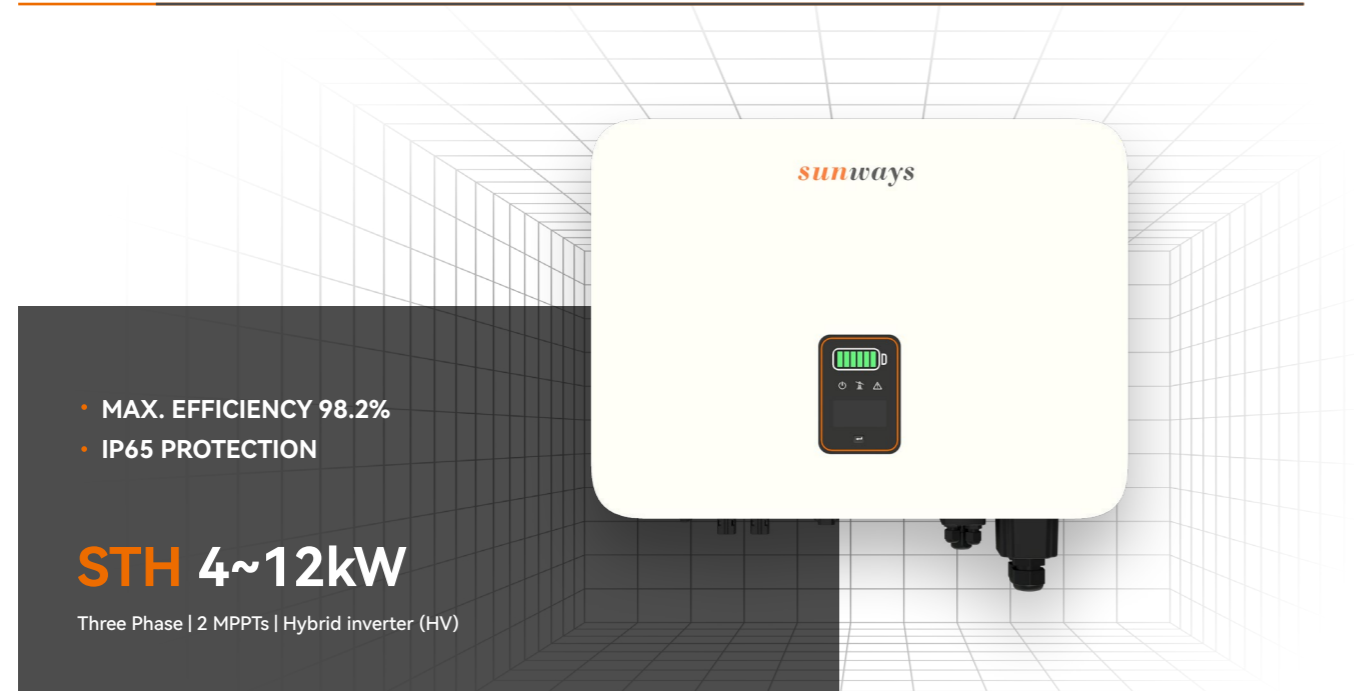
**General Data**

Over Voltage Category	PV : II; Main : III
Dimensions [W*H*D] (mm)	550*410*175
Weight (kg)	26
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (°C)	-30~60
Relative Humidity (%)	0~100
Operating Altitude (m)	4000 (derating > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
Display	OLED & LED
Communication	WiFi / LAN (Optional)

① Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery.

② The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is relating to the overload power.

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- MAX. EFFICIENCY 98.2%
- IP65 PROTECTION

**STH 4~12kW**

Three Phase | 2 MPPTs | Hybrid inverter (HV)



Max. Efficiency up to 98.2%.



Up to 110% phase unbalanced output available on both on-grid and back-up outputs.



Powerful load adaptability, support loads stable access.



Oled display+App, two ways for data checking and management.



140-750V wide battery connection range to store more energy and optimize self-sufficiency rate.



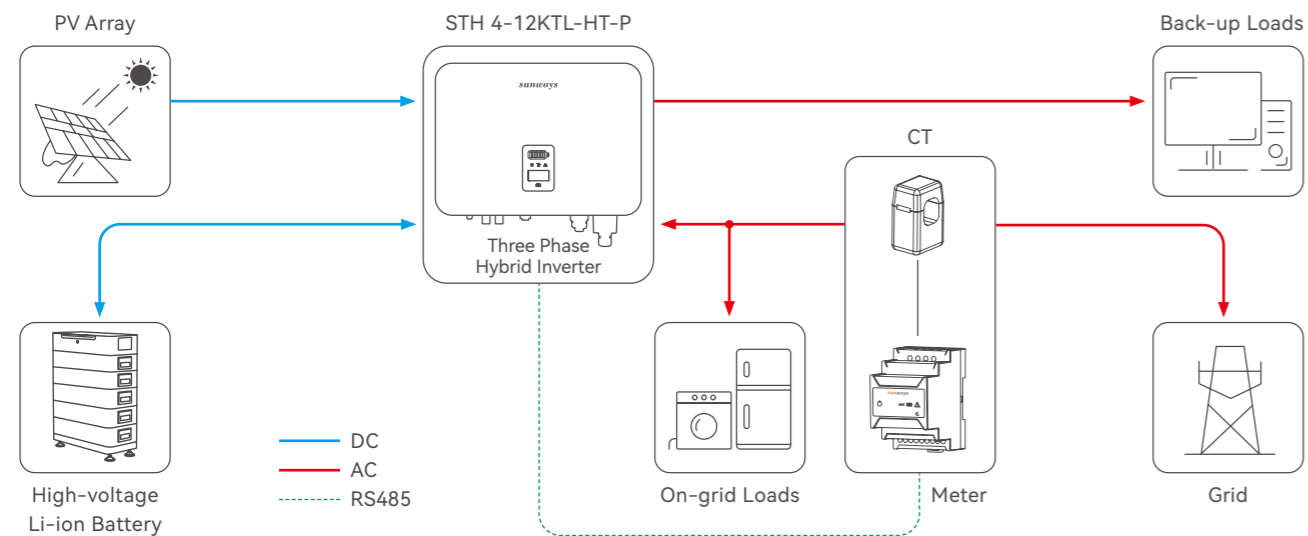
Arbitrary phase of back-up output allows up to 125% overloading ability.



Maximum 200% back-up output overloading @60s.



Uninterruptible power supply, switch to off-grid mode within 10ms.



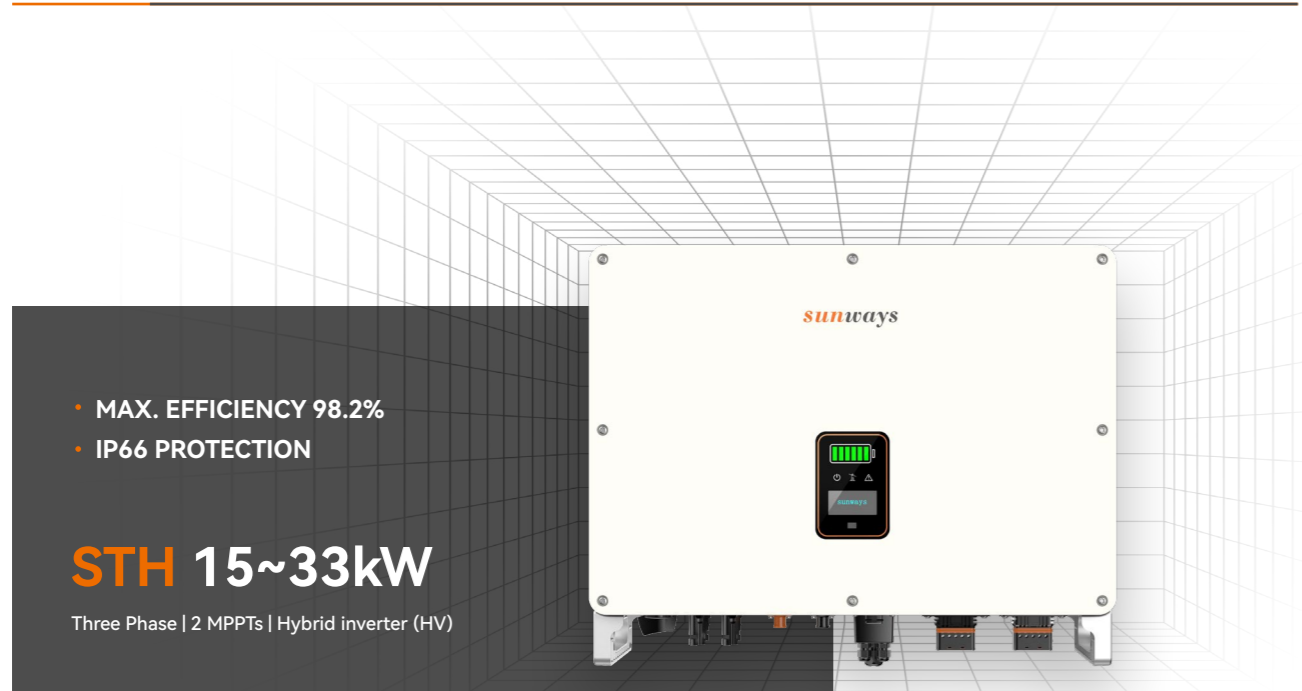
Model		STH-4KTL-HT-P	STH-5KTL-HT-P	STH-6KTL-HT-P	STH-8KTL-HT-P	STH-10KTL-HT-P	STH-12KTL-HT-P	
PV Input	Max. Input Power (W)	6,400	8,000	9,600	12,800	16,000	19,200	
	Start-up Voltage (V)	150	150	180	180	180	180	
	Max. DC Input Voltage (V)	1,000	1,000	1,000	1,000	1,000	1,000	
	Rated DC Input Voltage (V)	620	620	620	620	620	620	
	MPPT Voltage Range (V)	150-850	150-850	200-850	200-850	200-850	200-850	
	Number of MPPT Trackers	2	2	2	2	2	2	
	Number of PV Inputs	1	1	1	1	1	1	
	Max. Input Current (A)	16/16 <sup>①</sup>	16/16 <sup>①</sup>	16/16 <sup>①</sup>	16/16 <sup>①</sup>	16/16 <sup>①</sup>	16/16 <sup>①</sup>	
	Max. Short-circuit Current (A)	18/18	18/18	18/18	18/18	18/18	18/18	
Battery	Battery Communication Mode	CAN / RS485						
	Battery Voltage Range (V)	140-750						
	Max. Charge/Discharge Current (A)	25/25						
	Rated Current of Built-in Fuse (A)	63						
Output (Grid)	Rated Output Power (W)**	4,000	5,000	6,000	8,000	10,000	12,000	
	Max. Output Power (W)	4,400	5,500	6,600	8,800	11,000	13,200	
	Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200	
	Max. Input Apparent Power (VA)	8,000 <sup>②</sup>	10,000 <sup>②</sup>	12,000 <sup>②</sup>	16,000 <sup>②</sup>	16,500 <sup>②</sup>	16,500 <sup>②</sup>	
	Max. Charging Power of Battery (W)	4,000	5,000	6,000	8,000	10,000	12,000	
	Grid Type**	3L/N/PE, 230/400V						
	Rated AC Frequency (Hz)	50/60 45-55/55-65						
	Max. Output Current (A)	6.7	8.3	10	13.3	16.5	20	
	Power Factor	0.8 leading...0.8 lagging						
	THDi @ Rated Power	<3%						
	DCI	< 0.5%In						
	Output (Back-up)	UPS Switching Time (ms)	< 10					
		Grid Type	3L/N/PE, 230/400V					
Rated AC Frequency (Hz)		50/60 45-55/55-65						
Max. Apparent Power (VA)		4,400	5,500	6,600	8,800	11,000	13,200	
Peak Output Apparent Power (VA)		8,000 <sup>③</sup> , 60s	10,000 <sup>③</sup> , 60s	12,000 <sup>③</sup> , 60s	16,000 <sup>③</sup> , 60s	20,000 <sup>③</sup> , 60s	20,000 <sup>③</sup> , 60s	
Peak Output Apparent Power/per Phase (VA)		1,600 <sup>④</sup>	2,100 <sup>④</sup>	2,600 <sup>④</sup>	3,300 <sup>④</sup>	4,000 <sup>④</sup>	5,000 <sup>④</sup>	
THDi @ Rated Power		< 3%						
Efficiency		Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%
	Euro Efficiency	97.3%	97.3%	97.3%	97.4%	97.4%	97.4%	
	Max. Battery Charging Conversion Efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%	
	Max. Battery Discharge Conversion Efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%	

