

ASTRASUN Series Single Phase String Inverter



ASTRASUN 1500TL, 2000TL, 2500TL

ASTRASUN 3000TL, 3600TL

ASTRASUN 5000TL, 6000TL

Features

High performance string inverters

- > From 1.5KW to 6.0KW
- > Wide PV input voltage range
- > Rapid MPPT tracking technology
- > Superior PV energy harvest
- > Transformerless design with higher operation efficiency
- > Excellent thermal performance
- > High overload capability under most ambient conditions

Full data display and communications

- > LCD display energy data
- > Bright LED indicators imply system status at a glance
- > PC software for remote monitoring and system trouble shooting
- > Integrated RS232 serial communications

Easy and affordable to install

- > Lightweight and compact size
- > Includes a lightweight portable bracket simplifying installation
- > Firm IP65 inverter enclosure allows outdoor application

Cost advantages

- > Transformerless design cutting down the cost
- > Light weight and small dimension, reducing shipping cost
- > Low maintenance expense

Certificates

TUV, SAA, CE, CQC, AS4777.2/3, AS/NZS 3100, VDE 0126-1-1, EN62109-1/2, G83, G59, CNCA/CTS0004-2009A, CNCA/CTS0006-2010, EN61000-6-1/2/3/4, EN62109-1/2, RD1663, C10-11

Technical data

Model (ASTRASUN)	1500TL	2000TL	2500TL	3000TL	3600TL	5000TL	6000TL
Input (DC Side)							
Max. DC input power	1750W	2300W	2700W	3660W	3750W	5300W	6400W
Max. DC voltage	450Vdc		500Vdc			550Vdc	
Start voltage				150Vdc			
MPPT operating range			100~450Vdc			100~500Vdc	
Number of parallel inputs		1		2		3	
Number of MPP trackers				1			
Max. input current	10A	13A	14.5A	20A	20A	22.5A	27.5A
Output (AC Side)							
Nominal output power	1500W	2000W	2490W	3000W	3600W	4600W	6000W
Max. output power	1650W	2200W	2490W	3400W	3600W	5000W	6000W
Nominal output current	6.5A	8.7A	10.8A	13A	15.7A	20A	26A
Max. output current	7.9A	10.5A	12A	15.7A	16A	24A	29.3A
Nominal AC output voltage				230Vac			
AC Output voltage range*				190~265Vac			
AC Grid frequency range*				50±5Hz			
Power factor (cosφ)				>0.99			
THDI				<3% (at nominal output power)			
Efficiency							
Max efficiency	96.5%	97.0%	97.1%	97.2%	97.3%	97.4%	97.4%
Euro efficiency	95.5%	96.2%	96.3%	96.4%	96.6%	96.8%	96.8%
MPPT efficiency	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%
System							
Operating temperature				-25°C~+60°C			
Noise (typical)				≤20dB (A)			
Consumption at night				0W			
Electrical isolation				Transformerless			
Cooling concept				Natural cooling			
Degree of protection				IP65			
Communication				RS232 (WiFi optional)			
Dimension (W*D*H mm)	345*152*315		345*152*355		345*152*385	345*152*505	345*162*573
Weight (kg)	12	13	13	15	15	19	24

*AC grid voltage range and frequency range depend on local standards.

ASTRASUN-TWINS Series Dual MPPT String Inverter



Features

High performance string inverters

- > From 3.0KW to 5.0KW
- > Wide PV input voltage range
- > Rapid MPPT tracking technology
- > Two MPPT trackers
- > Superior PV energy harvest
- > Transformerless design with higher operation efficiency
- > Excellent thermal performance
- > High overload capability under most ambient conditions

Full data display and communications

- > LCD display energy data
- > Bright LED indicators imply system status at a glance
- > PC software for remote monitoring and system troubleshooting
- > Integrated RS232 serial communications

