Features :

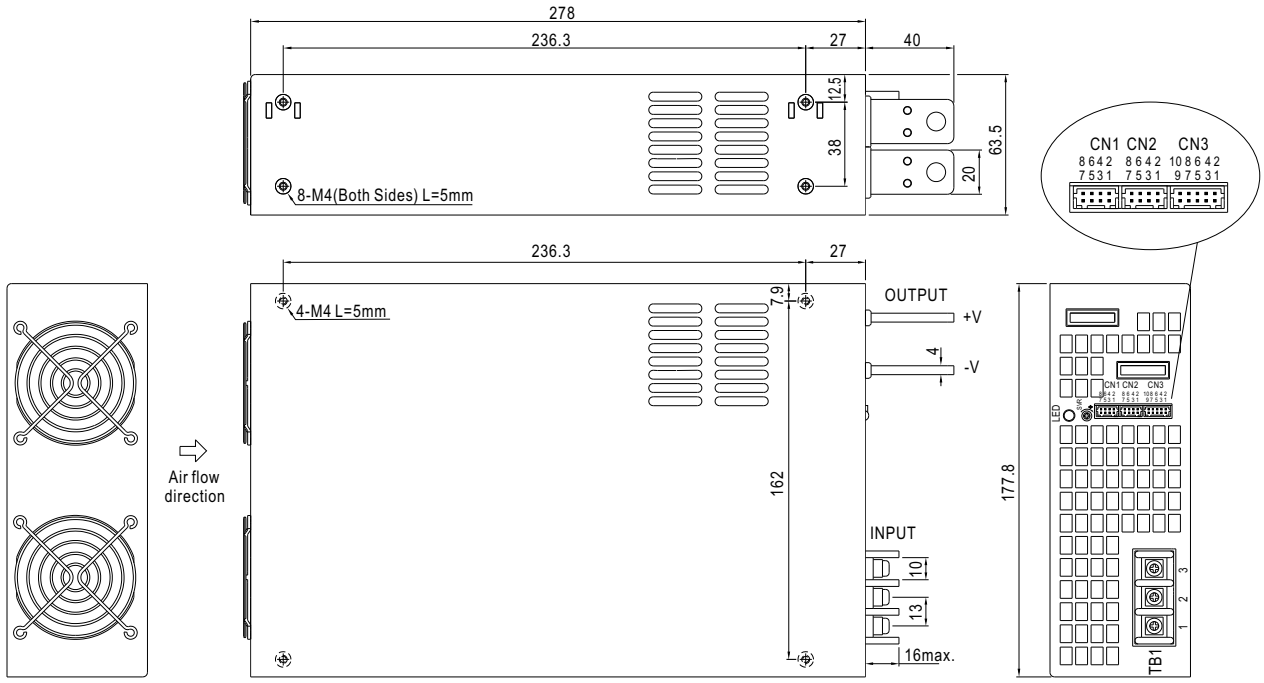
- AC input 180 ~ 264VAC
- AC input active surge current limiting
- High efficiency up to 90%
- Built-in active PFC function,PF>0.95
- Protections: Short circuit / Overload / Over voltage / Over temperature / Fan alarm
- Forced air cooling by built-in DC with fan speed control function
- Output voltage can be trimmed between 20~110% of the rated output voltage
- High power density 15.6W/inch^3
- Current sharing up to 3 units
- Alarm signal output (relay contact and TTL signal)
- Built-in 12V/0.1A auxiliary output for remote control
- Built-in remote ON-OFF control
- Built-in remote sense function
- 3 years warranty

