

### INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	90VAC~264 VAC	I/P: TESTING O/P: RCP-1000 UNIT Ta: 25°C	25 V~264V	P
			I/P: LOW-LINE-3V= 87 V HIGH-LINE+15%=300 V O/P: RCP-1000 UNIT ON: 30 Sec . OFF: 30 Sec 10MIN ( AC POWER ON/OFF NO DAMAGE )	TEST: OK	
2	INPUT FREQUENCY RANGE	47HZ ~63 HZ NO DAMAGE OSC	I/P: 90VAC ~ 264 VAC O/P: RCP-1000 UNIT Ta: 25°C	TEST: OK	P
5	INPUT CURRENT	230V/ 0.2 A (TYP) 115V/ 0.35 A (TYP)	I/P: 230 VAC I/P: 115 VAC O/P: RCP-1000 UNIT Ta: 25°C	I = 0.04 A / 230 VAC I = 0.048 A / 115 VAC	P
6	INRUSH CURRENT	230V/ 50 A (TYP) 115V/ 30 A (TYP) COLD START	I/P: 230 VAC I/P: 115 VAC O/P: RCP-1000 UNIT Ta: 25°C	I = 30 A / 230 VAC I = 15 A / 115 VAC	P

### CONTROL FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	REMOTE CONTROL	The controlled RCP-1000 unit can be turned ON/OFF on the front panel for RCP-MU	I/P: 230 VAC O/P: RCP-1000 UNIT Ta: 25°C	OK	p
2	VOLTAGE TRIM	Output voltage of the controlled RCP-1000 unit and be trimmed by 10% on the front panel of RCP-MU	I/P: 230 VAC O/P: RCP-1000 UNIT Ta: 25°C	12V=10.1 V~13.6 V 24V=18.5 V~26.7 V 48V=38.3 V~53.6 V 66V=53.6 V~73.3 V	p

## TYPICAL USER MANUAL

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT								
1	Monitoring Input	RCP-1U Address dip switch setting 	I/P: 230 VAC O/P: RCP-1000 UNIT Ta:25°C	OK	P								
2	Alarm Signal Relays Contact	<table border="1"> <thead> <tr> <th>Function</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>AC Fail</td> <td>When input AC fail, relay open, LED lights</td> </tr> <tr> <td>DC Fail</td> <td>When output DC fail, relay open, LED lights</td> </tr> <tr> <td>Temp Trip</td> <td>When temperature exceed the limit of temperature, relay open, LED lights</td> </tr> </tbody> </table>	Function	Description	AC Fail	When input AC fail, relay open, LED lights	DC Fail	When output DC fail, relay open, LED lights	Temp Trip	When temperature exceed the limit of temperature, relay open, LED lights	I/P: 230 VAC O/P: RCP-1000 UNIT Ta:25°C	OK	P
Function	Description												
AC Fail	When input AC fail, relay open, LED lights												
DC Fail	When output DC fail, relay open, LED lights												
Temp Trip	When temperature exceed the limit of temperature, relay open, LED lights												
3	Mode Select Switch	To get better display resolution, the correct output voltage of RCP-1000 that is monitored should be chosen. The factory original setting is for 48V models. 	I/P: 230 VAC O/P: RCP-1000 UNIT Ta:25°C	OK	P								
4	Voltage Adjust	Power device voltage can not be adjusted.  Power device voltage can be adjust independently by VRs. 	I/P: 230 VAC O/P: RCP-1000 UNIT Ta:25°C	OK	P								

### 7 Segment Display - LED / Relay TEST :

Normal condition :

TEST CONDITION	PSU AC IN OFF	PSU AC IN ON	RESULT
PSU SWITCH OFF			Ok
PSU SWITCH ON			Ok

Abnormal condition

TEST CONDITION	OTP	Output Shorting	RESULT
PSU SWITCH ON & PSU AC IN ON			ok

Note : ○ LED DARK : OK      ☐ : Relay short  
 ● LED LIGHTS : FAIL      ☐ : Relay open

