

Test Verification of Conformity

Verification Number: 220215002GZU-VOC001

On the basis of the referenced test report(s), sample(s) tested of the below product have been found to comply with the standards harmonized with the regulation(s) listed on this verification at the time the tests were carried out. Other standards and Regulations may be relevant to the product. This verification is part of the full test report(s) and should be read in conjunction with it <them>.

Once compliance with all product relevant \square mark regulations are verified, including any relevant e.g. risk assessment and production control, the manufacturer may indicate compliance by signing a Declaration of Conformity themselves and applying the mark to products identical to the tested sample(s).

Applicant Name & Address: Shenzhen Growatt New Energy Co., Ltd

4-13/F, Building A, Sino-German (Europe) Industrial Park,

Hangcheng Ave, Bao'an District, Shenzhen City, Guangdong Province, P.R. China.

Product Description: PV Grid inverter

Ratings & Principle See Appe Characteristics:

See Appendix: Test Verification of Conformity

Models/Type References: MOD 3000TL3-X, MOD 4000TL3-X, MOD 5000TL3-X, MOD 6000TL3-X,

MOD 7000TL3-X, MOD 8000TL3-X, MOD 9000TL3-X, MOD 10KTL3-X, MOD 11KTL3-X, MOD 12KTL3-X, MOD 13KTL3-X, MOD 15KTL3-X,

MOD 3000TL3-XH, MOD 4000TL3-XH, MOD 5000TL3-XH, MOD 6000TL3-XH, MOD 7000TL3-XH, MOD 8000TL3-XH, MOD 9000TL3-XH, MOD 10KTL3-XH

Brand Name: GROWATT

Relevant See Appendix: Test Verification of Conformity

Standards/Regulations:

Verification Issuing Office Intertek Testing Services Shenzhen Ltd. Guangzhou Branch

Name & Address: Room 02, & 101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2.

Caipin Road, Science City, GETDD, Guangzhou, Guangdong, China

Date of Tests: 2021.08.10-2021.10.20

Test Report Number(s): 60403140 001, CN21VWR3 001

Additional information in Appendix.

Signature

Name: Tommy Zhong

Date: 09 October 2022

Position: Techinical Manager



This is an Appendix to Test Verification of Conformity Number: 220215002GZU-VOC001.

Ratings & Principle Characteristics:

	MODELS LIST	MOD 3000TL3- X	MOD 4000TL3- X	MOD 5000TL3- X	MOD 6000TL3- X			
	V _{MAX} PV [Vdc]		110	00				
	I _{SC} PV [A]		16/	16				
	MPPT Voltage Range V _{MPP} [Vdc]	140-1000						
5	Max. Input Current I _{MAX} [A] (A/B) (each MPPT if more than 1)	13/13						
PV INPUT	MPPT Full Power Voltage Range [Vdc]	250-800						
	Number of MPPT	2						
	String per MPPT	1/1						
	Start PV Voltage [Vdc]	200						
.03	Backfeed Current [A]	0						
	Overvoltage Category (OVC)	U 10						
	Rated Output Voltage Ur [Vac]	3W/N/PE, 230/400						
- 0	Rated Output Frequency F _{NETZ} [Hz]	50/60						
ACOUTPUT	Normal Operating Frequency Range Fn [Hz]	45~55/55-65						
AC	Rated Output Power P _E [W]	3000	4000	5000	6000			
	Max. Apparent power S _{Emax} [VA]	3300 4400 5500		6600				
	Rated Output Current Ir [A]	4.3	5.8	7.2	8.7			
	Max. Output Current Imax [A]	5.0	6.7	8.3	10.0			

Signature

Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022



This is an Appendix to Test Verification of Conformity Number: 220215002GZU-VOC001.