SPECIFICATION

MODEL		RSP-3000-12	RSP-3000-24	RSP-3000-48
OUTPUT	DC VOLTAGE	12V	24V	48V
	RATED CURRENT	200A	125A	62.5A
	CURRENT RANGE	0 ~ 200A	0 ~ 125A	0 ~ 62.5A
	RATED POWER	2400W	3000W	3000W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p
	VOLTAGE ADJ. RANGE	10.8 ~ 13.2V	22 ~ 28V	43 ~ 56V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	1000ms, 80ms at full load		
	HOLD UP TIME (Typ.)	10ms at full load		
INPUT	VOLTAGE RANGE	180 ~ 264VAC 254 ~ 370VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	0.95/230VAC at full load		
	EFFICIENCY (Typ.)	86%	90%	90.5%
	AC CURRENT (Typ.)	20A/180VAC 16A/230VAC		
	INRUSH CURRENT (Typ.)	60A/230VAC		
	LEAKAGE CURRENT	<2.0mA / 240VAC		
PROTECTION	OVERLOAD	100 ~ 110% rated output power		
		User adjustable continuous constant current limiting or constant current limiting with delay shutdown after 5 seconds, re-power on to recover		
	OVER VOLTAGE	13.8 ~ 16.8V	28.8 ~ 33.6V	57.6 ~ 67.2V
		Protection type : Shut down o/p voltage, re-power on to recover		
	OVER TEMPERATURE	90℃±5℃(12V), 110℃±5℃(24V), 105℃±5℃(48V) (TSW1: detect on heatsink of power transistor)		
		90℃±5℃(12V), 85℃±5℃(24V), 75℃±5℃(48V) (TSW2 : detect on heatsink of o/p diode)		
		Protection type : Shut down o/p voltage, recovers automatically after temperature goes down		
FUNCTION	AUXILIARY POWER(AUX)	12V@0.1A(Only for Remote ON/OFF control)		
	REMOTE ON/OFF CONTROL	Please see the Function Manual		
	ALARM SIGNAL OUTPUT	Please see the Function Manual		
	OUTPUT VOLTAGE TRIM	2.4 ~ 13.2V	4.8 ~ 28V	9.6 ~ 56V
	CURRENT SHARING	Please see the Function Manual		
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to output load derating curve)		
	WORKING HUMIDITY	20~90% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH		
	TEMP. COEFFICIENT	±0.05%/℃ (0 ~ 50℃)		
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes		
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved		
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:1.5KVAC O/P-FG:0.5KVAC		
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH		
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22)		
	HARMONIC CURRENT	Compliance to EN61000-3-2,-3		
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A		
OTHERS	MTBF	104.5K hrs min. MIL-HDBK-217F (25℃)		
	DIMENSION	278*177.8*63.5mm (L*W*H)		
	PACKING	4Kg; 4pcs/16Kg/1.89CUFT		
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Tolerance : includes set up tolerance, line regulation and load regulation. 4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.			

■ Mechanical Specification

Case No.982B Unit:mm



AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	AC/L
2	AC/N
3	FG ⏚

Control Pin No. Assignment(CN1,CN2) : HRS DF11-8DP-2DS or equivalent

Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	RCG	5,7	-S	HRS DF11-8DS or equivalent	HRS DF11-**SC or equivalent
2	RC	6	CS(Current Share)		
3	PV	8	+S		
4	PS				

RCG: Remote ON/OFF Ground
RC : Remote ON/OFF
PV :Output Voltage External Control
PS : Reference Voltage Terminal
-S : -Remote Sensing
CS: Load Share
+S: +Remote Sensing

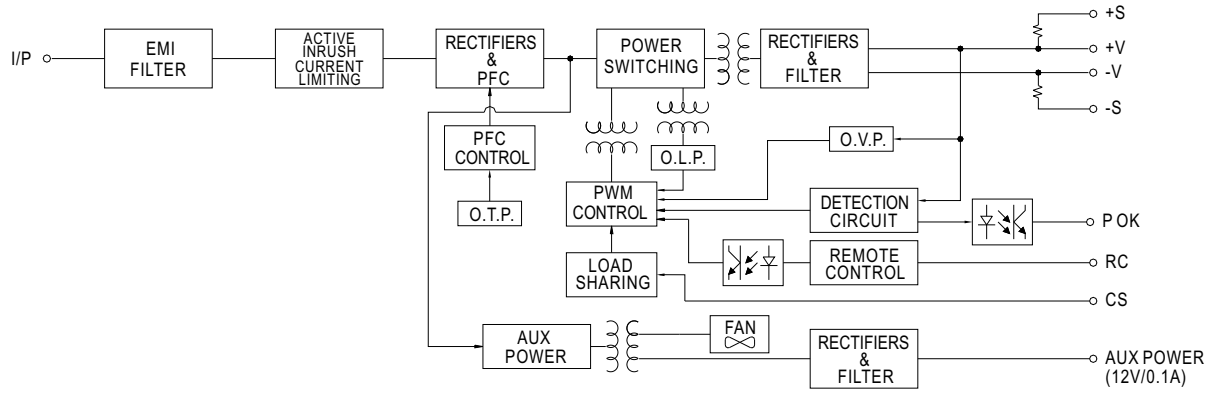
Control Pin No. Assignment(CN3) : HRS DF11-10DP-2DS or equivalent

Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment	Mating Housing	Terminal
1	P OK GND	4	P OK2	7	AUXG	10	OL-SD	HRS DF11-10DS or equivalent	HRS DF11-**SC or equivalent
2	P OK	5	RCG	8	AUX				
3	P OK GND2	6	RC	9	OLP				

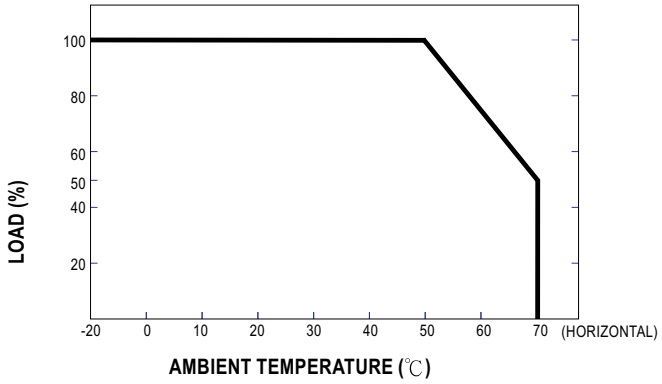
P OK GND: Power OK Ground
P OK: Power OK Signal (Relay Contact)
P OK2: Power OK Signal (TTL Signal)
RCG: Remote ON/OFF Ground
RC: Remote ON/OFF
AUXG: Auxiliary Ground
AUX: Auxiliary Output
OLP: OLP/OL-SD:OLP mode select