Easy and affordable to install

- > Lightweight and compact size
- > Includes a lightweight portable bracket simplifying installation
- > Firm IP65 inverter enclosure allows outdoor application

Cost advantages

- > Transformerless design cutting down the cost
- > Light weight and small dimension, reducing shipping cost
- > IP65 protection degree, suitable for outdoor installation, reducing construction cost
- > Low maintenance expense

Certificates

TUV, SAA, CE, CQC, AS4777.2/3, AS/NZS 3100, VDE 0126-1-1, EN62109-1/2, G83, G59, CNCA/CTS0004-2009A, CNCA/CTS0006-2010, EN61000-6-1/2/3/4, EN62109-1/2, RD1663, C10-11

Technical data

Model (ASTRASUN-TWINS)	3300TL	4000TL	5000TL
Input (DC Side)			
Max. DC input power	3600W	4380W	5300W
Max. DC voltage		500Vdc	
Start voltage		150Vdc	
MPPT operating range		100~450Vdc	
Number of inputs		2	
Number of MPP trackers		2	
Max. Input power per MPPT	2000W	2300W	3000W
Max. input current	IN1: 10A/IN2: 10A	IN1: 13A/IN2: 13A	IN1: 15A/IN2: 15A
Output (AC Side)			
Nominal output power	3300W	4000W	4950W/5000W
Max. output power	3300W	4000W	4950W/5000W
Nominal output current	14.3A	17.4A	21.5A
Max. output current	16.5A	20.0A	25.0A
Nominal AC output voltage		230Vac	
AC output voltage range*		190~265Vac	
AC grid frequency range*		50±5Hz	
Power factor (cosφ)		>0.99	
THDI		<3% (at nominal output power)	
Efficiency			
Max efficiency	97.4%	97.6%	97.6%
Euro efficiency	97.0%	97.1%	97.1%
MPPT efficiency	99.6%	99.6%	99.6%
System			
Operating temperature		-25°C~+60°C	
Noise (typical)		≤25dB (A)	
Consumption at night		0W	
Electrical isolation		Transformerless	
Cooling concept		Natural cooling	
Degree of protection		IP65	
Communication		RS232 (WiFi optional)	
Dimension (W*D*H mm)		345*152*435	
Weight (kg)	16.5	18	18

*AC grid voltage range and frequency range depend on local standards.

ASTRASUN 3 PH Series Three Phase String Inverter



Features

High performance string inverters

- > From 5.0KW to 30.0KW
- > Famous power components
- > Superior PV energy harvest
- > Excellent thermal performance
- > Transformerless design with higher operation efficiency
- > High overload capability under most ambient conditions

Full data display and communications

- > LCD display energy data
- > Bright LED indicators imply system status at a glance
- > PC software for remote monitoring and system troubleshooting
- > Integrated RS485/RS232 serial communications

Easy and affordable to install

- > Lightweight and compact size
- > Wide MPPT voltage range allows more flexible module selections
- > Includes a lightweight portable bracket simplifying installation
- > Firm IP65 inverter enclosure allows outdoor application

Cost advantages

- > Transformerless design cutting down the cost
- > Light weight and small dimension, reducing shipping cost
- > Low maintenance expense and low power loss when breakdown

Certificates

TUV, SAA, CE, CQC, AS4777.2/3, AS/NZS 3100, VDE 0126-1-1, EN62109-1/2, G83, G59, CNCA/CTS0004-2009A, CNCA/CTS0006-2010, EN61000-6-1/2/3/4, EN62109-1/2, RD1663, C10-11

