

Originated from Germany, Since 1993

***sunways***

Photovoltaic Technology  
Ningbo Sunways Technologies Co.,Ltd.

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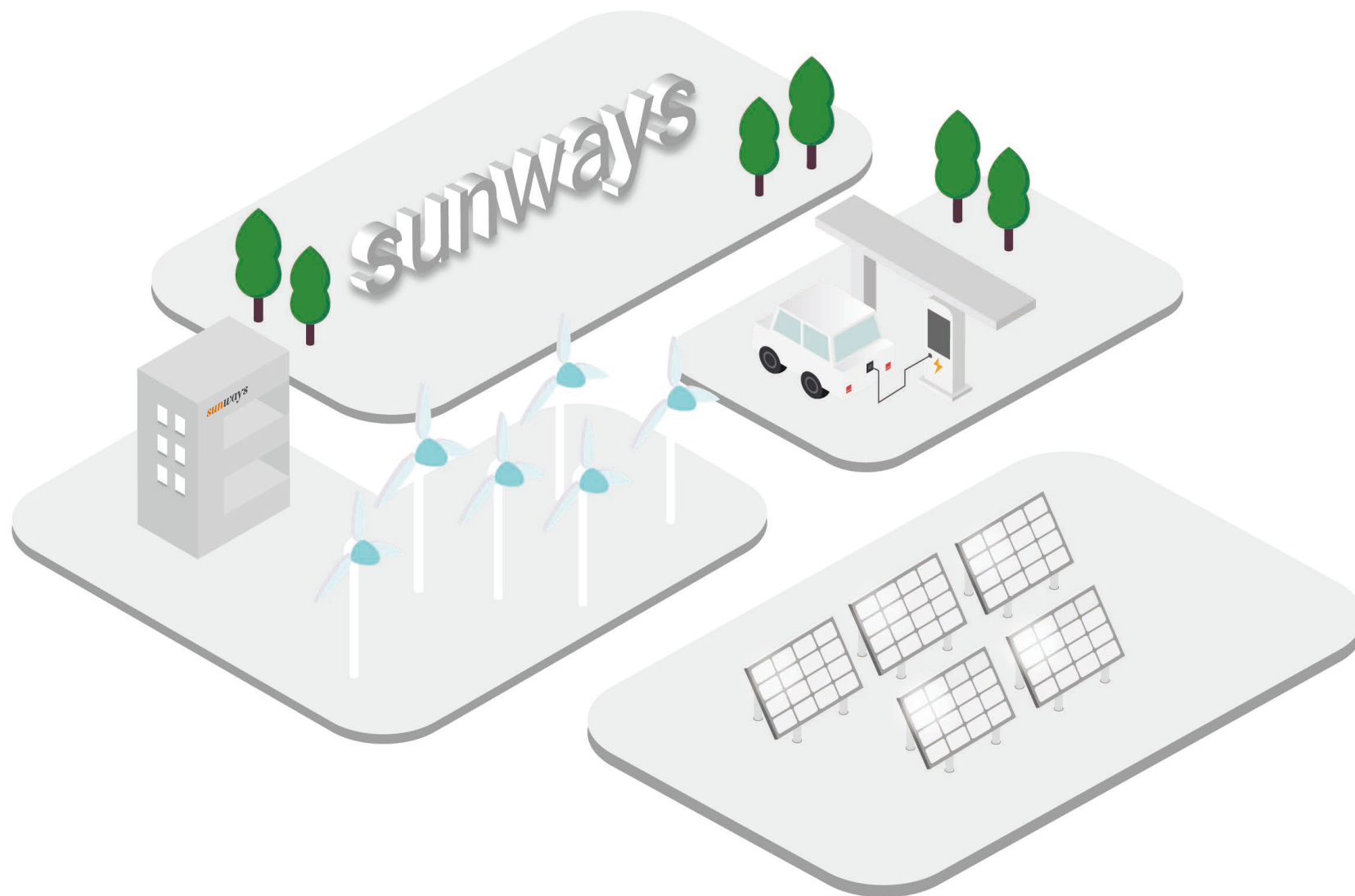
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# 01 COMPANY PROFILE



## WHO WE ARE

### Sunways Origination

Originated from Germany, Since 1993

Sunways is a company that originated in Konstanz, Germany in 1993, which develops, manufactures, and distributes cutting-edge technologies, high-efficiency products, and solutions for a whole PV industry for more than 20 years. Our products contain STS 1~6kW residential series, STT 4~125kW C&I series, STH 4~12kW storage series, and relative monitoring devices and portal. Our extensive product range enables us to meet the changing demand in the world and highly enhances our competitive power.

### Quality Management

Sunways treats product quality as its life, from supplier inspection, incoming quality inspection, process inspection to finished product inspection, we are not just set a series of strict, integrated quality control systems, but also have the most advanced testing laboratory to carry out a series of rigorous tests on batch products, and batch sampling and tracking the quality of finished products. Years of tempering and best practices contribute to the first impression of Sunways, from the source the quality assurance is ensured, based on the world-famous brand components, and Sunways commits to make brand-based inverter with highly standardized craft and integral quality inspection process.

### Our R&D Team

Sunways treats product quality as the life and technical innovation as the driving force, fostered a professional and experienced, leading high-level, strong independent innovation capability 50 people R&D team, and engaged with many scientific research institutions such as ISC Konstanz, Fraunhofer ISE, Konstanz University, Zhejiang University, and Solarvalley Mitteldeutschland, etc. Sunways has supplied tons of high-quality PV inverters to many projects at the domestic and overseas markets. All our products have been certified by TUV for a series of professional certificates such as VDE, IEC, CEI, EMC, NBR, C10/11, AS4777, etc., and also have been exported to Germany, the Netherlands, Poland, Vietnam, Philippines, Italy, Croatia, India and more than 40 countries and regions, and highly admired and recognized.

