

## AED Series



- Low Profile
- Single Outputs from 5 V to 48 V
- Universal Input
- Optional Floating Output
- High Power Density
- Class II Insulation on 36 W Version
- 3 Year Warranty

## Specification

## Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• AED36: 1.00 A max AED45: 1.20 A max AED70: 2.00 A max
Inrush Current	• AED36: 50 A max at 230 VAC AED45: 100 A max at 230 VAC AED70: 100 A max at 240 VAC
Earth Leakage Current	• AED36: Class II AED45/70: 3.5 mA max
Power Factor	• Compliant with EN61000-3-2

## Output

Output Voltage	• See tables
Initial Set Accuracy	• $\pm 2\%$
Minimum Load	• No minimum load requirement
Hold Up Time	• AED36: 8 ms min at 115 VAC AED45: 8 ms min at 115 VAC AED70: 20 ms min at 115 VAC
Line Regulation	• $\pm 1\%$
Load Regulation	• See tables
Ripple & Noise	• 1% pk-pk max, 20 MHz BW (see note 2)
Overvoltage Protection	• Typical 125% max
Overload Protection	• 120-150% hiccup/trip & restart mode with auto recovery
Short Circuit Protection	• Continuous
Temperature Coefficient	• $\pm 0.05\%/^{\circ}\text{C}$

## General

Efficiency	• 85% typical at 230 VAC & 100% load
Isolation	• 3000 VAC Input to Output, 1500 VAC Input to Ground. Negative output is connected to ground. For optional 500 VAC output to ground isolation add suffix '-F' to model number
Switching Frequency	• 60 kHz $\pm 10$ kHz
Power Density	• AED36: 5.34 W/in <sup>3</sup> AED45: 3.20 W/in <sup>3</sup> AED70: 4.98 W/in <sup>3</sup>
MTBF	• 200 kHrs to MIL-HDBK-217F at 25 °C, GB

## Environmental

Operating Temperature	• 0 °C to +60 °C derate linearly from 100% load at +40 °C to 50% load at +60 °C
Operating Humidity	• 93% RH, non-condensing
Operating Altitude	• 2000 m
Storage Temperature	• -20 °C to +85 °C

## EMC &amp; Safety

Emissions	• EN55022 Class B conducted & radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, 8 kV air, 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
Safety Approvals	• EN60950-1, UL60950-1

## Models and Ratings

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation <sup>(1)</sup>	Model Number
20 W	5.0 V	4.00 A	±6%	AED36US05
27 W	9.0 V	3.00 A	±5%	AED36US09
30 W	12.0 V	2.50 A	±5%	AED36US12†
32 W	13.5 V	2.40 A	±5%	AED36US13
36 W	15.0 V	2.40 A	±3%	AED36US15†
36 W	18.0 V	2.00 A	±2%	AED36US18†
36 W	24.0 V	1.50 A	±2%	AED36US24†
36 W	48.0 V	0.75 A	±2%	AED36US48

### Notes

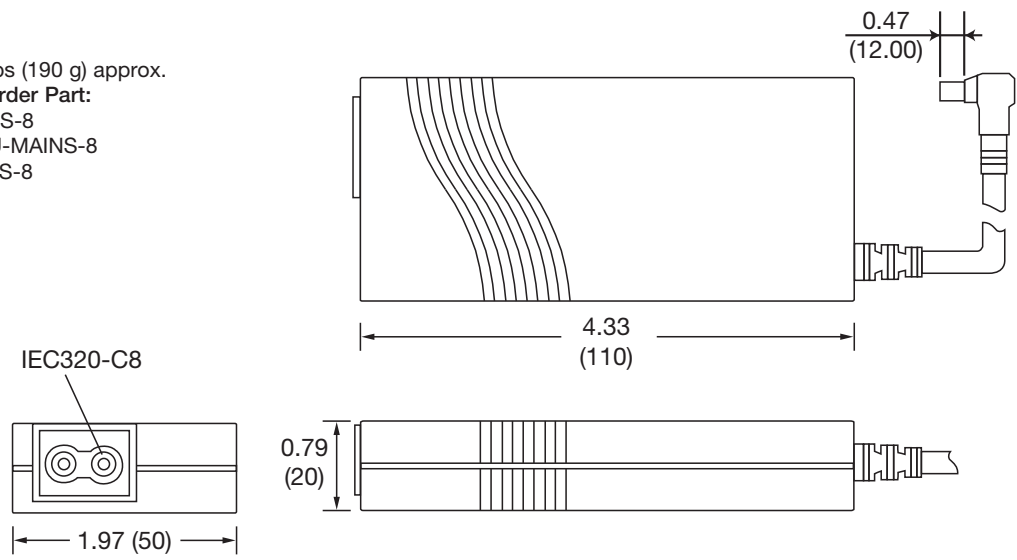
1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 µF ceramic capacitor and a 10 µF electrolytic capacitor.

† Available from Farnell.

^ Available from Newark.

## Mechanical Details

Weight: 0.42 lbs (190 g) approx.  
 Power Cord Order Part:  
 UK - UK-MAINS-8  
 European - EU-MAINS-8  
 US - US-MAINS-8



### Notes

- All dimensions shown in inches (mm)
- Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
- Optional output connectors available.
- Output cable is 48" (1220mm) approx.