Technical data

Model (ASTRASUN 3 PH)	5000TL	6000TL	8000TL	10000TL	12000TL	15000TL	17000TL	20000TL	30000TL	
Input (DC Side)										
Max. DC input power	5180W	6200W	8300W	11200W	13300W	15800W	17900W	21000W	32000W	
Max. DC voltage	900Vdc		1000Vdc							
Start voltage					250Vdc					
MPPT operating range	250~720Vdc			250~800Vdc						
Number of inputs	2		4		6		10			
Number of MPPT trackers					2					
Max. input power per MPPT	3500W	4000W	5000W	6000W	7000W	8500W	9500W	11000W	16500W	
Max. input current	20A	24A	32A	44A	48A	60A	64A	70A	82A	
Output (AC Side)										
Nominal output power	5000W	6000W	8000W	10000W	12000W	15000W	17000W	20000W	30000W	
Max output power	5000W	6000W	8000W	10000W	12000W	15000W	17000W	20000W	30000W	
Rated output current	7.3A	8.7A	11.6A	14.5A	17.4A	21.7A	24.6A	29.0A	43.5A	
Max. output current	7.9A	9.5A	12.7A	16.2A	19.4A	24.3A	27.5A	32.3A	48A	
Nominal output voltage					400Vac					
Output voltage range*					330~480Vac					
Grid frequency range*					50/60±5Hz					
Power factor					0.9 (leading)~0.9 (lagging)					
THDI					<3% (at nominal output power)					
Efficiency										
Max efficiency	97.6%	97.8%	98.1%	98.2%	98.2%	98.2%	98.2%	98.2%	98.2%	
Euro efficiency	96.7%	96.9%	97.3%	97.6%	97.6%	97.6%	97.6%	97.6%	97.8%	
MPPT efficiency	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.6%	99.9%	
System										
Operation temperature	-25°C~+60°C									
Noise	≤25dB (A)			≤50dB (A)				≤65dB (A)		
Consumption at	0W									
Electrical isolation	Transformerless									
Cooling concept	Natural cooling				Fan cooling					
Degree of protection	IP65									
Communication	RS485/RS232 (WiFi optional)									
Dimension (W*D*H mm)	470*165*560			470*165*585		470*165*670		580*235*800		
Weight (kg)	32		35		50		60			

*AC grid voltage range and frequency range depend on local standards.

ASTRASUN-CENTRAL Series Central Commercial Inverter



Features

Advanced performance

- > With the advanced system intelligence, highly speed MPPT technology, industrial-grade engineering and complete fault protections, Sunforest series central commercial inverters maximize system uptime and power production, even in harshest environments
- > DSP-controlled IGBT circuitry to achieve high efficiency, reliability and low installing cost
- > Sunforest KT series grid-tied inverters are integrated with an isolation transformer
- > Sunforest KTL series grid-tied inverters have a max efficiency of 98.6% without a transformer
- > Multiple work mode, SVG (Static Var Generator) mode, Anti-Reverse Power control mode

Optimal MPPT technology

- > Rapid and accurate control boost PV plant KWH yield
- > Provides a wide range of operation voltage

Utility-ready features

- > Open communication protocol, compatible with any third-party monitoring system and easily integrated into SCADA systems
- > Remote control of real and reactive power
- > LVRT (Low voltage ride through)
- > Power factor control
- > Simplified grid interconnection

Increased PV plant yield

- > Rapid and accurate MPPT control increases PV plant KWH yield by extending the production window of arrays, enabling them to operate at optimal voltage and current levels for longer periods of time-even in varied sunlight conditions to maximize efficiency and enable you to get the most from your investment