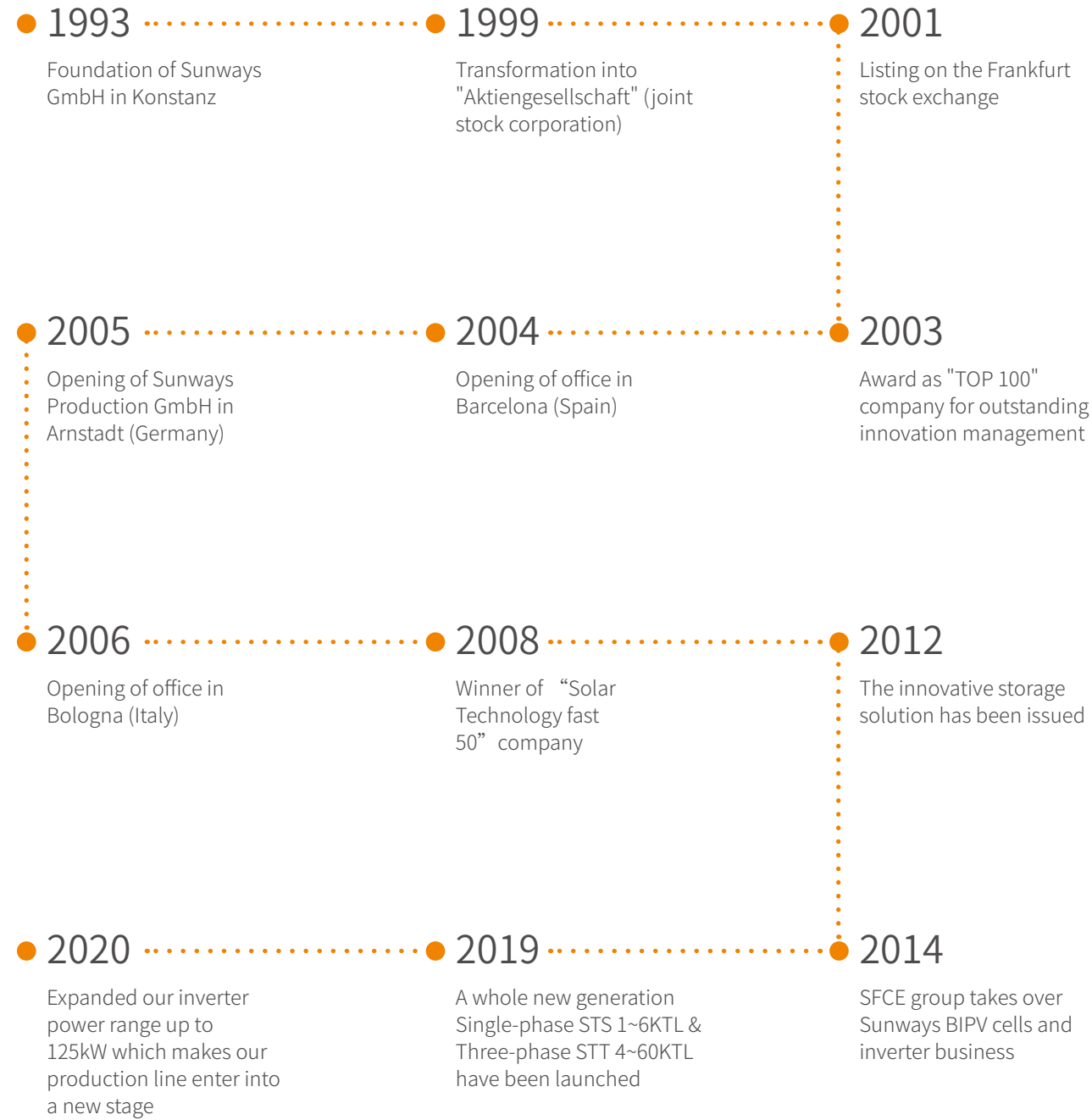
### Production Capacity and Scale

Sunways has 6 hectares of land in Cixi, Zhejiang with a factory area of about 4000 square meters and a production capacity of about 10,000 sets a month. With the expansion of our business, the production line is also subject to be doubled by the year 2022, and at that time, our production capacity will reach up to 20,000 sets in one month. We can ensure a timely delivery to our customers even faces the ever-growing demands of PV inverters.

A leading solar technology company

## WHO WE ARE

Sunways company's milestones



## OUR PRESENCE



## STRATEGIC PARTNERS



# 02 PRODUCTS

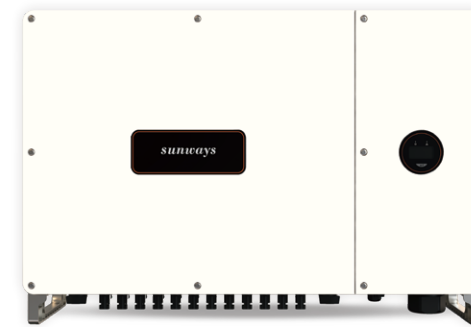
## WHAT WE HAVE



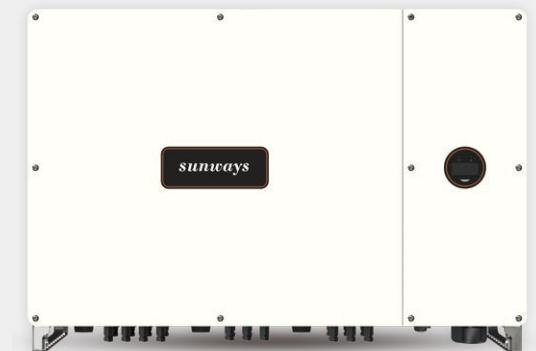
Single Phase Series  
STS-1~3KTL-S



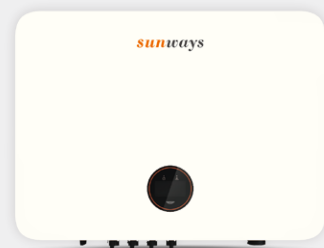
Single Phase Series  
STS-3~6KTL



Industrial Three Phase Series  
STT-50~60KTL



Industrial Three Phase Series  
STT-80~125KTL



Smart Three Phase Series  
STT-4~25KTL



Three Phase Storage Series  
STH-4~12KTL-HT



Monitoring Devices  
WiFi Module



Monitoring Devices  
GPRS Module

# PRODUCT INTRODUCTION

Sunways Single Phase with Single MPPT  
STS - 1K / 1.5K / 2K / 2.5K / 3KTL - S



MAX 97.5% EFFICIENCY

IP65 PROTECTION



Safe & Reliable

- 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
- IP65, wider working temperature and altitude, adapt to various installation environments



High Revenue

- High yield with Max.97.5% efficiency
- European weighted efficiency 97%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- Single MPPT design with precise MPPT algorithm
- Standard 5 years warranty, extendable to 10 or 15 years



Easy to use

- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485, Wi-Fi/GPRS/LAN optional)
- Remote upgrading available
- Intelligent positioning abnormal string with integrated I/V scan function

## Technical Parameters

Single Phase:STS-1K/1.5K/2K/2.5K/3KTL-S

Model	STS-1KTL-S	STS-1.5KTL-S	STS-2KTL-S	STS-2.5KTL-S	STS-3KTL-S
<b>Input</b>					
Max. Input Power (W)	1,300	1,950	2,600	3,250	3,900
Start-up Voltage (V)	60	60	60	60	60
Min. DC Voltage (V)	55	55	55	55	55
Max. DC Input Voltage (V)	500	500	500	500	500
Rated DC Input Voltage (V)	360	360	360	360	360
MPPT Voltage Range (V)	80-450	80-450	80-450	80-450	80-450
No. of MPP Trackers	1	1	1	1	1
No. of DC Inputs per MPPT	1	1	1	1	1
Max. Input Current (A)	12.5	12.5	12.5	12.5	12.5
Max. Short-circuit Current (A)	15	15	15	15	15
<b>Output</b>					
Rated Output Power (W)	1,000	1,500	2,000	2,500	3,000
Max. Output Power (W)	1,100	1,650	2,200	2,750	3,300
Max. Apparent Power (VA)	1,100	1,650	2,200	2,750	3,300
Rated Output Voltage (V)	220/230				
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz				
Max. Output Current (A)	4.8	7.2	9.6	12	14.4
Power Factor	0.8 leading ...0.8 lagging				
Max. Total Harmonic Distortion	<3% @Rated Output Power				
DCI	<0.5%In				
<b>Efficiency</b>					
Max. Efficiency	97.3%	97.3%	97.5%	97.5%	97.5%
European Efficiency	96.4%	96.4%	97.0%	97.0%	97.0%
MPPT Efficiency	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				
Islanding Protection	Integrated				
AC Short-circuit Protection	Integrated				
AC Over-voltage Protection	Integrated				
<b>General Data</b>					
Dimensions (mm)	327W*297H*114D				
Weight (KG)	6.5				
Protection Degree	IP65				
Self-consumption at Night (W)	<1				
Topology	Transformer-less				
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, Wi-Fi/GPRS/LAN(Optional)				
Compliance	NB/T32004, IEC62109, IEC62116, VDE4105, VDE0126, UTE C15-712-1, AS4777, C10/11, CEI0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000				

