



TRESS[®]
特雷斯

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Grid Tie Inverter

并网逆变器



TRESS[®]
特雷斯

Advocate low carbon energy saving life...

With the desire to be an important one in energy using , adapting to the development of the economic green energy and the development of low-carbon life, we are conscientious in the performance of our duties. We will offer the best solution to decrease the consumption of the energy to reduce the cost of the customer. Therefore, the earth, our home will be much greener and achieve sustainable development.

Expert of Grid tie solar system -----TRESS



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Grid Tie Inverter

Grid-Connected Power Supply Systems



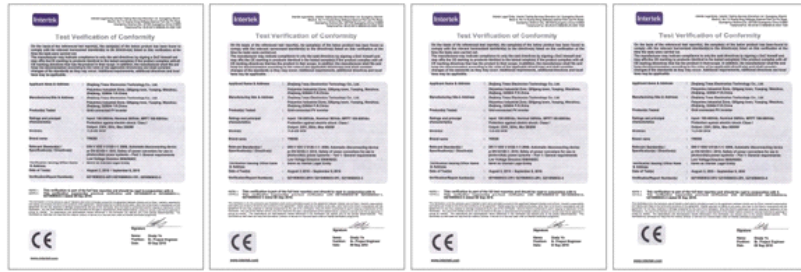
On grid power system mainly includes solar panel(or wind turbine with controller) , on grid inverter which converts DC to AC , meter ,feeding the power generated from solar panel (or wind turbine) into the Utility grid . As shown in the figure.Then the grid - connected inverter converts the DC power into pure sine wave AC power which has the same frequency and phase with the grid voltage.The AC power feed-in the grid partly and the other power supply the local loads.

- Wide DC input voltage range
- DSP controller
- High efficiency by using advanced IGBT and IPM
- MPPT(Maximum Power Point Tracking)technology
- High efficiency
- In accordance with international standards
- Quick and easy installation
- Operation parameters can be adjusted via LCD and keys
- The perfect Protection Function
- Designed to suitable for critical grid environment





Qualification certificate





About us

TRESS is specialized in research and development, manufacturing and selling a series of power inverters with high quality. We Company covers an area of over 66,000 square meters. Also, R&D and testing centre area of 7,000 square meters which is a R & D centre composed of a post-doctoral returnee with PHD. We company has been always focusing on researching and developing, manufacturing, selling, also serving customer with the grid tie solar inverter, wind generator inverter and all other renewable energy products. Besides, we provide project consulting, network design and system solutions for customers. Until now, our products can be comparable with the most excellent products home and abroad in some extent. They will show you the most advanced technology in the world.

With the "Green changes life, Technology leads the future" development idea and adhering to the "Innovation, Excellence and Superior" of TRESS, tomorrow, TRESS will be the most competitive power manufacturer in the world.

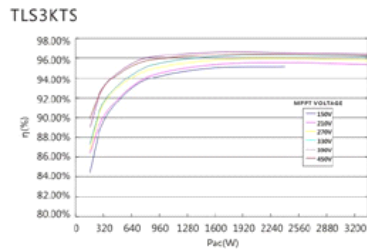
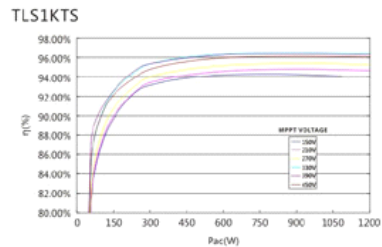




Grid Tie Inverter

TLS1KTS~4KTS Single Phase

- Using the fifth generation Intelligent Power Module from Mitsubishi, improve the system efficiency
- High conversion efficiency
- Advanced technology for maximum power point tracking(MPPT)
- MPPT efficiency(> 97%)
- Wide input voltage range
- High reliability due to perfect protection function
- Powerful communication interfaces
- Easy operation and installation
- Easy-to-set multilingual LCD display
- Adjustable protection/operation parameters



TLS1KTS ~ 4KTS Single Phase

Parameters

Model	TLS1KTS	TLS1.5KTS	TLS2KTS	TLS3KTS	TLS4KTS
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• DC INPUT

MPPT Voltage Range	DC100-500V				
Rated DC Voltage	360V				
Control System	MPPT				
Start Voltage	Wind energy systems:DC100V Solar power system:DC180V				