■ Block Diagram

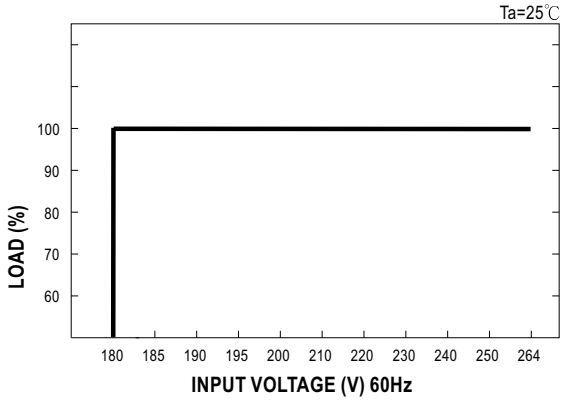
PFC fosc : 88KHz
PWM fosc : 100KHz



■ Derating Curve



■ Static Characteristics



■ Function Manual

1.Remote ON/OFF

(1)Remote ON/OFF control becomes available by applying voltage in CN1 & CN2 & CN3.

(2)Table 1.1 shows the specification of Remote ON/OFF function.

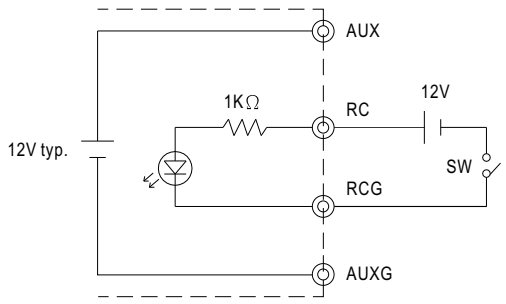
(3)Fig.1.2 shows the example to connect Remote ON/OFF control function.

Table 1.1 Specification of Remote ON/OFF

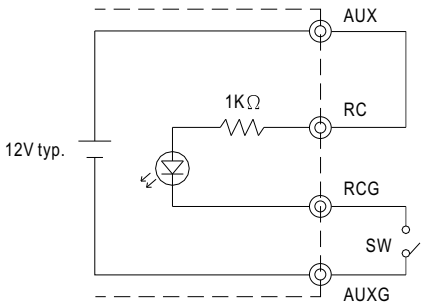
Connection Method		Fig. 1.2(A)	Fig. 1.2(B)	Fig. 1.2(C)
SW Logic	Output on	SW Open	SW Open	SW Close
	Output off	SW Close	SW Close	SW Open

Fig.1.2 Examples of connecting remote ON/OFF

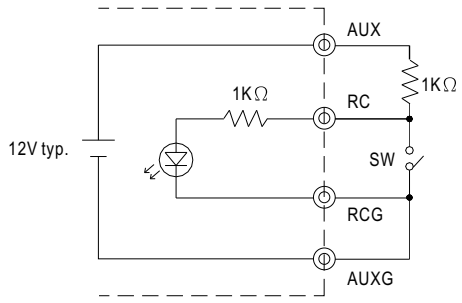
(A)Using external voltage source



(B)Using internal 12V auxiliary output



(C)Using internal 12V auxiliary output



2.Alarm Signal Output

(1)Alarm signal is sent out through "P OK" & "P OK GND" and P OK2 & P OK GND2 pins.

(2)An external voltage source is required for this function.

(3)Table 2.1 explain the alarm function built-in the power supply.

Function	Description	Output of alarm(P OK, Relay Contact)	Output of alarm(P OK2, TTL Signal)
P OK	The signal is "Low" when the power supply is above 80% of the rated output voltage-Power OK	Low (0.5V max at 500mA)	Low (0.5V max at 10mA)
	The signal turns to be "High" when the power supply is under 80% of the rated output voltage-Power Fail	High or open (External applied voltage, 500mA max.)	High or open (External applied voltage, 10mA max.)

Table 2.1 Explanation of alarm

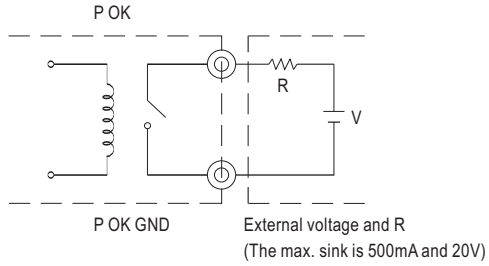


Fig. 2.2 Internal circuit of P OK (Relay, total is 10W)

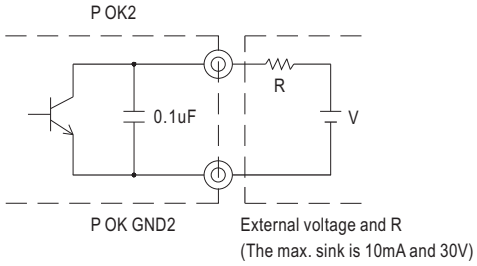


Fig. 2.3 Internal circuit of P OK2 (Open collector method)

3.Output Voltage TRIM

(1)Connecting an external DC source between PV and-S on CN1 or CN2 that is shown in Fig. 3.1.