# PRODUCT INTRODUCTION

Sunways Single Phase with Dual MPPT  
STS - 3 K / 3.6 K / 4.2 K / 4.6 K / 5 K / 6 K T L



MAX 98.1% EFFICIENCY

IP65 PROTECTION



Safe & Reliable

- 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
- IP65, wider working temperature and altitude, adapt to various installation environments



High Revenue

- High yield with Max.98.1% efficiency
- European weighted efficiency 97.5%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- Dual MPPT design with precise MPPT algorithm
- Standard 5 years warranty, extendable to 10 or 15 years



Easy to use

- Compact elegant design, light weight, one-person installation
- Plug and play connectors, easy for installation
- Support wireless and wired internet connection (RS485, Wi-Fi/GPRS/LAN optional)
- Remote upgrading available
- Intelligent positioning abnormal string with integrated I/V scan function

## Technical Parameters

Single Phase:STS-3K/3.6K/4.2K/4.6K/5K/6KTL

Model	STS-3KTL	STS-3.6KTL	STS-4.2KTL	STS-4.6KTL	STS-5KTL	STS-6KTL
<b>Input</b>						
Max. Input Power (W)	3,900	4,680	5,460	5,980	6,500	7,800
Start-up Voltage (V)	120	120	120	120	120	120
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)	12.5/12.5	12.5/12.5	12.5/12.5	12.5/12.5	12.5/12.5	12.5/12.5
Max. Short-circuit Current (A)	15/15	15/15	15/15	15/15	15/15	15/15
<b>Output</b>						
Rated Output Power (W)	3,000	3,600	4,200	4,600	5,000	6,000
Max. Output Power (W)	3,300	3,960	4,600	4,600	5,500	6,600
Max. Apparent Power (VA)	3,300	3,960	4,600	4,600	5,500	6,600
Rated Output Voltage (V)	220/230					
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
Max. Output Current (A)	15	18	21	21	25	28.7
Power Factor	0.8 leading ...0.8 lagging					
Max. Total Harmonic Distortion	<3% @Rated Output Power					
DCI	<0.5%In					
<b>Efficiency</b>						
Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%	98.1%
European Efficiency	97.5%	97.5%	97.5%	97.5%	97.5%	97.5%
MPPT Efficiency	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					
Islanding Protection	Integrated					
AC Short-circuit Protection	Integrated					
AC Over-voltage Protection	Integrated					
<b>General Data</b>						
Dimensions (mm)	410W*360H*120D					
Weight (KG)	13					
Protection Degree	IP65					
Self-consumption at Night (W)	<1					
Topology	Transformer-less					
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)					
Compliance	NB/T32004, IEC62109, IEC62116, VDE4105, VDE0126, UTE C15-712-1, AS4777, C10/11, CEI0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000					



# PRODUCT INTRODUCTION

Sunways Three Phase with Dual MPPT  
STT-4K/5K/6K/8K/10K/12K/15K/17K/20K/25KTL



MAX 98.6% EFFICIENCY

IP65 PROTECTION



Safe & Reliable

- 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
- IP65, wider working temperature and altitude, adapt to various installation environments



High Revenue

- High yield with Max.98.6% efficiency
- 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
- Dual MPPT design with precise MPPT algorithm
- Standard 5 years warranty, extendable to 10 or 15 years



Easy to use

- Compact elegant design, less than 25kg, easy for installation
- Support wireless and wired internet connection (RS485, Wi-Fi/GPRS/LAN optional)
- Remote upgrading available
- Intelligent positioning abnormal string with integrated I/V scan function

## Technical Parameters

Three Phase:STT-4K/5K/6K/8K/10K/12K/15K/17K/20K/25KTL

Model	STT-4KTL	STT-5KTL	STT-6KTL	STT-8KTL	STT-10KTL	STT-12KTL	STT-15KTL	STT-17KTL	STT-20KTL	STT-25KTL
<b>Input</b>										
Max. Input Power (W)	5,200	6,500	7,800	10,400	13,000	15,600	19,500	22,100	26,000	32,500
Start-up Voltage (V)	200	200	200	200	200	200	200	200	200	200
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)	200-950	200-950	200-950	200-950	200-950	200-950	200-950	200-950	200-950	200-950
No. of MPP Trackers	2	2	2	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	1/2	2/2	2/2	2/2
Max. Input Current (A)	11/11	11/11	11/11	11/11	11/11	11/11	11/22	22/22	22/22	22/22
Max. Short-circuit Current (A)	15/15	15/15	15/15	15/15	15/15	15/15	15/30	30/30	30/30	30/30
<b>Output</b>										
Rated Output Power (kW)	4	5	6	8	10	12	15	17	20	25
Max. Output Power (kW)	4.4	5.5	6.6	8.8	11	13.2	16.5	18.7	22	25
Max. Apparent Power (kVA)	4.4	5.5	6.6	8.8	11	13.2	16.5	18.7	22	25
Rated Output Voltage (V)	3L/N/PE, 230/400V									
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz									
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									
Max. Total Harmonic Distortion	<3% @Rated Output Power									
DCI	<0.5%In									
<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%
European 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 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 (mm)	550W*410H*175D									
Weight (KG)	22					25				
Protection Degree	IP65									
Self-consumption at Night (W)	< 1									
Topology	Transformer-less									
Operating Temperature Range (° C)	-30~60°C									
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)									
Compliance	NB/T32004, IEC62109, IEC62116, VDE4105, VDE0126, UTE C15-712-1, AS4777, C10/11, CEI0-21, RD1699, NBR16149, IEC61727, IEC60068, IEC61683, EN50549, EN61000									



# PRODUCT INTRODUCTION

Sunways Three Phase with Six MPPT  
STT-50K/60KTL



MAX 98.8% EFFICIENCY

IP65 PROTECTION



## Safe & Reliable

- 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 technology
- IP65, wider working temperature and altitude, adapt to various installation environments



## High Revenue

- High yield with Max.98.8% efficiency
- European weighted efficiency 98.3%
- Wide MPPT voltage range
- Up to 10% continuous output overloading capacity
- Six MPPT design, lower PV string mismatch loss
- Optional anti-PID function integrated
- Standard 5 years warranty, extendable to 10 or 15 years



