

AED Series



- Low Profile
- Low Cost
- Universal Input
- Optional Floating Output
- High Power Density
- 36, 45, 70 & 100 W Versions
- International Safety Approvals

Specification

Input

Input Voltage	• 96-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• AED36: 1.00 A AED45: 1.20 A AED70: 1.85 A AED100: 2.00 A
Inrush Current	• AED36: 50 A max at 230 VAC AED45: 100 A max at 230 VAC AED70: 100 A max at 230 VAC AED100: 100 A max at 230 VAC
Earth Leakage Current	• AED36: Class II AED45: 1.5 mA max AED70: 1.5 mA max AED100: 1.5 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: 8 ms min at 115 VAC AED100: 20 ms typical at 115 VAC
Line Regulation	• $\pm 1\%$
Load Regulation	• See tables
Ripple & Noise	• 1% pk-pk max
Oversvoltage Protection	• Typical 125% max
Overload Protection	• 120-150% hiccup / trip and restart mode with auto recovery
Short Circuit Protection	• Continuous
Temperature Coefficient	• $\pm 0.04\%$ / $^{\circ}\text{C}$

General

Efficiency	• 85% typical
Isolation	• 3000 VAC Input to Output, 2000 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 ± 10 kHz
MTBF	• 100,000 hours MIL-HDBK-217E

Environmental

Operating Temperature	• 0 $^{\circ}\text{C}$ to +65 $^{\circ}\text{C}$ AED36, AED45 and AED70 derate linearly from 100% load at 40 $^{\circ}\text{C}$ to 50% load at +55 $^{\circ}\text{C}$, AED100 derate linearly from 100% load at +40 $^{\circ}\text{C}$ to 0% at 65 $^{\circ}\text{C}$
Storage Temperature	• -20 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$

EMC & Safety

Emissions	• CISPR22 Level B (EN55022) FCC 20780 Level B
ESD Immunity	• EN61000-4-2, 8 kV air 4 kV contact Perf Criteria B
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria B
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria B
Safety Approvals	• EN60950 UL1950 CSA C22.2 No. 234 cUL

Models and Ratings

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation (1)	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
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%	AED45US18
45 W	24.0 V	1.88 A	2%	AED45US24
48 W	48.0 V	1.00 A	2%	AED45US48
66 W	12.0 V	5.50 A	5%	AED70US12*
69 W	15.0 V	4.60 A	3%	AED70US15*
70 W	18.0 V	3.90 A	2%	AED70US18*
72 W	19.0 V	3.70 A	2%	AED70US19*
72 W	24.0 V	3.00 A	2%	AED70US24*
72 W	48.0 V	1.50 A	2%	AED70US48*
100 W	12.0 V	8.33 A	5%	AED100US12†*
100 W	15.0 V	6.67 A	3%	AED100US15†*
100 W	18.0 V	5.56 A	2%	AED100US18†*
100 W	19.0 V	5.26 A	2%	AED100US19†*
100 W	24.0 V	4.17 A	2%	AED100US24†*
100 W	48.0 V	2.08 A	2%	AED100US48†*

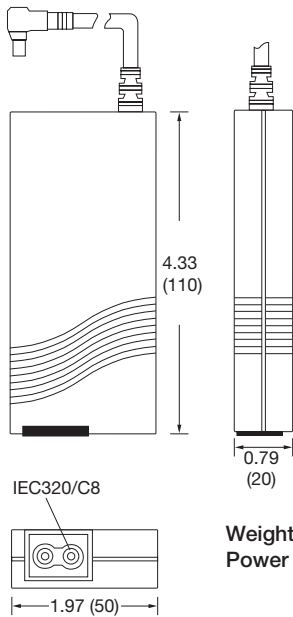
Notes

- 1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
- † Available from Farnell InOne. See pages 236-237
- *Available from Newark InOne. See page 238

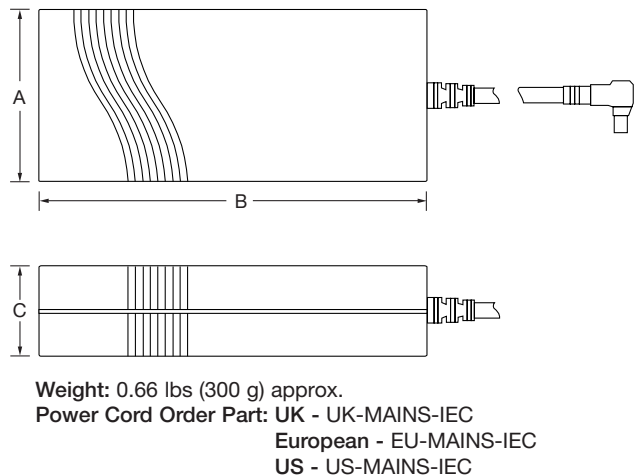
Mechanical Details

All dimensions shown in inches (mm).

36 Watt Models



45-100 Watt Models



DIMENSIONS			
	A	B	C
45 W	2.29 (58.0)	5.20 (132.0)	1.18 (30.0)
70 W	2.29 (58.0)	5.20 (132.0)	1.18 (30.0)
100 W	2.76 (70.0)	5.91 (150.0)	1.38 (35.0)

Notes

- 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" (1.22m).