• AC OUTPUT

Power	1000W	1500W	2000W	3000W	4000W
Voltage range	Single Phase AC 185~264V (According To Different Countries And Regions Require The Adjustment)				
Rated Voltage	AC220V				
Normal Grid Frequency	50/60Hz(Can Be Set)				
Phase Number	Single Phase				
Power Factor	0.95				
Max Current	4.5A	6.8A	9A	13.6A	18A
Current THD	At Rated Power And In The Sine Wave < 3.5				
Max Efficiency	97%				
Euro Efficiency	96.4%				

• STRUCTURE

Protection Degree	IP65/NEMA 4X				
Cooling Method	Natural Cooling				
Noise	< 50dB				
Data Interfaces	External RS 232C				
W×H×D	340×440×132				
Weight	15		15.5		
Web Module (Option)	RS 232C To TCP/IP				
Display	LCD				

• PROTECTION

Protection (Inverter)	(Inverter) Input Overvoltage, Output Short Circuit, Overload Overheat
Protection (Grid)	(Grid) Anti-islanding(IEEE 1547), Over/Under Voltage Of Grid, Over/Under Frequency Of Grid

• ENVIRONMENT

Operation Temperature Range	-10°C ~ 40°C(50°C)
Stored Temperature	-25°C ~ 60°C
Relative Humidity	0 ~ 100%
Environment	Have No Corrosion Gas, Flammable Gas, Oil Mist, Dust Etc
Standby Power Consumption	< 25, 0mW
Altitude	6600 Feet (2000 m)



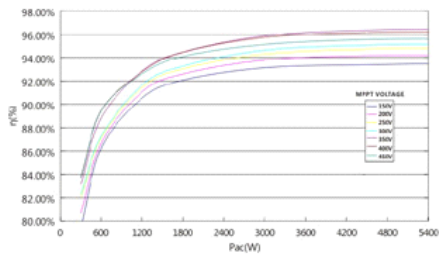
Grid Tie Inverter

TLS5KTS~8KTS Single Phase

- Using the fifth generation Intelligent Power Module from Mitsubishi, improve the system efficiency
- High conversion efficiency
- Advanced technology for maximum power point tracking(MPPT)
- MPPT efficiency(> 97%)
- Wide input voltage range
- Low frequency transformer isolation
- High reliability due to perfect protection function
- Powerful communication interfaces
- Easy operation and installation
- Easy-to-set multilingual LCD display
- Adjustable protection/operation parameters



TL55KTS~8KTS



TLS5KTS ~ 8KTS Single Phase

Parameters

Model	TLS5KTS	TLS6KTS	TLS7KTS	TLS8KTS
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DC INPUT

MPPT Voltage Range	DC100-500V			
Rated DC Voltage	360V			
Control System	MPPT			
Start Voltage	Wind energy systems:DC100V	Solar power system:DC180V		

AC OUTPUT

Power	5KW	6KW	7KW	8KW
Voltage range	Single Phase AC 185~264V (According To Different Countries And Regions Require The Adjustment)			
Rated Voltage	AC220V			
Normal Grid Frequency	50/60Hz(Can Be Set)			
Phase Number	Single Phase			
Power Factor	0.95			
Max Current	22.7A	27.3A	31.8A	36.4A
Current THD	At Rated Power And In The Sine Wave < 3.5			
Max Efficiency	97%			
Euro Efficiency	96.4%			

STRUCTURE

Protection Degree	IP20/NEMA 4X			
Cooling Method	Natural Cooling			
Noise	< 50dB			
Data Interfaces	External RS 232C			
WxHxD	560x420x165			
Weight	27.5	28		
Web Module (Option)	RS 232C To TCP/IP			
Display	LCD			

PROTECTION

Protection (Inverter)	(Inverter) Input Overvoltage, Output Short Circuit, Overload Overheat			
Protection (Grid)	(Grid) Anti-islanding(IEEE1547), Over/Under Voltage Of Grid, Over/Under Frequency Of Grid			

ENVIRONMENT

Operation Temperature Range	-10°C ~ 40°C(50°C)			
Stored Temperature	-25°C ~ 60°C			
Relative Humidity	0 ~ 100%			
Environment	Have No Corrosion Gas, Flammable Gas, Oil Mist, Dust Etc			
Standby Power Consumption	< 25, 0mW			
Altitude	6600 Feet (2000 m)			



