

<b>Prüfbericht - Nr.:</b> 19630478 001		<b>Seite 1 von 6</b>			
<i>Test Report No.:</i>		<i>Page 1 of 6</i>			
<b>Auftraggeber:</b> <i>Client:</i>	<b>Solar Idea Pvt. Ltd.</b> 8-2-277/A/7, Plot No.126, Road No.2, Banjara Hills, Hyderabad – 500034, Telangana, India				
<b>Gegenstand der Prüfung:</b> <i>Test item:</i>	Classic Solar Power Conditioning Unit with inbuilt MPPT charge Controller				
<b>Bezeichnung:</b> <i>Identification:</i>	2000VA	<b>Serien-Nr.:</b> <i>Serial No.:</i>	101510001573		
<b>Wareneingangs-Nr.:</b> <i>Receipt No.:</i>	1803110293	<b>Eingangsdatum:</b> <i>Date of receipt:</i>	2015.12.22		
<b>Prüfart:</b> <i>Testing location:</i>	<b>TÜV Rheinland (India) Pvt. Ltd.</b> Plot No.17B, Electronic City Phase II Industrial Area, Hosur Road Bangalore - 560 100, Karnataka, India				
<b>Prüfgrundlage:</b> <i>Test specification:</i>	Rated Output Efficiency measurement with Resistive load as per table 1 of IEC 61683:1999 as per customer's requirement.				
<b>Prüfergebnis:</b> <i>Test Result:</i>	Refer section " Summary of testing"				
<b>Prüflaboratorium:</b> <i>Testing Laboratory:</i>	<b>TÜV Rheinland (India) Pvt. Ltd.</b> Plot No.17B, Electronic City Phase II Industrial Area, Hosur Road Bangalore - 560 100, Karnataka, India				
<b>geprüft/tested by:</b>		<b>kontrolliert/reviewed by:</b>			
 2016.01.27      Manjunath.K / Sr. Engineer		 2016.01.27      Kamalaksha CS / Sr. Manager			
<b>Datum</b> <i>Date</i>	<b>Name/Stellung</b> <i>Name/Position</i>	<b>Unterschrift</b> <i>Signature</i>	<b>Datum</b> <i>Date</i>	<b>Name/Stellung</b> <i>Name/Position</i>	<b>Unterschrift</b> <i>Signature</i>
<b>Sonstiges/Other Aspects:</b>					
According to the customer's requirement, the rated output efficiency measurement test conducted with resistive load.					
This report consists of 6 pages including the following attachments: Attachment 1: Photo Document					
<b>Abkürzungen:</b>		<b>P(ass)</b> = entspricht Prüfgrundlage	<b>Abbreviations:</b>		<b>P(ass)</b> = passed
<b>F(ail)</b> = entspricht nicht Prüfgrundlage		<b>N/A</b> = nicht anwendbar	<b>F(ail)</b> = failed		<b>N/A</b> = not applicable
<b>N/T</b> = nicht getestet			<b>N/T</b> = not tested		
<p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b></p> <p><i>This test report relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any safety mark on this or similar products.</i></p>					

**TEST REPORT**  
**EFFICIENCY TESTING**

<b>Report reference No</b> .....	19630478 001	
Tested by (printed name and signature).....	(see cover page) .....	
Approved by (printed name and signature).....	(see cover page) .....	
Date of issue .....	(see cover page)	
<b>Testing Laboratory Name</b> .....	TÜV Rheinland (India) Pvt. Ltd.	
Address.....	Plot No.17B, Electronic City Phase II Industrial Area, Hosur Road Bangalore - 560 100, Karnataka, India	
<b>Applicant's Name</b> .....	Solar Idea Pvt. Ltd.	
Address.....	8-2-277/A/7, Plot No.126, Road No.2, Banjara Hills, Hyderabad – 500034, Telangana, India	
<b>Test specification</b> .....		
Standard .....	IEC 61683:1999 as per customer's requirement.	
Test procedure.....	QMA 37.501.03	
Non-standard test method .....	N/A	
<b>Test Report Form No</b> .....	TUVR_EFF_R1	
TRF originator.....	TUVR	
Master TRF .....	2009.08.20	
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This publication may be reproduced in whole or in part for non-commercial purposes as long as the TUVR is acknowledged as copyright owner and source of the material. TUVR takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.		
Test item description.....	Classic Solar Power Conditioning Unit with inbuilt MPPT charge Controller	
Manufacturer.....	Solar Idea Pvt. Ltd.	
Model and/or type reference.....	2000VA	
Serial number.....	101510001573	
Rating(s) .....	RATING	:2kVA/2kW
	BATTERY	:48VDC
	OUT PUT VOLTAGE	:230VAC ± 1%
	FREQUENCY	:50Hz
	AC MAINS	:120 – 300VAC
	MPPT VOLTAGE	:<80VDC
	CURRENT	:30Amps
	Manufactured Month	:OCT2015

## Efficiency Testing

## Copy of marking plate:



Model : Class Ic Solar PCU with Inbuilt MPPT charge controller  
 SL.No : 101510001573  
 RATING : 2KVA/2KW  
 BATTERY : 48VDC  
 OUTPUT VOLTAGE : 230VAC  $\pm$  1%  
 FREQUENCY : 50Hz  
 AC MAINS : 120 - 300VAC  
 MPPT VOLTAGE :  $\sim$ 80VDC  
 CURRENT : 30Amps  
 Manufactured Month : Oct 2015

## General product information:

EUT is a Classic Solar Power Conditioning Unit with inbuilt MPPT charge Controller.

## Particulars: test item vs. test requirements

Operating condition .....: Input: High current DC Power supply (0-120V/120A)  
Output: 230VAC/50Hz with resistive load.

