

AEB Series



- CEC2008 & EISA2007 Compliant
- Low Profile
- Single Outputs from 5 V to 48 V
- High Power Density
- Universal Input
- China Compulsory Certification (CCC) Qualified
- 3 Year Warranty

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• AEB36: 1.00 A max AEB45: 1.20 A max AEB70: 1.50 A max AEB100: 1.85 A max
Inrush Current	• AEB36: 60 A max at 240 VAC AEB45: 70 A max at 240 VAC AEB70: 80 A max at 240 VAC AEB100: 120 A max at 240 VAC
Power Factor	• Meets EN61000-3-2, class A
Earth Leakage Current	• <3.5 mA (AEB45/70/100)
Input Protection	• Fitted with an internal fuse AEB36 T1A/250 VAC, AEB45/70/100 T2A/250 VAC
No Load Input Power	• <0.5 W

Output

Output Voltage	• See tables
Initial Set Accuracy	• $\pm 2\%$, set at 60% load
Minimum Load	• No minimum load required
Hold Up Time	• AEB36/45/70: 8 ms at 115 VAC AEB100: 20 ms at 115 VAC
Line Regulation	• $\pm 1\%$
Load Regulation	• See tables
Ripple & Noise	• 1% pk-pk max, 20 MHz bandwidth, see note 2
Overvoltage Protection	• Typical 125% max, recycle input to restart
Overload Protection	• Trip & restart mode (hiccup mode)
Short Circuit Protection	• Continuous
Temperature Coefficient	• $\pm 0.04\%/^{\circ}\text{C}$

General

Efficiency	• 85% minimum at 230 VAC & 100% load
Isolation	• AEB36: 3000 VAC Input to Output AEB45/70/100: 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	• AEB36/70: 60 kHz typical AEB45: 100 kHz \pm typical AEB100: 80 kHz typical PFC converter 130 kHz typical main converter
MTBF	• AEB36: >360 kHrs AEB45: >300 kHrs AEB70: >200 kHrs AEB100: >150 kHrs to MIL-HDBK-217F at 25°C, GB

Environmental

Operating Temperature	• AEB36/45/70: 0 °C to +60 °C derate linearly from 100% load at +40 °C to 60%, load at +60 °C, AEB100: 0 °C to +60 °C derate linearly from 100% load at +40 °C to 50% load at +60 °C
Storage Temperature	• -20 °C to +85 °C

EMC & Safety

Emissions	• EN55022, Level B conducted & radiated
Harmonic Currents	• EN61000-3-2 Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2 Level 2 (contact) Perf Criteria A EN61000-4-2 Level 3 (air) Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria B
Conducted Immunity	• EN61000-4-6, Level 2 Perf Criteria A
Magnetic Field	• EN61000-4-8, 3 A/m Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms Perf Criteria A, B, B
Safety Approvals	• EN60950-1: UL/cUL60950-1, China Compulsory Certification (CCC) qualified (AEB36/70 only)

AEB36

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation ⁽¹⁾	Model Number
20 W	5.0 V	4.00 A	±6%	AEB36US05† [^]
27 W	9.0 V	3.00 A	±5%	AEB36US09† [^]
30 W	12.0 V	2.50 A	±5%	AEB36US12† [^]
32 W	13.5 V	2.40 A	±5%	AEB36US13† [^]
36 W	15.0 V	2.40 A	±3%	AEB36US15† [^]
36 W	18.0 V	2.00 A	±2%	AEB36US18† [^]
36 W	24.0 V	1.50 A	±2%	AEB36US24† [^]
36 W	48.0 V	0.75 A	±2%	AEB36US48† [^]

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. See pages 266-269.

[^] Available from Newark. See pages 270-272.

AEB45

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation ⁽¹⁾	Model Number
45 W	12.0 V	3.75 A	±3%	AEB45US12 [^]
45 W	15.0 V	3.00 A	±3%	AEB45US15 [^]
45 W	18.0 V	2.50 A	±2%	AEB45US18 [^]
45 W	19.0 V	2.37 A	±2%	AEB45US19 [^]
45 W	24.0 V	1.88 A	±2%	AEB45US24 [^]
48 W	48.0 V	1.00 A	±2%	AEB45US48 [^]

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.
3. For optional 500 VAC output to ground isolation add suffix '-F' to model number.

[^] Available from Newark. See pages 270-272.

AEB70

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation ⁽¹⁾	Model Number
66 W	12.0 V	5.50 A	±5%	AEB70US12† [^]
69 W	15.0 V	4.60 A	±3%	AEB70US15† [^]
70 W	18.0 V	3.90 A	±2%	AEB70US18† [^]
72 W	19.0 V	3.70 A	±2%	AEB70US19† [^]
72 W	24.0 V	3.00 A	±2%	AEB70US24† [^]
72 W	48.0 V	1.50 A	±2%	AEB70US48† [^]

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.
3. For optional 500 VAC output to ground isolation add suffix '-F' to model number.

