

## ALS50-12

### Description:

The ALS50-12 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:	12.0Vdc
Output Current (1):	4.2A
Output Power (1):	50W
Ripple & Noise (20 MHz BW):	120mV
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:

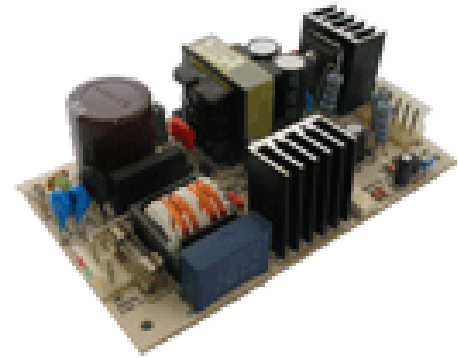
EMI (Conducted RFI):	Built to comply with EN55022-B
EFT:	Built to comply with IEC61000-4-4
ESD:	Built to comply with IEC61000-4-2
Surge:	Built to comply with IEC61000-4-5
Operating Temperature:	Convection cooling 0 to 50°C:100%; 60°C:70%
Operating Humidity:	30% to 90% RH
Storage Temperature:	-25 to 85°C
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:

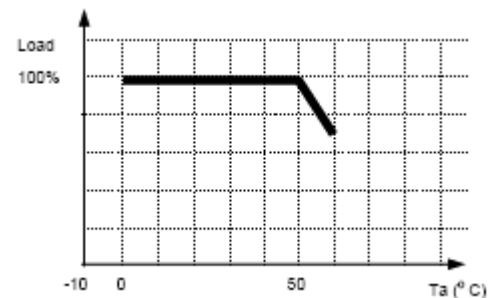
Efficiency:	70% Typical
Dimensions (WxLxH):	76.20x127x35.56mm
Weight:	300g
Warranty:	2 years @ 40°C, 100% Load

#### 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

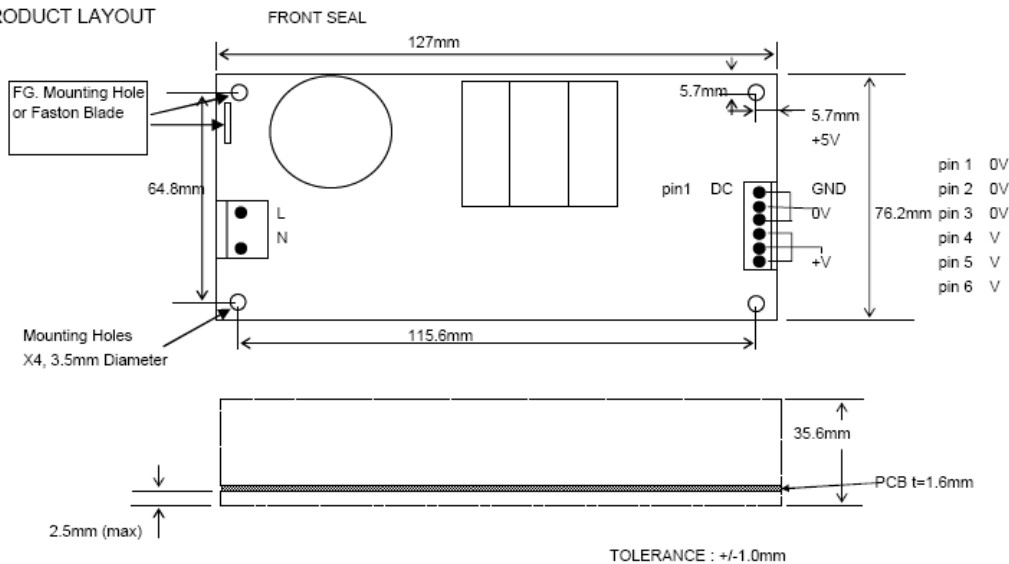


### Technical Notes:

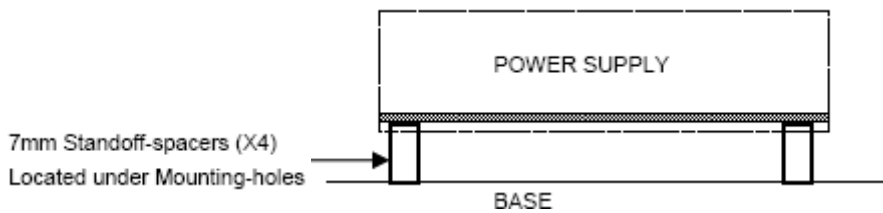
1. Throughout  $V_{in}$  range.  $V_{out}$  must be measured as near as possible to power supply.
2. Total output power by any combination of channel must not exceed  $P_{ou(m)}$ .
3.  $V_{out}$  deviation as  $I_{out}$  varies from  $I_{o(min)}$ - $I_{o(max)}$ .
4.  $V_{out}$  deviation as  $V_{in}$  varies from 90 – 260Vac.
5. Where UL and CSA is concerned, official rated input voltage range is 100-120Vac/200-240Vac.

### Outline Dimensions (mm):

PRODUCT LAYOUT



### Mounting Method:



### Connector Types:

**AC Housing:** Molex 09-50-3031  
**DC Housing:** Molex 09-50-3061

**Crimp Terminals:** Molex 08-50-0105  
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**RoHS Compliance:** As of manufacturing date February 2016, all standard products meet the requirements of 2015/863/EU, known as the RoHS 3 initiative.

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