

## ECP150 Series



- 100 W Convection, 150 W Force-cooled Ratings
- Single Outputs from 12 V to 48 V
- Built-in Fan Supply
- <0.5 W No Load Input Power
- 2" x 4" Foot Print
- Fits 1U Applications
- 3 Year Warranty

## Specification

## Input

Input Voltage	• 85-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 2.5 A max at 115 VAC, 1.5 A max at 230 VAC
Inrush Current	• 100 A max at 230 VAC, cold start 25 °C
Earth Leakage Current	• 0.23 mA at 260 VAC, 60 Hz
Power Factor	• >0.95 at 230 VAC, Conforms to EN61000-3-2
No Load Input Power	• <0.5 W max

## Output

Output Voltage	• See tables
Output Voltage Trim	• $\pm 10\%$
Initial Set Accuracy	• $\pm 1\%$ at 50 % load
Minimum Load	• No minimum load requirement
Start Up Delay	• 2 s max
Start Up Rise Time	• 35 ms typical
Hold Up Time	• 16 ms minimum at full load and 115 VAC
Line Regulation	• $\pm 0.5\%$ max
Load Regulation	• $\pm 1\%$ max
Transient Response	• 4% maximum deviation, recovering to less than 1% within 500 $\mu$ s for 25% step load
Ripple & Noise	• 1% max pk-pk, 20 MHz bandwidth
Overvoltage Protection	• 115% - 140% of nominal voltage on main output. Recycle mains to reset.
Overload Protection	• 110-150%
Short Circuit Protection	• Trip and restart (Hiccup)
Temperature Coefficient	• 0.02 %/°C
Fan Supply	• 12 V at 500 mA

## General

Efficiency	• See table
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VDC Output to Ground
Switching Frequency	• 60 kHz $\pm$ 10 kHz
MTBF	• >150k Hrs to MIL-HDBK-217F

## Environmental

Operating Temperature	• -20 °C to +70 °C derate from 100% load at 50 °C to 50% load at 70 °C
Cooling	• Convection cooled: 100 W Forced cooled: 150 W with 15 CFM
Operating Humidity	• 5% to 90% RH, non condensing
Operating Altitude	• 3000 m
Storage Temperature	• -40 °C to +85 °C
Shock	• IEC68-2-6, 30g, 11mins half sine, 3 times in each of 6 axes
Vibration	• IEC68-2-27, 10-55Hz, 2g 10 mins / sweep, 60 mins for each of 3 axes

## EMC &amp; Safety

Emissions	• EN55022, Level B conducted & Level A radiated
Harmonic Currents	• EN61000-3-2 Class A (Class C >60 W)
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, $\pm 8$ kV air, $\pm 4$ kV contact, Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m, Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2, Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, 3 V, Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60%, 100 ms, 100%, 5000 ms Perf Criteria A, B, B EN60601-1-2, 30% 500 ms, 60% 100 ms, 100% 10 ms, 100% 5000 ms, Perf Criteria A, A, A, B
Safety Approvals	• UL60950-1, IEC60950-1, EN60950-1, UL60601-1, IEC60601-1, EN60601-1

**Models and Ratings**

Output Voltage	Output Current		Ripple and Noise pk-pk <sup>(2)</sup>	Fan Output	Model Number
	Convection-cooled	Force-cooled <sup>(1)</sup>			
12.0 V	8.33 A	12.50 A	120 mV	12 V/0.5 A	ECP150PS12
15.0 V	6.67 A	10.00 A	150 mV	12 V/0.5 A	ECP150PS15
24.0 V	4.17 A	6.25 A	240 mV	12 V/0.5 A	ECP150PS24
28.0 V	3.50 A	5.40 A	280 mV	12 V/0.5 A	ECP150PS28
48.0 V	2.08 A	3.10 A	480 mV	12 V/0.5 A	ECP150PS48

**Notes**

- 1. Requires 15 CFM.
- 2. Measured with 20 MHz Bandwidth.