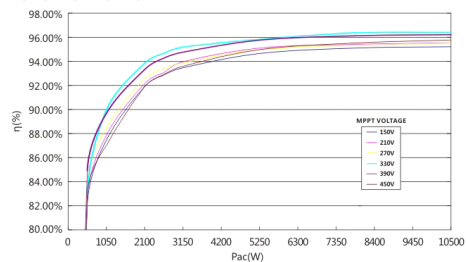
Grid Tie Inverter

TLS9KTS~10KTS Single Phase

- Using the fifth generation Intelligent Power Module from Mitsubishi, improve the system efficiency
- High conversion efficiency
- Advanced technology for maximum power point tracking(MPPT)
- MPPT efficiency (> 97%)
- Wide input voltage range
- Low frequency transformer isolation
- High reliability due to perfect protection function
- Powerful communication interfaces
- Easy operation and installation
- Easy-to-set multilingual LCD display
- Adjustable protection/operation parameters



TLS10KTS~10KTS



TLS9KTS ~ 10KTS Single Phase

Parameters

Model	TLS9KTS	TLS10KTS
DC INPUT		
MPPT Voltage Range	DC100-500V	
Rated DC Voltage	DC360V	
Control System	MPPT	
Start Voltage	DC180V	

AC OUTPUT

Power	9KW	10KW
Single Phase AC 185~264V (According To Different Countries And Regions Require The Adjustment)		
Voltage Range	AC220V	
Rated Voltage	50/60Hz(Can Be Set)	
Normal Grid Frequency	Single Phase	
Phase Number	0.95	
Power Factor	41A	45.5A
Max Current	At Rated Power And In The Sine Wave < 3.5	
Current THD	97%	
Max Efficiency	96.4%	
Euro Efficiency		

STRUCTURE

Protection Degree	IP20/NEMA 4X	
Cooling Method	Fan Cooling	
Noise	< 50dB	
Data Interfaces	External RS 232C	
W×H×D	400×680×285	
Weight	30	31
Web Module (Option)	RS 232C To TCP/IP	
Display	LCD	

PROTECTION

Protection (Inverter)	(Inverter) Input Over Voltage, Output Short Circuit, Overload Overheat
Protection (Grid)	(Grid) Anti-islanding(IEEE1547), Over/Under Voltage Of Grid, Over/Under Frequency Of Grid

ENVIRONMENT

Operation Temperature Range	-10°C ~ 40°C(50°C)
Stored Temperature	-25°C ~ 60°C
Relative Humidity	0 ~ 100%
Environment	Have No Corrosion Gas, Flammable Gas, Oil Mist, Dust Etc
Standby Power Consumption	< 25, 0mW
Altitude	6600 Feet (2000 m)



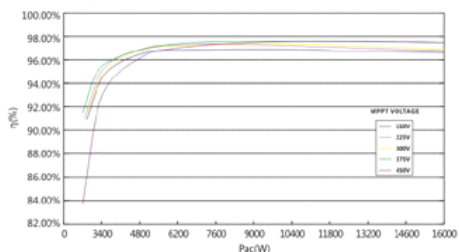
Grid Tie Inverter

TLS5KTS~20KTS 3 Phase

- Using the fifth generation Intelligent Power Module from Mitsubishi, improve the system efficiency
- High conversion efficiency
- Advanced technology for maximum power point tracking(MPPT)
- MPPT efficiency(> 97%)
- Wide input voltage range
- Low frequency transformer isolation
- High reliability due to perfect protection function
- Powerful communication interfaces
- Easy operation and installation
- Easy-to-set multilingual LCD display
- Adjustable protection/operation parameters



TL55KTS~20KTS



TLS5KTS ~ 20KTS 3 Phase

Parameters

Model	TLS5KTS	TLS7KTS	TLS10KTS	TLS12KTS	TLS15KTS	TLS20KTS
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DC INPUT

MPPT Voltage Range	DC200-850V				
Rated DC Voltage	DC620V				
Control System	MPPT				
Start Voltage	DC400V				

