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

1.0 SCOPE

1.1 Service Request No. : TE/0090/09-13

1.2 Test Report No. : ERTL(E)/TES/P308/0053/09-13
Date : 22/11/2013

1.3 Requested by (Name & Address of the organisation) :
PPS ENVIRO POWER PVT. LTD.
D97-A,PHASE-1,ROAD-18
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-01
Qty.	:	1

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

500VA/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 : 13/10/2013

1.6.1 Date of completion of testing : 22/11/2013

1.7 Location where testing performed : In house

1.8 Ambient condition during measurement : 25 +/- 2°C
75% RH. Max.

1.9 Spec. used for testing : IEC:61683

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

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TEST REPORT NO.: ERTL(E) / TES / P308 / 0053 / 09 - 13
TEST REPORT ON DIGITAL SOLAR INVERTER
AS PER IEC 61683 & CUSTOMER'S SPECIFICATION
MAKE: PPS ENVIRO POWER PVT. LTD., MODEL: PV-UP (E-SERIES), CAPACITY: 500 VA, 12 V
SL NO : SEP-01

TEST RESULT:

TEST NO.	TEST / ENVIRONMENT	CL. NO.	QUANTITY		SPECIFICATION LIMITS	TEST RESULTS	MEASUREMENT UNCERTAINTY
			TESTED	FAILED			
1.0	**Output Voltage:-** (At 100% Resistive Load)	**4.3**	1	-	Not Specified.	230.7 Vac	± 0.1964 Vac
2.0	**Output Freqency:-** (At 100% Resistive Load)	**4.3**	1	-	Not Specified.	50.02 Hz.	± 0.0001 Hz.
3.0	**Ripple & Distortion:-**	**4.5**					
3.1	THD_v at 100% Resistive Load		1	-	Not Specified.	2.82 %	± 0.2425 %
3.2	THD_i at 100% Resistive Load		1	-	Not Specified.	4.89 %	± 0.2425 %
4.0	**Loss Measurement:-**	**7.0**					
4.1	**No Load Loss:-**		1	-	Not Specified.	11.17 W.	± 0.0250 W.
4.2	**Standby Loss:-**		1	-	Not Specified.	1.70 W.	± 0.0250 W.
5.0	**Efficiency Test:-**	**IEC**					
5.1	**For unity power factor.:-**	**61683**					
5.1.1	At 5% of load ie. 25 W (Actualy Tested at 25.3 W)	Table1	1	-	Not specified.	64.91 %	± 0.0500 W.
5.1.2	At 10% of load ie. 50 W (Actualy Tested at 50.71 W)		1	-	Not specified.	77.96 %	± 0.0500 W.
5.1.3	At 25% of load ie. 125 W (Actualy Tested at 129.02 W)		1	-	Not specified.	84.07 %	± 0.4846 W.
5.1.4	At 50% of load ie. 250 W (Actualy Tested at 246.9 W)		1	-	Not specified.	87.05 %	± 0.4846 W.
5.1.5	At 75% of load ie. 375 W (Actualy Tested at 370.2 W)		1	-	Not specified.	86.70 %	± 0.0024 KW
5.1.6	At 100% of load ie. 500W (Actualy Tested at 508.5 W)		1	-	Not specified.	85.45 %	± 0.0024 KW

Notes: Measurement Uncertainty at 95% Confidance Level.

(A.K.Dhar.)
SCIENTIST `F`

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TEST REPORT ON DIGITAL SOLAR INVERTER
AS PER IEC 61683 & CUSTOMER'S SPECIFICATION
MAKE: PPS ENVIRO POWER PVT. LTD., MODEL: PV-UP (E-SERIES), CAPACITY: 500 VA, 12 V
SL NO : SEP-01

TEST RESULT:

TEST NO.	TEST / ENVIRONMENT	CL. NO.	QUANTITY		SPECIFICATION LIMITS	TEST RESULTS	MEASUREMENT UNCERTAINTY
			TESTED	FAILED			
5.2	For 0.25 power factor.:-	- do -					
5.2.1	At 25% of load ie. 31.25 W		1	-	Not specified.	-	See Note (ii)
5.2.2	At 50% of load ie. 62.5 W (Actualy Tested at 79.55 W)		1	-	Not specified.	66.45 %	± 0.4846 W.
5.2.3	At 100% of load ie. 125 W (Actualy Tested at 121.35 W)		1	-	Not specified.	63.16 %	± 0.4846 W.
5.3	For 0.50 power factor.:-	- do -					
5.3.1	At 25% of load ie. 62.5 W (Actualy Tested at 63.42 W)		1	-	Not specified.	75.31 %	± 0.4846 W.
5.3.2	At 50% of load ie. 125 W (Actualy Tested at 127.76 W)		1	-	Not specified.	77.04 %	± 0.4846 W.
5.3.3	At 100% of load ie. 250 W (Actualy Tested at 244.1 W)		1	-	Not specified.	76.73 %	± 0.0024 KW
5.4	For 0.75 power factor.:-	- do -					
5.4.1	At 25% of load ie. 93.75 W (Actualy Tested at 88.64 W)		1	-	Not specified.	81.47 %	± 0.4846 W.
5.4.2	At 50% of load ie. 187.5 W (Actualy Tested at 181.24 W)		1	-	Not specified.	83.68 %	± 0.4846 W.
5.4.3	At 100% of load ie. 375 W (Actualy Tested at 375.2 W)		1	-	Not specified.	77.69 %	± 0.0024 KW
5.5	For 80% THDi with 0.5 pf.:-	- do -					
5.5.1	At 50% of load ie. 125 W (Actualy Tested at 128.22 W)		1	-	Not specified.	76.53 %	± 0.4846 W.
5.5.2	At 100% of load ie. 250 W (Actualy Tested at 245.2 W)		1	-	Not specified.	76.49 %	± 0.4846 W.
5.6	Over Load Test At 120% of load ie. 600W for 30 secs.		-	-	Should withstood	Complied	

Note:- i) The Inverter capacity is 500 VA, so Full Load Power is 500 KW at unity **pf**.
ii) 25% load at 0.25 pf was not be carried out due to facility limitation.

(A.K.Dhar.)
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Notes: Measurement Uncertainty at 95% Confidance Level.

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Date : 22/11/2013

3.0 Equipment used

EQPT_NO	NAME	MAKE	MODEL	CAL. VALID UPTO
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)

22.11.13

SONALI JANA
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