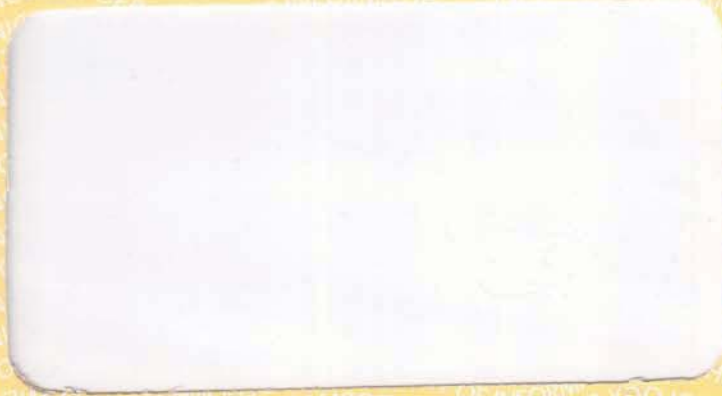




सत्यमेव जयते

TEST REPORT



Government of India

Ministry of Communications and Information Technology

Department of Information Technology

Standardisation Testing and Quality Certification Directorate

ELECTRONICS REGIONAL TEST LABORATORY (EAST)

Block DN, Sector V, Salt Lake, Kolkata 700 091

INDIA

Form No. QRF/2012-29/Rev.3

Government of India
Ministry of Communications and Information Technology
Department of Electronics & Information Technology, Standardisation Testing & Quality Certification Directorate
ELECTRONICS REGIONAL TEST LABORATORY (EAST)

TEST REPORT ON SOLAR INVERTER

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1.0 SCOPE

1.1 Service Request No. : TE/0061/03-13
1.2 Test Report No. : ERTL(E)/TES/P308/0031/03-13
Date : 02/05/2013

1.3 Requested by : **PPS ENVIRO POWER PVT. LTD.**
(Name & Address of the organisation) : D97-A,PHASE-1,ROAD-18
IDA, JEEDIMETIA
HYDERABAD 500055

1.4 Description , Identification of the item to be tested

Item	:	SOLAR INVERTER
Make	:	PPS ENVIRO POWER P.LTD
Model	:	PV-UP-P SERIES
Sl.No.	:	016
Qty.	:	1

1.4.1 Applicable Spec.of the item(s) tested:

1.2 KVA

1.4.2 Characterisation and condition of the item

Characterisation	:	Not applicable /
Condition	:	Satisfactory /

1.5 Date of item receipt of item : 19/03/2013

1.6 Date of start of testing : 21/03/2013

1.6.1 Date of completion of testing : 01/05/2013

1.7 Location where testing performed : In house

1.8 Ambient condition during measurement : 25 +/- 1.5°C
70% RH. Max.

1.9 Spec. used for testing : IEC:60068-2-1,2-2,2-14,2-30,IP-21 OF IEC-60529

1.9.1 Details of non-standard method followed (if any) : NIL



Certificate No. : T1397

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TEST REPORT NO: ERTL (E) / TES / P 308 / 0031 / 03- 13.

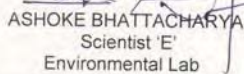
REPORT ON: **SOLAR INVERTER**
MAKE: **PPS ENVIRO POWER P. LTD, MODEL: PV-UP-P SERIES, SL NO: 016**

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TEST RESULT:

Sl. No.	Test of Environment	Clause No.	Quantity		Specifications Limit	Test Result	Notes
			Tested	Failed			
1.	Functional Test at 1.2 kw Resistive load. a) Out Put Voltage. b) Out Put Frequency.	Customer's Spec.	1	--	a) Not specified. b) Not specified.	a) 228.96 V. b) 50.02 Hz.	
2.	Cold Test : Temperature: -10° C. Duration: 2 hours.	IEC 60068-2-1 & Customer's Spec.	1	0	There shall be no physical deterioration.	Complied.	
3.	Functional Test at 1.2 kw Resistive load. a) Out Put Voltage. b) Out Put Frequency.	Customer's Spec.	1	--	a) Not specified. b) Not specified	a) 229.21 V. b) 50.01 Hz	
4.	Dry Heat Test : Temperature: + 55° C. Duration: 16 hours.	IEC 60068-2-2 & Customer's Spec.	1	0	There shall be no physical deterioration.	Complied.	
5.	Functional Test at 1.2 kw Resistive load. a) Out Put Voltage. b) Out Put Frequency.	Customer's Spec.	1	--	a) Not specified. b) Not specified	a) 229.14 V. b) 50.02 Hz	
6.	Temperature Cycling Test : Temperature : -5° C & +55° C. Duration at each temperature: 1hr. Rate of change of temperature : 1°C/min. Total no of cycle: 5	IEC 60068-2-14, & Customer's Spec.	1	0	There shall be no physical deterioration.	Complied.	
7.	Functional Test at 1.2 kw Resistive load. a)Out Put Voltage. b) Out Put Frequency	Customer's Spec.	1	--	a) Not specified. b) Not specified	a) 228.87 V. b) 50.02 Hz	
8.	Damp Heat Cyclic Test: Temperature: +25°C to + 40°C. Humidity : 95% RH. Variant 1, 12+ 12 hr cycle. No of cycles: 2	IEC 60068-2-30 & Customer's Spec.	1	0	There shall be no physical deterioration.	Complied.	
9.	Functional Test at 1.2 kw Resistive load. a) Out Put Voltage. b) Out Put Frequency.	Customer's Spec.	1	--	a) Not specified. b) Not specified	a) 229.11 V. b) 50.01 Hz	


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Environmental Lab

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TEST REPORT NO: ERTL (E) / TES / P 308 / 0031 / 03- 13.

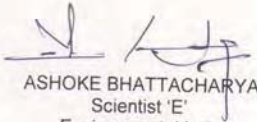
REPORT ON: **SOLAR INVERTER**
MAKE: **PPS ENVIRO POWER P. LTD, MODEL: PV-UP-P SERIES, SL NO: 016**

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TEST RESULT:

Sl. No.	Test of Environment	Clause No.	Quantity		Specifications Limit	Test Result	Notes
			Tested	Failed			
10	IP 2X Test : a) Protection against access to hazardous parts. Test Finger of length 80 mm and of dia 12 mm pushed through any opening of the enclosure with a force of 10 N. b) Protection against access to solid foreign objects: Sphere of dia 12.5 mm pushed against any opening of the enclosure.	CI No 12.1 of IEC 60529	1	0	Shall have adequate clearance between access probe and hazardous parts.	Complied.	
		CI No 13.2 of IEC 60529	1	0	The sphere of dia 12.5mm shall not fully Penetrate.	Complied.	
11	IP X1 Test : Protection against ingress of water: Uniform flow of water drops over the whole area of the enclosure placed on turn table. Water drop Duration : 10 min Water flow rate : 1mm/min.	CI No 14.2.1 of IEC 60529	1	0	Entered water shall not be sufficient to interfere with correct operation of the device.	Complied.	
12	Functional Test at 1.2 kw Resistive load. a) Out put Voltage. b) Out put Frequency.	Customer's Spec.	1	---	a) Not specified. b) Not specified	a) 228.92 V. b) 50.02 Hz	


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Test Report No. : ERTL(E)/TES/P308/0031/03-13
Date : 02/05/2013

3.0 Equipment used

EQPT_NO	NAME	MAKE	MODEL	CAL. VALID UPTO
0971	POWER QUALITY ANALYZER	FLUKE	43B	03/09/2013
1018	MULTIMETER	AGILENT TECHNOLO	34401A	13/09/2013
1191	CLIMATIC CHAMBER	M/S VOTSCH	VC-4100	06/03/2014
1246	DIGITAL POWER METER	YOKOGAWA	WT 230	07/02/2014
1341	TRUE RMS DMM WITH SOFTWARE	RISHABH	RISHMULTI 18S	11/02/2014
1457	PAC CLIMATIC CHAMBER	CM ENVIROSYSTEMS	PAC-1097-BH-CB	21/01/2014

Note: All tests were conducted within the validity period of respective equipment shown above.

4.0 Remarks (if any)

NIL

RELEASED BY *Sonia*
02.05.13
(signature & date)
SONALI JANA
Scientist - C
Electronics Regional Test Laboratory (East)
STQC Directorate, Ministry of Electronics & IT
Government of India
Kolkata-700091