Ratings & Principle Characteristics:

or cosφ [λ]	0.8 leading ~0.8lagging
nax. ηmax	98.3%
	1
(100% full	<3%
oise [dB]	≤35dB
e Category	III
	50
erter	Non-isolated
Protection	Integrated
by	Transformerless
Class	Class I
Protection	IP66
Temperature	-25°C to +60°C (45°C to 60°C with derating)
egree (PD)	PD3
n]	4000m
	425*387*138
g]	13.5
	nax. ηmax er on [W] (100% full oise [dB] ge Category lation Detection erter Protection by Class Protection Femperature egree (PD) n]

Signature

Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022

Tommy



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Ratings & Principle Characteristics:

		MOD	MOD	MOD	MOD	MOD			
	MODELS LIST	7000T	8000T	9000T	10KTL	11KTL			
	WODELS LIST	L3-X	L3-X	L3-X	3-X	3-X			
	V _{MAX} PV [Vdc]			1100	I				
	I _{SC} PV [A]			16/16					
_	MPPT Voltage Range V _{MPP} [Vdc]	140-1000							
5	Max. Input Current I _{MAX} [A] (A/B) (each MPPT if more than 1)	13/13							
PV INPUT	MPPT Full Power Voltage Range [Vdc]	320-850	320-850	400-850	450-850	450-850			
_	Number of MPPT	2							
- ///	String per MPPT	1/1							
	Start PV Voltage [Vdc]	200							
.00	Backfeed Current [A]	0							
	Overvoltage Category (OVC)								
	Rated Output Voltage Ur [Vac]	3W/N/PE, 230/400							
1	Rated Output Frequency F _{NETZ} [Hz]			50/60					
грит	Normal Operating Frequency Range Fn [Hz]	45~55/55-65							
АС ООТРОТ	Rated Output Power P _E [W]	7000	8000	9000	10000	11000			
	Max. Apparent power S_{Emax} [VA]	7700	8800	9900	11000	12100			
	Rated Output Current Ir [A]	10.1	11.6	13.0	14.5	15.9			
	Max. Output Current Imax [A]	11.7	13.3	15.0	16.7	18.3			

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Position: Techinical Manager Date: 09 October 2022

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Ratings & Principle Characteristics:

	Power Factor cosφ [λ]	0.8 leading ~0.8lagging
	Efficiency max. ηmax	98.6%
PUT	Night Power Consumption [W]	1
AC OUTPUT	THD [¥/I] (100% full power)	<3%
4	Acoustic Noise [dB]	≤35dB
	Overvoltage Category (OVC)	ш
	Array Insulation Resistance Detection [Ω]	50
	Type of inverter	Non-isolated
- ///	Type of NS Protection	Integrated
O	Separated by	Transformerless
E	Protective Class	Class I
CONSTRUCTION	Enclosure Protection (IP)	IP66
00	Operating Temperature Range [ºC]	-25°C to +60°C (45°C to 60°C with derating)
40.	Pollution degree (PD)	PD3
	Altitude [m]	4000m
70.	Size [mm]	425*387*178
- 10	Weight [kg]	15.0

Signature

Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022

Towns



This is an Appendix to Test Verification of Conformity Number: 220215002GZU-VOC001.

Ratings & Principle Characteristics:

	MODELS LIST	MOD 12KTL3-	· N	10D 13KTL3- X	M	OD 15KTL3- X	
	V _{MAX} PV [Vdc]		ı	1100	ı		
	I _{SC} PV [A]			16/32			
	MPPT Voltage Range V _{MPP} [Vdc]	140-1000					
5	Max. Input Current I _{MAX} [A] (A/B) (each MPPT if more than 1)	13/26					
PV INPUT	MPPT Full Power Voltage Range [Vdc]	480-850	_2	480-850		520-850	
	Number of MPPT						
- 1	String per MPPT	1/2					
- 10	Start PV Voltage [Vdc]	200					
- 10	Backfeed Current [A]	0					
U	Overvoltage Category (OVC)	н 1					
	Rated Output Voltage Ur [Vac]	3W/N/PE, 230/400					
0.	Rated Output Frequency F _{NETZ} [Hz]	- 0		50/60			
N	Normal Operating Frequency Range Fn [Hz]	45~55/55-65					
g prof	Rated Output Power P _E [W]	12000	1300	0 150	000	12000	
	Max. Apparent power S _{Emax} [VA]	13200	1430	00 165	500	13200	
ACOUTPUT	Rated Output Current Ir [A]	17.4	18.8	3 21	.7	17.4	
ACO	Max. Output Current Imax [A]	20	21.7	7 2	5	20	