**DIGITAL METER TEST :**

**TEST CONDITION : INPUT VOLTAGE:230VAC**

POWER UNIT	Module	TEST CONDITION	output voltage on the display	DMM voltage measurement	output current on the display	DMM current measurement	internal temperature on the display	Digital thermometer measurement	VERDICT
RCP-1000-12	A	NO LOAD	12.1V	12.07V	0A	0A	35.5°C	35.7°C	OK
		50% LOAD	12.3V	12.06V	29.8A	30.7A	35.5°C	35.8°C	OK
		100% LOAD	12.5V	12.05V	60.1A	61.6A	34.8°C	35.3°C	OK
	B	NO LOAD	12.1V	12.07V	0A	0A	31°C	30.9°C	OK
		50% LOAD	12.4V	12.06V	29.8A	30.6A	30.6°C	30.7°C	OK
		100% LOAD	12.5V	12.05V	60.1A	61.5A	29.9°C	29.8°C	OK
	C	NO LOAD	12.1V	12.07V	0A	0A	28.7°C	28.7°C	OK
		50% LOAD	12.4V	12.06V	29.8A	30.6A	29.1°C	29.4°C	OK
		100% LOAD	12.5V	12.05V	60.1A	61.4A	31.4°C	30.3°C	OK
RCP-1000-24	A	NO LOAD	23.9V	24.11V	0A	0A	35.9°C	35.3°C	OK
		50% LOAD	24.2V	24.11V	19.8A	20.3A	36.3°C	35.5°C	OK
		100% LOAD	24.2V	24.1V	40.5A	40.9A	36.7°C	35.8°C	OK
	B	NO LOAD	23.9V	24.11V	0A	0A	27.6°C	27.7°C	OK
		50% LOAD	24.1V	24.11V	19.6A	20.3A	28°C	28.1°C	OK
		100% LOAD	24.2V	24.11V	40.5A	40.7A	30.6°C	30.7°C	OK
	C	NO LOAD	23.9V	24.12V	0A	0A	32.5°C	31.7°C	OK
		50% LOAD	24.2V	24.11V	19.8A	20.2A	32.1°C	31.4°C	OK
		100% LOAD	24.2V	24.11V	40.5A	40.7A	31.4°C	30.3°C	OK
RCP-1000-48	A	NO LOAD	47.8V	48.2V	0A	0A	34.8°C	34.9°C	OK
		50% LOAD	48.1V	48.19V	10.3A	10.7A	34.8°C	34.9°C	OK
		100% LOAD	47.8V-48.3V	48.18V	20.8A	21.6A	34.8°C	34.8°C	OK
	B	NO LOAD	48.1V	48.13V	0A	0A	31.8°C	32.9°C	OK
		50% LOAD	48.3V	48.13V	10.2A	10.7A	32.1°C	32.6°C	OK
		100% LOAD	48.3V-48.6V	48.12V	20.7A	21.6A	32.1°C	32.7°C	OK
	C	NO LOAD	47.8V	48.13V	0A	0A	31.4°C	32.4°C	OK
		50% LOAD	48.1V	48.13V	10.3A	10.8A	31.4°C	32.3°C	OK
		100% LOAD	47.8V-48.3V	48.12V	20.6A	21.6A	30.2°C	31.8°C	OK
RCP-1000-66	A	NO LOAD	65.6V	66.14V	0A	0A	31.4°C	31.9°C	OK
		50% LOAD	65.6V	66.14V	7.8A	7.5A	30.1°C	31.5°C	OK
		100% LOAD	65.6V-65.9V	66.14V	15.2A	15.3A	30.2°C	30.6°C	OK
	B	NO LOAD	65.6V	66.16V	0A	0A	29.9°C	29°C	OK
		50% LOAD	65.6V	66.16V	7.8A	7.5A	30.2°C	29.4°C	OK
		100% LOAD	65.6V-65.9V	66.15V	15.2A	15.3A	31.8°C	30.9°C	OK
	C	NO LOAD	65.6V	66.17V	0A	0A	33.3°C	33.3°C	OK
		50% LOAD	65.6V	66.16V	7.8A	7.6A	32.9°C	32.5°C	OK
		100% LOAD	65.6V-65.9V	66.15V	15.2A	15.4A	33.3°C	33°C	OK

