

**PART NUMBER:** VPSP-500 Series

**DESCRIPTION:** metal enclosed switching power supply

**features**

- universal ac input / full range
- built-in active PFC function, PF>0.95
- protections: short circuit / overload / over-voltage / over-temperature
- forced air cooling by built-in dc fan
- current sharing up to 2000W(3+1)
- with power good and fail signal output
- built-in remote ON/OFF control
- built-in remote sense function
- 3 year warranty



SPECIFICATIONS	-5	-12	-13.5	-15	-24	-27	-48
DC output voltage	5V	12V	13.5	15V	24V	27V	48V
output V. tolerance <sup>3</sup>	±2%	±1%	±1%	±1%	±1%	±1%	±1%
output rated current	80A	41.5A	37A	33A	20.8A	18.5A	10.5A
output current range	0~80A	0~41.5A	0~37A	0~33A	0~20.8A	0~18.5A	0~10.5A
DC output power	400W	498W	499.5W	495W	499.2W	499.5W	504W
ripple & noise <sup>2</sup>	100mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p
line regulation	±0.5%	±0.3%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
load regulation	±2%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
efficiency	76%	82%	82%	82%	84%	84%	86%
DC voltage adj.	4.75~5.5V	10~13.2V	12~15V	13.5~18V	20~26.4V	24~30V	41~56V
input voltage range <sup>6</sup>	90~264 V ac, 120~370 V dc						
AC current	7 A/115 V ac, 3.5 A/230 V ac						
inrush current	20 A/115 V ac, 40 A/230 V ac						
leakage current	<1mA/240 V ac						
overload protection	110~125% rated output power type: constant current limiting, recovers automatically after fault condition is removed						
over voltage protection	5.75~6.75V	13.8~16.2V	15.5~18.2V	18~21V	27.6~32.4V	31~36.5V	57.6~67.2V
over temp. protection	RTH2 ≥95°C detect on heatsink of Q1,Q7 power transistor & L3 output choke type: shutdown o/p voltage, recovers automatically after temperature goes down						
temperature coefficient	±0.03% / °C (0~50°C)						
set up, rise, hold up time	1500ms, 50ms, 24ms at full load						
vibration	10~500Hz, 2G 10min./1cycle (1 hour each axes)						
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: 500Vdc / 100M Ohms						
working temp., humidity	-10°C~+60°C (refer to output derating curve), 20%-90% RH						
storage temp., humidity	-20°C~+85°C, 10%~95% RH						
dimensions	278x129x63.5 mm						
safety standards	UL60950-1, TUV EN60950-1 approved						
EMC standards <sup>4</sup>	EN55022 (CISPR22) class B, EN61000-3-(2, 3), EN61000-4-(2, 3, 4, 5, 6, 8, 11), ENV50204, EN55024, light industry level, criteria A						

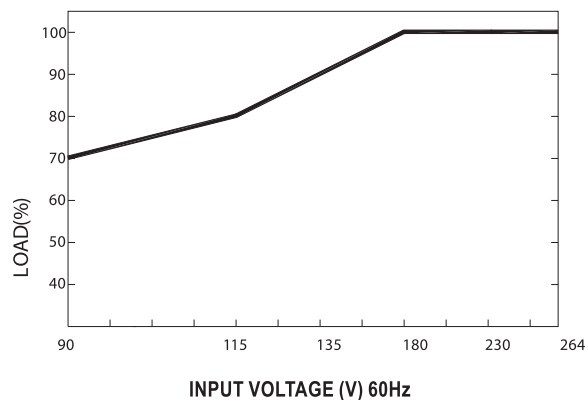
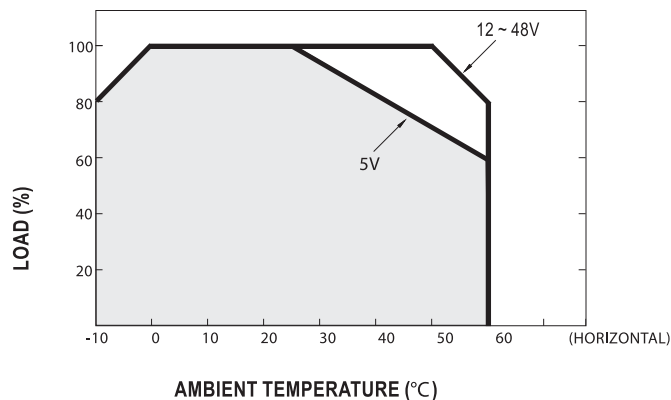
- notes:
1. all parameters are specified at 230VAC input, rated load, 25°C ambient
  2. ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
  3. tolerance : includes set up tolerance, line regulation and load regulation.
  4. the power supply is considered a component which will be installed into final equipment. final equipment must be re-confirmed that it still meets EMC directives.
  5. in parallel connection, maybe only one unit operated, if the total output load less than 5% of rated load condition.
  6. derating may be needed under low input voltages. Please check the derating curve for more details.