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Name: Tommy Zhong

Position: Techinical Manager

Date: 09 October 2022



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Ratings & Principle Characteristics:

	Power Factor cosφ [λ]	0.8 leading ~0.8 lagging
	Efficiency max. ηmax	98.6%
PUT	Night Power Consumption [W]	1
AC OUTPUT	THD [₩/I] (100% full power)	<3%
4	Acoustic Noise [dB]	≤35dB
	Overvoltage Category (OVC)	=
	Array Insulation Resistance Detection [Ω]	50
	Type of inverter	Non-isolated
- //	Type of NS Protection	Integrated
O	Separated by	Transformerless
5	Protective Class	Class I
CONSTRUCTION	Enclosure Protection (IP)	IP66
S	Operating Temperature Range [ºC]	-25°C to +60°C (45°C to 60°C with derating)
0.	Pollution degree (PD)	PD3
- 10	Altitude [m]	4000m
70.	Size [mm]	425*387*178
- 10	Weight [kg]	16.5

Signature

Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022

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This is an Appendix to Test Verification of Conformity Number: 220215002GZU-VOC001.

Ratings & Principle Characteristics:

		MOD	MOD	MOD	MOD			
	MODELS LIST	3000TL3-	4000TL3-	5000TL3-	6000TL3-			
	T	XH	XH	XH	XH			
	V _{MAX} PV [Vdc]	1100						
	I _{SC} PV [A]		20,	/20				
34	MPPT Voltage Range		140-	1000				
	V _{MPP} [Vdc]							
	Max. Input Current I _{MAX}	15/15						
5	[A] (A/B) (each MPPT if	16/16						
PV INPUT	more than 1) MPPT Full Power	- 100						
≥	Voltage Range [Vdc]		250	-800				
	Number of MPPT	-31-4		2				
	String per MPPT			<u>-</u> /1				
- //	Backfeed Current [A]	0						
- 10	Overvoltage Category							
- 10	(OVC)	п						
	Operating voltage	600-950						
	range [Vdc]	000-550						
	Full load voltage range	600-800						
400	[Vdc]	1.00	000	-800				
a)	Max. Operating current		1	1				
Side	[A]							
DC Side	Max. Discharge power	3300	4400	5500	6600			
- 3	[W]	3300	4400	3300	0000			
	Max. Charge power		66	00				
	[W]		00					
	Overvoltage Category			I				
	(OVC)	101	111	•				
	Rated Output VoltageUr		3W/N/PF	, 230/400				
	[Vac]		344/14/12	, 230, 400				
AC Side	Rated Output		50.	/60				
CS	Frequency F _{NETZ} [Hz]							
<	Normal Operating		.= ==	/==				
	Frequency Range		45~55	/55-65				
	Fn [Hz]							

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Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022

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Ratings & Principle Characteristics:

	Rated Output Power P _E [W]	3000	4000	5000	6000			
	Max. Apparent power S _{Emax} [VA]	3300	4400	5500	6600			
34	Rated Output Current Ir [A]	4.3	5.8	7.2	8.7			
e O	Max. Output Current Imax [A]	5.0	6.7	8.3	10.0			
AC Side	Power Factor cosφ [λ]		0.8 leading	~0.8lagging				
A	Efficiency max. ηmax	101	98.	.3%				
	Night Power Consumption [W]	<5.5						
7	THD [¥/I] (100% full power)	<3%						
	Acoustic Noise [dB]	≤35dB						
U	Overvoltage Category (OVC)	U	I	18				
	Array Insulation Resistance Detection[Ω]		50	ЭК				
	Type of inverter		Non-is	olated				
40.	Type of NS Protection	. 0	Integ	rated				
O	Separated by	Transformerless						
5	Protective Class		Cla	ss I				
-R	Enclosure Protection(IP)		IP	66				
CONSTRUCTION	Operating Temperature Range [ºC]	-25°C to +60°C (45°C to 60°C with derating)						
	Pollution degree (PD)	M	PI	03				
	Altitude [m]	M	300	00m	_			
	Size [mm]	M	425*38	87*147				
	Weight [kg]	U = A	12	2.5				