**NOTE: output voltage/ current /internal temperature on the display. For tolerance range, please refer to specification of RCP-1000.**

## ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL : RCP-MU 1. HIGH AMBIENT BURN-IN : 2.5 HRS I/P: 230VAC O/P: RCP-1000-48*3PCS Ta= 61 °C			P
2	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P: 230 VAC O/P: RCP-1000-48*3PCS Ta= -20 °C	TEST : OK	P
3	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 60 °C NO DAMAGE	I/P: 272 VAC O/P: RCP-1000-48*3PCS Ta= 60 °C HUMIDITY= 95 %R.H	TEST : OK	P
4	VIBRATION TEST	1 Carton & 1 Set (1) Waveform: Sine Wave (2) Frequency:10~500Hz (3) Sweep Time:10min/sweep cycle (4) Acceleration:2G (5) Test Time:1 hour in each axis (X.Y.Z) (6) Ta:25°C		TEST : OK	P

### SAFETY TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	WITHSTAND VOLTAGE	I/P-O/P: 3 KVAC/min I/P-FG: 1.5 KVAC/min O/P-FG: 0.5 KVAC/min	I/P-O/P: 3.6 KVAC/min I/P-FG: 1.8 KVAC/min O/P-FG: 0.6 KVAC/min Ta:25°C	I/P-O/P: 1.26 mA I/P-FG: 0.85 mA O/P-FG: 3.41 mA NO DAMAGE	P
2	ISOLATION RESISTANCE	I/P-O/P:500VDC>100MΩ I/P-FG: 500VDC>100MΩ O/P-FG:500VDC>100MΩ	I/P-O/P: 500 VDC I/P-FG: 500 VDC O/P-FG: 500 VDC Ta:25°C/70%RH	I/P-O/P: 1.5 GΩ I/P-FG: 1.1 GΩ O/P-FG: 7.4 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta:25°C / 70%RH	18 mΩ	P

### E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	PASS	P
2	CONDUCTION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
3	RADIATION	EN55022 CLASS B	I/P: 230 VAC (50HZ) O/P:FULL LOAD Ta:25°C	PASS Test by certified Lab	P
4	E.S.D	EN61000-4-2 LIGHT INDUSTRY AIR:8KV / Contact:4KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
5	E.F.T	EN61000-4-4 LIGHT INDUSTRY INPUT: 1KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
6	SURGE	IEC61000-4-5 LIGHT INDUSTRY L-N :1KV L,N-PE:2KV	I/P: 230 VAC/50HZ O/P:FULL LOAD Ta:25°C	CRITERIA A	P
7	Test by certified Lab & Test Report Prepare				

### M.T.B.F & LIFE CYCLE CALCULATION

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	CAPACITOR LIFE CYCLE	SUPPOSE C105 IS THE MOST CRITICAL COMPONENT I/P: 230VAC O/P: RCP-1000-48*3PCS Ta= 25 °C LIFE TIME= 1182279 HRS I/P: 230VAC O/P: RCP-1000-48*3PCS Ta= 60 °C LIFE TIME= 104510 HRS			P

### COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor ( D to S) or (C to E) <b>Peak Voltage</b>	Q2 Rated TIP122 : 100V 5A	I/P:High-Line +3V = 267 V O/P: (1) RCP-1000 UNIT Ta:25°C	(1) 7.7 V	P



DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2008/4/18	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG
2008/7/15	PRODUCT SAMPLE W0806A33	PASS	SANFORD SU	VINCENT TSENG
2008/8/15	PRODUCT SAMPLE W0807D48	PASS	SANFORD SU	VINCENT TSENG

2003/12/12 A50-F023