

## 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<br>AED45: 1.20 A max<br>AED70: 2.00 A max                              |
| Inrush Current        | • AED36: 50 A max at 230 VAC<br>AED45: 100 A max at 230 VAC<br>AED70: 100 A max at 240 VAC |
| Earth Leakage Current | • AED36: Class II<br>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<br>AED45: 8 ms min at 115 VAC<br>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,<br>1500 VAC Input to Ground.<br>Negative output is connected to ground.<br>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><br>AED45: 3.20 W/in <sup>3</sup><br>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<br>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**

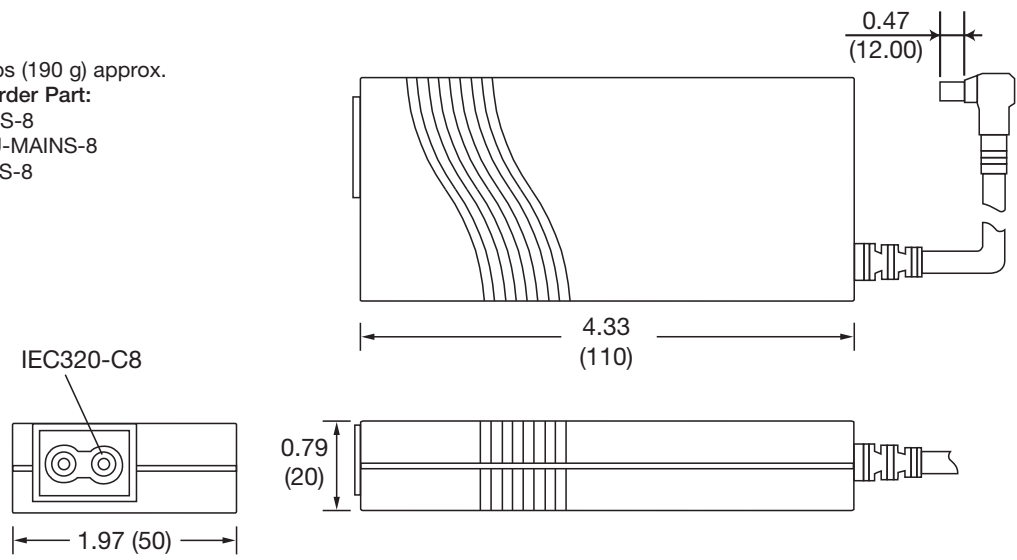
| Output Power Maximum | Output Voltage Nominal | Output Current Maximum | Load Regulation <sup>(1)</sup> | Model Number |
|----------------------|------------------------|------------------------|--------------------------------|--------------|
| 20 W                 | 5.0 V                  | 4.00 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.

**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    |

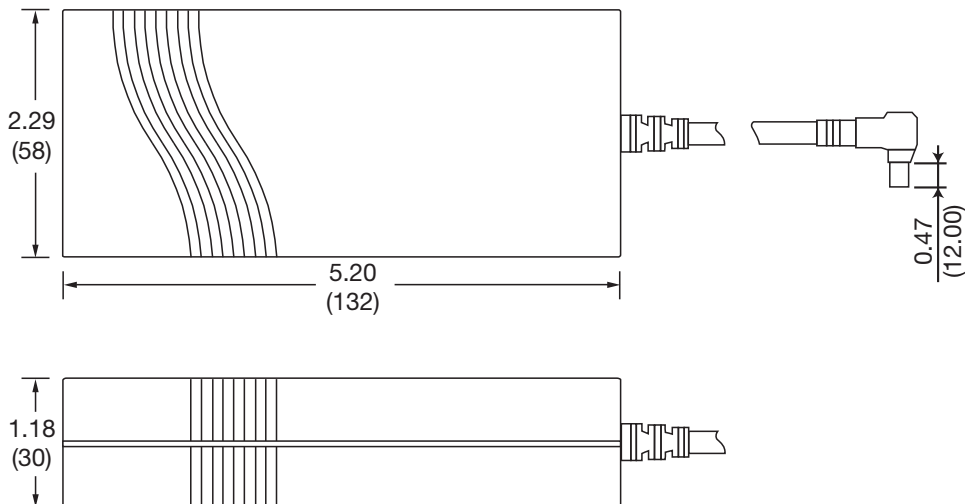
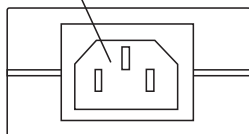
**Notes**

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.

**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**

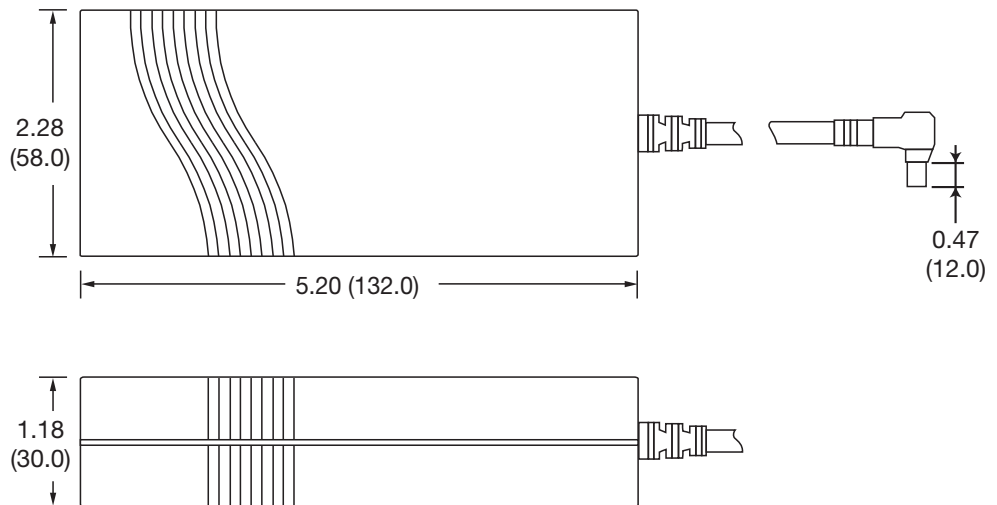
| Output Power Maximum | Output Voltage Nominal | Output Current Maximum | Load Regulation <sup>(1)</sup> | Model Number |
|----------------------|------------------------|------------------------|--------------------------------|--------------|
| 70 W                 | 12.0 V                 | 5.50 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).
- 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.