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Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022

Towns,



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Ratings & Principle Characteristics:

		MOD	MOD	MOD	MOD			
	MODELS LIST	7000TL3-	8000TL3-	9000TL3-	10KTL3-			
	DV 5041.1	XH XH XH XH						
	V _{MAX} PV [Vdc]		11					
	I _{SC} PV [A]	20/20						
	MPPT Voltage Range		140-1000					
- 4	V _{MPP} [Vdc]							
100	Max. Input Current I _{MAX}							
5	[A] (A/B) (each MPPT if	16/16						
<u> </u>	more than 1)							
PV INPUT	MPPT Full Power	320-850	320-850	400-850	450-850			
۵	Voltage Range [Vdc]	320-830	320-830	400-830	430-830			
	Number of MPPT	2						
	String per MPPT	1/1						
- 10	Backfeed Current [A]	0						
100	Overvoltage Category							
- 10	(OVC)	П						
100	Operating voltage	500.050						
	range [Vdc]	600-950						
	Full load voltage range							
-	[Vdc]	600-800						
100	Max. Operating current							
ge	[A]		18	3.5				
DC Side	Max. Discharge power			MI.				
۵	[W]	7700	8800	9900	11000			
			- 4	7				
	Max. Charge power	10000						
	[W]	49						
	Overvoltage Category			I				
	(OVC)	407						
	Rated Output VoltageUr		3W/N/PF	230/400				
	[Vac]	3W/N/PE, 230/400						
de	Rated Output		50/	/60				
AC Side	Frequency F _{NETZ} [Hz]		30/					
ĕ	Normal Operating							
	Frequency Range	45~55/55-65						
	Fn [Hz]							

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Ratings & Principle Characteristics:

	Rated Output Power P _E [W]	7000	8000	9000	10000		
	Max. Apparent power S _{Emax} [VA]	7700	8800	9900	11000		
	Rated Output Current Ir [A]	10.1	11.6	13.0	14.5		
qe	Max. Output Current Imax [A]	11.7	13.3	15.0	16.7		
AC Side	Power Factor cosφ [λ]	0.8 leading ~0.8 lagging					
ĕ	Efficiency max. ηmax		98.	6%			
	Night Power Consumption [W]	<5.5					
1	THD [¥/I] (100% full power)	<3%					
	Acoustic Noise [dB]	≤35dB					
	Overvoltage Category (OVC)	Ш					
	Array Insulation Resistance Detection[Ω]		50	OK			
	Type of inverter		Non-is	olated			
	Type of NS Protection	. 0	Integ	rated			
O	Separated by		Transfo	merless			
E	Protective Class		Cla	ss I			
-R	Enclosure Protection(IP)		IP	66			
CONSTRUCTION	Operating Temperature Range [ºC]	-25°C to +60°C (45°C to 60°C with derating)					
Ŭ	Pollution degree (PD)	M	P[03			
	Altitude [m]	M	300	0m			
	Size [mm]	M	425*38	37*178			
	Weight [kg]	0 10	14	1.0			

Relevant Standards/Regulations:

EN 62109-1: 2010 Safety of power converters for use in photovoltaic power systems – Part 1: General requirements

EN 62109-2: 2011 Safety of power converters for use in photovoltaic power systems –

Part 2: Particular requirements for inverters

Low Voltage Directive 2014/35/EU

Signature

Name: Tommy Zhong

Position: Techinical Manager Date: 09 October 2022

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