Protection	
DC Reverse Polarity Protection	Integrated
Battery Input Reverse Connection Protection	Integrated
Insulation Resistance Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions [W*H*D] (mm)	550*410*175
Weight (kg)	26-28
Protection Degree	IP65
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (°C)	-30~60
Relative Humidity	0~100%
Operating Altitude (m)	4000 (derating > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
Display	OLED & LED
Communication	WiFi / LAN (Optional)

① STH-4K-12KTL-HT series maximum input current per string is 13A, products deliver upon the order.  
 ② Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery.  
 ③ The output power will exceed the rated value only when the power in the PV array is sufficient, and the duration of the overload is relating to the overload power.  
 ④ Only one of the three phases can reach up to 1.25 times, and the other two phases should be less than 1.1.  
 \*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.





- MAX. EFFICIENCY 98.2%
- IP66 PROTECTION

## STH 15~33kW

Three Phase | 2 MPPTs | Hybrid inverter (HV)



Max. Efficiency up to 98.2%.



Up to 110% phase unbalanced output available on both on-grid and back-up outputs.



Powerful load adaptability, support loads stable access.



Fast and easy data checking and commissioning via App or OLED display.



200~800V wide battery connection range to store more energy and optimize self-sufficiency rate.



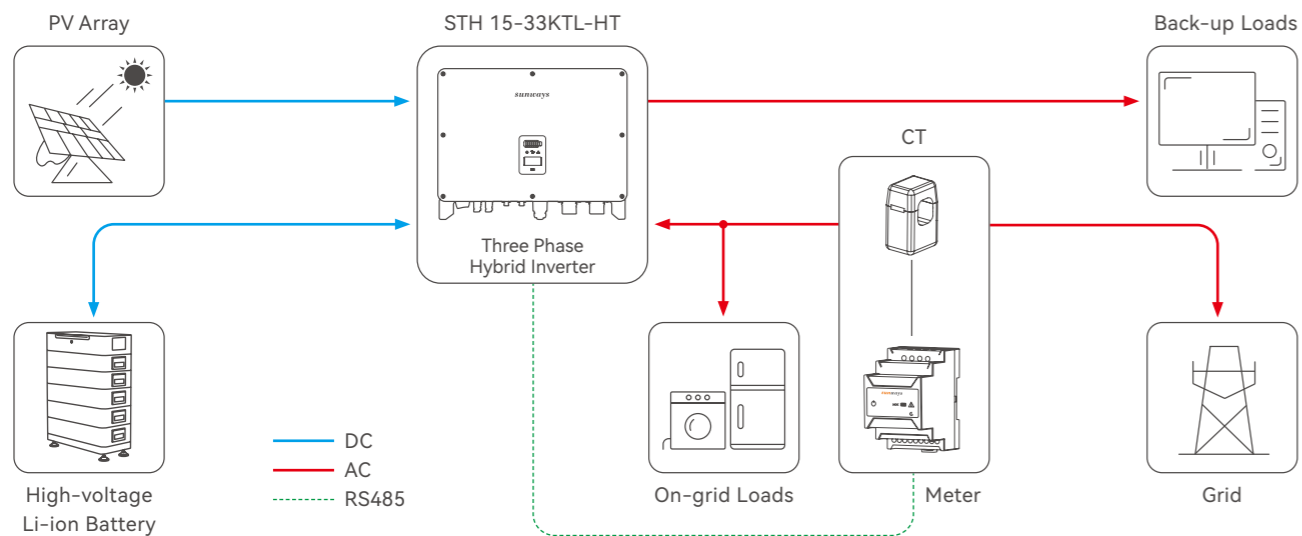
Support continuous 110% AC output overloading on both on-grid and back up sides.



Diversified work modes that are compatible with the majority of application scenarios.



Uninterruptible power supply, switch to off-grid mode within 10ms.



