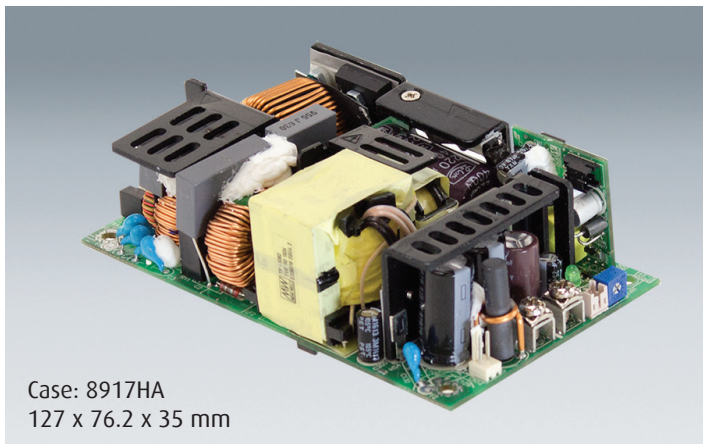


# EPP-400 Series

## 400W Single Output with PFC Function



Case: 8917HA  
127 x 76.2 x 35 mm

### Features

- 5" x 3" miniature size
- Universal AC input / Full range
- Built-in active PFC function
- EMI Class B for both Class I (with FG) and Class II (without FG) configuration
- No load power consumption <0.5W
- High Efficiency up to 94%
- Protections: Short circuit / Overload / Over voltage/ Over Temperature
- Cooling by free air convection for 150W and 400W with 10CFM forced air
- Built-in remote sense function
- LED indicator for power on
- Output 18V available
- Operating Altitude up to 5000 metres
- 3 years warranty



### Specification

INPUT	<b>Voltage</b>	80 ~ 264VAC 113 ~ 370VDC							
	<b>Frequency</b>	47 ~ 63 Hz							
	<b>Power Factor</b>	PF >0.94/230VAC PF>0.98/115 VAC at full load							
	<b>Efficiency</b>	91.5%	92%	93%	93.5%	93%	94%		
	<b>AC Current (Typ.)</b>	4.2A/115VAC		2.1A/230VAC					
	<b>Inrush Current (Typ.)</b>	Cold start 40A/115VAC		80A/230VAC					
	<b>Leakage Current (max)</b>	<0.75mA/240VAC							
OUTPUT	<b>Model Number</b>	<b>EPP-400-12</b>	<b>EPP-400-15</b>	<b>EPP-400-18</b>	<b>EPP-400-24</b>	<b>EPP-400-27</b>	<b>EPP-400-36</b>	<b>EPP-400-48</b>	
	<b>DC Voltage</b>	12V	15V	18V	24V	27V	36V	48V	
	<b>Current</b>	<b>25CFM</b>	33.3A	26.7A	22.3A	16.7A	14.9A	11.2A	8.4A
		<b>Convection</b>	20.8A	16.7A	13.9A	10.5A	9.3A	7A	5.3A
	<b>Rated Power</b>	<b>25CFM</b>	399.6W	400.5W	401.4W	400.8W	402.3W	403.2W	403.2W
		<b>Convection</b>	249.6W	250.5W	250.2W	252W	251.1W	252W	254.4W
	<b>R&amp;N</b>	120mVp-p	150mVp-p	180mVp-p	200mVp-p	200mVp-p	250mVp-p	250mVp-p	
	<b>Voltage Adj. Range</b>	11.4 ~ 12.6V	14.3 ~ 15.8V	17.1 ~ 18.9V	22.8 ~ 25.2V	25.6 ~ 28.4V	34.2 ~ 37.8V	45.6 ~ 50.4V	
	<b>Voltage Tolerance</b>	±3.0%	±3.0%	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	
	<b>Line Regulation</b>	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	<b>Load Regulation</b>	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	
	<b>Setup, Rise Time</b>	1000ms, 30ms/230VAC 1500ms, 30ms/115VAC at full load							
	<b>Hold Up Time</b>	16ms/230VAC 12ms/115VAC at full load							
	PROTECTION	<b>Overload</b>	105 ~ 135% rated output power Protection type: hiccup mode, recovers automatically after fault condition is removed						
<b>Over Voltage</b>		13.2 ~ 15.6V	16.5 ~ 19.5V	16.5 ~ 19.5V	26.4 ~ 31.2V	29.7 ~ 35.1V	39.6 ~ 48.8	52.8 ~ 62.4V	
<b>Over Temperature</b>		Protection type: Shutdown o/p voltage, re-power on to recover Protection type: Shut down o/p voltage, recovers automatically after temperature goes down							
FUNCTION	<b>5V Standby</b>	5VSB: 5V/0.6A without fan, 1A with fan 25CFM; Tolerance ±2% ripple: 120mVp-p (max)							
	<b>Fan Supply</b>	12V@0.5A for driving a fan; tolerance ±10%							
	<b>PS-On Input Signal</b>	Power on: PS-ON= "Hi" or ">2 ~ 5V"; Power off: PS-ON="Low" or "<0 ~ 0.5V"							
ENVIRONMENT	<b>Power Good/ Power Fail</b>	500ms>PG>10ms; The TTL signal goes high with 10ms to 500ms delay after power set up; The TTL signal goes at least 1ms before Vo below 90% of rated value							
	<b>Working Temperature</b>	-30 ~ +70°C (Refer to Derating Curve)							
	<b>Working Humidity</b>	20 ~ 90% RH non-condensing							
	<b>Storage Temperature</b>	-40 ~ +85°C, 10 ~ 95% RH							
	<b>Temp. Coefficient</b>	±0.03%/°C (0-50°C)							
	<b>Operating Altitude</b>	5000 metres							
SAFETY & EMC	<b>Vibration</b>	10 ~ 500Hz, 2G 10 min./1cycle, period for 60min. each along X, Y, Z axes							
	<b>Safety Standards</b>	UL60950-1, TUV EN60950-1, IEC60950-1 approved							
	<b>Withstand Voltage</b>	I/P-O/P: 3KVAC I/P-FG: 2KVAC O/P-FG: 0.5KVAC							
	<b>Isolation Resistance</b>	I/P-O/P I/P-FG:100M Ohms / 500VDC / 25°C / 70% RH							
	<b>EMC Emission</b>	Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3,CCC GB17625.1, GB/T9254, EAC TP TC 020							
OTHERS	<b>EMC Immunity</b>	Compliance to EN61000-4-2,3,4,5,6,8, 11, EN55024, EN61000-6-2, heavy industry level, criteria A, EAC TP TC 020							
	<b>MTBF</b>	194.1K hrs min. MIL-HDBK-217 (25°C)							
	<b>Packing</b>	0.39kg; 36pcs/15Kg/1.03CUFT							