**Models and Ratings**

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation <sup>(1)</sup>	Model Number
30 W	5.0 V	6.00 A	±6%	AED45US05
45 W	12.0 V	3.75 A	±5%	AED45US12
45 W	15.0 V	3.00 A	±3%	AED45US15†
45 W	18.5 V	2.50 A	±2%	AED45US18†
45 W	19.0 V	2.37 A	±2%	AED45US19
45 W	24.0 V	1.88 A	±2%	AED45US24†
48 W	48.0 V	1.00 A	±2%	AED45US48

**Notes**

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 μF ceramic capacitor and a 10 μF electrolytic capacitor.

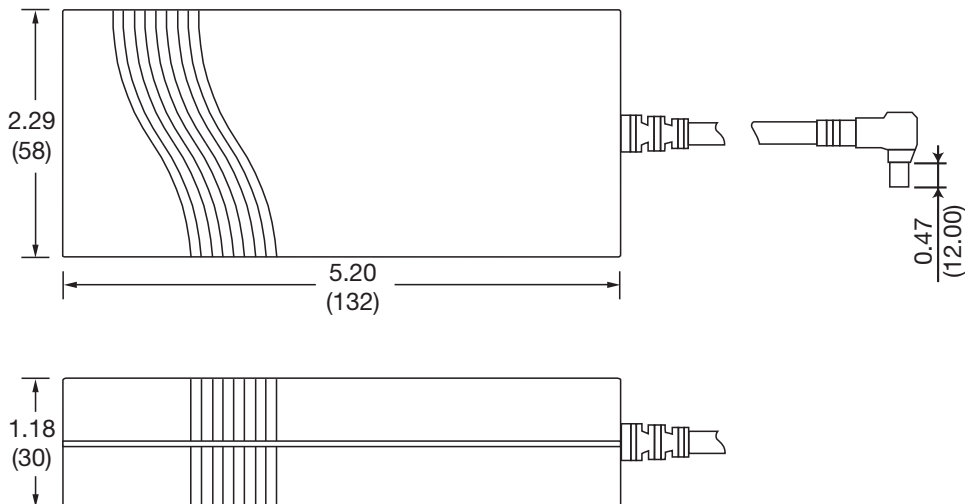
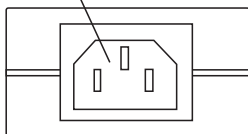
† Available from Farnell.

^ Available from Newark.

**Mechanical Details**

Weight: 0.73 lbs (330 g) approx.  
 Power Cord Order Part:  
 UK - UK-MAINS-IEC  
 European - EU-MAINS-IEC  
 US - US-MAINS-IEC

IEC320-C14



**Notes**

- All dimensions shown in inches (mm)  
 Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.  
 Optional output connectors available.  
 Output cable is 48" (1220mm) approx.

**Models and Ratings**

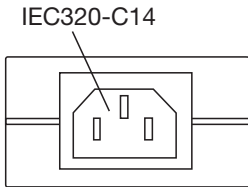
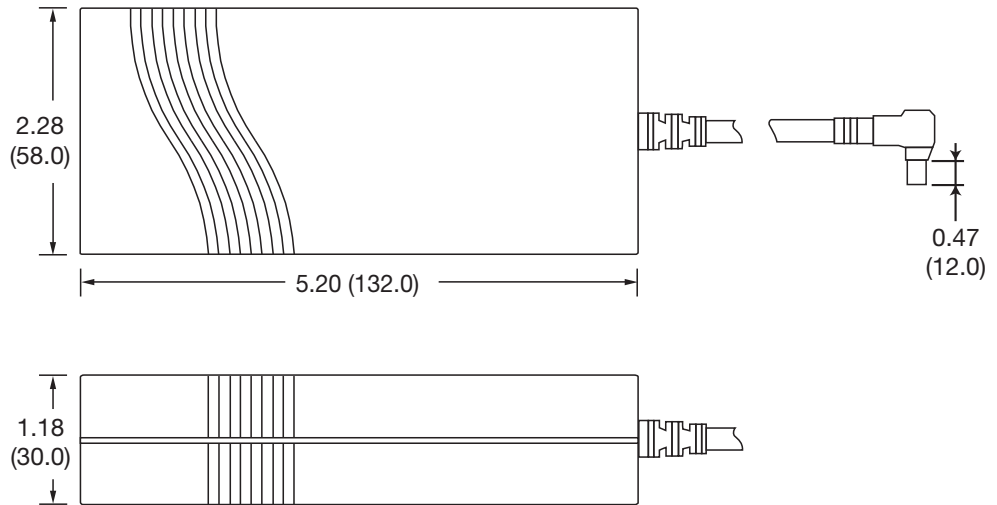
Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation <sup>(1)</sup>	Model Number
70 W	12.0 V	5.50 A	±5%	AED70US12
70 W	15.0 V	4.60 A	±3%	AED70US15
70 W	18.0 V	3.90 A	±2%	AED70US18
70 W	19.0 V	3.70 A	±2%	AED70US19
70 W	24.0 V	3.00 A	±2%	AED70US24
70 W	48.0 V	1.50 A	±2%	AED70US48

**Notes**

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 μF ceramic capacitor and a 10 μF electrolytic capacitor.

**Mechanical Details**

Weight: 0.76 lbs (345 g) approx.  
 Power Cord Order Part:  
 UK - UK-MAINS-IEC  
 European - EU-MAINS-IEC  
 US - US-MAINS-IEC



**Notes**

- All dimensions shown in inches (mm).
1. Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
  2. Optional output connectors available.
  3. Output cable is 48" (1220mm) approx.