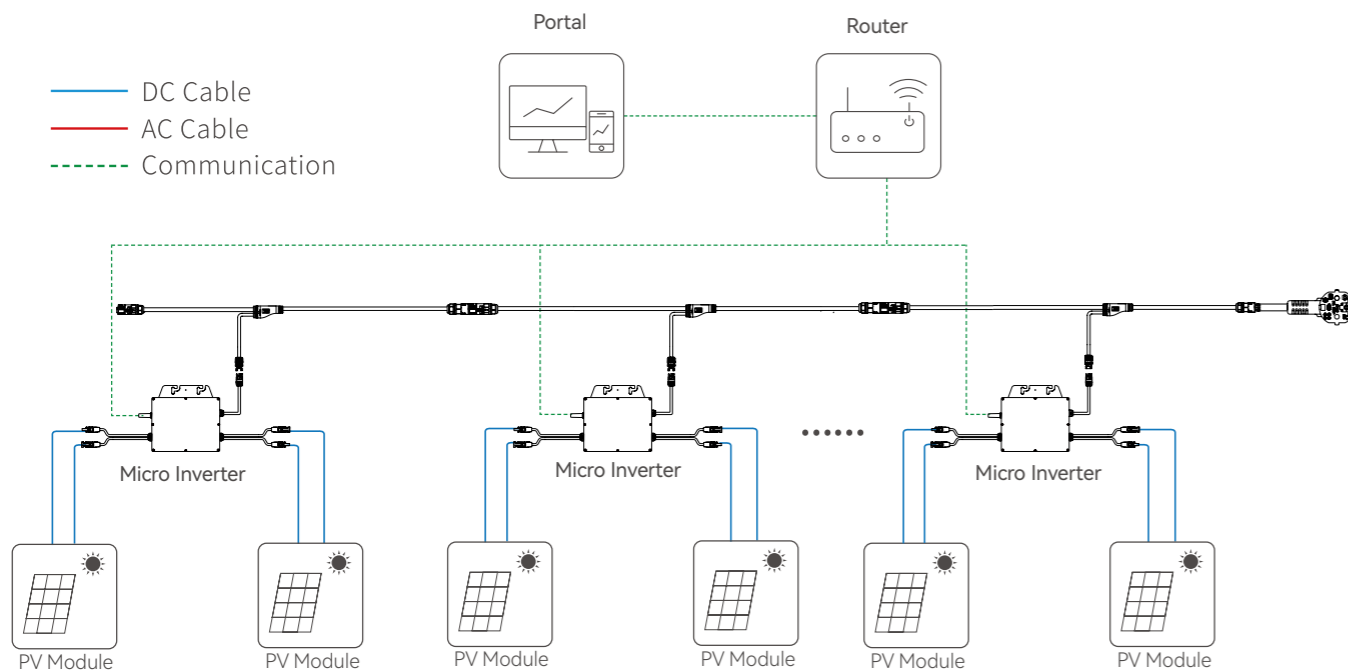
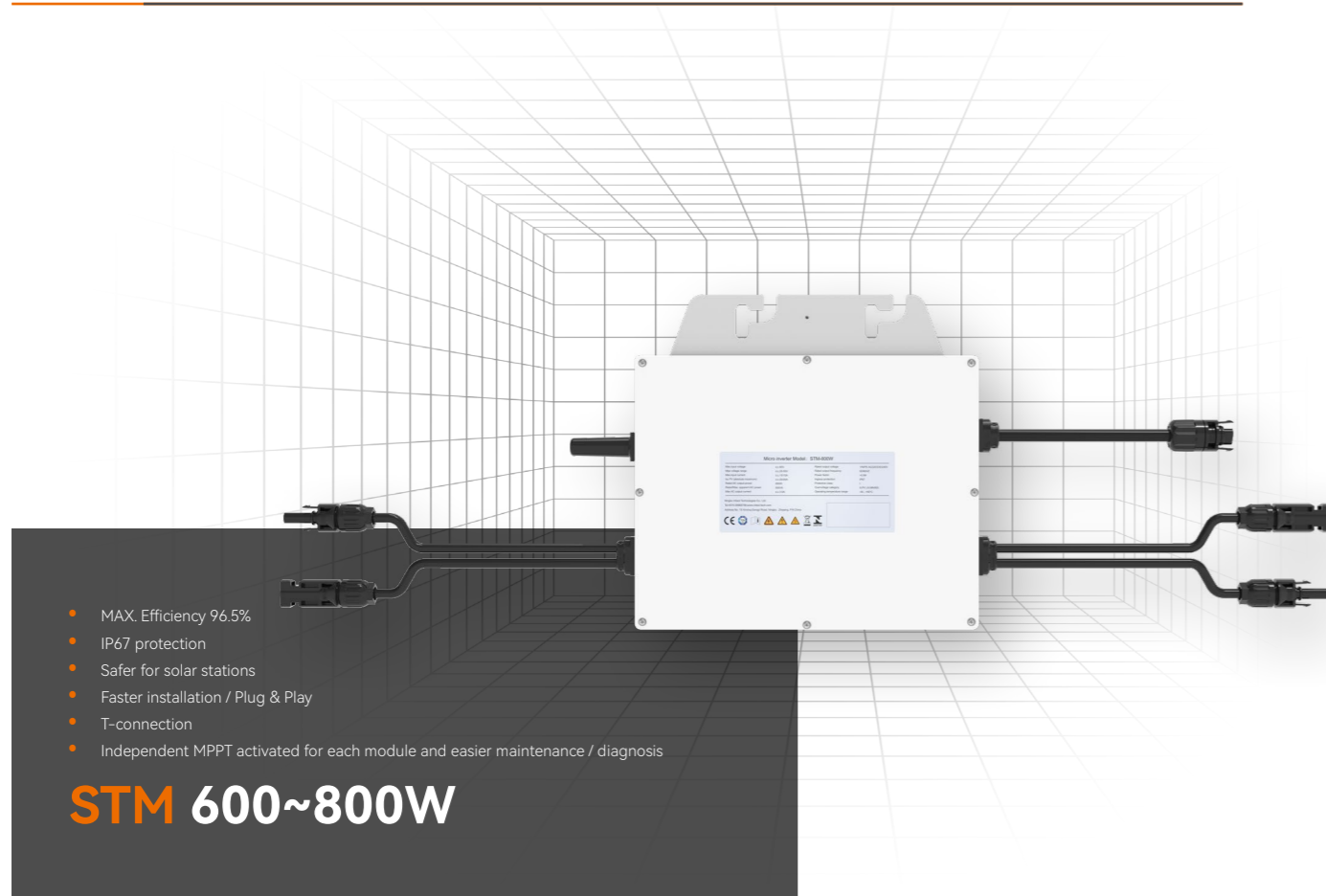
Model		STH-15KTL-HT	STH-17KTL-HT	STH-20KTL-HT	STH-25KTL-HT	STH-29.9KTL-HT	STH-30KTL-HT	STH-33KTL-HT	
PV Input	Max. Input Power (W)	22,500	25,500	30,000	37,500	44,850	45,000	49,500	
	Start-up Voltage (V)	190	190	190	190	190	190	190	
	Max. DC Input Voltage (V)	1000	1000	1000	1000	1000	1000	1000	
	Rated DC Input Voltage (V)	620	620	620	620	620	620	620	
	MPPT Voltage Range (V)	200-850	200-850	200-850	200-850	200-850	200-850	200-850	
	Number of MPP Trackers	2	2	2	2	2	2	2	
	Number of DC Inputs per MPPT	2	2	2	2	2	2	2	
	Max. Input Current (A)	32/32	32/32	32/32	32/32	32/32	32/32	32/32	
	Max. Short-circuit Current (A)	40/40	40/40	40/40	40/40	40/40	40/40	40/40	
Battery	Battery Communication Mode	CAN / RS485							
	Battery Voltage Range (V)	200-800							
	Max. Charge/Discharge Current (A)	50/50							
	Rated Current of Built-in Fuse (A)	125							
Output (Grid)	Rated Output Power (W)**	15,000	17,000	20,000	25,000	29,900	30,000	33,000	
	Max. Output Power (W)	16,500	18,700	22,000	27,500	29,900	33,000	36,300	
	AC Output Rated Apparent Power (VA)	15,000	17,000	20,000	25,000	29,900	30,000	33,000	
	Max. Input Apparent Power (VA)	22,500 <sup>①</sup>	25,500 <sup>①</sup>	30,000 <sup>①</sup>	37,500 <sup>①</sup>	44,850 <sup>①</sup>	44,850 <sup>①</sup>	44,850 <sup>①</sup>	
	Grid Type**	3L / N / PE, 230 (400)							
	Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	
	AC Output Rated Current (A)	21.7	24.6	29.0	36.2	43.3	43.5	47.8	
	Max. Output Current (A)	25.0	28.3	33.3	41.7	49.8	50.0	55.0	
	Power Factor	0.8 leading...0.8 lagging							
	THDi @ Rated Power	<3%							
	DCI	<0.5%In							
	Output (Back-up)	Rated Output Power (W)	15,000	17,000	20,000	25,000	29,900	30,000	33,000
Max. Output Power (W)		16,500	18,700	22,000	27,500	29,900	33,000	36,300	
Back-up Output Rated Apparent Power (VA)		15,000	17,000	20,000	25,000	29,900	30,000	33,000	
Max. Apparent Power (VA)		16,500	18,700	22,000	27,500	29,900	33,000	36,300	
Back-up output rated current (A)		21.7	24.6	29.0	36.2	43.3	43.5	47.8	
Max. Output Current (A)		25.0	28.3	33.3	41.7	49.8	50.0	55.0	
UPS switching time (ms)		<10							
Grid Type		3L/N/PE, 230 (400)							
Rated AC Frequency (Hz)		50/60	50/60	50/60	50/60	50/60	50/60	50/60	
THDi @ Rated Power		<3%							
Efficiency		Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%	98.2%	98.2%
		Euro Efficiency	97.3%	97.3%	97.3%	97.4%	97.4%	97.4%	97.4%
	MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	
	Max battery charging conversion efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%	97.3%	
	Max battery discharge conversion efficiency	97.2%	97.2%	97.2%	97.3%	97.3%	97.3%	97.3%	

Protection	
DC Reverse Polarity Protection	Integrated
Battery input reverse connection protection	Integrated
Insulation Resistance Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding protection	Integrated
AC Over-voltage Protection	Integrated
Overload protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Over Voltage Category	PV: II, Main: III
Dimensions [W*H*D] (mm)	640*490*290
Weight (kg)	48
Protection Degree	IP66
Self-consumption at Night (W)	<15
Topology	Transformerless
Operating Temperature Range (°C)	-30~60
Relative Humidity (%)	0~100
Operating Altitude (m)	3000
Cooling	Smart Fan Cooling
Noise Level (dB)	<50
Display	OLED & LED
Communication	WiFi/LAN (Optional)

① Max apparent power from the grid means the maximum power imported from the utility grid used to satisfy the backup loads and charge the battery.

\*\* Due to differences in voltage values in various countries, minor variations may occur. The final interpretation rights belong to Sunways.



Model	STM-600W	STM-800W
<b>PV Input</b>		
Recommended PV Module Power (Wp)	320-450 (2 Piece)	360-550 (2 Piece)
Max. Input Voltage (V)	60	
Start up Voltage (V)	16	
MPPT Voltage Range (V)	25-55	
Max. Input Current (A)	15/15	15/15
Max. Short Current (A)	20/20	20/20
<b>AC Output</b>		
Rated AC power (W)	600	800
Max. /Rated Apparent AC power (VA)	600	800
Rated Grid Voltage (AC Voltage Range) (V)	220/230/240	
Rated Grid Frequency (Hz)	50/60	
Max. AC Output Current (A)	2.70	3.60
Power Factor	>0.999	
Total Harmonic Distortion (THDi@Rated Power)	<3%	
Grid Connection	L/N/PE	
<b>Efficiency</b>		
MPPT Efficiency (%)	>99.9%	
Max. Efficiency (%)	96.50%	
<b>Protection</b>		
Anti-islanding Protection	Integrated	
PV Input Reverse Polarity Protection	Integrated	
Output over Current Protection	Integrated	
Output Short Protection	Integrated	
Over Voltage Protection	DC:II / AC:III	
<b>General Data</b>		
Dimensions [W*H*D] (mm)	226*220*33	
Weight (kg)	2.8	
Noise Emmison (dB)	≤20	
User Interface	LED	
DC Connection Type	MC4	
AC Connection Type	Plug-in connector	
Communication	Wi-Fi	
Cooling Method	Natural convection	
Operating Ambient Temperature Range (°C)	-40°C~65°C	
Allowable Relative Humidity Range (%)	0-100	
Max. Operating Altitude (m)	3000 (>3000 derating )	
Protection Degree	IP67	
Climatic Category (IEC 60721-3-4)	4K4H	
Topology	High frequency isolated	
Power Consumption at Night (mW)	< 50	
Inrush Current	9.8A peak@0.3ms	
Max. Inverter Backfeed Current to the Array (A)	0	
<b>Standard</b>		
Safety	IEC62109-1 / IEC62109-2 / IEC61727	
EMC	EN 61000-6-1 / EN 61000-6-2 / EN 61000-6-3	



