

Grid tie solar inverter

Summarize

The grid connected inverter can be used with a connection to grid or power lines. This type supplies the loading appliances with electric power produced by photovoltaic systems.

The advantage of grid-type is not to worry any power waste, because by connecting inverter to grid, it can save any surplus electricity.

Features

- * Wide DC input voltage range
- * DSP controller
- * High efficiency by using advanced IGBT and IPM
- * MPPT(Maximum power point tracking) technology
- * Transformer less, 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

Technical Data

	Model	TLS-ZB 1000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	1000W
	Rate voltage	AC220
	Voltage range	AC 185 ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave < 3.5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	4.5A
	Max. Efficiency	97%
Euro Efficiency	96.4%	
Structure	Protection Class	IP65
	Cooling system	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	510*430*210mm
	Net weight	15 kgs
Protection	Gross weight	16.8kgs
	Inverter	Input over voltage, output short circuit, overheat, output DC component.
Environment	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)

	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 1500W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	1500W
	Rate voltage	AC220
	Voltage range	AC 185 ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave < 3.5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	6.8A
	Max. Efficiency	97%
	Euro Efficiency	96.4%
Structure	Protection Class	IP65
	Cooling system	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	510*430*210mm
	Net weight	15 kgs
	Gross weight	16.8kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 2000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
	Output Power	2000W
	Rate voltage	AC220

AC Output	Voltage range	AC 185 ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave < 3.5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	9A
	Max. Efficiency	97%
	Euro Efficiency	96.4%
	Structure	Protection Class
Cooling system		Natural cooling
Noise		< 50dB
Data Interfaces		External RS232C/RS485
Display		LCD
Packing Dimensions (W*H*D)		510*430*210mm
Net weight		15.3 kgs
Gross weight		17.3kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

	Model	TLS-ZB 3000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	3000W
	Rate voltage	AC220
	Voltage range	AC 185 ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave < 3.5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	13.6A
Structure	Max. Efficiency	97%
	Euro Efficiency	96.4%
	Protection Class	IP65
	Cooling system	Natural cooling
Structure	Noise	< 50dB
	Data Interfaces	External RS232C/RS485

	Display	LCD
	Packing Dimensions (W*H*D)	510*430*210mm
	Net weight	16 kgs
	Gross weight	17.5kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

	Model	TLS-ZB 4000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	4000W
	Rate voltage	AC220
	Voltage range	AC 185 ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	P hases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave < 3.5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	18A
	Max. Efficiency	97%
	Euro Efficiency	96.4%
Structure	Protection Class	IP65
	Cooling system	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	510*430*210mm
	Net weight	16 kgs
	Gross weight	17.5kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islandin g, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 5000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	5000W
	Rate voltage	AC220
	Voltage range	AC 185V ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave <5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	22.7A
	Max. Efficiency	97%
Euro Efficiency	96.4%	
Structure	Protection Class	IP65
	Cooling system	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	680*415*325mm
	Net weight	28.5 kgs
Gross weight	33kgs	
Protection	Inverter	Input over voltage, output short circuit, overheat,output DC component.
	Grid	Anti-islandin g, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 6000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
	Output Power	6000W
	Rate voltage	AC220
	Voltage range	AC 185V ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)

AC Output	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave <5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	27.3A
	Max. Efficiency	97%
	Euro Efficiency	96.4%
Structure	Protection Class	IP65
	Cooling system	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	680*415*325mm
	Net weight	28.5 kgs
Gross weight	33kgs	
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

	Model	TLS-ZB 7000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	7000W
	Rate voltage	AC220
	Voltage range	AC 185V ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave <5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	31.8A
	Max. Efficiency	97%
Euro Efficiency	96.4%	
	Protection Class	IP65
	Cooling system	Natural cooling
	Noise	< 50dB

Structure	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	680*415*325mm
	Net weight	30 kgs
	Gross weight	35kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