(2)Adjustment of output voltage is possible between 20~110%(Typ.) of the rated output which is shown in Fig. 3.2. Reducing output current is required when the output voltage is trimmed up.

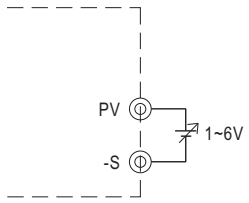


Fig. 3.1 Add on 1~6V external voltage

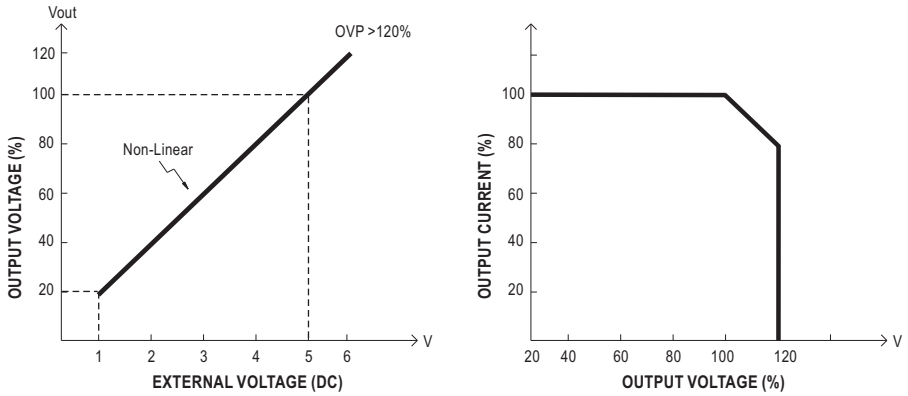


Fig. 3.2 Output voltage trimming

4.Current Sharing

(1)Parallel operation is available by connecting the units shown as below
(+S,-S and CS are connected mutually in parallel):

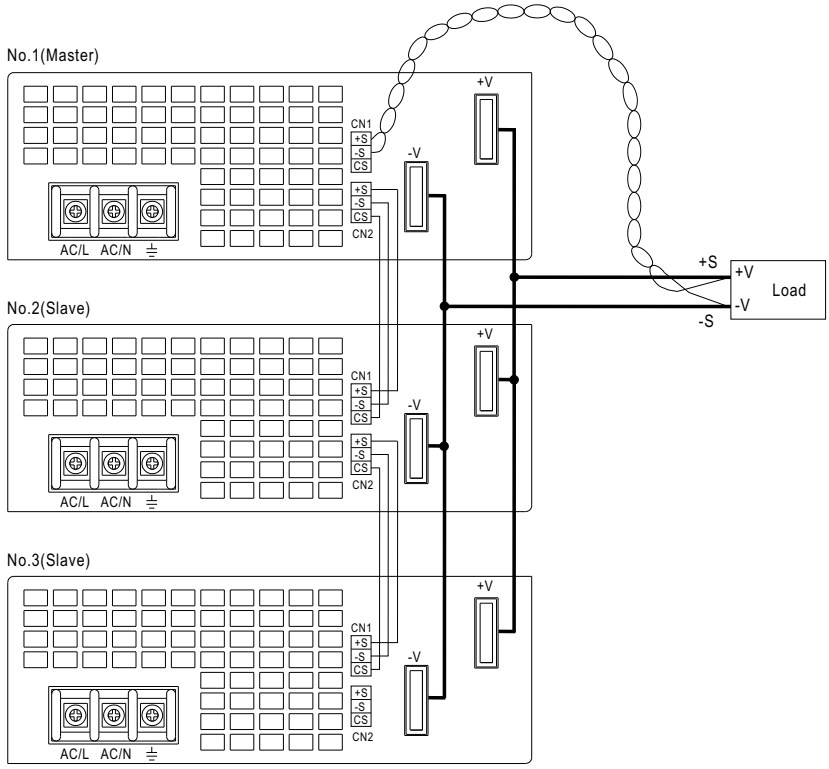
(2)The voltage difference among each output should be minimized that less than ±2% is required.

(3)The total output current must not exceed the value determined by the following equation.
(Output current at parallel operation)=(The rated current per unit) x (Number of unit) x 0.9

(4) In parallel operation 3 units is the maximum, please consult the manufacturer for other applications.

(5) When remote sensing is used in parallel operation, the sensing wire must be connected only to the master unit.

(6) Wires of remote sensing should be kept at least 10 cm from input wires.



(7) Under parallel operation, the O.L.P. function can only choose "constant current limiting with delay shut down".

(8) Under parallel operation, the "output voltage trim" function is not available.