## Easy to use

- String monitoring, improve O&M efficiency
- Support wireless and wired internet connection (RS485, Wi-Fi/GPRS/LAN optional)
- Remote upgrading available
- Intelligent positioning abnormal string with integrated I/V scan function

## Technical Parameters

Three Phase:STT-50K/60KTL

Model	STT-50KTL	STT-60KTL
<b>Input</b>		
Max. Input Power (W)	65,000	78,000
Start-up Voltage (V)	200	200
Min. DC Voltage (V)	180	180
Max. DC Input Voltage (V)	1,100	1,100
Rated DC Input Voltage (V)	620	620
MPPT Voltage Range (V)	200-950	200-950
No. of MPP Trackers	6	6
No. of DC Inputs	12	12
Max. Input Current (A)	22/22/22/22/22/22	22/22/22/22/22/22
Max. Short-circuit Current (A)	30/30/30/30/30/30	30/30/30/30/30/30
<b>Output</b>		
Rated Output Power (kW)	50	60
Max. Output Power (kW)	55	66
Max. Apparent Power (kVA)	55	66
Rated Output Voltage (V)	3/N/PE, 230/400V	
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz	
Max. Output Current (A)	83.6	95.3
Power Factor	0.8 leading...0.8 lagging	
Max. Total Harmonic Distortion	< 3% @ Rated Output Power	
DCI	< 0.5% In	
<b>Efficiency</b>		
Max. Efficiency	98.8%	98.8%
European Efficiency	98.3%	98.3%
MPPT Efficiency	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	
PID Protection	Optional	
<b>General Data</b>		
Dimensions (mm)	850W*520H*290D	
Weight (KG)	58	
Protection Degree	IP65	
Self-consumption at Night (W)	<1	
Topology	Transformer-less	
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)	
Compliance	NB/T32004、IEC62109、IEC62116、VDE4105、VDE0126、AS4777、C10/11、CEI0-21、RD1699、NBR16149、IEC61727、IEC60068、IEC61683、EN50549、EN61000	

# PRODUCT INTRODUCTION

Sunways Three Phase with Ten MPPT  
STT-80K / 100K / 110K / 125KTL



MAX 98.8% EFFICIENCY

IP65 PROTECTION



## Intelligent

- Intelligent positioning abnormal string with integrated I/V scan function
- 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



## High Revenue

- High yield with Max.98.8% efficiency
- Up to 10% continuous output overloading capacity
- 8/10 MPPT design, lower PV string mismatch loss
- Optional PID recovery function
- Max 13A input, compatible with bifacial panel



## Convenience

- Support wireless and wired internet connection (RS485, Wi-Fi/GPRS/LAN optional)
- Remote upgrading available
- App+Oled dual displaying module, user friendly

## Technical Parameters

Three Phase:STT-80K/100K/110KTL、100K/125KTL-HV

Model	STT-80KTL	STT-100KTL	STT-110KTL	STT-100KTL-HV	STT-125KTL-HV
<b>Input</b>					
Max. Input Power (W)	104,000	130,000	143,000	130,000	162,500
Start-up Voltage (V)	200	200	200	200	200
Min. DC Voltage (V)	180	180	180	180	180
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
No. of MPP Trackers	8	10	10	10	10
No. of DC Inputs	16	20	20	20	20
Max. Input Current (A)	8*26	10*26	10*26	10*26	10*26
Max. Short-circuit Current (A)	8*40	10*40	10*40	10*40	10*40
<b>Output</b>					
Rated Output Power (kW)	80	100	110	100	125
Max. Output Power (kW)	88	110	121	110	137.5
Max. Apparent Power (kVA)	88	110	121	110	137.5
Rated Output Voltage (V)	3/N/PE,230/400V			3/N/PE,288/500V	
Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz				
Max. Output Current (A)	127	158.8	174.8	127	158.8
Power Factor	0.8 leading...0.8 lagging				
Max. Total Harmonic Distortion	< 3% @ Rated Output Power				
DCI	< 0.5% In				
<b>Efficiency</b>					
Max. Efficiency	98.8%	98.8%	98.8%	98.8%	98.8%
European 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 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				
PID Protection	Optional				
<b>General Data</b>					
Dimensions (mm)	975W*680H*290D				
Weight (KG)	75	78	78	75	78
Protection Degree	IP65				
Self-consumption at Night (W)	< 1				
Topology	Transformer-less				
Operating Temperature Range (° C)	-30~60°C				
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)				
Compliance	NB/T32004、IEC62109、IEC62116、RD1699、NBR16149、IEC61727、IEC60068、IEC61683、EN61000				

# PRODUCT INTRODUCTION

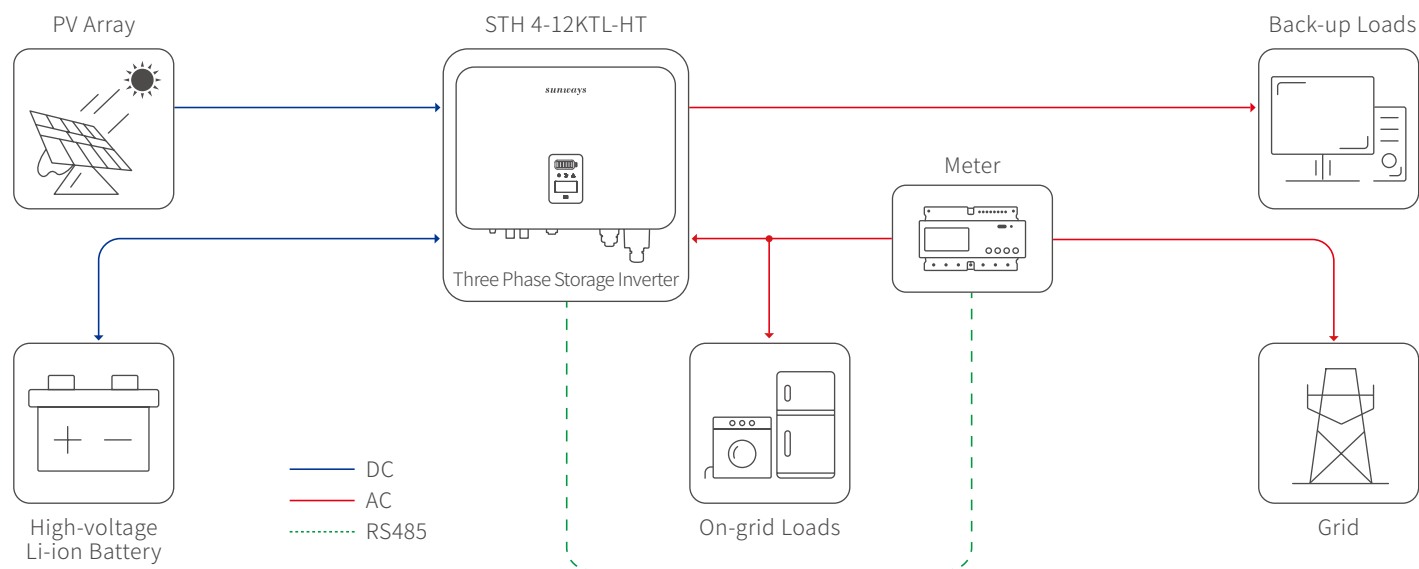
Sunways Three Phase Storage Inverter  
STH-4K/5K/6K/8K/10K/12KTL-HT