- MAX. EFFICIENCY 97.6%
- IP54 PROTECTION

**STA 3-8kW**



10ms conversion time to UPS mode



Max 8.8kW AC output



Wiring pretreatment



Scalable battery capacity

Model	STA-3KTL-HSS	STA-3.6KTL-HSS	STA-4.2KTL-HS	STA-4.6KTL-HS	STA-5KTL-HS	STA-6KTL-HS	STA-7KTL-HS	STA-8KTL-HS
<b>PV Input</b>								
Max. Input Power (W)	4,800	5,760	6,720	7,360	8,000	9,600	11,200	12,800
Start-up Voltage (V)	80	80	80	80	80	80	80	80
Max. DC Input Voltage (V)	600	600	600	600	600	600	600	600
Rated DC Input Voltage (V)	360	360	360	360	360	360	360	360
MPPT Voltage Range (V)	100-550	100-550	100-550	100-550	100-550	100-550	100-550	100-550
Number of MPP Trackers	1	1	2	2	2	2	2	2
Number of DC Inputs per MPPT	1	1	1	1	1	1	1	1
Max. Input Current (A)	15	15	15/15	15/15	15/15	15/15	15/15	15/15
Max. Short-circuit Current (A)	20	20	20/20	20/20	20/20	20/20	20/20	20/20
<b>Battery</b>								
Nominal Capacity of per module (kWh)	2.56							
Nominal Capacity (Ah)	50							
Nominal Voltage of per module (V)	51.2							
Max. Charge/Discharge Current (A)	25/25							
Number of Battery Modules Supported	2-8							
<b>Output(Grid)</b>								
Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Max. Input Apparent Power (VA)	6,000	7,200	8,400	9,200	10,000	12,000	12,000	12,000
Max. Charging Power of Battery (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Grid Type	L/N/PE, 220/230/240V							
Rated AC Frequency (Hz)	50/60							
Max. Output Current (A)	15	18	21	21	25/21.7	28.7	35	36.3
Power Factor	0.8 leading...0.8 lagging							
THDi @ Rated Power	<3%							
DCI	<0.5%In							
<b>Output(Back-up)</b>								
Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Back-up Output Rated Apparent Power (VA)	3,000	3,600	4,200	4,600	5,000	6,000	7,000	8,000
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600	7,700	8,000
Back-up Output Rated Current (A)	13	15.7	18.3	20	21.7	26.1	31.8	36.3
Max. Output Current (A)	15	18	21	21	25/21.7	28.7	35	36.3
UPS Switching Time (ms)	<10							
Grid Type	L/N/PE, 220/230/240							
Rated AC Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Peak Output Apparent Power (VA)	3,900, 60s	4,700, 60s	5,500, 60s	6,000, 60s	6,500, 60s	7,800, 60s	9,100, 60s	10,000, 60s
THDi @ Rated Power	<3%							
<b>Efficiency</b>								
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
Euro Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Max. Battery Charging Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%
Max. Battery Discharge Conversion Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%
<b>Protection</b>								
DC Reverse Polarity Protection	Integrated							
Battery Input Reverse Connection Protection	Integrated							
Insulation Resistance Detection	Integrated							
DC Switch	Optional							
Surge Protection	Integrated							
Over-temperature Protection	Integrated							
Residual Current Protection	Integrated							
Anti-islanding Protection	Integrated							
AC Over-voltage Protection	Integrated							
Overload Protection	Integrated							
AC Short-circuit Protection	Integrated							
<b>General Data</b>								
Over Voltage Category	PV : II; Main : III							
Dimensions [W*H*D] (mm)	696x(1197-2019)x315							
Weight (kg)	105-268							
Protection Degree	IP54							
Self-consumption at Night (W)	< 15							
Topology	Transformerless							
Operating Temperature Range (°C)	-30~60							
Relative Humidity (%)	0~100							
Operating Altitude (m)	4000 (derating > 3000)							
Cooling	Natural Convection							
Noise Level (dB)	< 25							
Display	OLED & LED							
Communication	WiFi / LAN (Optional)							



- MAX. EFFICIENCY 98.2%
- IP54 PROTECTION

**STA 4-12kW**



10ms conversion time to UPS mode



Max 13.2kW AC output



Wiring pretreatment



Scalable battery capacity

Model		STA-4KTL-HT	STA-5KTL-HT	STA-6KTL-HT	STA-8KTL-HT	STA-10KTL-HT	STA-12KTL-HT
PV Input	Max. Input Power (W)	6,400	8,000	9,600	12,800	16,000	19,200
	Start-up Voltage (V)	150	150	180	180	180	180
	Max. DC Input Voltage (V)	1,000	1,000	1,000	1,000	1,000	1,000
	Rated DC Input Voltage (V)	620	620	620	620	620	620
	MPPT Voltage Range (V)	150-850	150-850	200-850	200-850	200-850	200-850
	Number of MPP Trackers	2	2	2	2	2	2
	Number of PV Inputs	1	1	1	1	1	1
	Max. Input Current (A)	16/16	16/16	16/16	16/16	16/16	16/16
Battery	Max. Short-circuit Current (A)	18/18	18/18	18/18	18/18	18/18	18/18
	Nominal Capacity of per module (kWh)	2.56					
	Nominal Capacity (Ah)	50					
	Nominal Voltage of per module (V)	51.2					
	Max. Charge/Discharge Current (A)	25/25					
Output (Grid)	Number of Battery Modules Supported	3-8					
	Rated Output Power (W)	4,000	5,000	6,000	8,000	10,000	12,000
	Max. Output Power (W)	4,400	5,500	6,600	8,800	11,000	13,200
	Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200
	Max. Input Apparent Power (VA)	8,000	10,000	12,000	16,000	16,500	16,500
	Max. Charging Power of Battery (W)	4,000	5,000	6,000	8,000	10,000	12,000
	Grid Type	3L/N/PE, 230/400V					
	Rated AC Frequency (Hz)	50/60 45-55/55-65					
	Max. Output Current (A)	6.7	8.3	10	13.3	16.5	20
	Power Factor	0.8 leading...0.8 lagging					
	THDi @ Rated Power	< 3%					
	DCI	< 0.5%In					
Output (Back-up)	UPS Switching Time (ms)	< 10					
	Grid Type	3L/N/PE, 230/400V					
	Rated AC Frequency (Hz)	50/60 45-55/55-65					
	Max. Apparent Power (VA)	4,400	5,500	6,600	8,800	11,000	13,200
	Peak Output Apparent Power (VA)	8,000, 60s	10,000, 60s	12,000, 60s	16,000, 60s	20,000, 60s	20,000, 60s
	Peak Output Apparent Power/per Phase (VA)	1,600	2,100	2,600	3,300	4,000	5,000
	THDi @ Rated Power	< 3%					
	Efficiency	Max. Efficiency	98.1%	98.1%	98.1%	98.2%	98.2%
Euro Efficiency		97.3%	97.3%	97.3%	97.4%	97.4%	97.4%
Max. Battery Charging Conversion Efficiency		97.2%	97.2%	97.2%	97.3%	97.3%	97.3%
Max. Battery Discharge Conversion Efficiency		97.2%	97.2%	97.2%	97.3%	97.3%	97.3%

Protection	
DC Reverse Polarity Protection	Integrated
Battery Input Reverse Connection Protection	Integrated
Insulation Resistance Detection	Integrated
DC Switch	Optional
Surge Protection	Integrated
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Anti-islanding Protection	Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

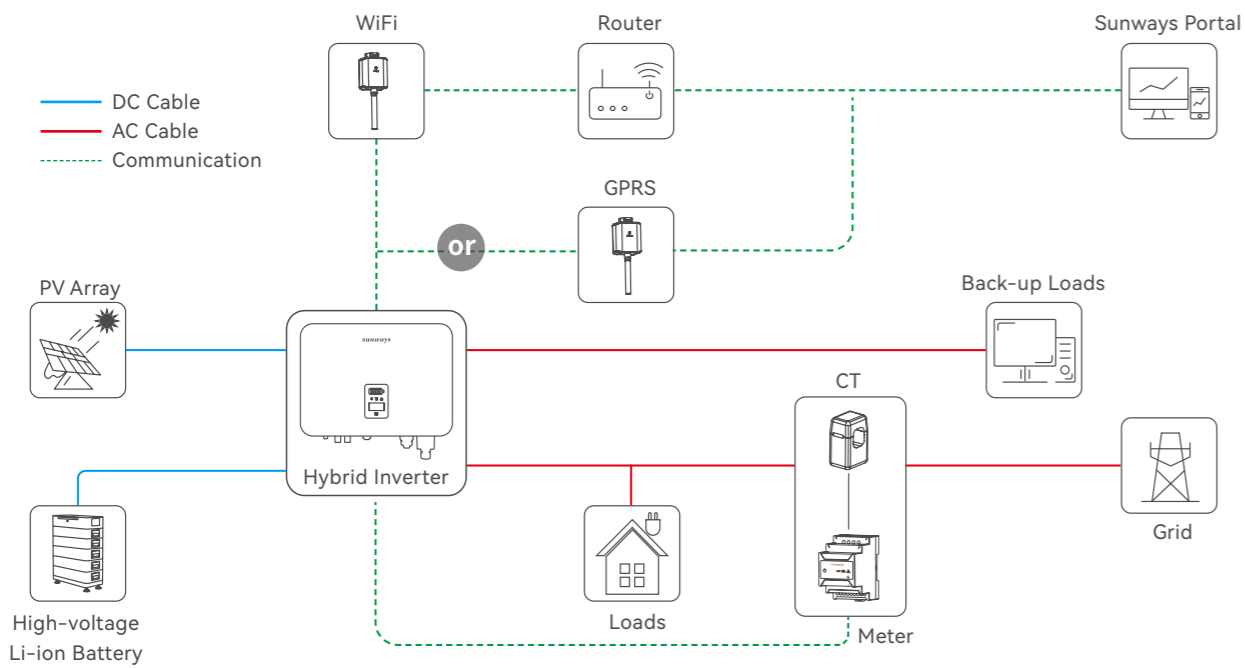
General Data	
Dimensions [W*H*D] (mm)	696x(1134~2019)x315
Weight (kg)	105~270
Protection Degree	IP54
Self-consumption at Night (W)	< 15
Topology	Transformerless
Operating Temperature Range (°C)	-30~60
Relative Humidity	0~100%
Operating Altitude (m)	4000 (derating > 3000)
Cooling	Natural Convection
Noise Level (dB)	< 25
Display	OLED & LED
Communication	WiFi / LAN (Optional)



- Stack installation, time and cost-saving
- Longer cycle life battery(6,000 cycles)
- Support remote diagnosis & upgrade
- Charge your battery within one hour
- Optional battery capacity ranges from 5.12-20.48kWh
- Perfect match up with both residential and commercial inverter