5.Select O.L.P mode

(1)Remove the shorting connector on CN3 that is shown in Fig 5.1, the O.L.P. mode will be "continuous constant current limiting".

(2)Insert the shorting connector on CN3 that is shown in Fig 5.2, the O.L.P. mode will be "constant current limiting with delay shutdown after 5 seconds, re-power on to recover.

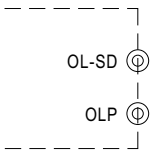


Fig. 5.1 Remove the CN3
OLP Mode : constant current limiting

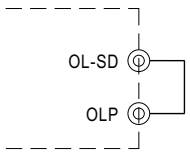
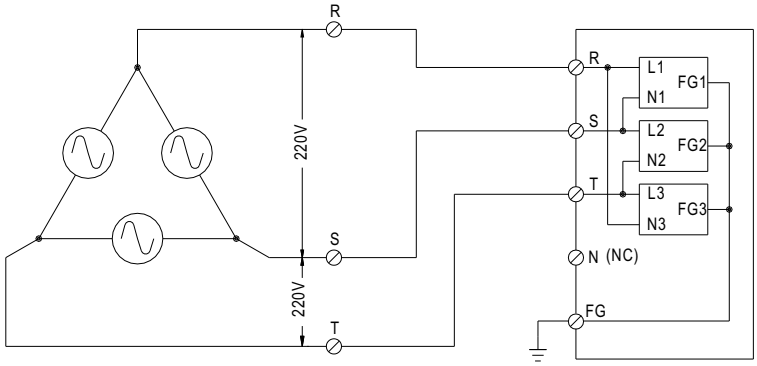


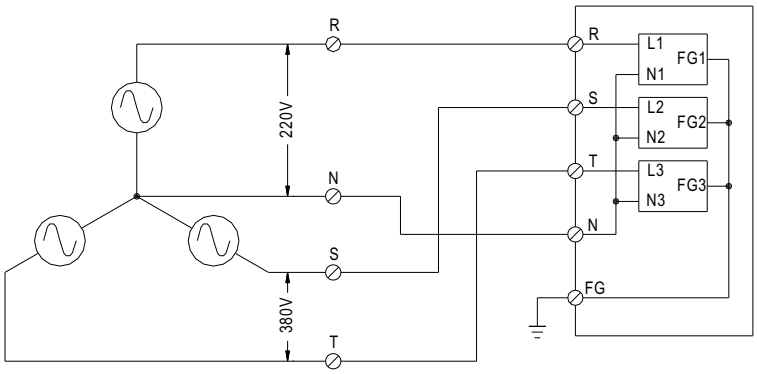
Fig. 5.2 Insert the CN3
OLP Mode : constant current limiting with delay shutdown after 5 seconds

6.Three Phase Connect

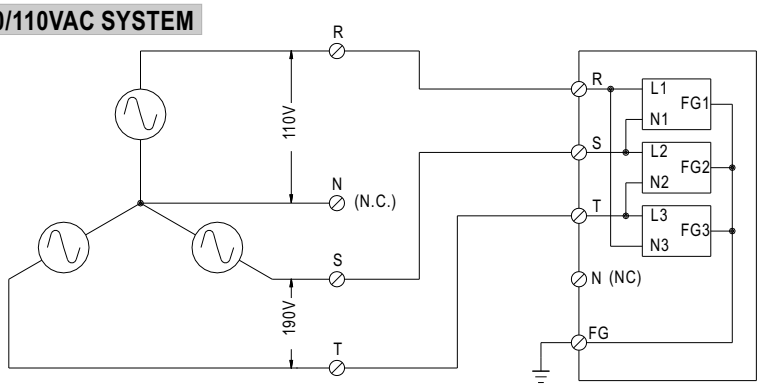
■ FIG. A: 3 ϕ 3W 220VAC SYSTEM (STANDARD MODEL FOR STOCK)



■ FIG. B: 3 ϕ 4W 220/380VAC SYSTEM



■ FIG. C: 3 ϕ 4W 190/110VAC SYSTEM



MODEL：RSP-3000-24

OUTPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	RIPPLE & NOISE	V1： 150 mVp-p (Max)	I/P： 230VAC O/P：FULL LOAD Ta：25℃	V1： 116 mVp-p (Max)	P
2	OUTPUT VOLTAGE ADJUST RANGE	CH1： 22 V~ 28 V	I/P： 230 VAC O/P：MIN LOAD Ta：25℃	20.88 V~ 28.59 V/ 230 VAC 20.87 V~ 28.59 V/180 VAC	P
3	OUTPUT VOLTAGE TOLERANCE	V1： 1 %~ -1 % (Max)	I/P： 180VAC / 264 VAC O/P：FULL/ MIN LOAD Ta：25℃	V1： 0.04 %~ -0.04 %	P
4	LINE REGULATION	V1： 0.5 %~ -0.5 % (Max)	I/P：180VAC ~ 264 VAC O/P：FULL LOAD Ta：25℃	V1： 0.03 %~ -0.03 %	P
5	LOAD REGULATION	V1： 0.5 %~ -0.5 % (Max)	I/P： 230 VAC O/P：FULL ~MIN LOAD Ta：25℃	V1： 0.03 %~ -0.03 %	P
6	SET UP TIME	230VAC： 1000 ms (Max)	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	230VAC/ 524 ms	P
7	RISE TIME	230VAC： 80 ms (Max)	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	230VAC/ 53 ms ms	P
8	HOLD UP TIME	230VAC： 10 ms (TYP)	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	230VAC/ 30 ms	P
9	OVER/UNDERSHOOT TEST	< ±5%	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	TEST： < 5 %	P
10	DYNAMIC LOAD	V1： 2400 mVp-p	I/P： 230 VAC O/P：FULL /Min LOAD 90%DUTY/ 1KHZ Ta：25℃	230 mVp-p	P