MAX 98.3% EFFICIENCY

IP65 PROTECTION



<p>Max. efficiency up to 98.3%</p>	<p>Support unbalance output on both on-grid and back-up side</p>	<p>Fanless design, ultra-silence</p>
<p>Powerful load adaptability, support multiple loads stable access</p>	<p>Oled display+App, two ways for data checking and management</p>	<p>180~750V super wide battery voltage range, adapt to bigger capacity battery</p>
<p>New pin type AC connector introduced, easy to use and safer</p>	<p>Intelligent BMS management, power dispatching from PV, Battery and Grid is more flexible</p>	<p>Uninterruptible power supply, switch to off-grid mode within 10ms</p>



## Technical Parameters

Three Phase:STH-4K/5K/6K/8K/10K/12KTL-HT

Model	STH-4KTL-HT	STH-5KTL-HT	STH-6KTL-HT	STH-8KTL-HT	STH-10KTL-HT	STH-12KTL-HT	
PV Input	Max. Input Power (W)	5,200	6,500	7,800	10,400	13,000	15,600
	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
	No. of MPP Trackers	2	2	2	2	2	2
	No. of PV Inputs	1/1	1/1	1/1	1/1	1/1	1/1
	Max. Input Current (A)	13/13	13/13	13/13	13/13	13/13	13/13
Max. Short-circuit Current (A)	18/18	18/18	18/18	18/18	18/18	18/18	
Battery	Battery Type	Lithium Battery (with BMS)					
	Battery Communication Mode	CAN / RS485					
	Battery Voltage Range (V)	180-750					
	Max. Charge/Discharge Current (A)	25/25					
	Rated Current of Built-in Fuse (A)	63					
Output (Grid)	Rated Output Power (kW)	4	5	6	8	10	12
	Max. Output Power (kW)	4.4	5.5	6.6	8.8	11	13.2
	Max. Apparent Power (kVA)	4.4	5.5	6.6	8.8	11	13.2
	Max. Input Apparent Power (kVA)	8 <sup>①</sup>	10 <sup>①</sup>	12 <sup>①</sup>	16 <sup>①</sup>	16.5 <sup>①</sup>	16.5 <sup>①</sup>
	Max. Charging Power of Battery (kW)	4	5	6	8	10	12
	Rated Output Voltage (V)	3 / N / PE, 230(400)					
	Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
	Max. Output Current (A)	6.7	8.3	10	13.3	16.5	20
	Power Factor	0.8 leading ~ 0.8 lagging					
	Max. Total Harmonic Distortion	<3% @Rated Output Power					
Output (Back-up)	DCI	<0.5%In					
	UPS Switching Time	<10ms					
	Rated Output Voltage (V)	3/N/PE, 230(400)					
	Rated AC Frequency (Hz)	50/60Hz 45-55Hz/55-65Hz					
	Max. Apparent Output Power (kVA)	4.4	5.5	6.6	8.8	11	13.2
	Peak Overload Apparent Power (kVA)	8 <sup>②</sup> , 60s	10 <sup>②</sup> , 60s	12 <sup>②</sup> , 60s	16 <sup>②</sup> , 60s	20 <sup>②</sup> , 60s	20 <sup>②</sup> , 60s
	Peak Output Apparent Power/per Phase (kVA)	1.6 <sup>③</sup>	2.1 <sup>③</sup>	2.6 <sup>③</sup>	3.3 <sup>③</sup>	4 <sup>③</sup>	5 <sup>③</sup>
	Voltage Harmonic Distortion	<3% @Linear Load					
Efficiency	Max. Efficiency	98.2%	98.2%	98.2%	98.3%	98.3%	98.3%
	European Efficiency	97.4%	97.4%	97.4%	97.5%	97.5%	97.5%
	Max. Battery Charging Conversion Efficiency	97.4%	97.4%	97.4%	97.5%	97.5%	97.5%
	Max. Battery Discharge Conversion Efficiency	97.6%	97.6%	97.6%	97.7%	97.7%	97.7%

Protection	
DC Reverse Polarity Protection	Integrated
Battery Input Reverse Connection Protection	Integrated
Insulation Resistance Protection	Integrated
DC Switch	Optional
Surge Protection	Integrated ( Type II )
Over-temperature Protection	Integrated
Residual Current Protection	Integrated
Islanding Protection	Frequency Shift, Integrated
AC Over-voltage Protection	Integrated
Overload Protection	Integrated
AC Short-circuit Protection	Integrated

General Data	
Dimensions (mm)	550W*410H*175D
Weight (KG)	28
Protection Degree	IP65
Self-consumption at Night (W)	<15
Topology	Transformer-less
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)

### Compliance

IEC62109、IEC62116、VDE4105、VDE0126、AS4777、RD1699、NBR16149、IEC61727、IEC60068、IEC61683、EN50549、EN61000

- 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.
- ③ Peak output apparent of power per phase is the max output apparent power that won't trigger the overload protection.

# PRODUCT INTRODUCTION

## WiFi Module



Reliability



Flexibility



Extensibility



- Plug and play 1s installation
- Metal body, beautiful and long durable
- Easy to configure with Sunways Monitoring App
- Support local and remote monitoring
- IP65, for both indoor and outdoor installation
- Enable mobile monitoring at anytime anywhere

## Technical Parameters

General Data	
Max. No. of Inverters	1
Inverter Communication	USB3.0
Remote Communication	WiFi(802.11 b/g/n)
Serial Port Communication Rate	115200bps
Communication Distance	100M (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	DC 5V
Working Current	80mA(200mA 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	2.412GHz-2.484GHz
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)	156*52*30mm
Weight	130g
Certificates	CE
Warranty	2 years