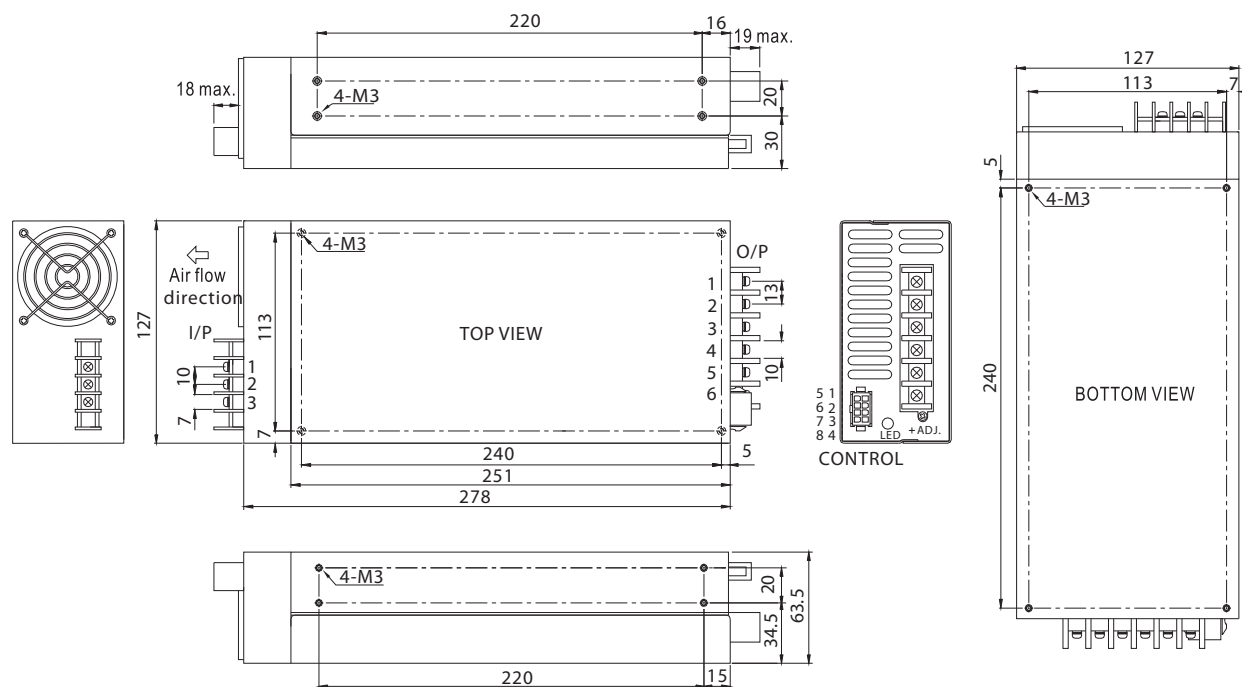
**date** 04/2008

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## OUTPUT DERATING vs INPUT VOLTAGE