INPUT FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	INPUT VOLTAGE RANGE	180VAC~264 VAC	I/P：TESTING O/P：FULL LOAD Ta：25℃	173V~264V	P
			I/P： LOW-LINE-3V= 177 V HIGH-LINE+15%=300 V O/P：FULL/MIN LOAD 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： 180 VAC ~ 264 VAC O/P：FULL~MIN LOAD Ta：25℃	TEST： OK	P
3	POWER FACTOR	0.95 / 230 VAC(TYP)	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	PF= 0.991 / 230 VAC	P
4	EFFICIENCY	89% (TYP)	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	90.3 %	P
5	INPUT CURRENT	230V/ 16 A (TYP) 180V/ 20 A (TYP)	I/P： 230 VAC I/P： 180 VAC O/P：FULL LOAD Ta：25℃	I = 14.69 A/ 230 VAC I = 18.75 A/ 180 VAC	P
6	INRUSH CURRENT	230V/ 60 A (TYP) COLD START	I/P： 230 VAC O/P：FULL LOAD Ta：25℃	I = 52 A/ 230 VAC	P
7	LEAKAGE CURRENT	< 2 mA / 240 VAC	I/P： 264 VAC O/P：Min LOAD Ta：25℃	L-FG： 1.1 mA N-FG： 1.1 mA	P

PROTECTION FUNCTION TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	OVER LOAD PROTECTION	100%~112 %	I/P： 230 VAC O/P：TESTING Ta：25℃	104.8 %/ 230 VAC Constant Current Limiting	P
2	OVER VOLTAGE PROTECTION	CH1：28.8V~ 33.6V	I/P： 230 VAC O/P：MIN LOAD Ta：25℃	31.84 V/ 230 VAC Shut down Re- power ON	P
3	OVER TEMPERATURE PROTECTION	SPEC： TSW1： 110 ± 5℃ O.T.P detect on heatsink of power transistor TSW2： 85 ± 5℃ O.T.P detect on heatsink of O/P diode NO DAMAGE	I/P： 230 VAC O/P：FULL LOAD	O.T.P. Active Shut down o/p voltage，recovers automatically after temperature goes down	P
4	SHORT PROTECTION	SHORT EVERY OUTPUT 1 HOUR NO DAMAGE	I/P： 264 VAC O/P：FULL LOAD Ta：25℃	NO DAMAGE CN3 PIN9-10 SHORT: Shut down Re-power ON CN3 PIN9-10 OPEN: Current Limit	P

CONTROL FUNCTION TEST

<table>
<tr><th>NO</th><th>TEST ITEM</th><th>SPECICATION</th><th>TEST CONDITION</th><th>RESULT</th><th>VERDICT</th></tr>
<tr><td>1</td><td>AUXILIARY POWER (AUX)</td><td>12V @ 0.1A
(Only for Remote ON/OFF control)</td><td>I/P： 230 VAC
O/P：FULL LOAD
Ta：25℃</td><td>11.859V</td><td>P</td></tr>
<tr><td>2</td><td>REMOTE CONTROL</td><td>Table1.1 Fig1.2(a)(b)(c)
Specification of Remote ON/OFF</td><td>I/P： 230 VAC
O/P：FULL LOAD
Ta：25℃</td><td>
<table>
<tr><td colspan="2">Connection Method</td><td>Fig1.2(a)</td><td>Fig1.2(b)</td><td>Fig1.2(c)</td></tr>
<tr><td rowspan="2">SW Logic</td><td>Output on</td><td>SW Open</td><td>SW Open</td><td>SW Close</td></tr>
<tr><td>Output off</td><td>SW Close</td><td>SW Close</td><td>SW Open</td></tr>
</table>
</td><td>P</td></tr>
<tr><td>3</td><td>ALARM SIGNAL OUTPUT</td><td>Table2.1 Explanation of alarm
<table>
<tr><td>Function</td><td>Description</td></tr>
<tr><td>P OK</td><td>The signal is "Low" when the power supply is
80% of the rated output voltage-Power OK</td></tr>
<tr><td></td><td>The signal turns to be "High" when the power supply
is under 80% of the rated output voltage-Power Fail</td></tr>
</table>
</td><td>I/P： 230 VAC
O/P：FULL LOAD
Ta：25℃</td><td>
<table>
<tr><td>Output of alarm
(P OK, relay contact)</td><td>Output of alarm
(P OK2, TTL Signal)</td></tr>
<tr><td>Low
(0.5V max at 500mA)</td><td>Low
(0.5V max at 10mA)</td></tr>
<tr><td>High or open
(External applied voltage 500mA max.)</td><td>High or open
(External applied voltage 10mA max.)</td></tr>
</table>
</td><td>P</td></tr>
<tr><td>4</td><td>OUTPUT VOLTAGE TRIM</td><td>(1) Adjustment of output voltage is possible between 20~110%(Typ.) of the rated output which is shown in Fig. 3.1
(2) Connecting a resistor externally between PV and-S on CN1 or CN2 that is shown in Fig. 3.2</td><td>I/P： 230 VAC
O/P：NOL LOAD
Ta：25℃</td><td>PV=1V , Vout= 4.821 V
PV=3V , Vout= 14.422 V
PV=5V , Vout= 24.37 V
PV=5.83V,Vout= 28.03 V</td><td>P</td></tr>
<tr><td>5</td><td>CURRENT SHARING</td><td>PSU1-PSU2 < 10%</td><td>I/P： 230 VAC
O/P：90%/50% LOAD
Ta：25℃</td><td>O/P：90% LOAD
PSU1： 112.9A
PSU2： 110.9A
PSU3： 114.2A