	Model	TLS-ZB 8000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	8000W
	Rate voltage	AC220
	Voltage range	AC 185V ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave <5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	36.4A
	Max. Efficiency	97%
Euro Efficiency	96.4%	
Structure	Protection Class	IP20
	Cooling system	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Display	LCD
	Packing Dimensions (W*H*D)	700*450*540mm
	Net weight	30 kgs
	Gross weight	35kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islandin g, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)

	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 9000W
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT
AC Output	Output Power	9000W
	Rate voltage	AC220
	Voltage range	AC 185V ~ 264V (1 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)
	Phases	1 phase 2 wire
	Power Factor	> 0.95
	Current THD	At rated power and in the sine wave <5%
	Control System	PWM
	Anti-islanding	≤0.5 sec
	Total Max.Current	40.2A
	Max. Efficiency	97%
	Euro Efficiency	96.4%
Structure	Protection Class	IP20
	Cooling System	Natural cooling
	Noise	< 50dB
	Data Interfaces	External RS232C/RS485
	Web Module(Option)	RS232C to TCP/IP
	Display	LCD
	Packing Dimensions (W*H*D)	700*460*840mm
	Net weight	63 kgs
Protection	Gross weight	68kgs
	Inverter	Input over voltage, output short circuit, overheat, output DC component.
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 10KW
DC Input	MPPT Voltage Range	DC100 ~ 450V
	Rated DC Voltage	360V
	Control System	MPPT

AC Output	Output Power	10K W	
	Rate voltage	AC220	AC380
	Voltage range	AC 185V ~ 264V (1 phase)	AC 342V ~ 418V(3 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)	
	Phases	1 phase 2 wire	3 phase 4 wire
	Power Factor	> 0.95	
	Current THD	At rated power and in the sine wave <5%	
	Control System	PWM	
	Anti-islanding	≤0.5 sec	
	Total Max.Current	45.5A	26.3A
	Max. Efficiency	97%	
	Euro Efficiency	96.4%	
Structure	Protection Class	IP20	
	Cooling system	Natural cooling	
	Noise	< 50dB	
	Data Interfaces	External RS232C/RS485	
	Web Module(Option)	RS232C to TCP/IP	
	Display	LCD	
	Packing Dimensions (W*H*D)	700*460*840mm	
	Net weight	63.5 kgs	64 kgs
	Gross weight	67.5kgs	68kgs
Protection	Inverter	Inputover voltage, output short circuit, overheat, output DC component.	
	Grid	Anti-islandin g, over/under voltage of grid, over/under frequency of grid.	
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.	
	Operation temperature	-10 °C ~40 °C (50 °C)	
	Stored temperature	-20 °C ~ 65 °C	
	Relative humidity	0~100% (Do not wet with dew)	

Model		TLS-ZB 12 KW	
DC Input	MPPT Voltage Range	DC100 ~ 450V	
	Rated DC Voltage	360V	
	Control System	MPPT	
AC Output	Output Power	12K W	
	Rate voltage	AC220	AC380
	Voltage range	AC 185V ~ 264V (1 phase)	AC 342V ~ 418V(3 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)	
	Phases	1 phase 2 wire	3 phase 4 wire
	Power Factor	> 0.95	
	Current THD	At rated power and in the sine wave <5%	
	Control System	PWM	
	Anti-islanding	≤0.5 sec	
	Total Max.Current	54.5A	33.3A
Max. Efficiency	97%		

	Euro Efficiency	96.4%	
Structure	Protection Class	IP20	
	Cooling system	Natural cooling	
	Noise	< 50dB	
	Data Interfaces	External RS232C/RS485	
	Display	LCD	
	Packing Dimensions (W*H*D)	700* 460* 840mm	
	Net weight	69 gs	70 kgs
	Gross weight	73kgs	75kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.	
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.	
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.	
	Operation temperature	-10 °C ~40 °C (50 °C)	
	Stored temperature	-20 °C ~ 65 °C	
	Relative humidity	0~100% (Do not wet with dew)	

