

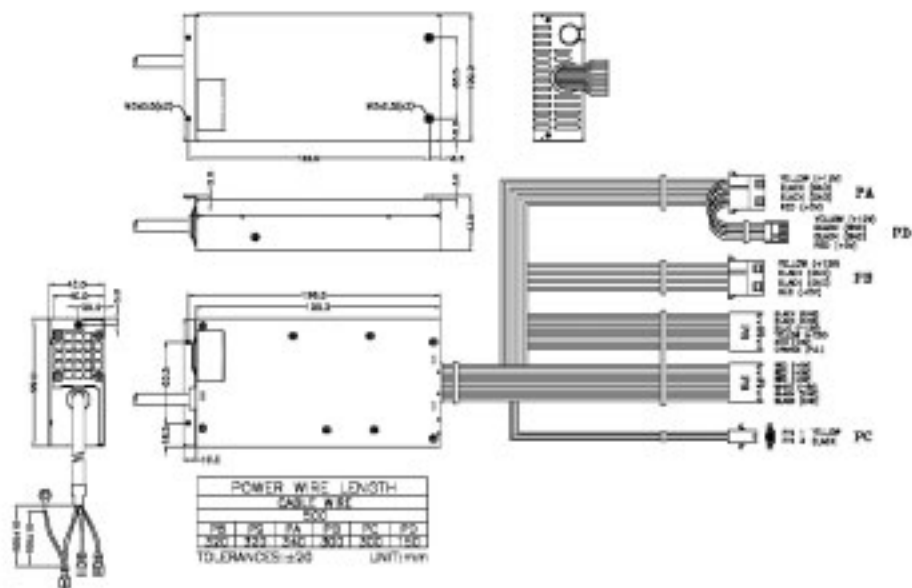
Model OP-20PZ 200 Watt Power Supply

Unit User's Manual

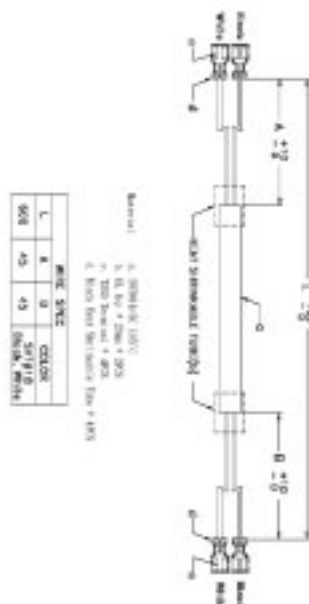
Specifications

Input	AC Input voltage range	100-240 V _{AC} (with ± 10% tolerance)					
	AC Input frequency	60-50 Hz					
	Inrush current	65/130A @cold start for 110/220 V _{AC} (at 25 ambient)					
Output	O/P voltage	+5V	+12V	-5V	-12V	+3.3V	+5V _{SB}
	Min. load current	2.0	1.0	0.1	0.1	1.0	0.1
	Max. load current	16	9	0.2	0.7	14	1.5
	Line regulation	± 50mV	± 100mV	± 50mV	± 120mV	± 50mV	± 50mV
	Load regulation	± 250mV	± 600mV	± 250mV	± 1200mV	± 165mV	± 250mV
	Cross regulation	± 250mV	± 600mV	± 250mV	± 1200mV	± 165mV	± 250mV
	Ripple & Noise	50	120	100	120	60	60
		mVp-p	mVp-p	mVp-p	mVp-p	mVp-p	mVp-p
		Note: Peak to peak with 20MHz bandwidth					
	Over shoot	Any overshoot at turn on or turn off shall be less than 15% of the nominal voltage value.					
Overall Performance	Efficiency	Typical 65% @115V, full load					
	Hold up time	When power shutdown DC output 5V must be maintain 16msec in regulation limit at normal input voltage.					
	Power factor correction	PFC can reach the target of 95% @ 115V, full load, following the standard of IEC 1000-3-2.					
Features	Over power protection	Over power protection at 110% 160% of rated output power .The power supply latches all DC output into a shutdown state.					
	Over voltage protection	If an over voltage fault occurs (internal of the power supply) , the power supply will latch all DC output into a shutdown state before					
		+5V	: 5.6V	6.6V			
		+3.3V	: 3.6V	4.2V			
		+12V	: 13.2V	14.6V			
	Short circuit	A: A short circuit placed on any DC output to DC return shall cause no damage. B: The power supply shall be latched in case any short circuit is taken place at +5V, +3.3V, +12V output. C: The power supply shall be auto-recovered in case any short circuit is taken place at -5V, -12V, +5V _{SB}					
Environmental	Temperature	Operating	0 ~ 40				
Safety standard	Designed to meet standard	UL 1950; TUV EN60950; EN 61000-4-2(ESD) Criterion B, ±4KV by contact, ±8KV by air; EN 61000-4-4(EFT) Criterion B, ±1KV; EN 61000-4-5(SURGE) Criterion B, Line-Line ±1KV, Line-Earth ±2KV.					
EMI standard	Designed to meet standard	FCC part15, CISPR 22(EN 55022)					

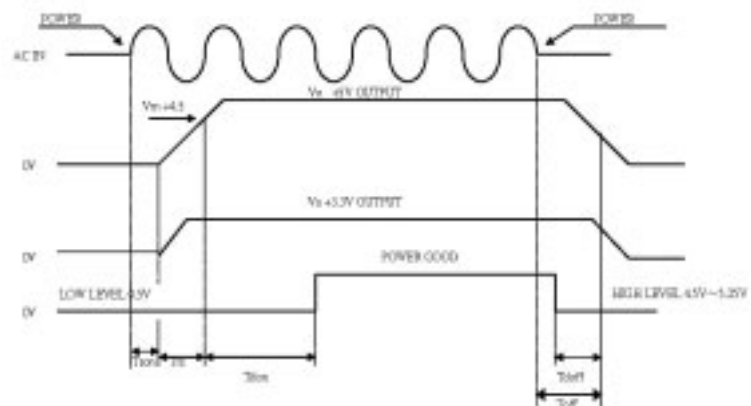
Mechanical and Wiring specifications



AC-Input Cable specifications



Power Supply Timing



Vn	Nominal voltages +5V
Vm	Minimum voltages +4.5V
Va	Nominal voltages +3.3V
T _{on}	Switch on time(500ms. Max)
T _{rs}	+5V rise time (100ms. max.)
T _{den}	Delay turn-on (100ms. < T _{den} < 500ms.)
T _{doff}	Delay turn-off (1 ms. min.)
T _{off}	Hold up time (16ms. min.)