† Available from Farnell. See pages 266-269.

[^] Available from Newark. See pages 270-272.

AEB100

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation ⁽¹⁾	Model Number ⁽³⁾
100 W	12.0 V	8.34 A	±4%	AEB100PS12
100 W	12.5 V	8.00 A	±4%	AEB100PS125
100 W	15.0 V	6.67 A	±4%	AEB100PS15
100 W	24.0 V	4.17 A	±2%	AEB100PS24
100 W	48.0 V	2.08 A	±2%	AEB100PS48

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.
3. For optional 500 VAC output to ground isolation add suffix '-F' to model number.

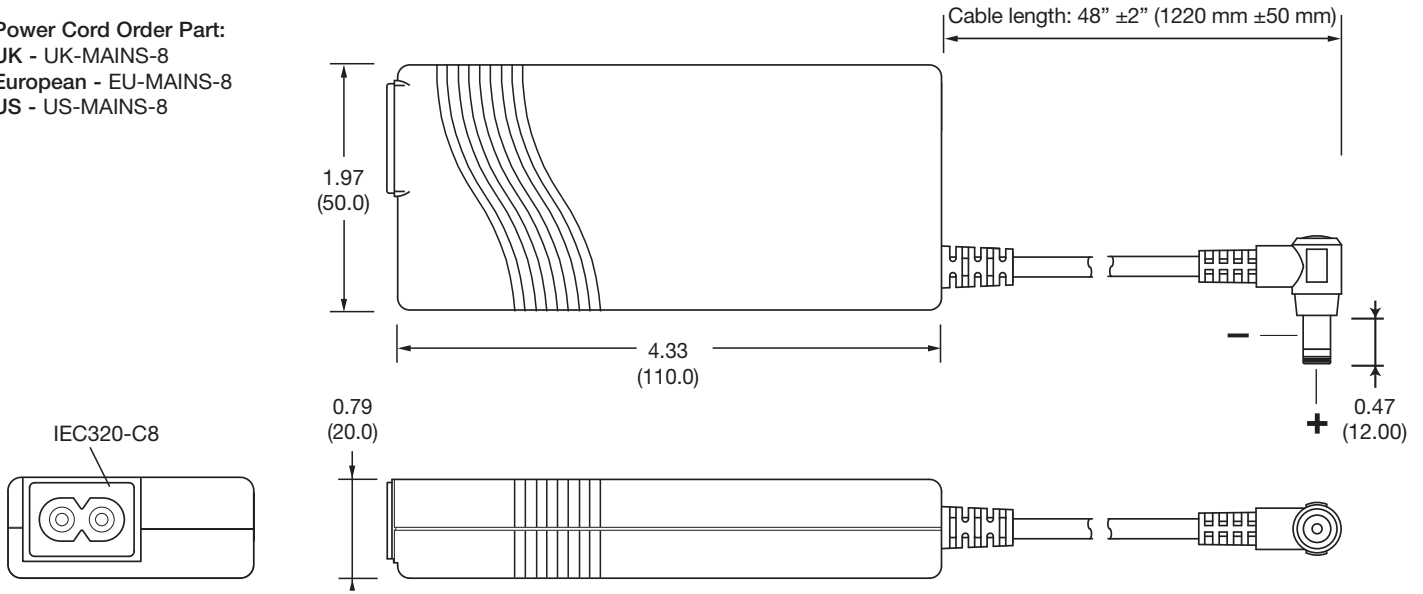


Mechanical Details

All dimensions shown in inches (mm).