AC OUTPUT

Power	5KW	7KW	10KW	12KW	15KW	20KW
Voltage range	3 Phase AC 380V±10% (According To Different Countries And Regions Require The Adjustment)					
Rated Voltage	AC380V					
Normal Grid Frequency	50/60Hz(Can Be Set)					
Phase Number	3 Phase					
Power Factor	0.95					
Max Current	7.6A	10.6A	15A	18A	22.7A	30A
Current THD	At Rated Power And In The Sine Wave < 3.5%					
Max Efficiency	97%					
Euro Efficiency	96.4%					

STRUCTURE

Protection Degree	IP20				
Cooling Method	Fan Cooling				
Noise	< 50dB				
Data Interfaces	External RS 232C/RS485				
W×H×D	400×680×285	500×730×285	550×780×285	600×840×285	
Weight	38	45	60	72	
Web Module (Option)	RS 232C To TCP/IP				
Display	LCD				

PROTECTION

Protection (Inverter)	(Inverter) Input Over Voltage, Output Short Circuit, Overload Overheat
Protection (Grid)	(grid) Anti-islanding(IEEE1547), Over/Under Voltage Of Grid, Over/Under Frequency Of Grid

ENVIRONMENT

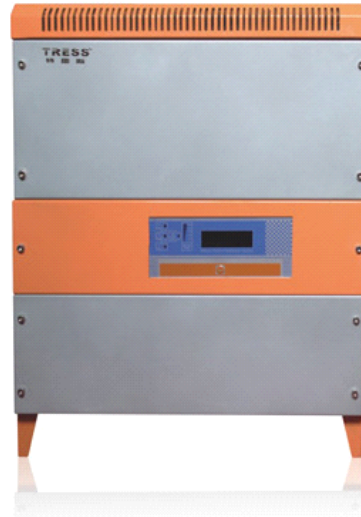
Operation Temperature Range	-10°C ~ 40°C(50°C)
Stored Temperature	-25°C ~ 60°C
Relative Humidity	0 ~ 100%
Environment	Have No Corrosion Gas, Flammable Gas, Oil Mist, Dust Etc
Standby Power Consumption	< 25.0mW
Altitude	6600 Feet (2000 m)



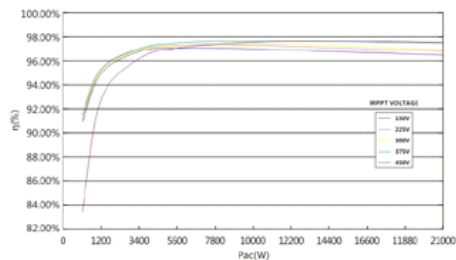
Grid Tie Inverter

TLS30KTS~50KTS 3 Phase

- Using the fifth generation Intelligent Power Module from Mitsubishi, improve the system efficiency
- High conversion efficiency
- Advanced technology for maximum power point tracking(MPPT)
- MPPT efficiency(> 97%)
- Wide input voltage range
- Low frequency transformer isolation
- High reliability due to perfect protection function
- Powerful communication interfaces
- Easy operation and installation
- Easy-to-set multilingual LCD display
- Adjustable protection/operation parameters



TLS30KTS~50KTS



TLS30KTS ~ 50KTS 3 Phase

Parameters

Model	TLS30KTS	TLS40KTS	TLS50KTS
DC INPUT			
MPPT Voltage Range	DC200-850V		
Rated DC Voltage	DC620V		
Control System	MPPT		
Start Voltage	DC400V		

AC OUTPUT

Power	30KW	40KW	50KW
Voltage range	3 Phase AC 380V±10% (According To Different Countries And Regions Require The Adjustment)		
Rated Voltage	AC380V		
Normal Grid Frequency	50/60Hz(Can Be Set)		
Phase Number	3 Phase		
Power Factor	0.95		
Max Current	45.5A	61A	75.8A
Current THD	At Rated Power And In The Sine Wave < 3.5%		
Max Efficiency	97%		
Euro Efficiency	96.4%		

STRUCTURE

Protection Degree	IP20		
Cooling Method	Fan Cooling		
Noise	< 50dB		
Data Interfaces	External RS 232C/RS485		
W×H×D	520×800×260	525×1000×260	
Weight	80	83	90
Web Module (Option)	RS 232C To TCP/IP		
Display	LCD		