# PRODUCT INTRODUCTION

## GPRS Module



Reliability



Flexibility



Easy to use



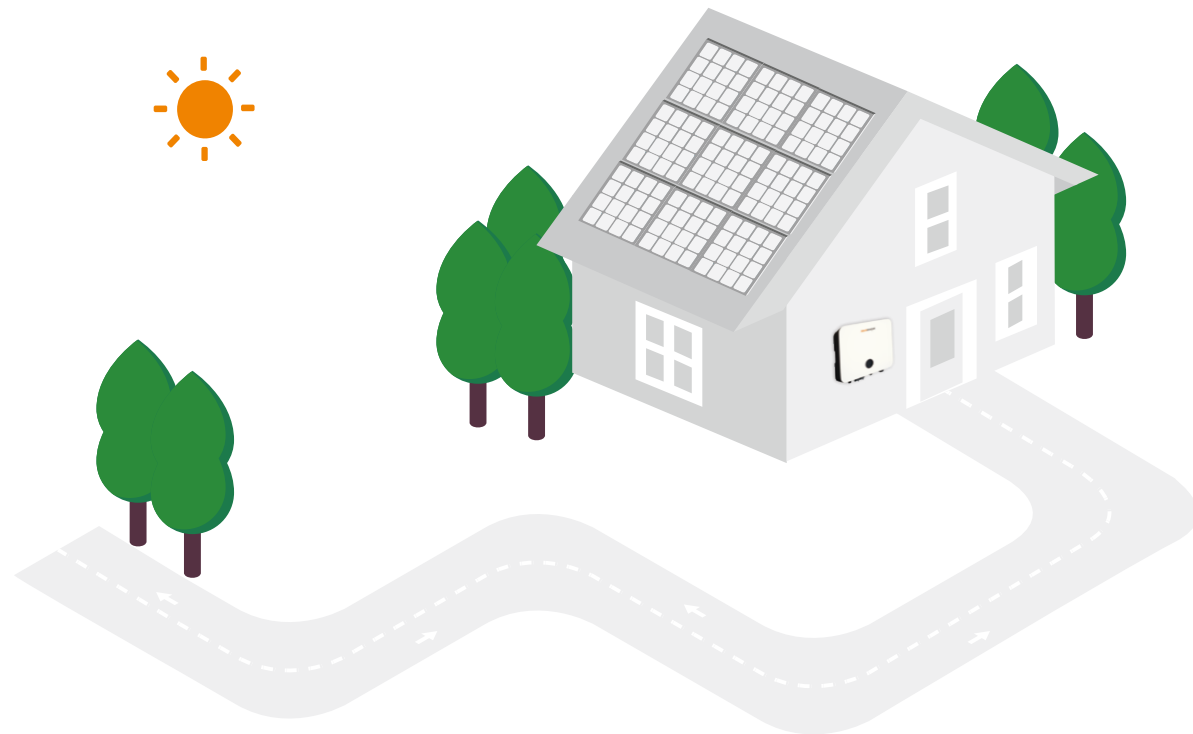
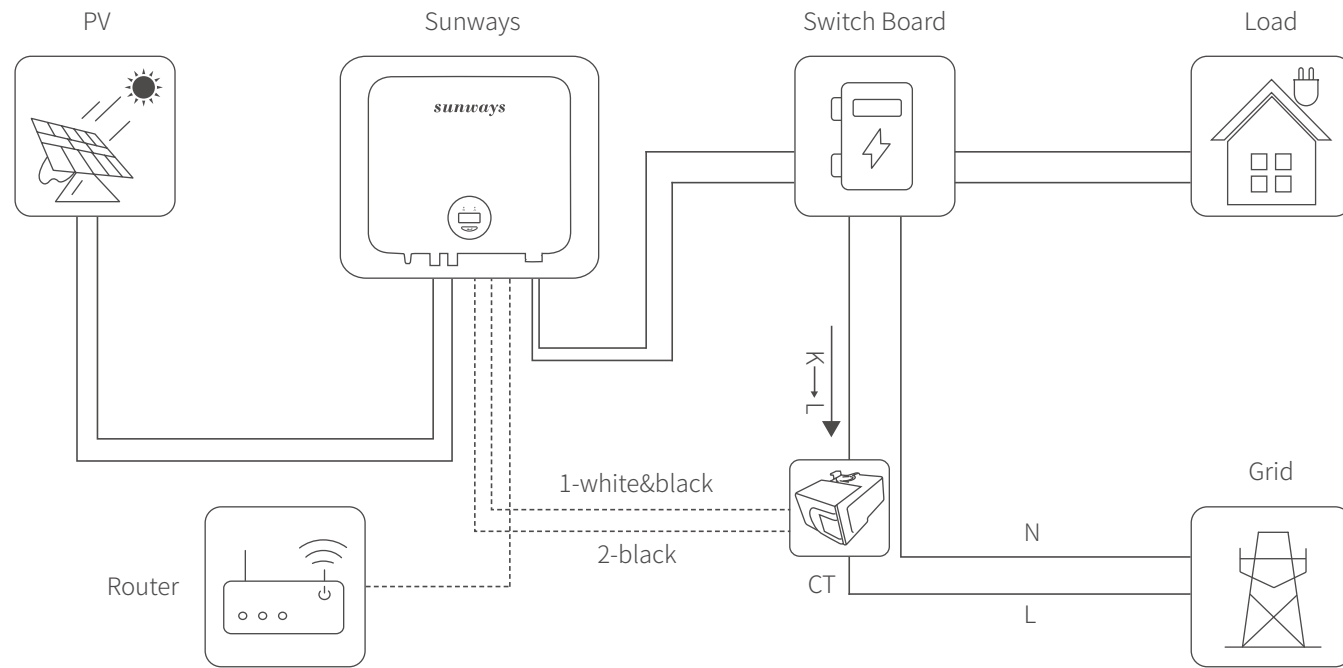
- Metal body, beautiful and long durable
- Plug and play 1s installation, no need to set
- Support local and remote monitoring
- IP65, for both indoor and outdoor installation
- External SIM card slot, easier for SIM card replacement
- External antenna, stronger signal and reliable communication
- Enable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

## Technical Parameters

General Data	
Max. No. 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	DC 5V
Working Current	130mA(600mA Peak)
Wireless Data	
Wireless Transmitting Power	GSM850/EGSM900: 5dbm ~ 32.5dbm、DCS1800/PCS1900: 0dbm ~ 29.5dbm
Wireless Receiving Sensitivity	<-108.5dBm
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)	156*52*30mm
Weight	140g
Certificates	SRRC
Warranty	2 years