**STE-BS 5~20kWh**

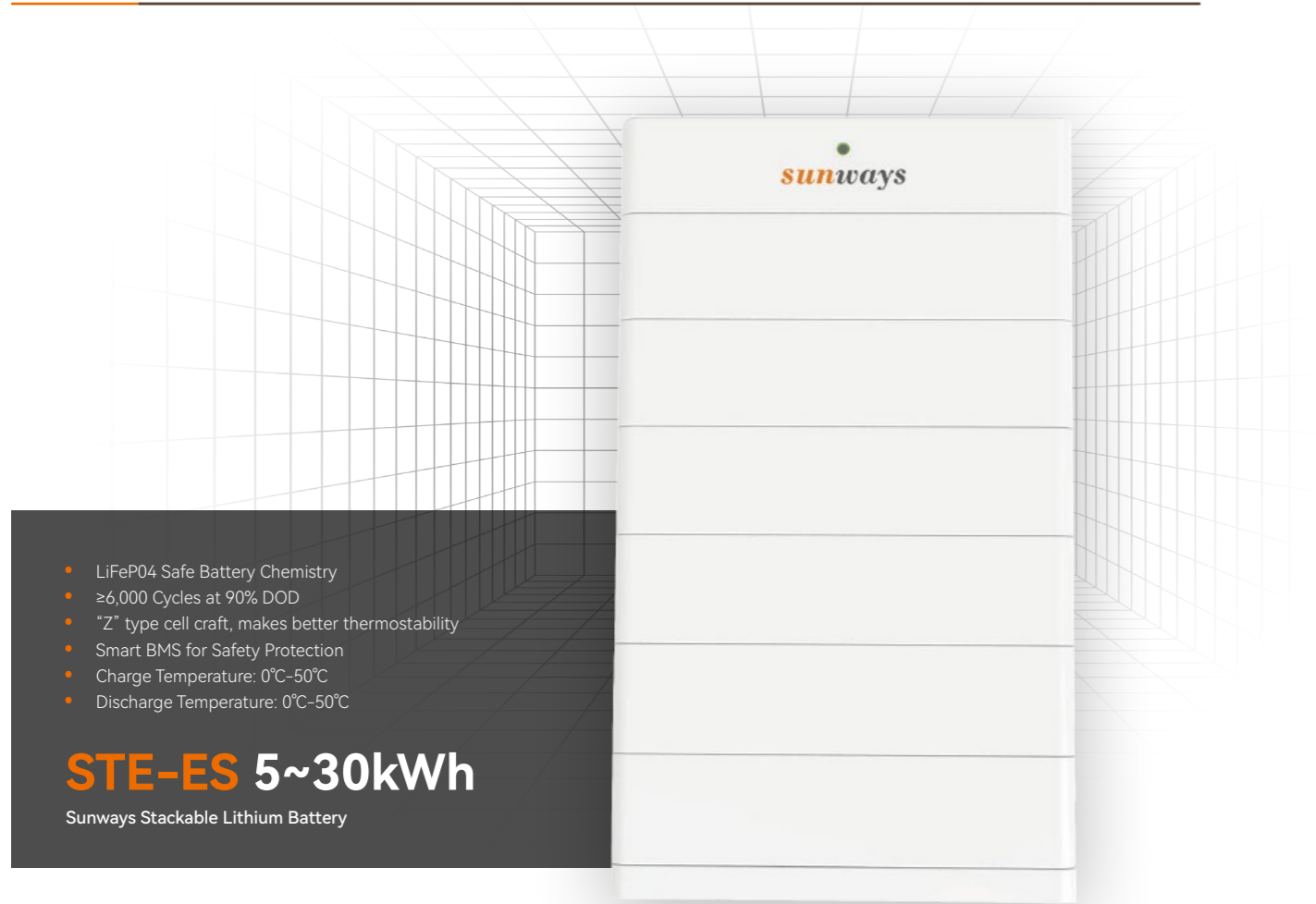
Sunways Stackable Lithium Battery



Model	STE-BS5	STE-BS7	STE-BS10	STE-BS12	STE-BS15	STE-BS17	STE-BS20
Battery Usable Energy (kWh)	5.12	7.68	10.24	12.8	15.36	17.92	20.48
Battery Capacity (Ah)	50	50	50	50	50	50	50
Nominal Voltage (V)	102.4	153.6	204.8	256	307.2	358.4	409.6
Maximum Charge/Discharge Current (A)	50	50	50	50	50	50	50
Recommend Continuous Charge/Discharge Current (A)	25	25	25	25	25	25	25
Weight (kg)	74.5	101.6	128.7	155.8	182.9	210	237.1
Dimension[W*H*D] (mm)	708*497*315	708*634*315	708*771*315	708*908*315	708*1045*315	708*1182*315	708*1319*315
Protection Degree	IP54						
Cycle Life	6,000 cycles @ 90%DOD						
Operating Temperature Range (°C)	0~50						
Storage Temperature (°C)	0~35						
Relative Humidity	≤95%						
Altitude (m)	2000						
Internal Battery Module	STE-P2560						
Module Connection	Series / Hard Connection with Positioner						
Installation Method	Stackable						
Number of Modules	2	3	4	5	6	7	8
Communication Protocol/Connector Type	CAN/RJ45						

- Standard operating temperature for batteries is 25°C
- STH 3~8KTL-HS series suitable battery range from STE-BS5-BS20
- STH 4~12KTL-HT series suitable battery range from STE-BS7-BS20
- STH 15~33KTL-HT series suitable battery range from STE-BS10-BS20

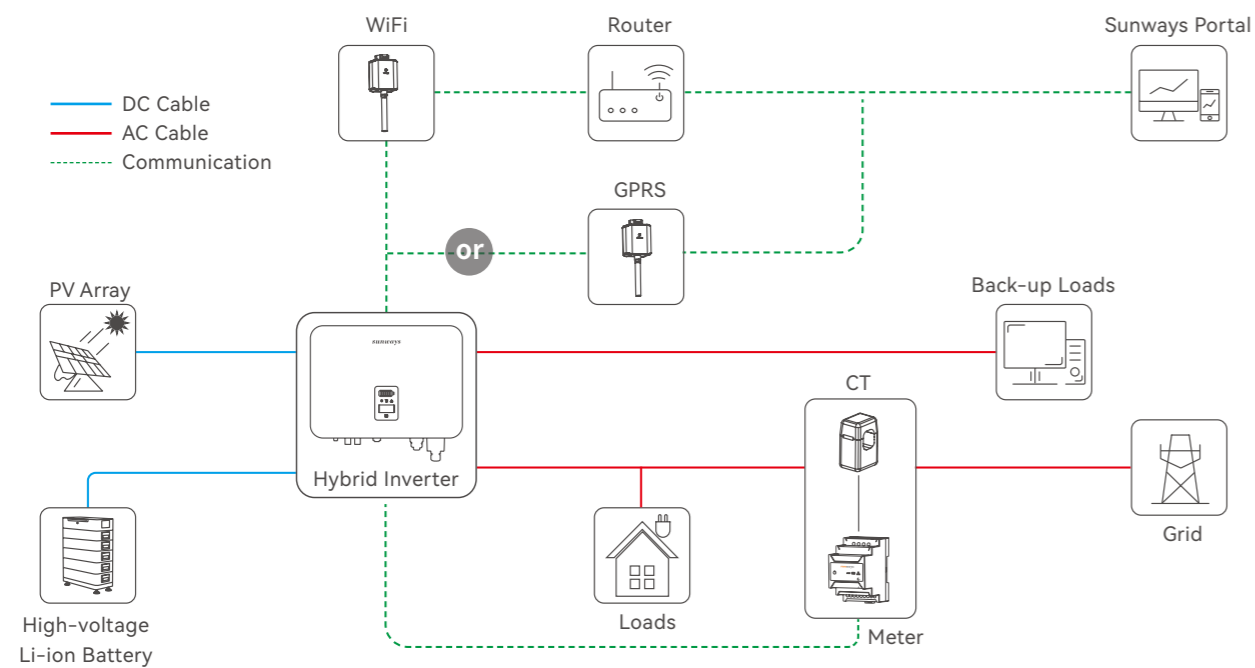




- LiFePO4 Safe Battery Chemistry
- ≥6,000 Cycles at 90% DOD
- "Z" type cell craft, makes better thermostability
- Smart BMS for Safety Protection
- Charge Temperature: 0°C-50°C
- Discharge Temperature: 0°C-50°C

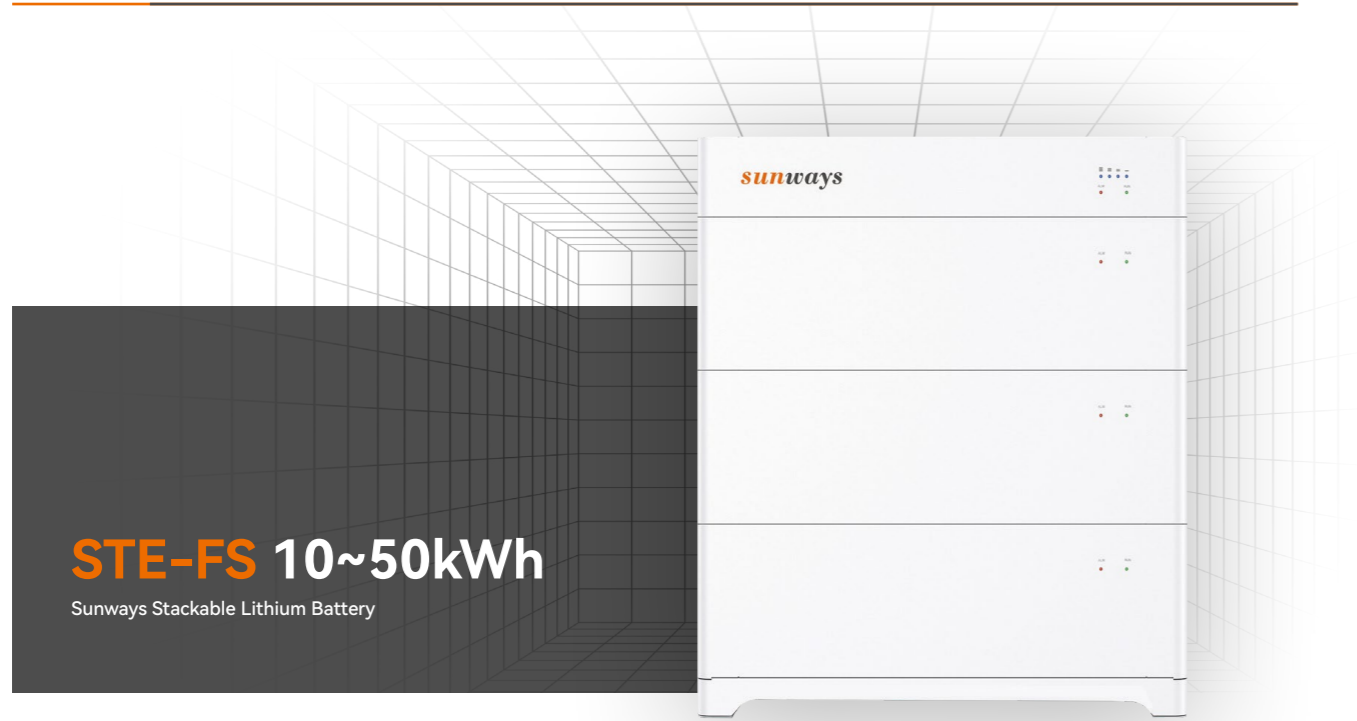
**STE-ES 5~30kWh**

Sunways Stackable Lithium Battery



Model	STE-ES5	STE-ES10	STE-ES15	STE-ES20	STE-ES25	STE-ES30
Battery Usable Energy (kWh)	5.12	10.24	15.36	20.48	25.60	30.72
Battery Capacity (Ah)	50	50	50	50	50	50
Nominal Voltage (V)	102.4	204.8	307.2	409.6	512	614.4
Maximum Charge/Discharge Current (A)	50	50	50	50	50	50
Recommend Continuous Charge/Discharge Current (A)	25	25	25	25	25	25
Weight (kg)	73	119	165	211	257	303
Dimension [W*H*D] (mm)	700*365*430	700*530*430	700*695*430	700*860*430	700*1025*430	700*1190*430
Protection Degree	IP54					
Cycle Life	6,000 cycles @90% DOD					
Operating Temperature Range(°C)	0~50					
Storage Temperature(°C)	0~35					
Relative Humidity	≤95%					
Altitude (m)	2000					
Internal Battery Module	STE-P5120					
Module Connection	Series / Hard Connection with Positioner					
Installation Method	Stackable					
Number of Modules	1	2	3	4	5	6
Communication Protocol/Connector Type	CAN/RJ45					

- Standard operating temperature for batteries is 25°C
- STH 3~8KTL-HS series suitable battery range from STE-ES5-ES20
- STH 4~12KTL-HT series suitable battery range from STE-ES10-ES30
- STH 15~33KTL-HT series suitable battery range from STE-ES10-ES30



**STE-FS 10~50kWh**  
Sunways Stackable Lithium Battery



**Safer**

Cobalt Free Lithium Iron Phosphate(LFP)Battery, safety and long lifespan, high efficiency and high-power density. Intelligent BMS, providing complete protection.