PROTECTION

Protection (Inverter)	(Inverter) Input Over Voltage, Output Short Circuit, Overload Overheat
Protection (Grid)	(grid) Anti-islanding(IEEE1547), Over/Under Voltage Of Grid, Over/Under Frequency Of Grid

ENVIRONMENT

Operation Temperature Range	-10°C ~ 40°C(50°C)
Stored Temperature	-25°C ~ 60°C
Relative Humidity	0 ~ 100%
Environment	Have No Corrosion Gas, Flammable Gas, Oil Mist, Dust Etc
Standby Power Consumption	< 25.0mW
Altitude	6600 Feet (2000 m)



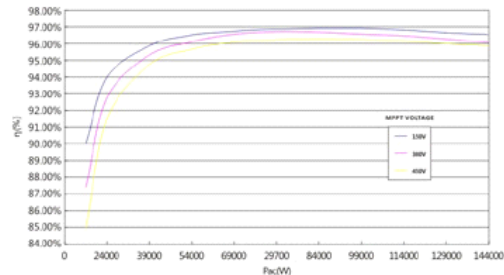
Grid Tie Inverter

TLS100KTS 3 Phase

- Using the fifth generation Intelligent Power Module from Mitsubishi, improve the system efficiency
- High conversion efficiency
- Advanced technology for maximum power point tracking(MPPT)
- MPPT efficiency(>97%)
- Wide input voltage range
- Low frequency transformer isolation
- High reliability due to perfect protection function
- Powerful communication interfaces
- Easy operation and installation
- Easy-to-set multilingual LCD display
- Can be continuously operating at rated power without derating under 55°C
- Designed to suitable for critical grid environment



TLS100KTS



TLS100KTS 3 Phase

Parameters

Model	TLS100KTS
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DC INPUT

MPPT Voltage Range	DC200-850V
Rated DC Voltage	DC620V
Control System	MPPT
Start Voltage	DC400V

AC OUTPUT

Power	100KW
Voltage range	3 Phase AC 380V±10% (According To Different Countries And Regions Require The Adjustment)
Rated Voltage	AC380V
Normal Grid Frequency	50/60Hz(Can Be Set)
Phase Number	3 Phase
Power Factor	0.95
Max Current	151.5A
Current THD	At Rated Power And In The Sine Wave < 5%
Max Efficiency	97%
Euro Efficiency	96.4%

STRUCTURE

Protection Degree	IP20
Cooling Method	Fan Cooling
Noise	< 60dB
Data Interfaces	External RS 232C/RS485
W×H×D	700×1420×450
Weight	125
Web Module (Option)	RS 232C To TCP/IP
Display	LCD

PROTECTION

Protection (Inverter)	(Inverter) Input Over Voltage, Output Short Circuit, Overload Overheat
Protection (Grid)	(grid) Anti-Islanding(IEEE1547), Over/Under Voltage Of Grid, Over/Under Frequency Of Grid

ENVIRONMENT

Operation Temperature Range	-10°C - 40°C(50°C)
Stored Temperature	-20°C - 65°C
Relative Humidity	< 90%RH(Do Not Wet With Dew)
Environment	Have No Corrosion Gas, Flammable Gas, Oil Mist, Dust Etc
Standby Power Consumption	< 25, 0mW
Altitude	6600 Feet (2000 m)



Solar Pump Inverter

TLS0.5KWP~55KWP

Summarize

Photovoltaic pumping systems using photovoltaic power drive motor pumps pumping without electricity, the perfect solution to power shortage occasions pumping needs. The system consists of a PV array, inverter, pumps and other components, to save the battery energy storage device, which can effectively reduce the system cost, reduce environmental pollution.

Operating principle: the multi-block solar modules in series, in parallel into a photovoltaic array, absorb solar energy solar radiation energy into electricity to power the power supply for the system. The photovoltaic pump inverter implementation of the control and regulation of the operation of the system, to convert the DC output of the PV array into alternating current to drive the pumps, to achieve the maximum power point tracking.

Applications: photovoltaic pumping systems are widely applied to domestic water, agriculture, forestry, irrigation, desert control, grassland animal husbandry, the island water supply, water treatment works, and can also be used in municipal engineering, city squares, hotels, restaurants as well as residential communities, etc. The landscape sprinkler systems in.