Condition of the equipment at the time of receipt.....: Good

## Test case verdicts

Test case does not apply to the test object ...: N/A  
 Test item does meet the requirement .....: P(Pass)  
 Test item does not meet the requirement ....: F(Fail)

## Testing

Date of receipt of test item .....: 2015.12.22  
 Date(s) of performance of test .....: 2016.01.05

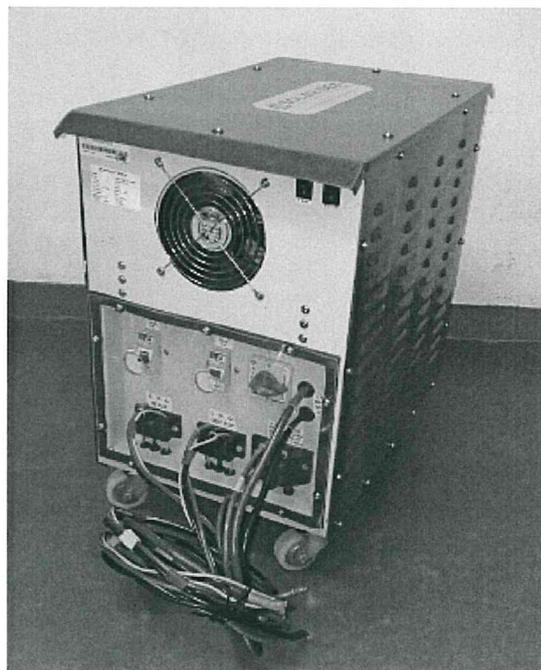
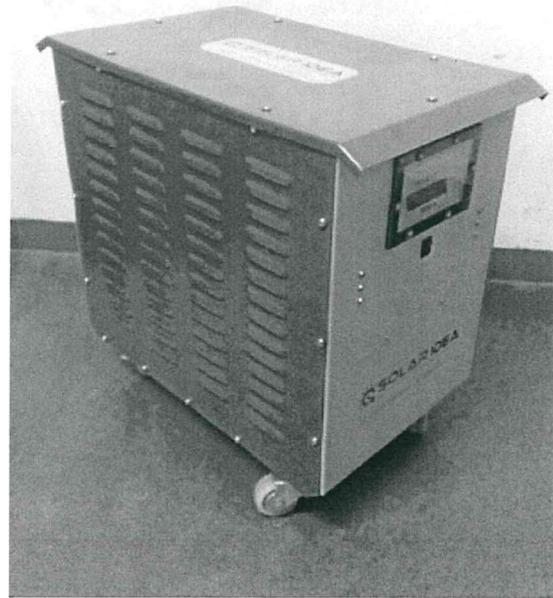
## Efficiency Testing

## Summary of testing:

Table 1							
Model/Type	2000VA						
Sl. No.:	101510001573						
Load type:	Resistive load						
Load (%)	5	10	25	50	75	100	120
Actual load (%)	5.18	10.35	25.13	49.96	75.63	100.35	120.08
DC Input Voltage (V)	48.08	48.01	48.21	48.04	48.00	48.06	47.92
DC Input Current (A)	3.85	6.02	12.13	23.36	35.11	46.78	56.88
DC Input Power (W)	185.11	289.02	584.79	1122.21	1685.28	2248.25	2725.69
Output	Frequency(Hz)	49.80	49.80	49.80	49.80	49.80	49.80
	Voltage (V)	232.25	231.76	231.84	230.98	231.24	231.23
	Current (A)	0.45	0.89	2.16	4.32	6.54	8.67
	Power Factor	1.00	0.999	1.000	1.000	1.000	1.000
	THD (V in %)	3.18	3.23	4.15	2.77	2.91	3.11
	THD (I in %)	4.27	3.90	4.25	2.93	3.04	3.23
	Power (W)	103.58	207.09	502.60	999.20	1512.60	2006.90
	Power (VA)	103.65	207.13	502.70	999.20	1512.60	2006.90
Rated Output Efficiency (%)	55.96	71.65	85.95	89.04	89.75	89.27	88.11
Overall Efficiency (%) (25 -100% Load)	88.50						
No-Load loss (W)	48.09V 1.60A = 76.94W						
Standby loss (W)	48.19V 0.138A =6.65W						
Note:	The above readings are taken at an ambient temperature of 25°C ± 2°C						

Efficiency Testing

Attachment-1: Photo Document

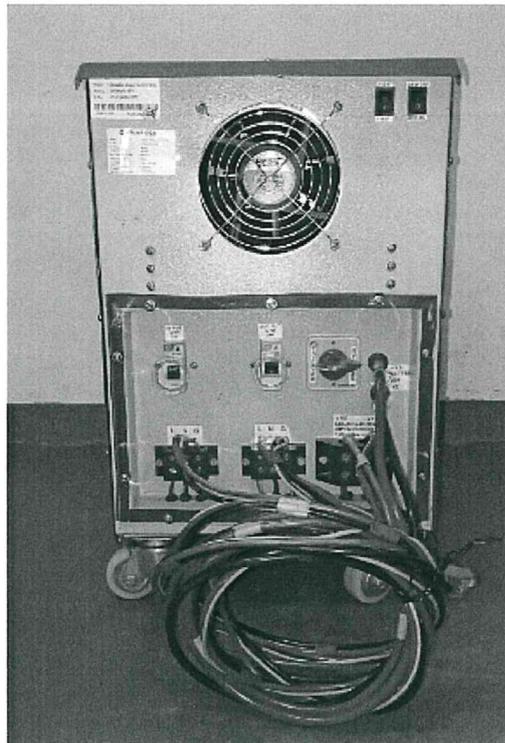


Overall View

Efficiency Testing



Front View



Rear View

\* End of Report \*