**Reliable**

Support high discharge power, module level Auto-balancing, under-voltage Automatic Restart.



**Flexible**

Modular design, easy to expand, Max capacity of 51.2 kWh. Suited to residential and commercial applications for increasing the selfconsumption ratio.



**Convenient**

Battery module auto networking, Automatic IP addressing, easy maintenance, remotely monitoring and upgrade, support USB drive upgrade the firmware.



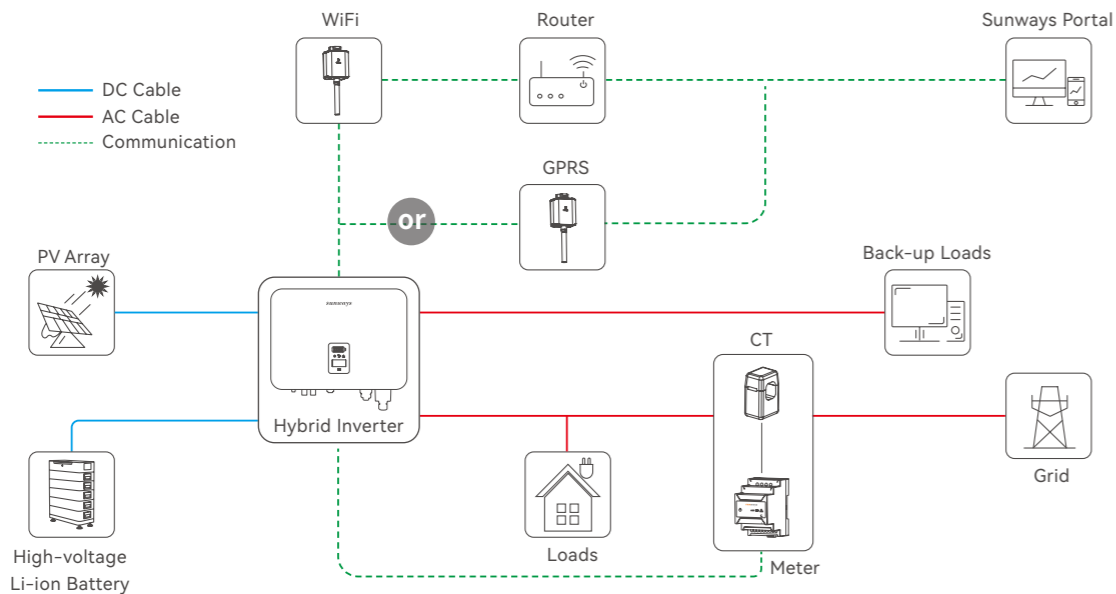
**Eco-Friendly**

Use environmental protection materials, the whole module non-toxic, pollution-free.



**Floor-stand**

Free stand design, floor-mounted, saving installation space.



Model	STE-FS10	STE-FS20	STE-FS30	STE-FS40	STE-FS50
Battery Usable Energy (kWh)	10.24	20.48	30.72	40.96	51.2
Battery Capacity (Ah)	100	100	100	100	100
Nominal Voltage (V)	102.4	204.8	307.2	409.6	512
Maximum Charge/Discharge Current (A)	70	70	70	70	70
Recommend Continuous Charge/Discharge Current (A)	50	50	50	50	50
Weight (kg)	105	194	283	372	461
Dimension [W*D*H](mm)	720*420*455	720*420*750	720*420*1045	720*420*1340	720*420*1635
Protection Degree	IP65				
Cycle Life	6,000 cycles @90% DOD				
Operating Temperature Range (°C)	0~50				
Storage Temperature (°C)	0~35				
Relative Humidity	≤95%				
Altitude (m)	2000				
Internal Battery Module	STE-P10240				
Module Connection	Series / Hard Connection with Positioner				
Installation Method	Stackable				
Number of Modules	1	2	3	4	5
Communication Protocol/Connector Type	CAN/RJ45				

·Standard operating temperature for batteries is 25°C  
 ·STH 3~8KTL-HS series suitable battery range from STE-FS10-FS40  
 ·STH 4~12KTL-HT series suitable battery range from STE-FS20-FS50  
 ·STH 15~33KTL-HT series suitable battery range from STE-FS20-FS50



**STE-LS5**  
**51.2V100AH**  
 LIFEPO4 BATTERY  
 51.2V100Ah



**HIGH SAFETY**

The use of the most advanced lithium iron phosphate battery core technology.



**LONG LIFE**

≥5000 cycles.



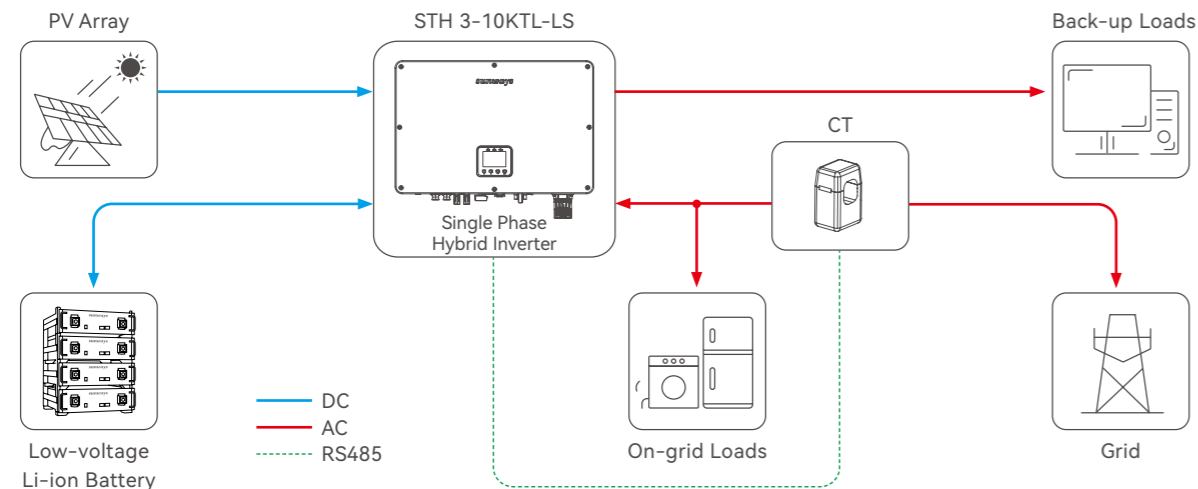
**STRONG PERFORMANCE**

Cold resistance (-20-60 °C)  
 high temperature resistance (0-50 °C).



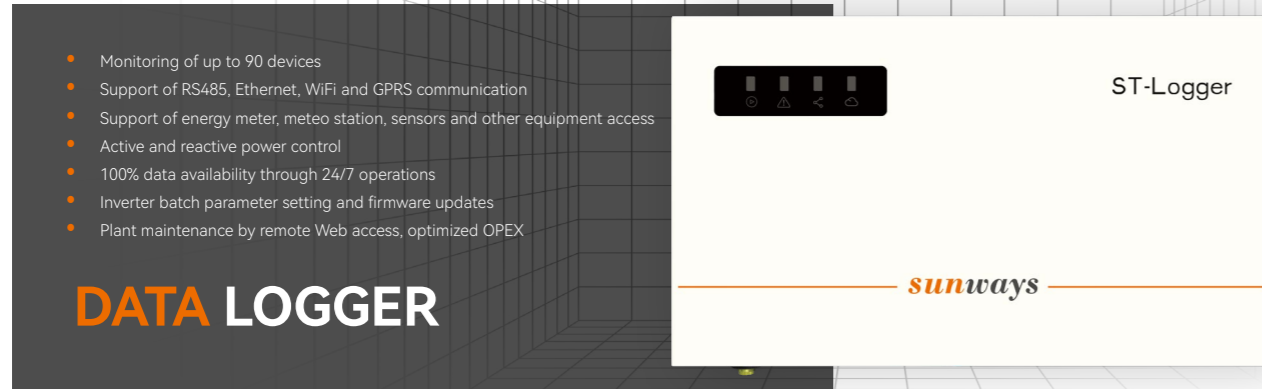
**MODULAR DESIGN**

support for multiple modules used in parallel, easy to install and maintain.