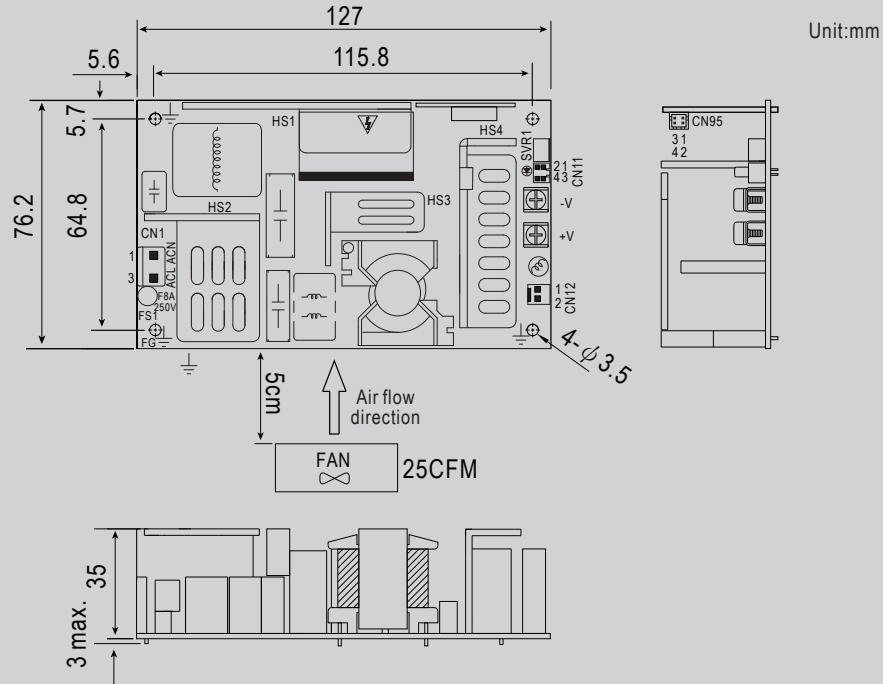
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load, 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation, load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. Touch current was measured from primary input to DC output.
6. The power supply is considered as a component which will be installed into final equipment. All the Class I (with FG) EMC tests are being executed by mounting the unit on a 360mm \* 360mm plate with 1mm of thickness. The Class II (without FG) EMC test is being executed by mounting the unit on a 130mm \* 86.6mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to 'EMI testing of component power supplies'.