	Model	TLS-ZB 15 KW	
DC Input	MPPT Voltage Range	DC100 ~ 450V	
	Rated DC Voltage	360V	
	Control System	MPPT	
AC Output	Output Power	15K W	
	Rate voltage	AC220	AC380
	Voltage range	AC 185V ~ 264V (1 phase)	AC 342V ~ 418V(3 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)	
	P hases	1 phase 2 wire	3 phase 4 wire
	Power Factor	> 0.95	
	Current THD	At rated power and in the sine wave <5%	
	Control System	PWM	
	Anti-islanding	≤0.5 sec	
	Total Max.Current	68.2A	41.6A
	Max. Efficiency	97%	
	Euro Efficiency	96.4%	
Structure	Protection Class	IP20	
	Cooling system	Natural cooling	
	Noise	< 50dB	
	Data Interfaces	External RS232C/RS485	
	Web Module(Option)	RS232C to TCP/IP	
	Display	LCD	
	Packing Dimensions (W*H*D)	700* 460* 1100mm	
	Net weight	85 kgs	86 kgs
	Gross weight	95kgs	97kgs
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.	
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.	

Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.
	Operation temperature	-10 °C ~40 °C (50 °C)
	Stored temperature	-20 °C ~ 65 °C
	Relative humidity	0~100% (Do not wet with dew)

Model		TLS-ZB 20 KW	
DC Input	MPPT Voltage Range	DC100 ~ 450V	
	Rated DC Voltage	360V	
	Control System	MPPT	
AC Output	Output Power	20K W	
	Rate voltage	AC220	AC380
	Voltage range	AC 185V ~ 264V (1 phase)	AC 342V ~ 418V(3 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)	
	Phases	1 phase 2 wire	3 phase 4 wire
	Power Factor	> 0.95	
	Current THD	At rated power and in the sine wave <5%	
	Control System	PWM	
	Anti-islanding	≤0.5 sec	
	Total Max.Current	90.5A	55.5A
	Max. Efficiency	97%	
	Euro Efficiency	96.4%	
Structure	Protection Class	IP20	
	Cooling system	Natural cooling	
	Noise	< 50dB	
	Data Interfaces	External RS232C/RS485	
	Display	LCD	
	Packing Dimensions (W*H*D)	400* 555* 1555mm	
	Net weight	140kgs	
Protection	Gross weight	145kgs	
	Inverter	Input over voltage, output short circuit, overheat, output DC component.	
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.	
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.	
	Operation temperature	-10 °C ~40 °C (50 °C)	
	Stored temperature	-20 °C ~ 65 °C	
	Relative humidity	0~100% (Do not wet with dew)	

Model		TLS-ZB 30 KW	
DC Input	MPPT Voltage Range	DC100 ~ 450V	
	Rated DC Voltage	360V	

	Control System	MPPT	
AC Output	Output Power	30KW	
	Rate voltage	AC220	AC380
	Voltage range	AC 185V ~ 264V (1 phase)	AC 342V ~ 418V(3 phase)
	Normal Grid Frequency	50/60Hz (Grid frequency)	
	Phases	1 phase 2 wire	3 phase 4 wire
	Power Factor	> 0.95	
	Current THD	At rated power and in the sine wave <5%	
	Control System	PWM	
	Anti-islanding	≤0.5 sec	
	Total Max.Current	136.1A	78.5A
	Max. Efficiency	97%	
	Euro Efficiency	96.4%	
Structure	Protection Class	IP20	
	Cooling system	Natural cooling	
	Noise	< 50dB	
	Data Interfaces	External RS232C/RS485	
	Display	LCD	
Protection	Inverter	Input over voltage, output short circuit, overheat, output DC component.	
	Grid	Anti-islanding, over/under voltage of grid, over/under frequency of grid.	
Environment	Environment	No corrosion gas, flammable gas, oil mist, dust etc.	
	Operation temperature	-10 °C ~40 °C (50 °C)	
	Stored temperature	-20 °C ~ 65 °C	
	Relative humidity	0~100% (Do not wet with dew)	

Photo