Model	STE-LS5
Battery Type	LiFePO4
Nominal Battery Energy (kWh)	5.12
Nominal Capacity (Ah)	100
Nominal Voltage (V)	51.2
Charging Cut-off voltage (V)	57.6
Discharging End-off voltage (V)	40
Recommended Charge / Discharge Current (A)	50
Max. Power Charge / Discharge Current (A)	100
Peak Power Charge / Discharge Current (A)	200(5s)
Weight (kg)	45
Max. Dimension [W*D*H] (mm)	480*460*155.5
Charging Temp. Range (°C)	0-50
Discharging Temp. Range (°C)	-20-6
Communication	CAN / RS485
Calendar Life	≥5000 Cycles
Protection Degree	IP20

\*Standard operating temperature for batteries is 25°C



**Technical Parameters**

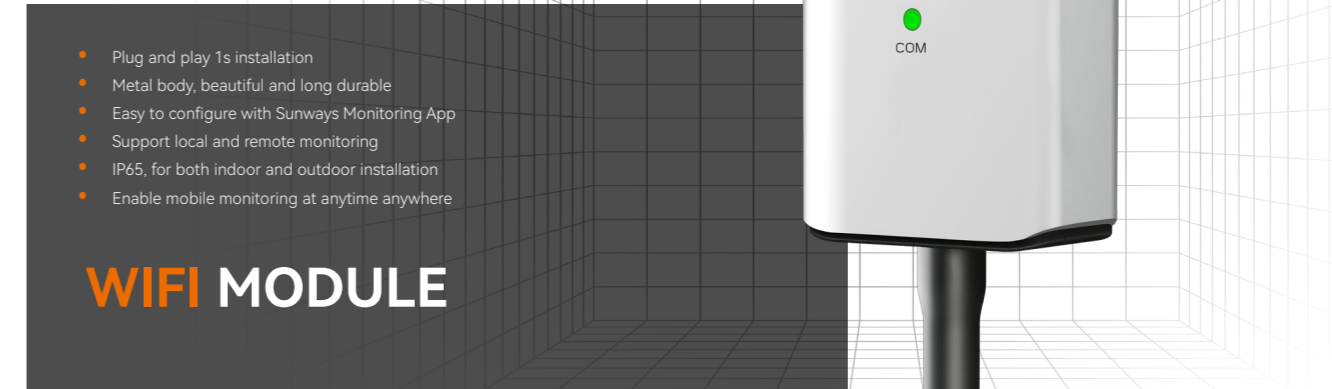
General Data		Environmental Data	
Max. number of Inverters	90 (30/RS485 Port)	Operating Temperature (°C )	-10~+60
Preference Setting	Remote Web / APP	Operating Humidity	0%-90% relative humidity, no condensation
Firmware Upgrade	Wireless upgrade	Operating Altitude (m)	≤ 4000
Working Voltage (V)	DC 12	Storage Temperature (°C )	-40~+85
Power Consumption (W)	< 10	Storage Humidity	< 40%
		Protection Degree	IP20

**Interface Specification**

RS485 Interface	4 ports (3 ports for inverters connection, 1 port for other devices connection), Baud 9600bps (Adjustable from 1200-57600 bps)
Ethernet Interface	1 port, 10/100Mbps Self-adaptive
Wireless Interface	WiFi/GPRS Alternative
Output Dry Contact	Two independent dry contacts, 230V/1A
Other Interface	CAN/USB/SD/SIM

**Wireless Data**

WiFi Transmitting Power	802.11b: +16 +/-2dBm (@11Mbps), 802.11g: +14 +/-2dBm (@54Mbps), 802.11n: +13 +/-2dBm (@HT20, MCS7)
WiFi Receiving Sensitivity	802.11b: -87 dBm (@11Mbps , CCK), 802.11g: -73 dBm (@54Mbps, OFDM), 802.11n: -71 dBm (@HT20, MCS7)
WiFi Operating Frequency (GHz)	2.412-2.484
Communication Distance (m)	100 (without obstacles)



**Technical Parameters**

General Data	
Max. number of Inverters	1
Inverter Communication	USB3.0
Remote Communication	WiFi (802.11 b/g/n)
Serial Port Communication Rate ( bps)	115200
Communication Distance (m)	100 (without obstacles)
External Antenna	SMA water-proof glue stick antenna
Data Intervals	Remote configuration available
Preference Setting	Remote Web, APP
Data Access	Remote server
Working Voltage (V)	DC 5
Working Current (mA)	80 (200 Peak)
Wireless Data	
WiFi Transmitting Power	802.11b: +16 +/-2dBm (@11Mbps), 802.11g: +14 +/-2dBm (@54Mbps), 802.11n: +13 +/-2dBm (@HT20, MCS7)
WiFi Receiving Sensitivity	802.11b: -87 dBm (@11Mbps ,CCK), 802.11g: -73 dBm (@54Mbps, OFDM), 802.11n: -71 dBm (@HT20, MCS7)
WiFi Operating Frequency (GHz)	2.412-2.484
Environmental Data	
Operating Temperature (°C)	-10~+60
Operating Humidity	0%-90% relative humidity, no condensation
Storage Temperature (°C)	-40~+85
Storage Humidity (%)	< 40
Protection Degree	IP65
Other Data	
Dimensions [L*W*H] (mm)	156*52*30
Weight (g)	130
Warranty (years)	2



- Metal body, beautiful and long durable
- Plug and play 1s installation, no need to set
- Support local and remote monitoring
- IP65, for both indoor and outdoor installation
- External SIM card slot, easier for SIM card replacement
- External antenna, stronger signal and reliable communication
- Enable mobile monitoring at anytime anywhere

**GPRS MODULE**

**Technical Parameters**

General Data	
Max. number of Inverters	1
Inverter Communication	USB3.0
External Antenna	SMA water-proof glue stick antenna
Data Intervals	Remote configuration available
Preference Setting	Remote Web, APP
Data Access	Remote server
Working Voltage (V)	DC 5
Working Current (mA)	130 (600 Peak)
Wireless Data	
Wireless Transmitting Power (dbm)	GSM850/EGSM900: 5~32.5, DCS1800/PCS1900: 0~29.5
Wireless Receiving Sensitivity (dBm)	< -108.5
Wireless Operating Frequency	GSM850, EGSM900, DCS1800, PCS1900
GPRS Connection Features	GPRS multi-slot class is 10 (default), GPRS mobile station class B
Environmental Data	
Operating Temperature (°C)	-10~+60
Operating Humidity (%)	0-90 relative humidity, no condensation
Storage Temperature (°C)	-40~+85
Storage Humidity	< 40%
Protection Degree	IP65
Other Data	
Dimensions [L*W*H] (mm)	156*52*30
Weight (g)	140
Warranty (years)	2



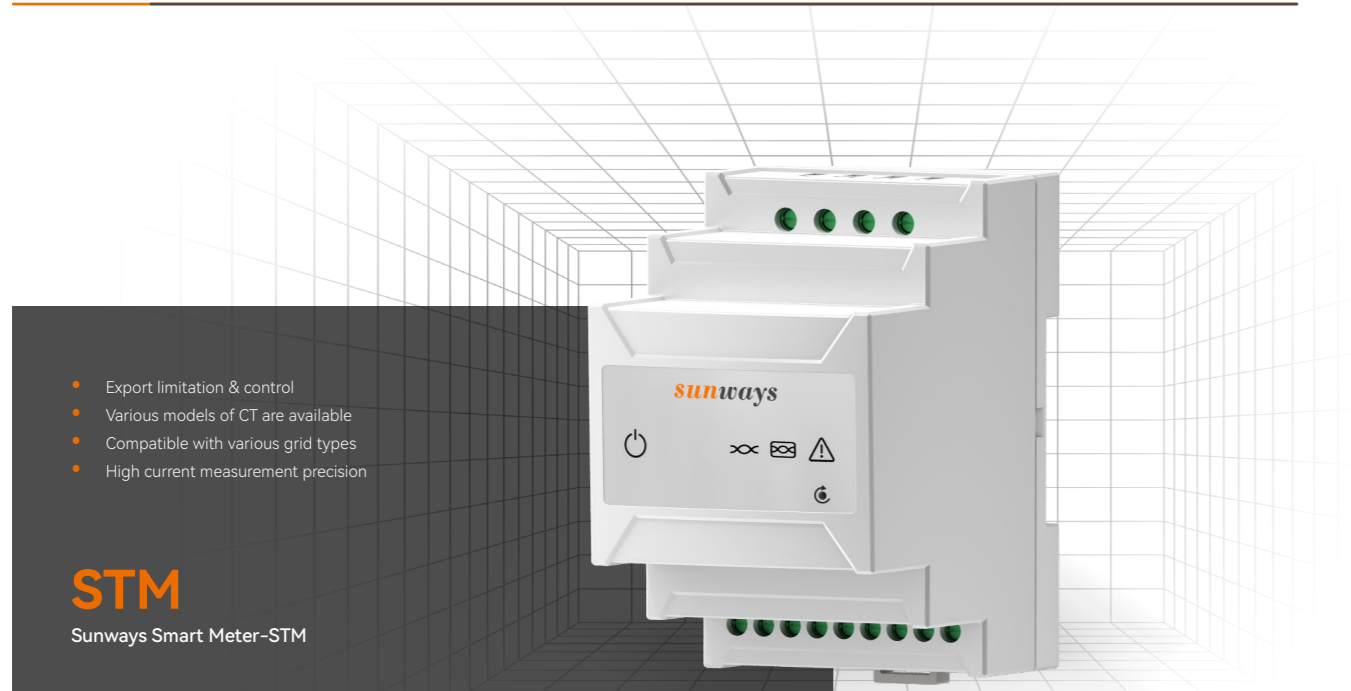
- Plug and play 1s installation
- Data encrypted to ensure data security
- Supports breakpoint retransmission
- Remote upgrade available
- Stable and reliable data transmission via wired internet cable
- Default dynamic IP mode and static IP commissioning available

**LAN MODULE**

**Technical Parameters**

General Data	
Max. number of Inverters	1
Inverter Communication	USB3.0
Remote Communication	IEEE802.3 10
Serial Port Communication Rate (bps)	115200
MAX. Communication Distance (m)	100
Data Intervals	Remote configuration available
Preference Setting	Remote Web, APP
Data Access	Remote server
Working Voltage (V)	DC 5
Working Current (mA)	100 (220 Peak)
Environmental Data	
Operating Temperature (°C)	-30~+75
Operating Humidity	0%-90% relative humidity, no condensation
Storage Temperature (°C)	-40~+85
Storage Humidity	< 40%
Protection Degree	IP65
Other Data	
Dimensions [L*W*H] (mm)	116*52*30
Weight (g)	100
Warranty (years)	2





- Export limitation & control
- Various models of CT are available
- Compatible with various grid types
- High current measurement precision

**STM**  
Sunways Smart Meter-STM



- Export limitation & control
- Various models of CT are available
- Compatible with various grid types
- High current measurement precision
- 24/7 Real-time consumption monitoring
- Integrated features of WiFi/LAN/RS485