Safety

- > Built-in DC and AC disconnected switches

Certificates

CQC, CNCA/CTS0004-2009A, CNCA/CTS0006-

Technical data

Model (ASTRASUN-CENTRAL)	50KT	75KT	100KT
Input (DC Side)			
Max. DC input Power	58KW	87KW	115KW
Max DC voltage	1000Vdc		
MPPT operating range	450~820Vdc (start voltage 470Vac)		
Number of parallel inputs	2		
Number of MPP trackers	1		
Max. input current	128A	200A	250A
Output (AC Side)			
Nominal output power	50KW	75KW	100KW
Max. output power	55KW	82.5KW	110KW
Nominal output current	72A	108A	144A
Max. output current	80A	120A	158A
Nominal AC output voltage	400Vac		
AC output voltage range*	360~440Vac		
AC grid frequency range*	50±5Hz		
Power factor (cosφ)	0.9 (leading)~0.9 (lagging)		
THDI	<3% (at nominal output power)		
Efficiency			
Max efficiency	96.5%	96.8%	97.1%
Euro efficiency	95.8%	96.2%	96.4%
MPPT efficiency	99.9%	99.9%	99.9%
System			
Operating temperature	-25°C~+60°C (derated power above 50°C)		
Altitude	6000m (derated power above 3000m)		
Noise (typical)	≤65dB (A)		
Consumption at night	<100W		
Electrical isolation	Transformer		
Cooling concept	Fan cooling		
Degree of protection	IP20		
Communication	RS485		
Dimension (W*D*H mm)	600*650*1450	650*700*1550	800*700*1700
Weight (kg)	520	650	810

*AC grid voltage range and frequency range depend on local standards.

ASTRASUN-CENTRAL Series Central Commercial Inverter

Technical data

Model (ASTRASUN-CENTRAL)	150KT	175KT	250KTL	250KT
Input (DC Side)				
Max. DC input Power	172KW	202KW	285KW	285KW
Max DC voltage	1000Vdc			
MPPT operating range	450~820Vdc (start voltage 470Vac)			
Number of parallel inputs	4	4	5	5
Number of MPP trackers	1			
Max. input current	380A	500A	600A	600A
Output (AC Side)				
Nominal output power	150KW	175KW	250KW	250KW
Max. output power	165KW	192KW	275KW	275KW
Nominal output current	217A	254A	535A	362A
Max. output current	238A	280A	589A	400A
Nominal AC output voltage	400Vac	400Vac	270Vac	400Vac
AC output voltage range*	360~440Vac	360~440Vac	243~297Vac	360~440Vac
AC grid frequency range*	50±5Hz			
Power factor (cosφ)	0.9 (leading)~0.9 (lagging)			
THDI	<3% (at nominal output power)			
Efficiency				
Max efficiency	97.2%	97.2%	98.4%	97.3%
Euro efficiency	96.5%	96.6%	98.0%	96.8%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%
System				
Operating temperature	-25°C~+60°C (derated power above 50°C)			
Altitude	6000m (derated power above 3000m)			
Noise (typical)	≤65dB (A)			
Consumption at night	<100W			
Electrical isolation	Transformer	Transformer	Transformerless	Transformer
Cooling concept	Fan cooling			
Degree of protection	IP20			
Communication	RS485			
Dimension (W*D*H mm)	900*900*1800	900*900*1800	1000*900*1850	1985*900*1850
Weight (kg)	830	1150	890	1750

*AC grid voltage range and frequency range depend on local standards.

Technical data

Model (ASTRASUN-CENTRAL)	500KTL	500KT	630KTL	630KT
Input (DC Side)				
Max. DC input Power	570KW	570KW	715KW	715KW
Max DC voltage	1000Vdc			
MPPT operating range	450~820Vdc (start voltage 470Vac)		500~820Vdc (start voltage 520Vac)	
Number of parallel inputs	12			
Number of MPP trackers	1			
Max. input current	1200A	1200A	1400A	1400A
Output (AC Side)				
Nominal output power	500KW	500KW	630KW	630KW
Max. output power	550KW	550KW	693KW	693KW
Nominal output current	1070A	725A	1155A	910A
Max. output current	1177A	800A	1270A	1000A
Nominal AC output voltage	270Vac	400Vac	315Vac	400Vac
AC output voltage range*	243~297Vac	360~440Vac	283~347Vac	360~440Vac
AC grid frequency range*	50±5Hz			
Power factor (cosφ)	0.9 (leading)~0.9 (lagging)			
THDI	<3% (at nominal output power)			
Efficiency				
Max efficiency	98.5%	97.3%	98.6%	97.5%
Euro efficiency	98.0%	96.6%	98.2%	97.0%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%
System				
Operating temperature	-25°C~+60°C (derated power above 50°C)			
Altitude	6000m (derated power above 3000m)			
Noise (typical)	≤65dB (A)			
Consumption at night	<100W			
Electrical isolation	Transformerless	Transformer	Transformerless	Transformer
Cooling concept	Fan cooling			
Degree of protection	IP20			
Communication	RS485			
Dimension (W*D*H mm)	1700*900*1850	3100*900*1850	1700*900*1850	3100*900*1850
Weight (kg)	1427	3200	1677	3400

