

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 DIGITAL SOLAR INVERTER

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1.0 SCOPE

1.1 Service Request No. : TE/0090/09-13
1.2 Test Report No. : ERTL(E)/TES/P308/0056/09-13
 Date : 26/11/2013

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

1.4 Description ,
 Identification
 of the item
 to be tested

Item	:	DIGITAL SOLAR INVERTER
Make	:	PPS ENVIRO POWER P. LTD
Model	:	PV-UP(E-SERIES)
Sl.No.	:	SEP-04
Qty.	:	1

1.4.1 Applicable Spec.of the item(s) tested:
 300VA/12V

1.4.2 Characterisation and
 condition of the item

Characterisation	:	Not applicable /
Condition	:	Satisfactory /

1.5 Date of item receipt of item : 30/09/2013

1.6 Date of start of testing : 04/10/2013

1.6.1 Date of completion of testing : 26/11/2013

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 & IEC:60529-12.1,13.2,14,2,1 &
 CUSTOMER'S SPEC.

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

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TEST RESULT:

Sl. No.	Test of Environment	Clause No.	Quantity		Specifications Limit	Test Result	Notes
			Tested	Failed			
1.	Performance Test at 300VA Resistive load (Unity power factor) a. Output Voltage. b. Output Frequency.	Customer's Spec	1	--	a. Not specified. b. Not specified.	a. 230.21V b. 50.02Hz.	
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.	Performance Test at 300VA Resistive load (Unity power factor) a. Output Voltage. b. Output Frequency.	Customer's Spec	1	--	a. Not specified. b. Not specified.	a. 231.01V b. 50.01Hz.	
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.	Performance Test at 300VA Resistive load (Unity power factor) a. Output Voltage. b. Output Frequency.	Customer's Spec	1	--	a. Not specified. b. Not specified.	a. 229.89V b. 50.02Hz.	
6.	Temperature Cycling Test : Temperature : -5° C & +55° C. Duration at each temperature: 1hours. 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.	Performance Test at 300VA Resistive load (Unity power factor) a. Output Voltage. b. Output Frequency.	Customer's Spec	1	--	a. Not specified. b. Not specified.	a. 230.01V b. 50.02Hz.	
8.	Damp Heat Cyclic Test: Temperature: +25°C to + 40°C. Humidity: 95% RH. Cycle: 12+ 12 hour. . No of cycles: 2 Recovery: 2 hours.	IEC 60068-2-30 & Customer's Spec.	1	0	There shall be no physical deterioration.	Complied.	


ASHOKE BHATTACHARYA
Scientist 'E'
Authorized Signatory.

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TEST RESULT:

Sl. No.	Test of Environment	Clause No.	Quantity		Specifications Limit	Test Result	Notes
			Tested	Failed			
9.	Performance Test at 300VA Resistive load (Unity power factor) a. Output Voltage. b. Output Frequency.	Customer's Spec	1	--	a. Not specified. b. Not specified.	a. 230.82V b. 50.014Hz.	
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	Performance Test at 300VA Resistive load (Unity power factor) a. Output Voltage. b. Output Frequency.	Customer's Spec	1	--	a. Not specified. b. Not specified.	a. 230.05V b. 50.01Hz.	


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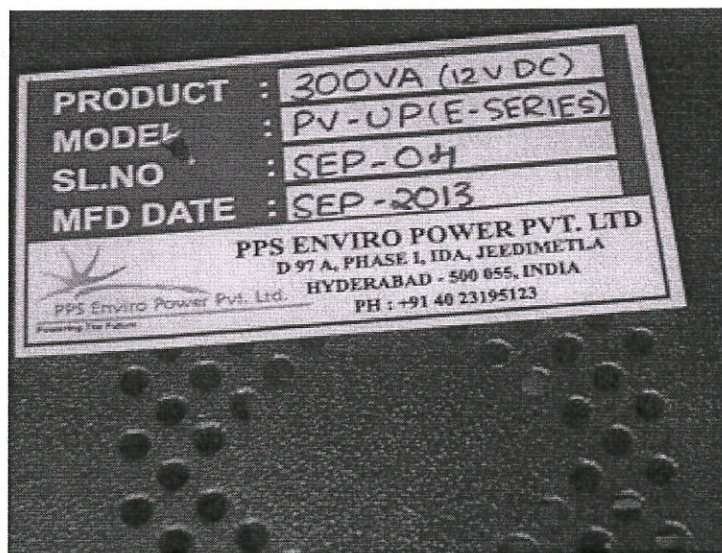
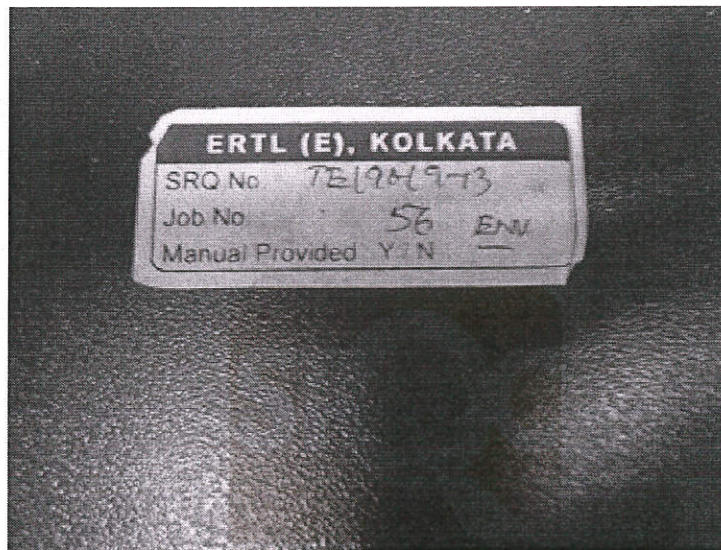
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3.0 Equipment used

EQPT_NO	NAME	MAKE	MODEL	CAL. VALID UPTO
1173	TEMPERATURE TEST CHAMBER	VOTSCH	INDUST.VT4100	11/03/2014
1191	CLIMATIC CHAMBER	M/S VOTSCH	VC-4100	06/03/2014
1203	UNIVERSAL POWER ANALYSER	VOLTECH, UK	PM3300	07/02/2014
1232	DIGITAL MULTIMETER	AGILENT TECHNOLO	34401A	01/08/2014

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

4.0 Remarks (if any)

NIL

RELEASED BY
 (signature & date)

Sona
 27.11.13
SONALI JANA
 Scientist-C
 Electronics Regional Test Laboratory (East)
 STQC Directorate, Dept. of Info. Technology
 Ministry of Comm. & Info. Technology
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