# EPP-400 Series

## 400W Single Output with PFC Function



### Mechanical Specification



#### AC Input Connector (CN1) : JST B3P-VH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	AC/N	JST VHR or equivalent	JST SVH-21T-P1.1 or equivalent
2	No Pin		
3	AC/L		

#### DC Output Connector (CN2,CN3)

Pin No.	Assignment	Output Terminals
CN2	-V	M4 Pan HD screw in 2 positions Torque to 8 lbs-in(90cNm)max.
CN3	+V	

#### Function Connector(CN95): TKP DH2L-2X2 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	5VSB	TKP DH2 or equivalent	TKP or equivalent
2,4	DC COM		
3	PS-ON		

#### Function Connector(CN11): TKP DH2I-2X2 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	-S	TKP DH2 or equivalent	TKP or equivalent
2	+S		
3	DC COM		
4	PG		

#### FAN Connector(CN12) : TKP 8812-2 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	DC COM	TKP 2502 or equivalent	TKP 8811 or equivalent
2	+12V		

⏏ Grounding Required

⚠ HS1, HS2, HS3, HS4 can not be shorted

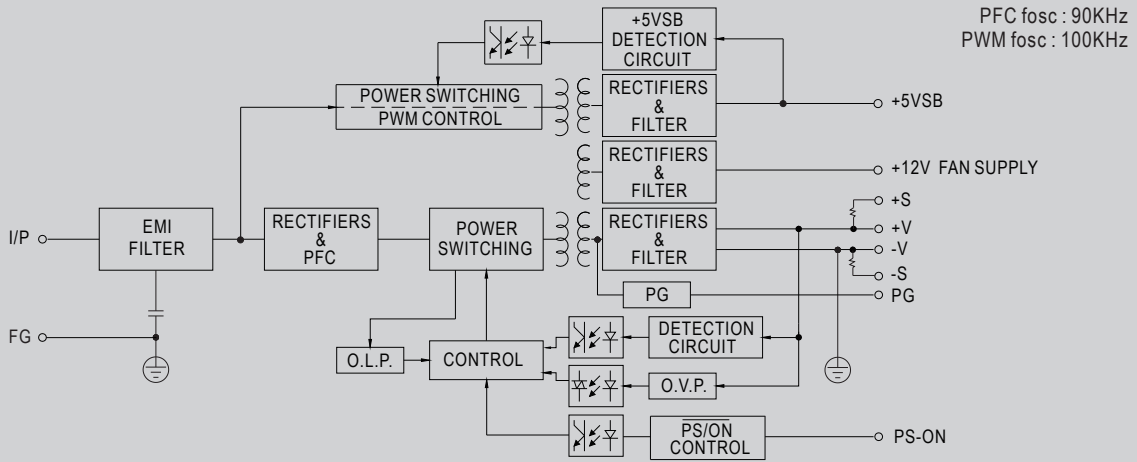
Note: When the input voltage is AC 230V the model delivers EMI Class B for both conducted emission and radiated emission for the power supply, When the input voltage is AC110V the model delivers EMI Class B for conducted emission ,Class A for radiated emission for the power supply.  
It delivers Class A for conduted emission and radiated emission, when configured into Class II (without FG) system.

# EPP-400 Series

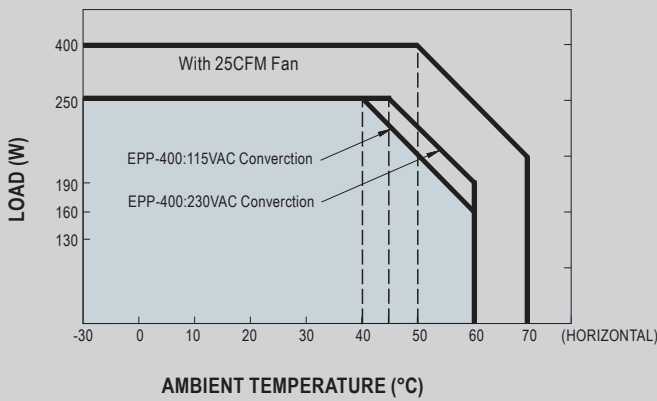
## 400W Single Output with PFC Function



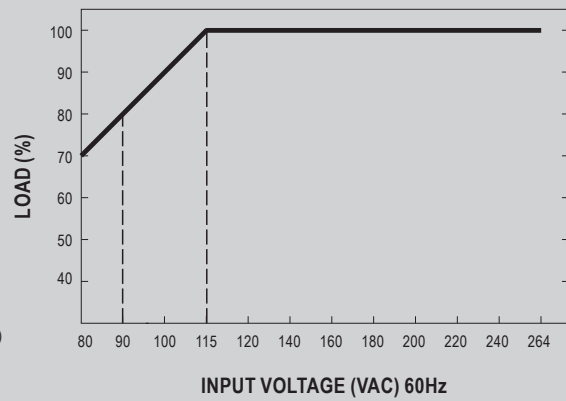
### Block Diagram



### Derating Curve



### Static Characteristics



Without Fan Watt	250W
With Fan Watt	400W