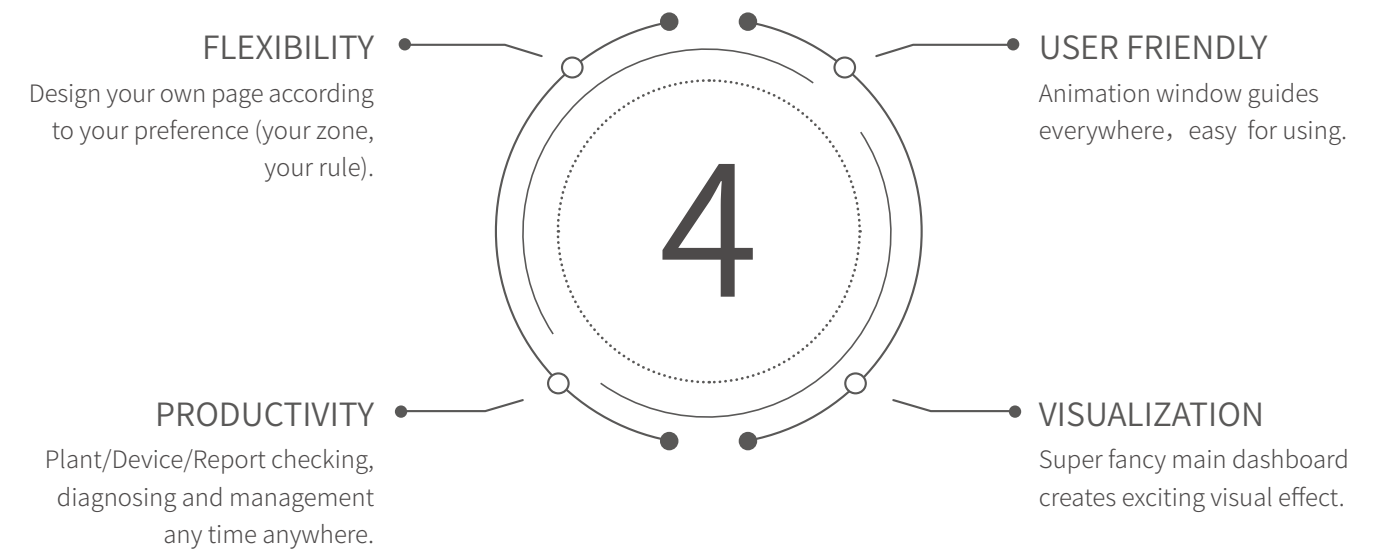
## APPLY SCENARIOS

Grid connected PV inverter is mostly used in the residential and commercial roof where the grid is running stably in most times. The system consists of photovoltaic array, grid-connected inverter, grid, and load. According to the application scenarios which you chose is all power exported to grid or only surplus power exported to the grid to decide whether the load should be connected to the system.



# MONITORING 03

## WEB See what our portal offers you

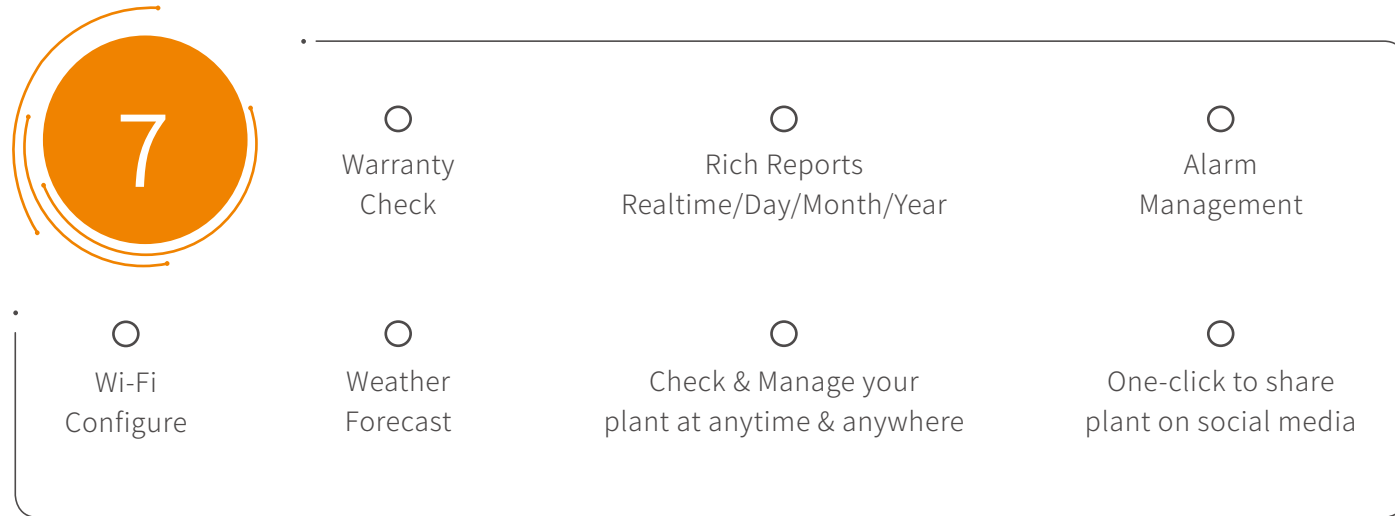


MONITOR.SUNWAYS-TECH.COM



## APP

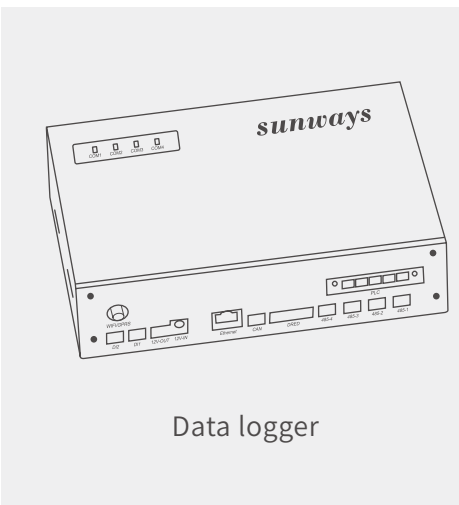
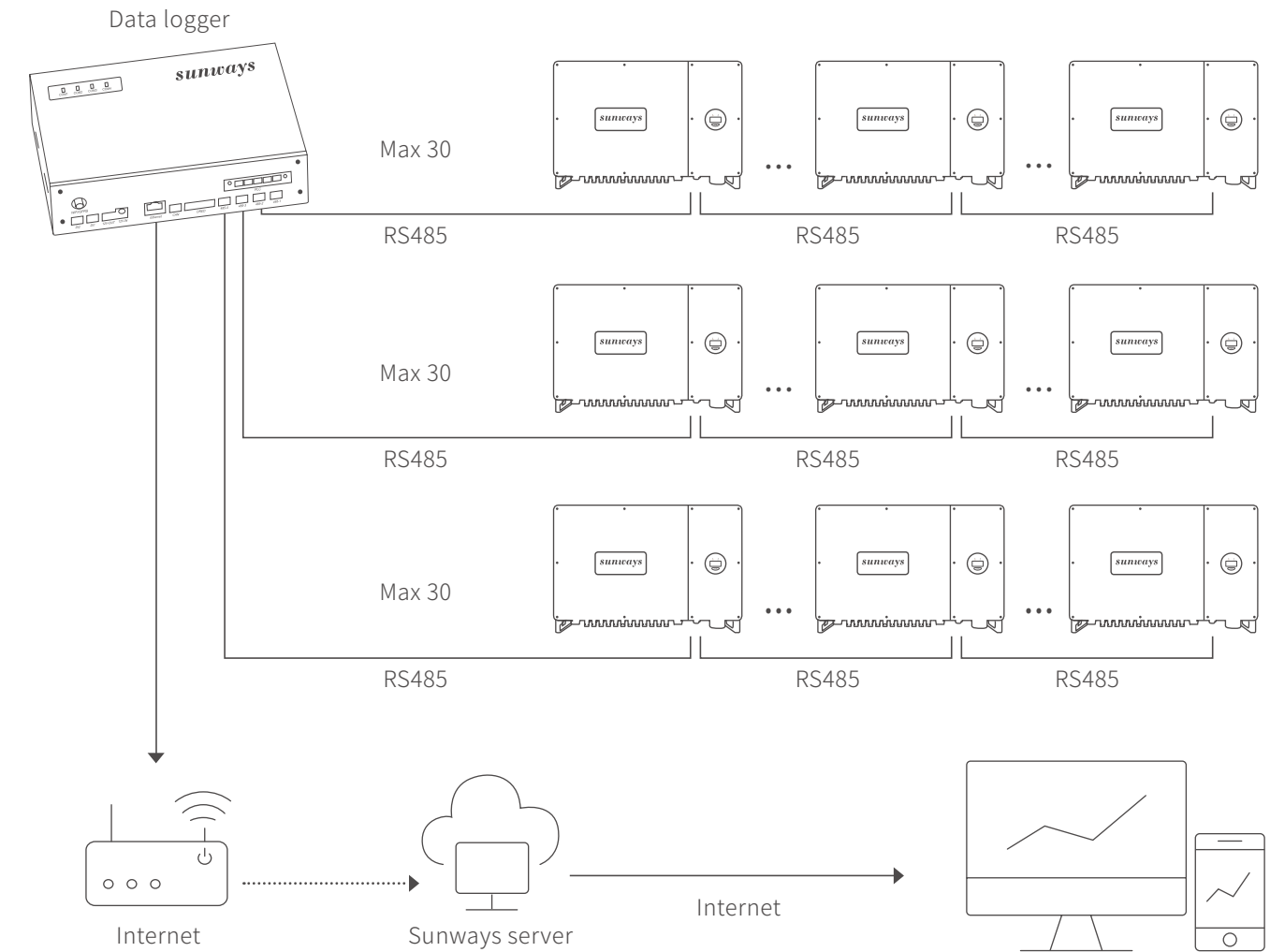
Key features