### DIMENSIONS (mm)



Pin No.	Assignment
1	AC/L
2	AC/N
3	FG $\frac{1}{2}$

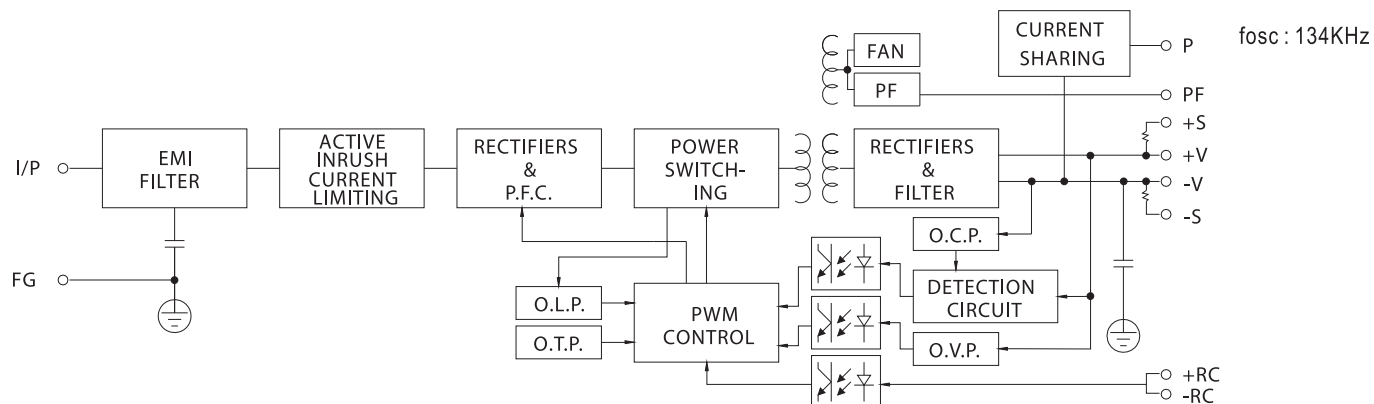
Pin No.	Assignment
1~3	DC OUTPUT +V
4~6	DC OUTPUT -V

Pin No.	Assignment	Pin No.	Assignment	Mating connector	Terminal
1	P(Current share)	5	NC	MOLEX 5557-NR	MOLEX 5557 Female crimp Terminal receptacle
2	-S	6	PF(Power fail signal)		
3	G	7	+S		
4	RC-	8	RC+		

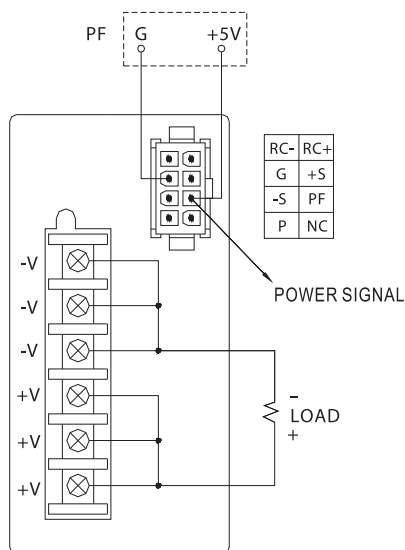
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## BLOCK DIAGRAM

