

## AD50 Series

50 Watts

**Total Power:** 50 Watts  
**Input Voltage:** 90 - 264 VAC  
**# of Outputs:** single



### Special Features

- Universal AC input
- Fully regulated output
- EN61000-3-2 compliant
- Input power <74 watts
- Overcurrent and overvoltage protection
- High efficiency
- High MTBF
- IEC320 AC input receptacle
  - 3 pin (type C6) - AD5012N3L
  - 2 pin (type C8) - AD5012N2L
- Built in EMI filter
- (CISPR 22 Class B)
- AC input fuse
- Complies with One Watt Input Energy Star / Blue Angel Requirement
- CE Mark EMC & LVD

### Safety

CSA<sub>UL</sub> UL 60950-1  
CSA CSA-C22.2 no.60950-1  
VDE EN/IEC60950-1  
CE Mark LVD and EMC

## Electrical Specifications

### Input

Input range	90-264 Vac (wide range)
Frequency	47-63 Hz
Inrush current	60A maximum @ 230VAC, cold start 25C°
Input current	2 A maximum
Efficiency	80% typical
EMI/RFI	FCC Part 15, Class B & EN55022 (CISPR 22) Class B
Safety ground leakage current	300µA maximum@ 50/60 Hz, 264 VAC input - AD5012N3L 100µA maximum@ 50/60 Hz, 264 VAC input - AD5012N2L

### Output

Maximum Power (Po)	50 W
Hold-up time	17 ms. minimum at full load @ 100 Vac, 47 Hz
Overvoltage protection	16 - 20 V Latching type, recycle AC to reset.
Overcurrent protection	Output short circuit protection auto recover Overload protection @ 110 - 120% above maximum rating
Thermal protection	105° to 120°C Trip point; output will latch off
Cable/connector	DC cable length 2.5 mm center plug DC plug center +v DC plug outer -v

## Environmental Specifications

Operating temperature:	5° to +40°C ambient
Storage temperature:	-40°C to +70°C
Electromagnetic susceptibility:	Designed to meet EN61000-4-2, -4, -5, level 4; EN61000-4-3, -6, 10v/m; EN61000-4-8, -11; EN61000-3-3 and EN61000-3-2 Class A
Humidity:	Operating; non-condensing 10% to 90% RH
MTBF demonstrated:	>300,000 hours at full load and 25°C ambient conditions

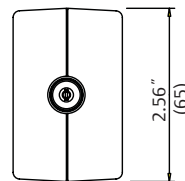
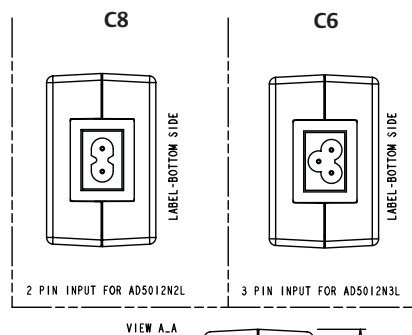
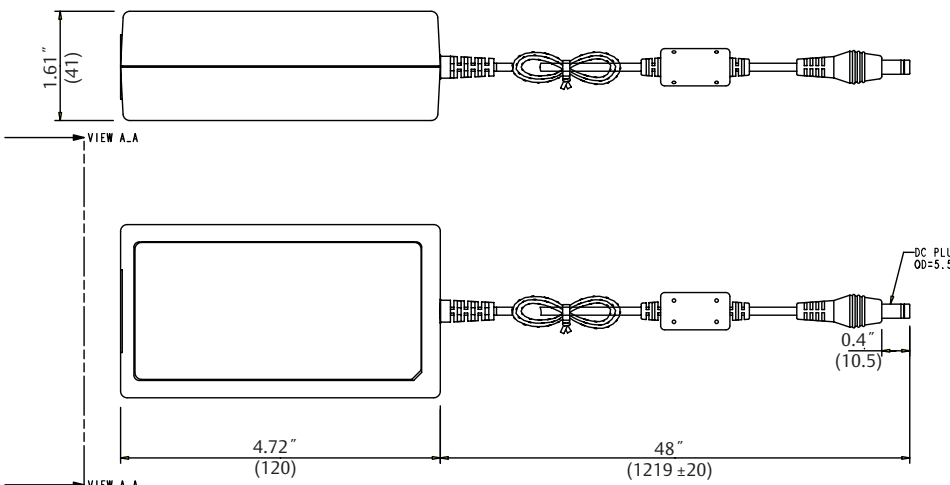


## Ordering Information

Model Number	Maximum Power	Output Voltage	Maximum Load	Peak Load <sup>1</sup>	Regulation <sup>2</sup>	Ripple P/P (PAR) <sup>3</sup>
AD5012N3L	50 W	12 Vdc	4.16 A	6 A	±5%	<500 mV
AD5012N2L	50 W	12 Vdc	4.16 A	6 A	±5%	<500 mV

1. Peak current lasting 200ms every 3 seconds.
2. At 25°C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. Peak-to-peak with 20MHz bandwidth and 10µF (tantalum capacitor) in parallel with a 0.1µF capacitor at rated line voltage and load ranges.

## Mechanical Drawing



### Notes:

1. Specifications subject to change without notice.
2. All dimensions in inches (mm), tolerance is ± 0.02" (±0.5mm)
3. Warranty: 2 year
4. Weight: 0.61 lb./ 0.28 kg
5. AC input power cord sold separately.
6. Specifications at factory settings at 115VAC input, 25°C unless otherwise stated
7. AC Input Connector: IEC320, C6 or C8

## Americas

5810 Van Allen Way  
Carlsbad, CA 92008  
USA  
Telephone: +1 (760) 930 4600  
Facsimile: +1 (760) 930 0698

## Europe (UK)

Waterfront Business Park  
Merry Hill, Dudley  
West Midlands, DY5 1LX  
United Kingdom  
Telephone: +44 (0) 1384 842 211  
Facsimile: +44 (0) 1384 843 355

## Asia (HK)

14/F, Lu Plaza  
2 Wing Yip Street  
Kwun Tong, Kowloon  
Hong Kong  
Telephone: +852 2176 3333  
Facsimile: +852 2176 3888

For global contact, visit:

[www.powerconversion.com](http://www.powerconversion.com)  
[techsupport.embeddedpower@emerson.com](mailto:techsupport.embeddedpower@emerson.com)

While every precaution has been taken to ensure accuracy and completeness in this literature, Emerson Network Power assumes no responsibility, and disclaims all liability for damages resulting from use of this information or for any errors or omissions.

**Emerson Network Power.**  
The global leader in enabling  
business-critical continuity.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power**
- Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

**EmersonNetworkPower.com**

Emerson Network Power and the Emerson Network Power logo are trademarks and service marks of Emerson Electric Co.  
©2008 Emerson Electric Co.