

PFC 500W Single Output power supply

UP500 series

Features :

Universal AC input active PFC

Protections: Short circuit / Over load / Over voltage / Over Temp.

All using 105°C long life electrolytic capacitors

High operation temperature up to 60°C

Active AC surge current limiting

Power OK signal

U-bracket low profile: 38mm

Free air convection for 400W and

500W with 23.5CFM forced air

ADC fan supply is provided

High power density 6.4w/in³

Remoter Voltage sense

2 modes Remoter ON/OFF Ctrl. Setup by user

Withstand 2G vibration test

3 years warranty

High efficiency, long life and high reliability



SPECIFICATION

MODEL	UP-500-12	UP-500-15	UP-500-24	UP-500-48	
INPUT	Voltage and Frequency RANGE ²	90 ~ 264VAC 47 ~ 63Hz, or 127 ~ 370VDC			
	AC CURRENT	6 A / 115VAC 3A / 230VAC			
	INRUSH CURRENT(Typ.)	30A / 115VAC 50A / 230VAC			
	LEAKAGE CURRENT	< 2mA / 230VAC			
	EFFICIENCY (Typ.)	90%	90%	90%	91%
OUTPUT	DC VOLTAGE RANGE	12V	15V	24V	48V
	RATED CURRENT	42A	33.5A	21A	10.5A
	CURRENT RANGE	0~33.3A	0~26.7A	0~16.7A	0~8.4A
	Rated Power (23.5CFM FAN)	0~42A	0~33.5A	0~21A	0~10.5A
	Rated Power (convection)	399.6W	400.5W	400.8W	403.2W
	Rated Power (23.5CFM FAN)	504W	502.5W	504W	504W
	VOLTAGE ADJ. RANGE	10.8 ~ 13.2V	13.5 ~ 16.5V	21.6 ~ 26.4V	43.2 ~ 52.8V
	Ripple & Noise (max.) ³	150 mVp-p	150 mVp-p	150 mVp-p	150mVp-p
	VOLTAGE TOLERANCE ⁴	±2.0%			
	Line Regulation	±1.0%			
	Load Regulation	±2.0%			
	Setup, Rise Time	600ms, 30ms at full load			
	Hold Up Time (Typ.)	16ms / 230VAC at full load			
PROTECTION	Over Load	> 105% rated output power Protection type : constant current limiting, output voltage less then 50% rating DC voltage			
	Over Voltage	115% ~ 150% rated output voltage			
	Over Temperature	95°C With N2 sense by T1 core ±5°C, 95°C With TH1 sense near D26 heat sink ±5°C			
ENVIRONMENT	WORKING TEMP.	-20°C ~ +60°C (Refer to output load derating curve)			
	WORKING HUMIDITY	20 ~ 90% R.H non-condensing			
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C 10 ~95% R.H			
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)			
	VIBRATION	10 ~ 500Hz, 2G 10min./1 cycle, period for 60 min. Each along X,Y,Z axes			
SAFETY & EMC	SAFETY STANDARDS	UL 60950-1, 2 n d Edition, TUV EN60950-1 : 2006+A11 Approved			
	WITHSTAND VOLTAGE	I/P - O/P : 4242 DC I/P - FG : 2121 DC 1 minute			
	ISOLATION RESISTANCE	I/P - O/P, I/P - FG, O/P - FG: 100M Ω / 500VDC			
	EMI CONDUCTION & RADIATION	EN55022 : 2006 Class B			
	HARMONIC CURRENT	EN61000-3-2: 2006 Class A, EN61000-3-3: 1995+A1: 2001+A2: 2005			
	EMS IMMUNITY	EN61204-3: 2000, EN55024:1998+A1: 2001+A2: 2003 light industry level, criteria A			
OTHERS	Connection	I/P 3P / 9.5mm terminal block with cover, O/P : 8P/9.5mm terminal block with cover			
	Power OK signal	Open Darin.Max 30Vdc / 0.1A			
	Cooling	Free Air convection for 400W, With23.5CFM Fan for 500W			
	MTBF (MIL-HDBK-217F)	88.188 Khours			
	ON/OFF Remote Control	Two modes setup remote ON/OFF see Function Description of J2			
	Remote Voltage sense	Compensates for wire voltage drop			
	DIMENSION	254x127x38			
PACKING	1.7kg : 12Pcs / 20.4KG				
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47 uf parallel capacitor.</p> <p>3. Tolerance: includes set up tolerance, line regulation and load regulation.</p> <p>4. De-rating may be needed under low input voltages. Please check the de-rating curve for more details.</p>				