**STK**  
Sunways Energy Manager

**Technical Parameters**

Model		STM
Voltage Range (V)		85-280
Frequency (Hz)		50/60
Rated Current (A)		90A/120A/300 ( With CT )
Self-consumption (W)		<3
Data Detection		Current/Voltage/Active Power/Reactive Power/Power Factor/Frequency
Calculated Value		Power Factor/Bidirectional Active/Reactive Power Energy
Precision	Active Power	Class 1 (IEC 62053-22)
	Reactive Power	Class 1 (IEC 62053-23)
Communication		Modbus RTU (RS485)
Interface		3 LED, Reset Button
Mechanical Parameters	Terminal capacity (mm <sup>2</sup> )	0.5~4 (Copper Core Wire)
	Size [L*W*H] (mm)	85*54*75
	Weight (g)	150
	Protection Degree	IP20 (For Indoor Use)
	Installation Method	35mm DIN Rail
Operating Temperature (°C)		-25 ~ +60
Operating Humidity		<95%, No Condensation
Altitude (m)		<2500

**Technical Parameters**

Model		STK
Voltage Range (V)		85-280
Frequency (Hz)		50/60
Rated Current (A)		90A/120A/300 ( With CT )
Self-consumption (W)		<5
Data Detection		Current/Voltage/Active Power/Reactive Power/Frequency
Calculated Value		Power Factor/Bidirectional Active/Reactive Power
Precision	Active Power	Class 1 (IEC 62053-22)
	Reactive Power	Class 1 (IEC 62053-23)
Communication		Modbus RTU (RS485), WiFi/LAN/Bluetooth
Interface		5 LED, Reset Button
Mechanical Parameters	Terminal capacity (mm <sup>2</sup> )	0.5~4 (Copper Core Wire)
	Size [L*W*H] (mm)	85*54*75
	Weight (g)	150
	Protection Degree	IP20 (For Indoor Use)
	Installation Method	35mm DIN Rail
Operating Temperature (°C)		-25 ~ +60
Operating Humidity		<95%, No Condensation
Altitude (m)		<2500
Parallel Connection		Optional

# 03 MONITORING SYSTEM & ACCESSORIES

Sunways monitoring system is a smart plants monitoring and management platform, which can offer a quick check, diagnose and management of customer plants. Convenient for both Sunways installers and distributors to manage their plants and customers and help to lower the service costs. With the help of Sunways monitoring system, service engineers almost can handle 50%+ problems by remote configuration and firmware updating without on-site service.



# WEB


See What Our Portal Offers You

www.sunways-portal.com




**FLEXIBILITY**  
Design your own page according to your preference (your zone, your rule).


**USER FRIENDLY**  
Automatic alarm notification and multiple language operation supportable.

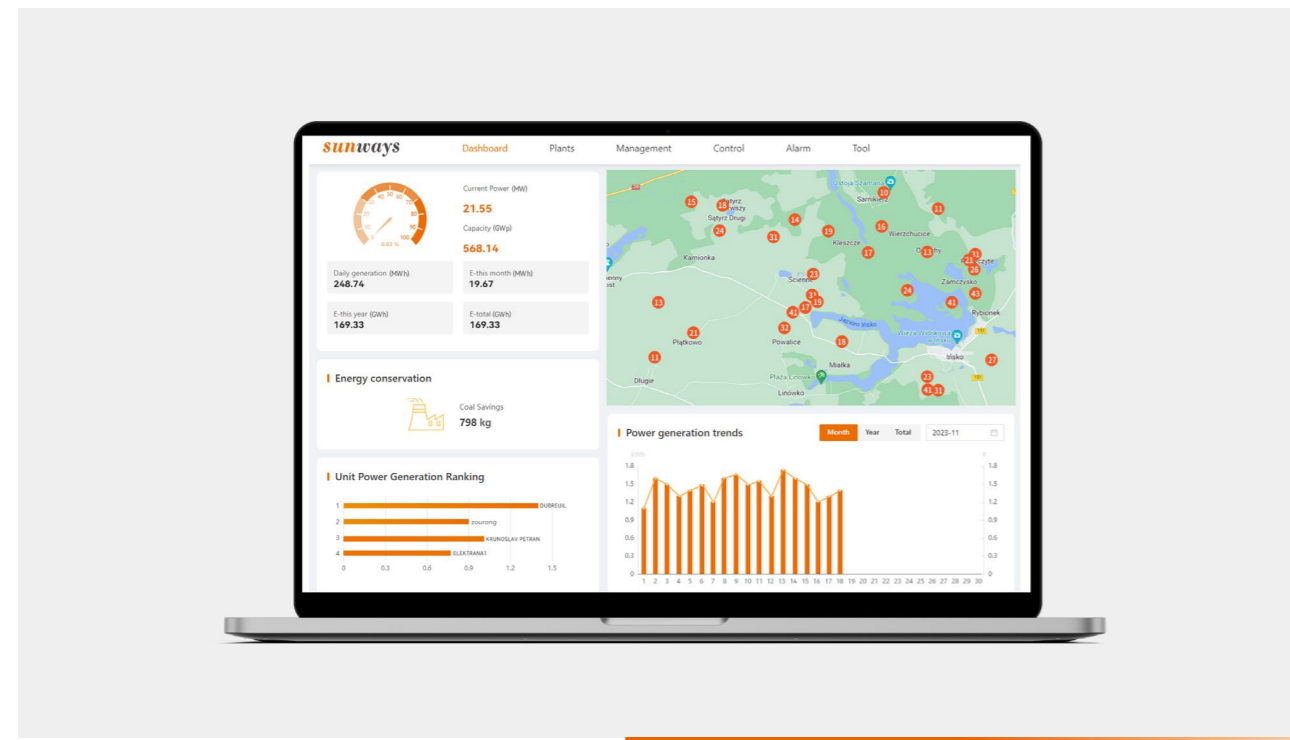


**PRODUCTIVITY**  
Plant/Device/Report checking, diagnosing and management any time anywhere.



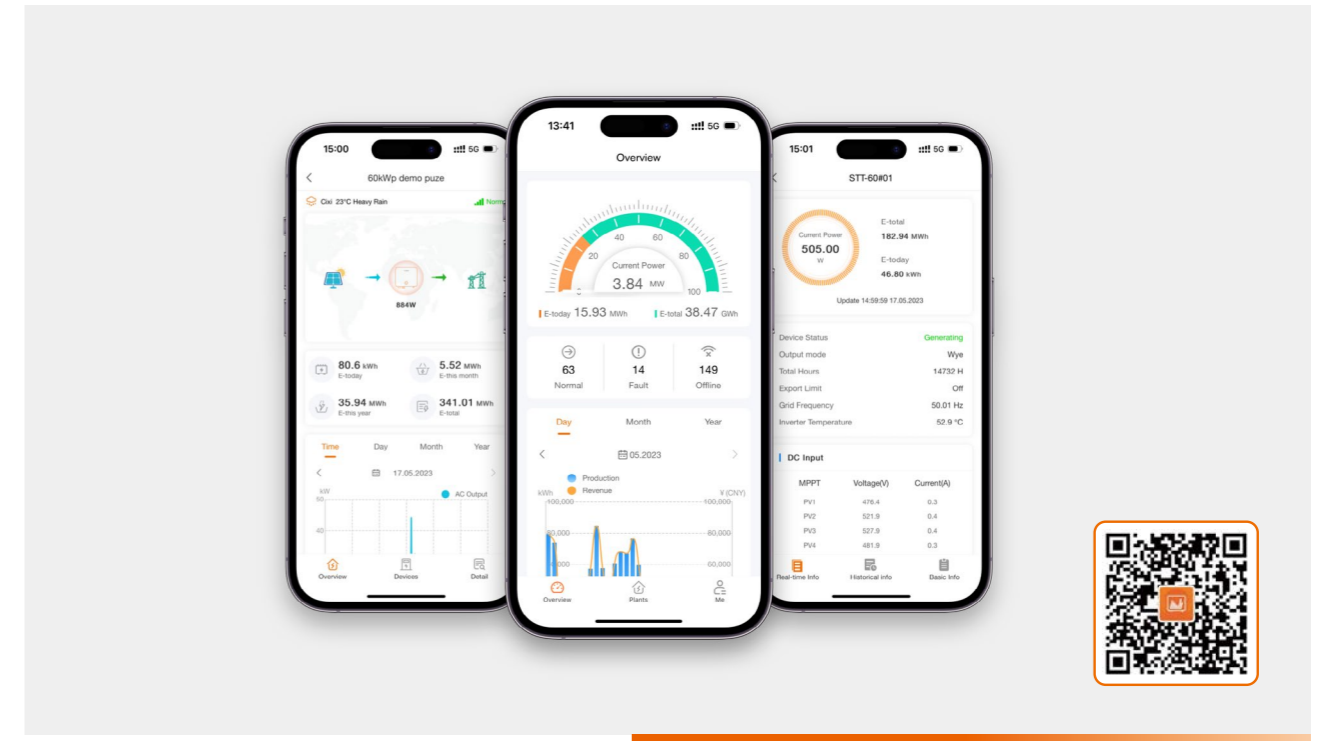
**CONTINUITY**  
Breakingpoints data recovery up to 14 days, never lose your generation data.






# APP

Key Features




Check and manage your plant at anytime, anywhere.




One click diagnose devices

Support multiple languages operation




Customized dynamic data & energy flow presentation

One App for all roles, UI auto changed according to user's role



Rich data analysis-Realtime/Daily/Monthly/Yearly



Multi-dimensional data visualization



# 04

## CASE STUDY



PROJECT ADDRESS

Italy

PROJECT CAPACITY

6.6MW

INVERTER

Sunways STT 12kW\*522





PROJECT ADDRESS	PROJECT CAPACITY
<b>China</b>	<b>1.6MW</b>

INVERTER  
**Sunways STT 100kW\*13**



PROJECT ADDRESS	PROJECT CAPACITY
<b>Sweden</b>	<b>15.6kW</b>

INVERTER  
**Sunways STH 8kW\*2**



PROJECT ADDRESS	PROJECT CAPACITY
<b>Brazil</b>	<b>1.1MW</b>

INVERTER  
**Sunways STT 100kW\*6 & 50kW\*5**



PROJECT ADDRESS	PROJECT CAPACITY
<b>Turkey</b>	<b>240kW</b>

INVERTER  
**Sunways STT 80kW\*3**



PROJECT ADDRESS	PROJECT CAPACITY
<b>Australia</b>	<b>15kW</b>

INVERTER  
**Sunways STT 5kW\*3**



PROJECT ADDRESS	PROJECT CAPACITY
<b>Czech Republic</b>	<b>100kW</b>

INVERTER  
**Sunways STT 100kW\*1**



*sunways*



WeChat



Sunways Portal

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