ASTEC

DESCRIPTION

The AC 8151 is a 40 Watt, multiple-output switching power supply, produced on an open printed circuit board. It is ideally suited for use in small microprocessor based systems, disc drive systems, terminals, and other mixed logic applications. Input voltage is jumper selectable for either 115 VAC or 230 VAC. The AC 8151 is UL and CSA approved and designed to meet European safety standards.

FEATURES

- High Efficiency
- Built-in EMI filter
- UL/CSA approved
- Meets European safety standards
- 100% thermal cycle and burn-in
- Vacuum impregnated transformers
- Dual input voltage 115/230 VAC
- Low output ripple
- Over voltage protection
- Short circuit protection
- Open PCB construction

Outputs:

- +5V DC @ 2.5A
- +12V DC @ 2.0A
- -12V DC @ 0.1A

PIN ASSIGNMENT

SK1  P1 Neutral
     P2 Live

SK2/3/4

P1  -12V
P2  +12V
P3 Common
P4  +5V

Dimensions in inches

<table>
<thead>
<tr>
<th>2.5</th>
<th>3.5</th>
<th>3.15</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>30</td>
<td>25</td>
</tr>
</tbody>
</table>

Diagram of AC 8151 power supply with pin assignment and dimensions.
AC 8151 ELECTRICAL CHARACTERISTICS

Input Characteristics
AC Input voltage: 95 to 135 VAC, or 190 to 270 VAC
(Selectable by jumper on PCB)
AC Input frequency: 47 to 63Hz
AC Input current: 0.85A (rms)

Output Characteristics
Output current capacity:

<table>
<thead>
<tr>
<th>Output Voltage</th>
<th>Load min</th>
<th>Load max</th>
<th>Tolerance1</th>
<th>Output Ripple2</th>
</tr>
</thead>
<tbody>
<tr>
<td>+5 VDC</td>
<td>0.45A</td>
<td>2.5A</td>
<td>±5%</td>
<td>50mV p-p</td>
</tr>
<tr>
<td>+12 VDC</td>
<td>0.3A</td>
<td>2.0A</td>
<td>±5%</td>
<td>150mV p-p</td>
</tr>
<tr>
<td>-12 VDC</td>
<td>0.1A</td>
<td>0.1A</td>
<td>+25%/-8.3%</td>
<td>150mV p-p</td>
</tr>
</tbody>
</table>

NOTES:
1. The output tolerance refers to the nominal voltage and includes line regulation, load regulation, temperature drift and set-up tolerance.
2. The specified ripple is at the rated line voltage and load range.

Individual maximum ratings:

+5V DC: 5 amps if no load on +12V output, or 2.5 amps if load draws 2.5 amps on +12V output.
+12V DC: 2.5 amps if +5V output load draws 1.5 amps or less.
-12V DC: 0.5 amps

NOTE: The maximum continuous output power shall not exceed 40 Watts. Specified voltage tolerances do not apply to the above individual maximum currents.

General Characteristics
Operating temperature: 0 to 50°C
Efficiency: 65% (min) at full load
Input line regulation: ±0.2% max.
Over-voltage protection: 5.8V min. to 6.8V max. (+5V line only)
Hold-up time: 15msec.
Line regulation: ±0.5% high line at full load
Overcurrent protection: All outputs protected to short circuit conditions
Line transient response: Meets IEEE standards
Power line disturbances: Output supply unaffected through half cycle absence of input power during full load and 95 VAC input.

EMI Requirements:
Meets conduction limits of:
- FCC Class "B" rules
- VDE 0871 Class "B" rules

Safety requirements:
Meets or exceeds:
- a) UL 1012 (File #E69016)
- b) CSA 22.2 (File #LR42983-22)
- c) IEC 435
- d) CEE: Part 1 and Part 2P

Inrush current: 30 amps @ 115 VAC, or 60 amps @ 230 VAC at 25°C ambient cold start.

Mechanical Characteristics
Size (Overall):
- length: 6.3 in. (160 mm)
- width: 3.9 in. (100 mm)
- height: 2.0 in. max (51.4 mm)

Weight:
15.17 oz (0.43 kg)

Mating connectors:
AC input: Molex PIN 09-50-3031
DC Output: Molex PIN 22-01-1043