Function Description of CN2, CN3

CN2 PIN CONNECTIONS		
1	VS+	Remote Sense VO (+)
2	S GND	Signal Common
3	INH-	Remote ON/OFF Signal (-)
4	N.C	N.C
5	VS-	Remote Sense VO (-)
6	POK	Power OK signal control
7	INH+	Remote ON/OFF Signal (+)
8	VS-	Remote Sense VO (-)

CN3 PIN CONNECTIONS		
1	SGND	Return
2	12V+	FAN Voltage MAX:0.8A

Function Description of J2

1. Remote Control

The PSU can be turned ON/OFF by using the "Remote Control" function.

J2 PIN & CN2 CONNECTIONS		
J2	INH+(7 PIN)/ INH-(3 PIN)	Output Status
Open	SW ON (>2.5V)	ENABLE
Open	SW OFF (<0.8V)	DISABLE
Close	SW ON (>2.5V)	DISABLE
Close	SW OFF (<0.8V)	ENABLE

(Default Setting)

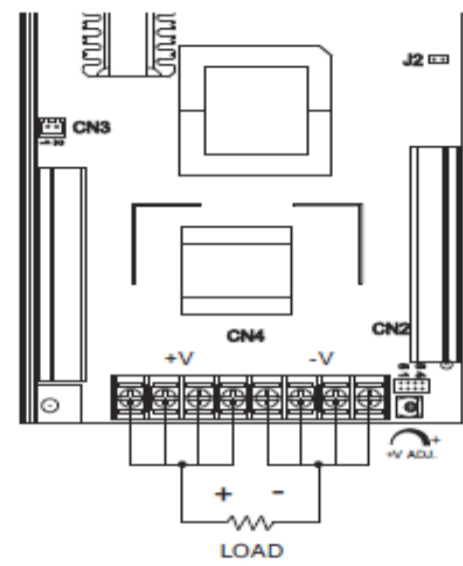
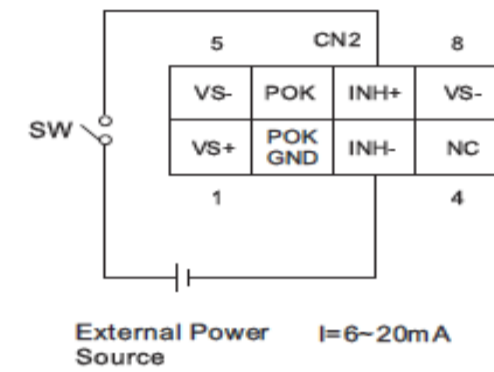