*AC grid voltage range and frequency range depend on local standards.



Features

- > Built-in two 500KW high efficient inverter with perfect power distribution, firefighting protection, monitoring system to meet requirements to rapidly and security connect the grid
- > IP54 containerized design, easy to transport and install
- > DC power distribution and cooling integrated design, reducing cost of whole system
- > Comply the zero-voltage ride trough standard
- > SVG running mode controlling reactive power compensation at night
- > Transformerless design, the highest efficiency 98.6% (European efficiency 98.2%)
- > Active and reactive power adjustable according to the grid command
- > Strong capability to the harsh grid environment, LCL filter, low output harmonic
- > Perfect protection to ensure reliable operation of the system
- > Auxiliary heating optional, normal running at ambient temperature of minus 35 degrees

ASTRASUN ONE STOP-1000/1260KTL With the four integrated functions as DC distribution, inverting-inversion and system monitoring, this solution of inverter cells is able to control from the DC output of PV modules to the grid-connection in one-stop, and has significant advantages at system integration, environmental adaptation, overall investment, speedy installation and debugging, etc. The integrated design of power distribution and inverting-inversion is based on the high performance inverter and distribution cabinet, and the total solution will reduce the system loss and bring higher equipment compatibility, hence improve the power generating efficiency and the system stability. The field installation of this product is more convenient and quick since it's adapted to integral hoisting with shorter duration of construction, lower cost, smaller construction difficulty and risks. This overall solution of inverter cells is standardized and able to be debugged and grid-connected rapidly.

Technical data

Model	ASTRASUN ONE STOP-1000KTL	ASTRASUN ONE STOP-1260KTL
DC Side		
Max. DC input power	1157KW	1410KW
Max DC voltage	1000Vdc	1000Vdc
MPPT operating range	450~820Vdc (start voltage 470Vac)	500~820Vdc (start voltage 520Vac)
Number of parallel inputs	24	24
Number of MPP trackers	2	2
Max. input current	2400A	2800A
AC Side		
Nominal output power	1000KW	1260KW
Max. output power	1100KW	1400KW
Nominal output current	2140A	2310A
Max. output current	2354A	2566A
Nominal AC output voltage	270Vac	315Vac
AC output voltage range*	243~297Vac	283~347Vac
AC grid frequency range*	50±5 Hz	50±5 Hz
Power factor (cosφ)	0.9 (leading)~0.9 (lagging)	0.9 (leading)~0.9 (lagging)
THDI	<3% (normal output power)	<3% (normal output power)
Efficiency		
Max efficiency	98.5%	98.6%
Euro efficiency	98.0%	98.2%
MPPT efficiency	99.9%	99.9%
System		
Operating temperature	-35°C~+55°C	-35°C~+55°C
Noise (typical)	≤65dB (A)	≤65dB (A)
Consumption at	<200W	<200W
Electrical isolation	Transformerless	Transformerless
Cooling concept	Fan cooling	Fan cooling
Degree of protection	IP54	IP54
Communication	RS48	RS48
Dimension (W×D×H)(mm)	5700*2438*289	5700*2438*289
Weight (kg)	7200	7700

* Note: AC grid voltage range and frequency range depend on local standards