

## Switch Mode Power Supplies Single Output AC/DC Power Supply

## **ALS50-24**

#### **Description:**

The ALS50-24 is a single output power supply. It provides a DC output power in a cost-effective open frame package. Excellent performance specifications are provided, together with compliance to European EMC (EN55022, Class A), and Low Voltage directive (TUV EN60950).

#### Specifications (@25C)

#### **Input Characteristics:**

Input Voltage (5): 110/220Vac (90-260Vac, 120-370Vdc)

Input Frequency Range (1): 47-63Hz

Max Input Current: 1.0A @ 110Vac; 0.5A @ 220Vac

Max Inrush Current: 30A @ 220VAc

Hold-Up Time: 17ms typ @ 110Vac, 100% Load

#### **Output Characteristics:**

 Output Voltage:
 24.0Vdc

 Output Current (1):
 2.1A

 Output Power (1):
 50W

 Ripple & Noise (20 MHz BW):
 240mV

 Line Regulation (4):
 1.0%

 Load Regulation (3):
 2.0%

 Temperature Drift:
 0.02%/°C

Rise-up Time: 500ms max, 110Vac, 100% Load

Over Current Protection: Shutdown, O.C.P Point>120%, recycle AC supply to recover

Over Voltage Protection: >105% Zener across output

Short Circuit Protection: Unit shutdown, recycle AC supply to recover

Adj. O/P Voltage Range (1,2): ±10%

#### **Environmental Specifications:**

EMI (Conducted RFI):

EFT:

Built to comply with EN55022-B

Built to comply with IEC61000-4-4

ESD:

Built to comply with IEC61000-4-2

Surge:

Built to comply with IEC61000-4-5

Operating Temperature: Convection cooling 0 to 50°C:100%; 60°C:70%

Operating Humidity: 30% to 90% RH
Storage Temperature: -25 to 85°C
Storage Humidity: 10% to 95% RH
Cooling: Convection cooling

Vibration: 1min sweep 10-55Hz, 2G Amplitude, X,Y,Z axis 1hr each

Shock: <20G

### General Specifications:

Efficiency: 70% Typical
Dimensions (WxLxH): 76.20x127x35.56mm

Weight: 300g

Warranty: 2 years @ 40°C, 100% Load

#### **Safety Standards:**

**Standard:** UL1950 (E204980)

TUV EN60950 (50070245) Built to meet CSA 22.2

Dielectric Strength: I/P-O/P:3kVac, I/P-FG:2.5kVac, <10mA, 1min

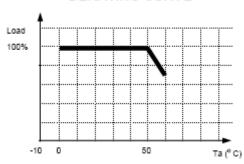
Insulation Resistance: O/P-FG: 500VDC>100Mohms







#### DERATING CURVE



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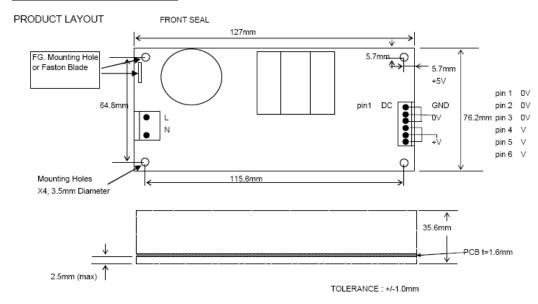


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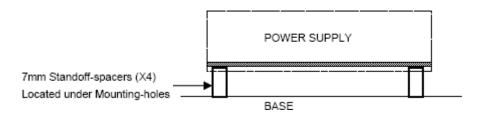
#### **Technical Notes:**

- 1. Throughout Vin range. Vout must be measured as near as possible to power supply.
- 2. Total output power by any combination of channel must not exceed Pou(m).
- 3. Vout deviation as lout varies from lo(min)-lo(max).
- 4. Vout deviation as Vin varies from 90 260Vac.
- 5. Where UL and CSA is concerned, official rated input voltage range is 100-120Vac/200-240Vac.

### **Outline Dimensions (mm):**



#### **Mounting Method:**



### **Connector Types:**

 AC Housing: Molex 09-50-3031
 Crimp Terminals: Molex 08-50-0105

 DC Housing: Molex 09-50-3061
 Crimp Terminals: Molex 08-50-0105

RoHS Compliance: As of manufacturing date February 2005, all standard products meet the requirements of 2011/65/EU, known as the RoHS initiative.

\* Upon printing, this document is considered "uncontrolled". Please contact Triad Magnetics' website for the most current version.

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