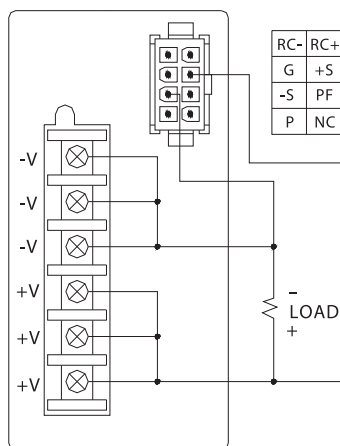


## CONTROL TERMINAL INSTRUCTIONS

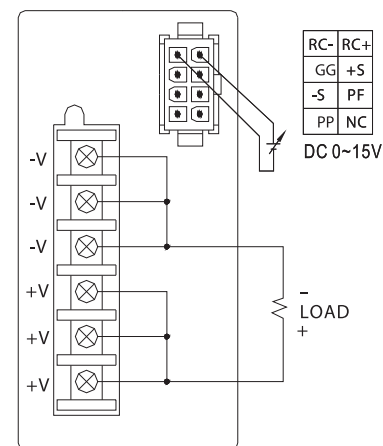


### Power Fail Signal

PF Signal is the voltage difference between "G" and "PF" pin output



### Remote Sensing



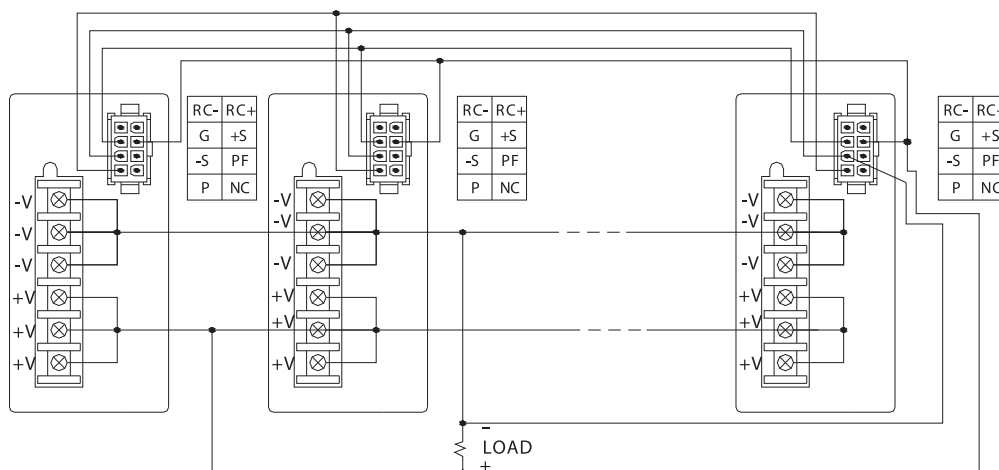
### Remote Control

Power ON: When VRC+, RC-=0 ~ 0.8V or Open  
Power OFF: When VRC+, RC-=4 ~ 10V

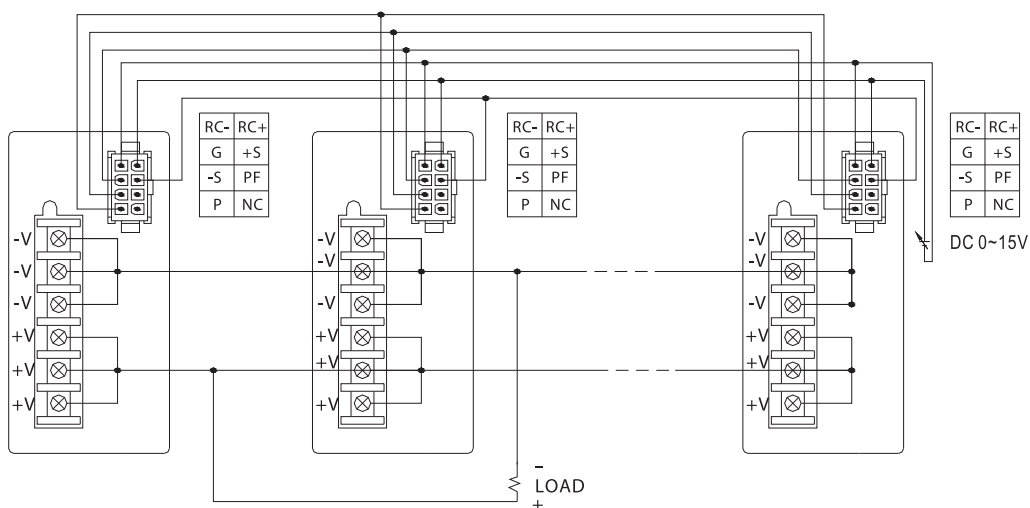
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## PARALLEL OPERATION



Parallel Operation With Remote Sensing



Parallel Operation With Remote Control