O/P：50%
PSU1： 61.3A
PSU2： 61.2A
PSU3： 65.5A</td><td>P</td></tr>
<tr><td>6</td><td>REMOTE SENSE</td><td>>0.25V</td><td>I/P： 230 VAC
O/P：FULL LOAD
Ta：25℃</td><td>> 0.25 V</td><td>P</td></tr>
<tr><td>7</td><td>FAN SPEED CONTROL</td><td>-------</td><td>I/P： 230 VAC
O/P：FULL /NOLOAD
Ta：25℃</td><td>NO LOAD Fan Voltage= 7.370 V
100% LOAD Fan Voltage= 12.522 V</td><td>P</td></tr>
</table>

ENVIRONMENT TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	TEMPERATURE RISE TEST	MODEL：RSP-3000-24 1. ROOM AMBIENT BURN-IN： 2 HRS I/P： 230VAC O/P： FULL LOAD Ta= 45.4 ℃ 2. HIGH AMBIENT BURN-IN： 2 HRS I/P： 230VAC O/P： FULL LOAD Ta= 51.2 ℃			P

NO	Position	P/N	ROOM AMBIENT Ta= 45.4 ℃	HIGH AMBIENT Ta= 51.2 ℃
1	LF1	TR-807	89.8℃	96.8℃
2	BD1	25A/600V D25XB60	86.5℃	94.2℃
3	T1 3-4	TF-905	51.4℃	57.8℃
4	L1	TF-1804	80.3℃	88.4℃
5	T1 1-2	TF-905	49.0℃	55.5℃
6	D2	STTH3006DPI 30A/600V	72.5℃	77.0℃
7	Q5	TK40J60T 40A/600V	61.3℃	70.1℃
8	C7	470u/420V 105℃ 30*45 HU	64.7℃	70.7℃
9	U900	UCC2818	60.8℃	67.3℃
10	C83	10u/50V UL10Kh 5*11 YXM	67.4℃	80.4℃
11	U1	TNY280	76.0℃	82.3℃
12	C82	220u/25V UL7Kh 8*11.5 KY	72.3℃	74.3℃
13	ZD80	TVS P6KE200A	77.9℃	84.4℃
14	T2	TF-1806A	81.9℃	88.0℃
15	C306	47u/25V UL10Kh YXM	72.9℃	80.3℃
16	RG1	RG L7812CV 1.0A/12V	74.2℃	84.4℃
17	U223	UCC2895DW	63.1℃	70.1℃
18	T6	TF-1813	72.7℃	80.7℃
19	T7	TF-1813	71.3℃	78.9℃
20	Q51	FCH47N60F 47A/600V	82.4℃	87.8℃
21	D980	BYC8-600 8A/600V	66.7℃	73.4℃
22	L2	TF-1805	90.6℃	97.6℃
23	D981	BYC8-600 8A/600V	75.9℃	79.0℃
24	T5	TF-1811	99.9℃	106.2℃
25	D100	60CPQ150 60A/150V	67.0℃	72.1℃
26	D104	60CPQ150 60A/151V	78.8℃	84.1℃
27	L101	TF1808	69.7℃	76.4℃
28	C110	1500u/35V UL10Kh ZLH	70.4℃	78.0℃
29	C114	1500u/35V UL10Kh ZLH	75.0℃	81.4℃
30	C116	1500u/35V UL10Kh ZLH	73.2℃	79.9℃
31	C118	1500u/35V UL10Kh ZLH	71.8℃	78.2℃
32	C253	22uF/16V 20% 6032(C)	68.6℃	75.3℃
33	C257	22uF/16V 20% 6033(C)	68.5℃	75.6℃
34	C510	47u/25V UL10Kh 5*11 YXM	73.3℃	81.5℃
35	C512	47u/25V UL10Kh 5*12 YXM	73.6℃	82.2℃
36	Q530	STP60NF06L 60A/60V	78.1℃	85.0℃
37	C701	330u/25V UL8Kh ZLH	49.4℃	55.5℃
38	Q702	TIP42C -5A/100V	50.8℃	57.1℃
39	TSW2	ST-22 85℃	79.7℃	86.0℃
40	U530	PIC16F684	67.0℃	73.4℃
41	TSW1	ST-22 110℃	85.3℃	90.5℃

