

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### PSE1000-PFC

1000 Watts

**PFC Front End** 

Total Power: 1000 W # of Outputs: Single Output: 390 V



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### **Special Features**

- 1000 W output power
- Unity power factor correction
- 3.5" x 2.4" x 1"
- 119 Watts per cubic inch
- Industrial safety
- -40 °C to 85 °C
- High efficiency: 94% typical
- Negative enable function
- Output OTP, OVP and power limit
- Current sharing and monitoring
- MIL-STD-810F for shock and vibration

### Compliance

- EMI Class B (with external filter)
- EN61000 lunity
- RoHS 2

### Safety

• UL	60950-1
	508/1598/1433
	60601-1 EO 3
• cUL	60950-1
• TUV	60950-1
	60601

• CB Scheme Report/Cert

## **Electrical Specifications**

Input			
Input range:	90 - 264 Vac (Operating) 115/230 Vac (Nominal)		
Frequency:	47 - 63 Hz		
Inrush current:	≤ 50 A peak at 230 Vac @ 25 deg C (with external resistor from INRUSH pin to OUTPUT -)		
Power factor:	> 0.97 typical		
Input current:	10.3 A RMS max input current, at 115 Vac		
Hold up time:	16 ms minimum, at 115 Vrms AC input, full load with 680 uF/450 Vdc electrolytic capacitor		
Efficiency:	> 94% typical at full load / 230 VAC nominal		
ON/OFF power switch	Remote negative enable		
Isolation:	PRI-Chassis 1500 Vac		



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# **Electrical Specifications**

Output		
Output rating	390 Vdc	180 - 264 Vac
Set point		
Total regulation range	380 V to 400 Vdc 5 Vsb ± 1%	With 680 uF / 450 V electrolytic capacitor
Rated load	1000 W maximum	No derating up to 85 °C, Vin > 100 Vac
Minimum load	Main output @ 0.0 A	No loss of regulation
Output noise (PARD)	< 50 V max p-p	Full load at 680 uF / 450 V capacitor
Output voltage overshoot		No overshoot/undershoot outside the regulation band during ON or OFF cycle
Transient response	< 300 μSec	50% load step @ 1 A/µs Step load valid between 10% to 100% of output rating Recovery time to within 1% of set point at onset of transient
Max units in parallel	Up to 10	
Remote sense		Compensation up to 500 mV
Output isolation		Standard per safety requirements
Forced load sharing	To within 10% of all shared outputs	Analog sharing control
Overload protection (OCP)	140% to 160%	
Overvoltage protection (OVP)	110% to 135%	Latched until AC line recycle
Overtemp protection	102 - 107 °C baseplate temperature	Shut down and automatically restart when fault is removed

# **Environmental Specifications**

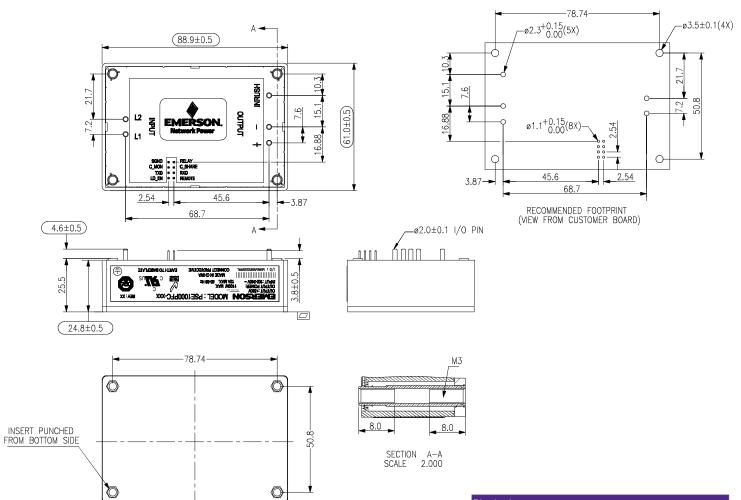
Operating temperature:	-40 °C to +85 °C baseplate temperature	
Storage temperature	-40 °C to +100 °C	
Humidity	10 to 100% non-condensing operating	
Altitude	Operating - 13,000 feet, derating 1 degree C per 1000 feet above 10,000 feet Storage - 50,000 feet	
Shock	MIL-STD-810F 516.5,	
Vibration	MIL-STD-810F 514.5, Cat, IEC68-2-6	

# Ordering Information

Model Number	Output	Nominal Output Voltage	Current		Output Ripple P/P 0-50 deg C	Max Continuous	Combined Line/ Load Regulation
Nullibei		Set Point	Min	Max	7/F 0-30 deg C	Power	Regulation
PSE1000PFC	390 V	390 V	0 A	2.82 A	< 50 V	1000	2.5%

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## **Mechanical Drawing**



Pin Assignment		
Signal Type	Description	
L1	AC input	
L2	AC input	
S GND	Signal ground	
C. Mon	Current monitoring	
TXD	Digital communication	
LD EN	Load Enable	
Relay		
C. Share	Current Share	
RXD	Digital communication	
Remote	Remote ON/OFF	
INRUSH	Limit Inrush Current	
Output +	DC Output +	
Output -	DC Output -	

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## Miscellaneous Specifications

### Burn-In

100% Burn-in at  $45\,^{\circ}\text{C},$  at 80 - 90% load. Duration of burn-in determined by Quality Assurance Procedures

### **MTBF**

The power supply has a minimum MTBF of 300K hours using the Bell core 332, issue 6 specification @ 25 °C and 40 °C, ambient, at full load. With the power supply installed in a system in a 25 °C ambient environment and operating at full load, capacitor life shall be 10 years, minimum for ALL electrolytic capacitors contained within this power supply. The power supply shall demonstrate a MTBF level of > 500,000 hours.

### **Quality Assurance**

Full QAV testing shall be conducted in accordance with Emerson Network Power Standards with reports available upon request.

### Warranty

Emerson Network Power shall warrant the power supply to be free of defects in materials and workmanship for a minimum period of **three years** from the date of shipment, when operated within specifications. The warranty shall be fully transferable to the end owner of the equipment powered by the supply.

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