Monitoring APP



## MONITORING SYSTEM



### Flexible Networking

- Monitoring of up to 90 devices
- Support of RS485, Ethernet, WiFi communication
- Support of energy meter, meteo station, sensors and other equipment access

### Convenient O&M

- Active and reactive power control
- 100% data availability through 24/7 operations
- Inverter batch parameter setting and firmware updates
- Plant maintenance by remote Web access, optimized OPEX

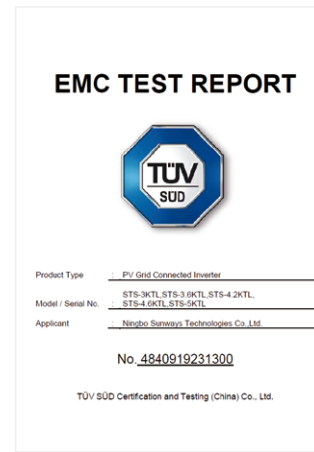
# 04 WHY US

## CERTIFICATES

## SUPPORT



CQC



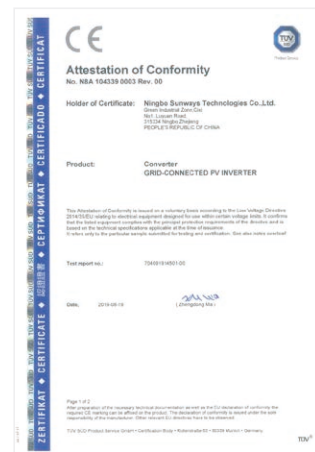
EN61000



EN50549



SAA



EN62109



IEC62109

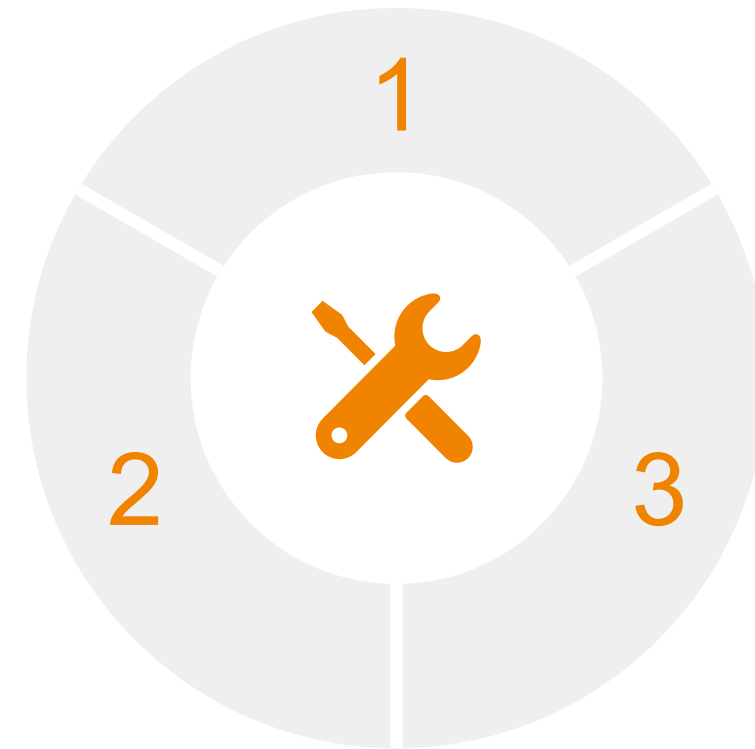


CEI 0-21



RD1699

### One-stop Solution



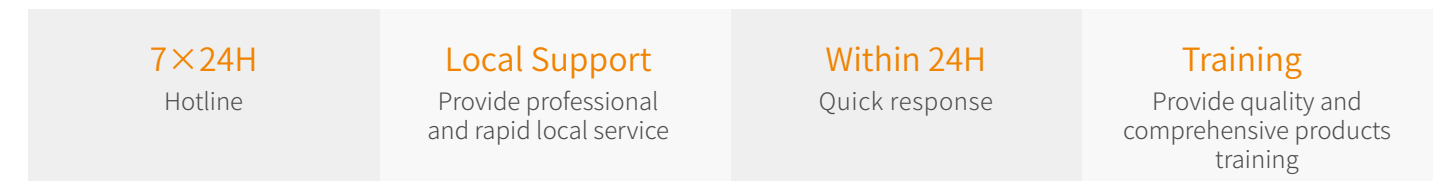
Convenient

Fast

### ► Convenient



### ► Fast



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



# 05 CASE STUDY



Project Address: Lishui, China  
Project Capacity: 3.168MW  
Inverter: 48 sets of Sunways STT 60kW inverter



Project Address: Cixi, China  
Project Capacity: 1.1MW  
Inverter: 20 sets of Sunways STT 50kW inverter





Project Address: Serra, Brazil  
 Project Capacity: 390kW  
 Inverter: 6 sets of Sunways STT 60kW inverter



Project Address: Kunshan, China  
 Project Capacity: 22kW  
 Inverter: 1 set of Sunways STT 20kW inverter



Project Address: Gujarat, India  
 Project Capacity: 5kW  
 Inverter: 1 set of Sunways STS 5kW inverter



Project Address: Cixi, China  
 Project Capacity: 1MW  
 Inverter: 16 sets of Sunways STT 60kW inverter





Project Address: Shandong, China  
Project Capacity: 60kW  
Inverter: 1 set of Sunways STT 60kW inverter



Project Address: Manila, Philippines  
Project Capacity: 25kW  
Inverter: 1 set of Sunways STT 25kW inverter

# *sunways*



WeChat

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Monitoring APP

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