Fig 1.1



Function Description of CN2

2. P-OK CONTROL

POK Signal use open drain MOSFET control
MAX:30Vds,0.1A

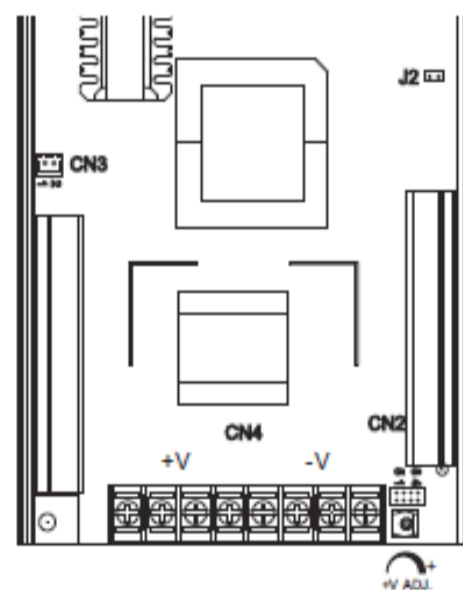
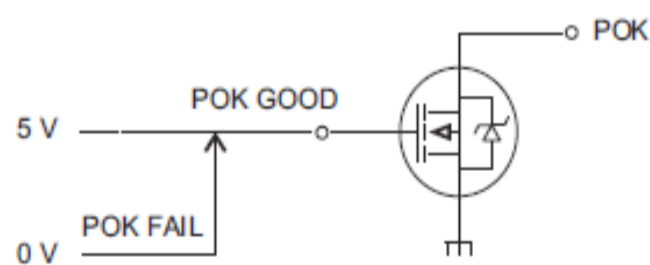
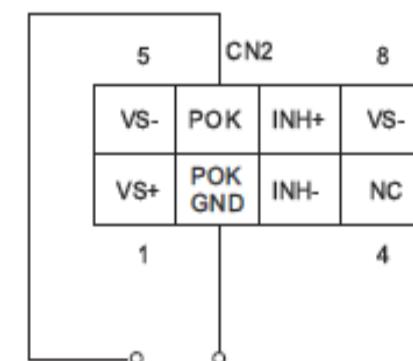


Fig 2.1



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5	VS-	Remote Sense VO (-)
6	POK	Power OK signal control
7	INH+	Remote ON/OFF Signal (+)
8	VS-	Remote Sense VO (-)

CN3 PIN CONNECTIONS		
1	SGND	Return
2	12V+	FAN Voltage MAX:0.8A

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Open	SW OFF (<0.8V)	DISABLE
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Close	SW OFF (<0.8V)	ENABLE

(Default Setting)

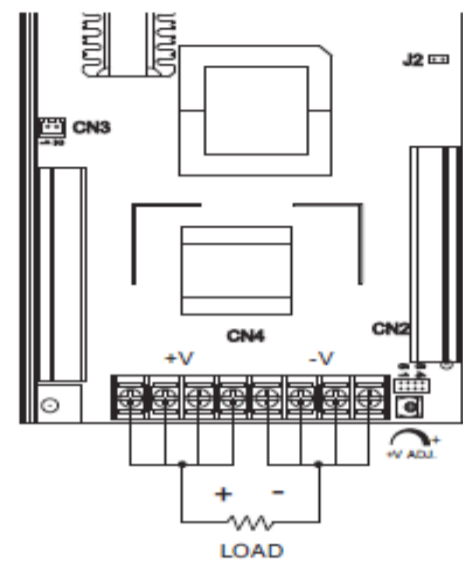
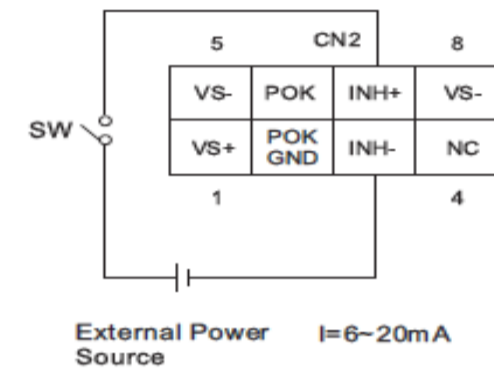


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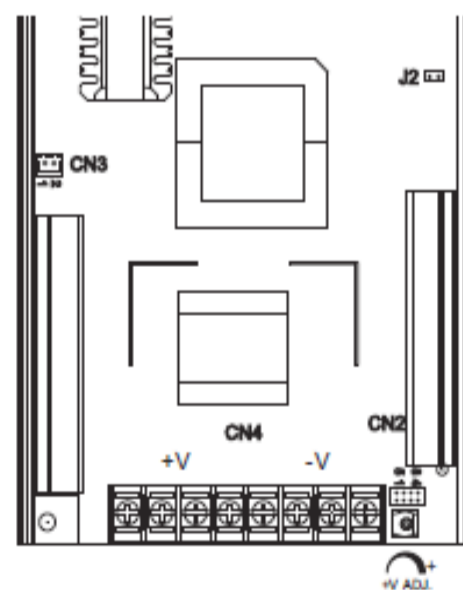
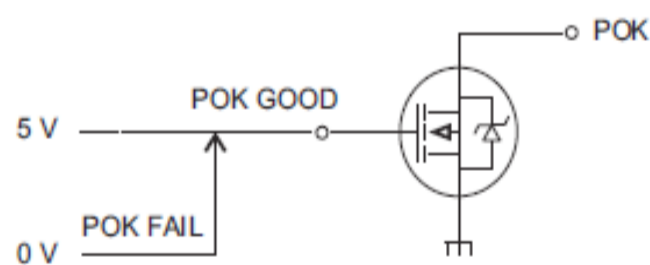
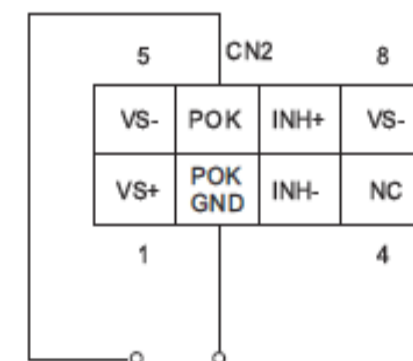