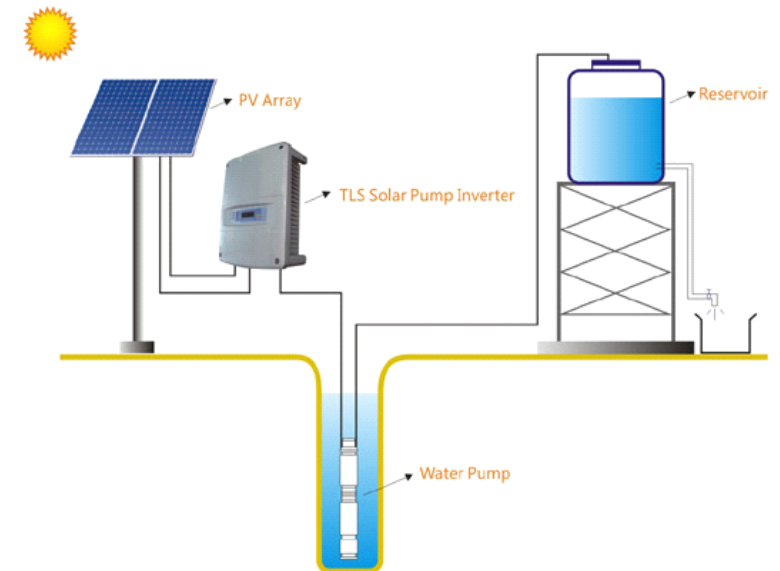


PV pump inverter has the following characteristics.

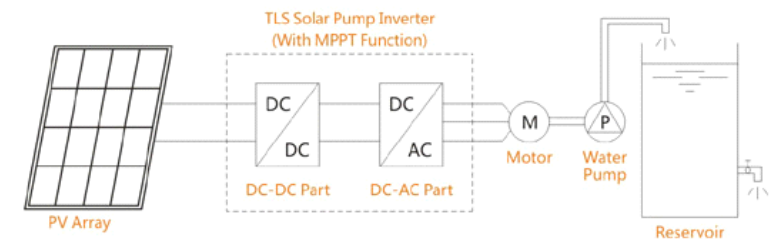
- Independently developed real maximum power point tracking (MPPT), and effectively improve the utilization of the PV array.
- The system to run automatically, without human duty, saving a lot of manpower.
- System modular design, stable operation, high reliability and safety, installation and maintenance is very convenient.
- Fully digital control with fully automatic operation, data storage, as well as a full range of protection features
- LCD display, you can view and set various operating parameters.
- Independently developed real maximum power point tracking (MPPT), and effectively improve the utilization of the PV array.
- The system to run automatically, without human duty, saving a lot of manpower.
- System modular design, stable operation, high reliability and safety, installation and maintenance is very convenient.
- Full digital control with fully automatic operation, data storage, as well as a full range of protection features.



Solar Pump System



Working Principle





Solar Pump Inverter

Parameters

Model	Appropriate Pump Voltage		Max PV Input Power	Max DC Input Voltage	Suggested MPPT Voltage	Rated Output Current	Output Power
	Rated Power (KW)	Rated Voltage (V)					
TLS05KWP	0.25-06	200-240	0.5	600	280-360	3	0-60
TLS1KWP	0.55-1.2	200-240	1.1	600	280-360	5	0-60
TLS1.5KWP	1.1-1.7	200-240	2.2	600	280-360	7	0-60
TLS2.2KWP	2.2	200-240	3.3	600	280-360	11	0-60
TLS3.7KWP	3-3.7	200-240	5	600	280-360	17	0-60
TLS3.7KWP	3-3.7	380-440	5	820	500-600	9	0-60
TLS5.5KWP	4-5.5	380-440	8	820	500-600	13	0-60
TLS7.5KWP	7.5	380-440	10	820	500-600	18	0-60
TLS11KWP	9.2-11	380-440	15	820	500-600	24	0-60
TLS15KWP	13-15	380-440	21	820	500-600	30	0-60
TLS18KWP	18.5	380-440	25	820	500-600	39	0-60
TLS22KWP	22	380-440	30	820	500-600	45	0-60
TLS30KWP	26-30	380-440	42	820	500-600	60	0-60
TLS37KWP	37	380-440	50	820	500-600	75	0-60
TLS45KWP	40-45	380-440	60	820	500-600	91	0-60
TLS55KWP	55	380-440	75	820	500-600	112	0-60