**Mechanical Details**

All dimensions shown in inches (mm).

Input Connector	
Pin 1	Neutral
Pin 2	Not Fitted
Pin 3	Line

Mates with JST housing VHR-3N and JST Series SVH-21T-P1.1 crimp terminals

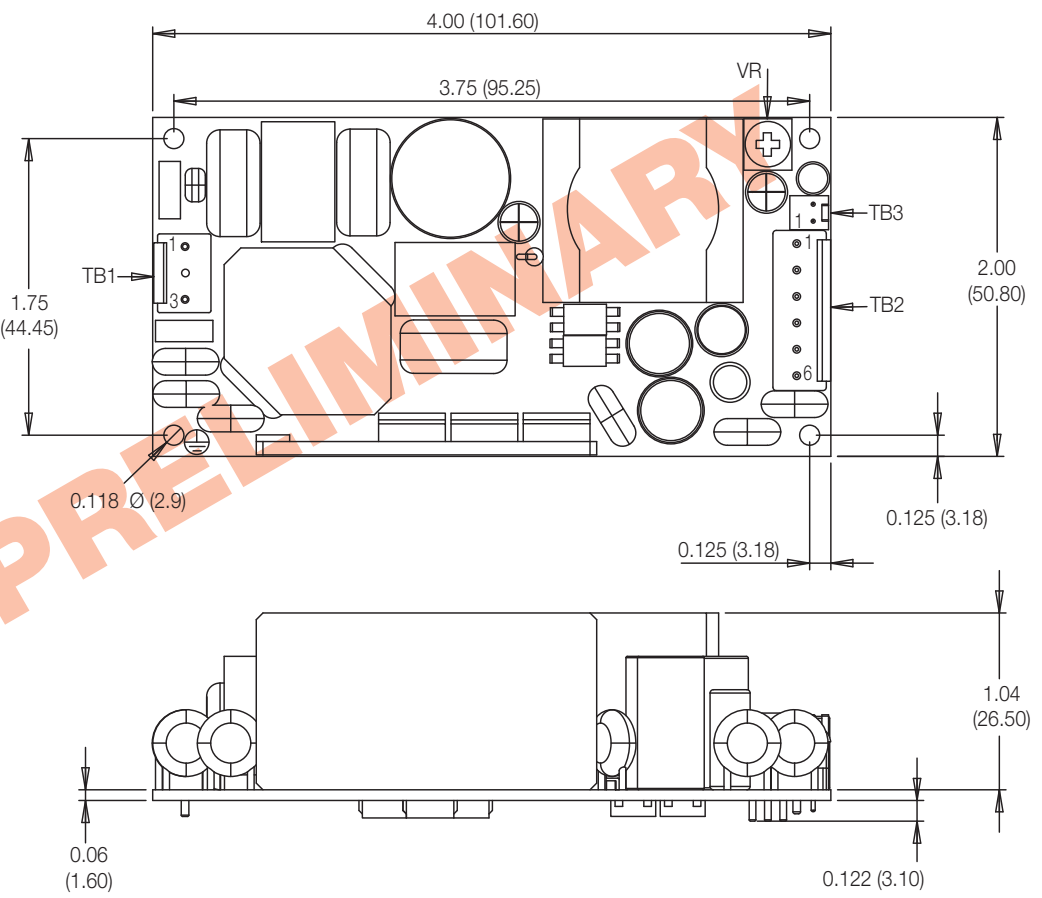
Mounting holes marked with  $\oplus$  must be connected to safety earth

Output Connector	
1	+Vout
2	+Vout
3	+Vout
4	-Vout
5	-Vout
6	-Vout

Mates with JST housing VHR-6N and JST Series SVH-21T-P1.1 crimp terminals

Fan Connector	
Pin 1	Fan -
Pin 2	Fan +

Mates with Molex housing 22-01-1043 and 40445 crimp terminals



**Derating Curve**