Fig 2.1



3.Remote Sense

The remote sensing compensates voltage drop on the load wiring up to 0.5V.

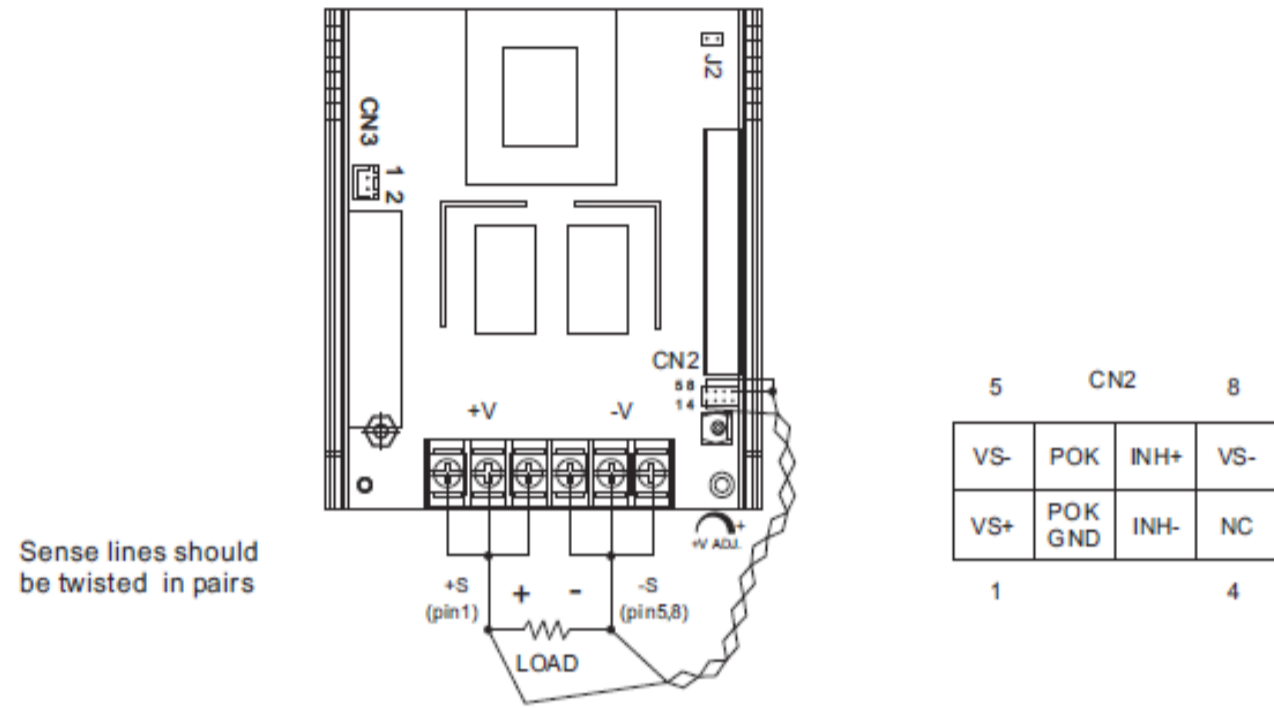


Fig 3.1