Pure sine wave inverter

SCOPE :

- 1, vehicle-borne equipment series: military vehicles, police cars, ambulances, ships, traffic lights, etc.;
- 2, industrial equipment series: solar energy, wind power, gas discharge lamps, etc.;
- 3, office space: computers, printers, copiers, scanners, digital cameras, etc.;
- 4, kitchen utensils series: microwave ovens, battery heaters, refrigerators, etc.;
- 5, family electrical equipment: electric fans, vacuum cleaners, air conditioning, lighting, etc.;
- 6, power tools: saws, drilling machines, punching machines, air compressors, etc.;

FEATURES :

1. adopting the advanced dual-CPU single-chip intelligent control technology, microcomputer control, user-friendly design, high reliability, low failure rate characteristics;
2. high-quality pure sine wave AC output, with a load capability, wide application;
3. with complete protection (overload protection, internal over-temperature protection, output short circuit protection, input under-voltage protection, input over-voltage protection, etc.), greatly improving product reliability;
4. small size, light weight, using CPU to concentrate on internal control, chip technology, making the very small size, light weight;
5. Intelligent control of cooling fans, using the CPU control the working status of cooling fan, greatly extending the life of the fan, improve efficiency and save energy;
6. stable working, low distortion, no noise, no pollution, anti-shock load capability, simple operation, long life
7. LED display the panel menu, working status and fault type
8. a three-stage charger with battery type selection (optional)
9. overvoltage, undervoltage protection for the battery
10. electricity automatically converted (optional)
11. it can be restored to normal after over-voltage
12. high efficiency, high instantaneous power and low no load loss
13. enabling the generator and the external battery connection





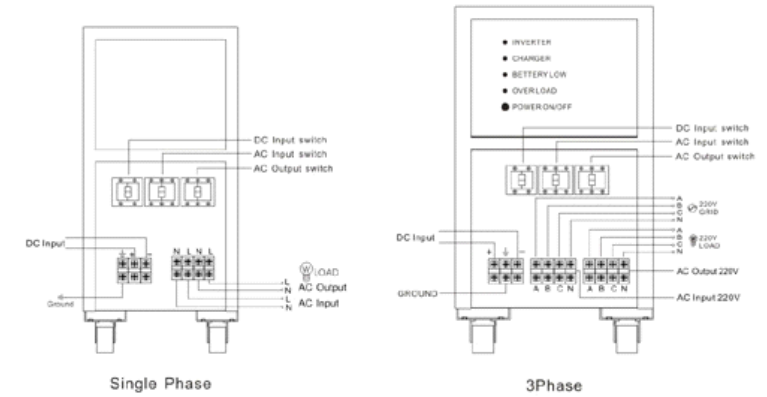
Pure sine wave inverter

Parameters

Model	TLS_VA	500	800	1000	1500	2000	3000	4000	5000	6000	7000	8000	10000								
Rating Power(KW)		0.5	0.8	1	1.5	2	3	4	5	6	7	8	10								
Input Voltage(VDC)		24 48	24 48	24 48	24 48	24 48	48 96	48 96	48 96	96 192	192	192	192								
Top Discharge Current (A)		20	10	33	16	42	20	62	320	83	42	63	16	73	21	104	26	32	36	42	52
Output Current(A)		2	3.5	4.5	6.8	9	13.6	18	23	27	32	36	45								
Output Voltage(VAC)		220 VAC±5%																			
Frequency(HZ)		50HZ±0.5%																			
Charge Current(A)		5A																			
Peak Overload Ability		150%技术指标, 5秒																			
THD		≤5%																			
Waveform		Pure Sine Wave																			
Noise		≤55 dB																			
Inverter Efficiency		≥85%																			
Protection		Inverter overload, over voltage, over temperature, short circuit protection; normal voltage over-voltage auto-recovery																			
Environmental Temperature		-10°C~60°C																			
Humidity		≤90%RH, 不凝露																			
Altitude		≤1000m																			
Dimension(mm)		410×180×300			430×300×530			480×350×630			480×350×630			475×400×810							
Product net weight (kg)		25	27	30	35	40.5	46	51	57	62	90	95	101								

Note: The above dimension and weight data are often updated, please contact us before ordering

Structure Diagram



Functional Scheme

