Prüfbericht - Nr.: *Test Report No.:*	**19630481 001**		**Seite 1 von 6** *Page 1 of 6*
Auftraggeber: *Client:*	**Solar Idea Pvt. Ltd.** 8-2-277/A/7, Plot No.126, Road No.2, Banjara Hills, Hyderabad – 500034, Telangana, India		
Gegenstand der Prüfung: *Test item:*	Classic Solar Power Conditioning Unit with inbuilt MPPT charge Controller		
Bezeichnung: *Identification:*	3000VA	**Serien-Nr.:** *Serial No.:*	121505001812
Wareneingangs-Nr.: *Receipt No.:*	1803110293	**Eingangsdatum:** *Date of receipt:*	2015.12.22
Prüfort: *Testing location:*	**TÜV Rheinland (India) Pvt. Ltd.** Plot No.17B, Electronic City Phase II Industrial Area, Hosur Road Bangalore - 560 100, Karnataka, India		
Prüfgrundlage: *Test specification:*	Rated Output Efficiency measurement with Resistive load as per table 1 of IEC 61683:1999 as per customer's requirement.		
Prüfergebnis: *Test Result:*	Refer section " Summary of testing"		
Prüflaboratorium: *Testing Laboratory:*	**TÜV Rheinland (India) Pvt. Ltd.** Plot No.17B, Electronic City Phase II Industrial Area, Hosur Road Bangalore - 560 100, Karnataka, India		

geprüft/*tested by:*			**kontrolliert**/*reviewed by:*		
2016.01.27	Manjunath.K / Sr. Engineer		2016.01.27	Kamalaksha CS / Sr. Manager	
Datum *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*	**Datum** *Date*	**Name/Stellung** *Name/Position*	**Unterschrift** *Signature*

Sonstiges/*Other Aspects:*

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

Abkürzungen:	***P(ass)***	=	***entspricht Prüfgrundlage***	***Abbreviations:***	***P(ass)***	=	***passed***
	F(ail)	=	***entspricht nicht Prüfgrundlage***		***F(ail)***	=	***failed***
	N/A	=	***nicht anwendbar***		***N/A***	=	***not applicable***
	N/T	=	***nicht getestet***		***N/T***	=	***not tested***

TEST REPORT
EFFICIENCY TESTING

Report reference No ..... :	19630481 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)	
Testing Laboratory Name ..... :	TÜV Rheinland (India) Pvt. Ltd.	
Address..... :	Plot No.17B, Electronic City Phase II Industrial Area, Hosur Road Bangalore - 560 100, Karnataka, India	
Applicant's Name..... :	Solar Idea Pvt. Ltd.	
Address..... :	8-2-277/A/7, Plot No.126, Road No.2, Banjara Hills, Hyderabad – 500034, Telangana, India	
Test specification ..... :		
Standard ..... :	IEC 61683:1999 as per customer's requirement.	
Test procedure..... :	QMA 37.501.03	
Non-standard test method ..... :	N/A	
Test Report Form No..... :	TUVR_EFF_R1	
TRF originator..... :	TUVR	
Master TRF..... :	2009.08.20	

Test item description..... :	Classic Solar Power Conditioning Unit with inbuilt MPPT charge Controller	
Manufacturer..... :	Solar Idea Pvt. Ltd.	
Model and/or type reference..... :	3000VA	
Serial number..... :	121505001812	
Rating(s) ..... :	RATING	:3kVA/3kW
	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	:	Classic Solar PCU with inbuilt MPPT charge controller
SL.No	:	121505001812
RATING	:	3KVA/3KW
BATTERY	:	48VDC
OUT PUT VOLTAGE	:	230VAC ± 1%
FREQUENCY	:	50Hz
AC MAINS	:	120 - 300VAC
MPPT VOLTAGE	:	<80VDC
CURRENT	:	30Amps
Manufactured Month	:	Dec 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

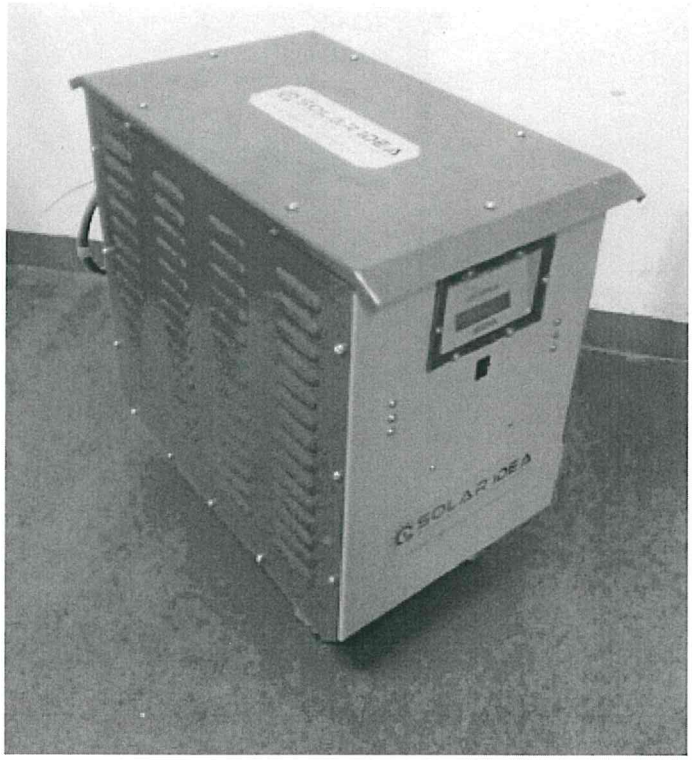
Efficiency Testing

Summary of testing:

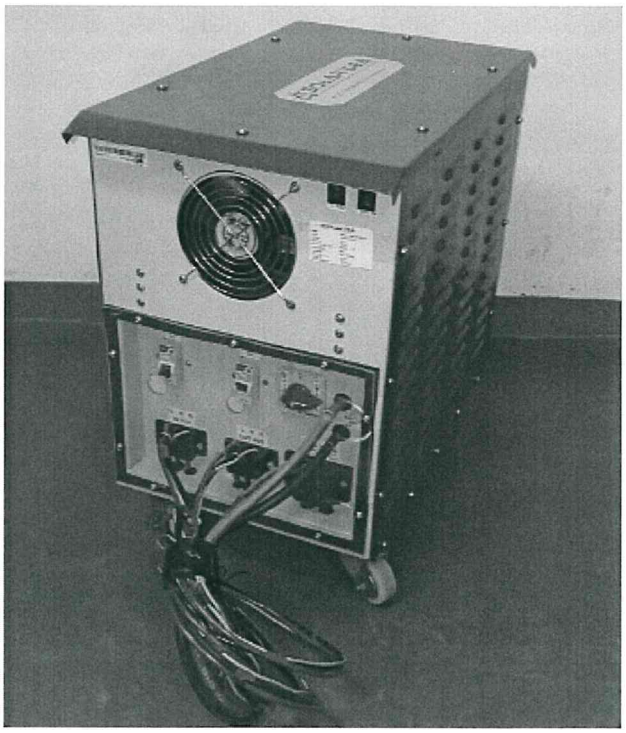
Table 1								
Model/Type		3000VA						
Sl. No.:		121505701812						
Load type:		Resistive load						
Load (%)		5	10	25	50	75	100	120
Actual load (%)		5.00	9.95	24.92	50.16	75.18	100.23	120.56
DC Input Voltage (V)		48.20	48.03	48.03	48.08	48.00	48.10	48.13
DC Input Current (A)		4.78	7.92	17.58	34.34	51.78	69.48	83.50
DC Input Power (W)		230.40	380.40	844.37	1651.07	2485.44	3341.99	4018.86
Output	Frequency(Hz)	49.81	49.81	49.81	49.81	49.81	49.81	49.81
	Voltage (V)	233.37	234.16	233.97	235.95	235.94	237.92	238.14
	Current (A)	0.64	1.27	3.19	6.37	9.55	12.63	15.18
	Power Factor	1.00	0.999	1.000	1.000	1.000	1.000	1.00
	THD (V in %)	3.02	3.16	3.96	3.11	3.34	3.88	4.25
	THD (I in %)	3.64	3.48	4.04	3.19	3.48	4.00	4.36
	Power (W)	150.06	298.36	747.50	1504.80	2255.30	3006.90	3616.90
	Power (VA)	150.12	298.39	747.50	1504.80	2255.30	3006.90	3616.90
Rated Output Efficiency (%)		65.13	78.43	88.53	91.14	90.74	89.97	90.00
Overall Efficiency (%) (25 -100% Load)		90.09						
No-Load loss		48.10V 1.75A = 84.18W						
Standby loss		48.04V 0.119A =5.71W						
Note: The above readings are taken at an ambient temperature of 25°C ± 2°C								

Efficiency Testing

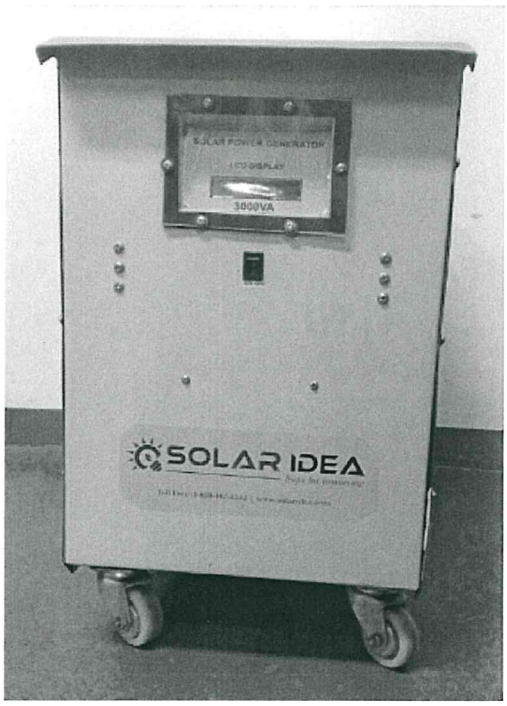
Attachment-1: Photo Document



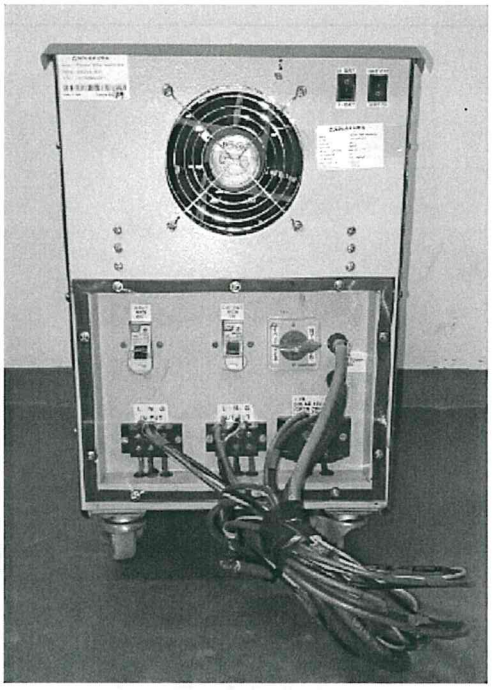
Overall View



Efficiency Testing



Front View



Rear View

* End of Report *