2	OVER LOAD BURN-IN TEST	NO DAMAGE 1 HOUR (MIN)	I/P： 230 VAC O/P： 104 % LOAD Ta：25℃	TEST：OK	P
3	LOW TEMPERATURE TURN ON TEST	TURN ON AFTER 2 HOUR	I/P：230 VAC O/P：100% LOAD Ta= -25℃	TEST：OK	P
4	HIGH HUMIDITY HIGH TEMPERATURE HIGH VOLTAGE TURN ON TEST	AFTER 12 HOURS IN CHAMBER ON CONTROL 50 ℃ NO DAMAGE	I/P： 272 VAC O/P：FULL LOAD Ta= 50 ℃ HUMIDITY= 95 %R.H	TEST：OK	P
5	TEMPERATURE COEFFICIENT	± 0.05 %(0~50℃)	I/P： 230 VAC O/P：FULL LOAD	± 0.003 %(0~50℃)	P
6	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℃		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℃	I/P-O/P： 13.96 mA I/P-FG： 10.33 mA O/P-FG： 7.81 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℃/70%RH	I/P-O/P： 1.33 GΩ I/P-FG： 1.54 GΩ O/P-FG： 2.21 GΩ NO DAMAGE	P
3	GROUNDING CONTINUITY	FG(PE) TO CHASSIS OR TRACE < 100 mΩ	40 A / 2min Ta：25℃ / 70%RH	20 mΩ	P
4	APPROVAL	TUV： Certificate NO ： UL： File NO ：			N/A

E.M.C TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	HARMONIC	EN61000-3-2 CLASS A CLASS D	I/P： 230 VAC/50HZ O/P：FULL LOAD Ta：25℃	PASS	P
2	CONDUCTION	EN55022 EN55011 CLASS B	I/P： 230 VAC (50HZ) O/P：FULL/50% LOAD Ta：25℃	PASS Test by certified Lab	P
3	RADIATION	EN55022 EN55011 CLASS A	I/P： 230 VAC (50HZ) O/P：FULL LOAD Ta：25℃	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℃	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℃	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℃	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	RSP-3000-24：SUPPOSE C116 IS THE MOST CRITICAL COMPONENT I/P： 230VAC O/P：FULL LOAD Ta= 25 ℃ LIFE TIME= 448730 HRS I/P： 230VAC O/P：FULL LOAD Ta= 50 ℃ LIFE TIME= 74527 HRS			P
2	MTBF	MIL-HDBK-217F NOTICES2 PARTS COUNT TOTAL FAILURE RATE： 104.5K HRS			P

COMPONENT STRESS TEST

NO	TEST ITEM	SPECIFICATION	TEST CONDITION	RESULT	VERDICT
1	Power Transistor (D to S) or (C to E) Peak Voltage	Q50 Rated FCH47N60F 47A/600V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on (2) Output Short Ta：25℃	(1) 494 V (2) 484 V	P
2	Diode Peak Voltage	D100 Rated 60CPQ150 60A/150V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on (2)Output Short Ta：25℃	(1) 93.2 V (2) 95.2 V	P
3	Input Capacitor Voltage	C5 Rated 470u/420V 105℃ 30*45 HU	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta：25℃	(1) 393 V (2) 392.8 V (3) 392.8 V	P
4	Control IC Voltage Test	U223 Rated UCC2895DW：11.8V~17V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on /Off (2) Min load Turn on /Off (3)Full Load /Min load Change Ta：25℃	(1) 12.888 V (2) 12.886 V (3) 12.886 V	P
5	Power Transistor (D to S) or (C to E) Peak Voltage	Q5 Rated TK40J60T 40A/600V	I/P：High-Line +3V = 267 V O/P：(1)Full Load Turn on (2) Output Short Ta：25℃	(1) 506 V (2) 430 V	P

DATE	SAMPLE	TEST RESULT	TESTER	APPROVAL
2008/12/3	RD SAMPLE	PASS	SANFORD SU	VINCENT TSENG
2009/3/11	PRODUCT SAMPLE W0812E52	PASS	SANFORD SU	VINCENT TSENG
2009/6/10	PRODUCT SAMPLE W0904A38	PASS	SANFORD SU	VINCENT TSENG

2003/12/12 A50-F023