AEB36

Power Cord Order Part:
 UK - UK-MAINS-8
 European - EU-MAINS-8
 US - US-MAINS-8

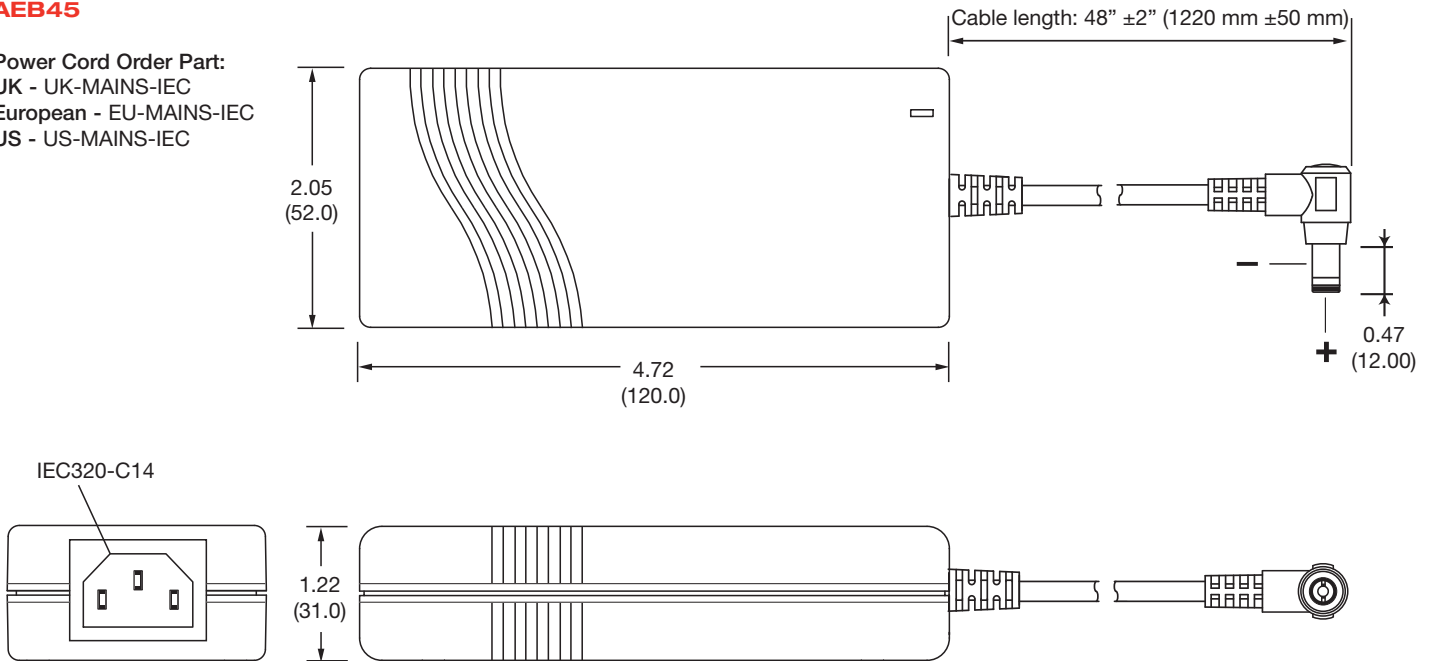


Notes

1. Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5 mm with a center +ve and outer shell -ve polarity.
2. Optional output connectors available, contact sales for details.
3. Weight: 0.42 lbs (190 g) approx.
4. Tolerance is ±0.02 (±0.5) maximum, except output cable length.
5. Length of mains lead: 76 inches (1930 mm) approx

AEB45

Power Cord Order Part:
 UK - UK-MAINS-IEC
 European - EU-MAINS-IEC
 US - US-MAINS-IEC



Notes

1. Output connector is 5.5 mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
2. Optional output connectors available, contact sales for details.
3. Weight: 0.62 lbs (280 g) approx.
4. Tolerance is ±0.02 (±0.5) maximum, except output cable length.
5. Length of mains lead: 76 inches (1930 mm) approx

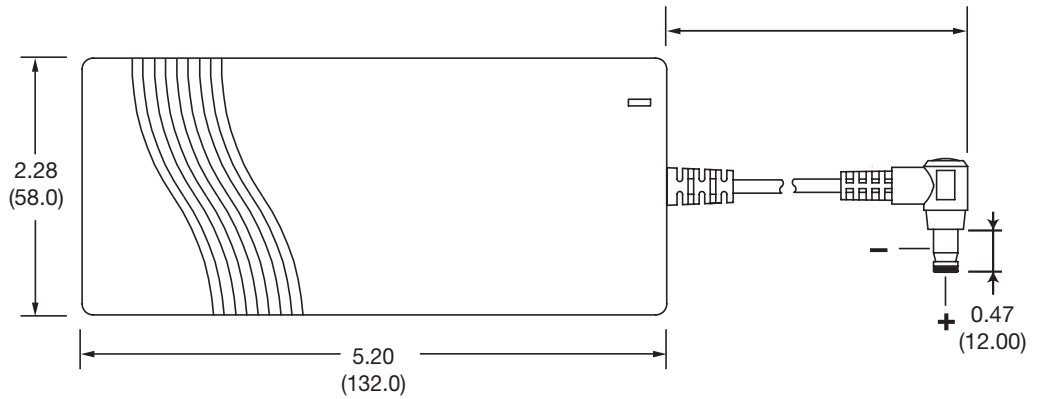
Mechanical Details

All dimensions shown in inches (mm).

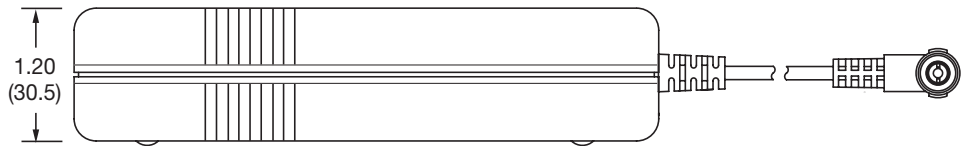
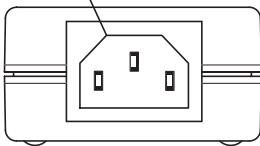
AEB70

Power Cord Order Part:
 UK - UK-MAINS-IEC
 European - EU-MAINS-IEC
 US - US-MAINS-IEC

Cable length: 48" ±2" (1220 mm ±50 mm)



IEC320-C14



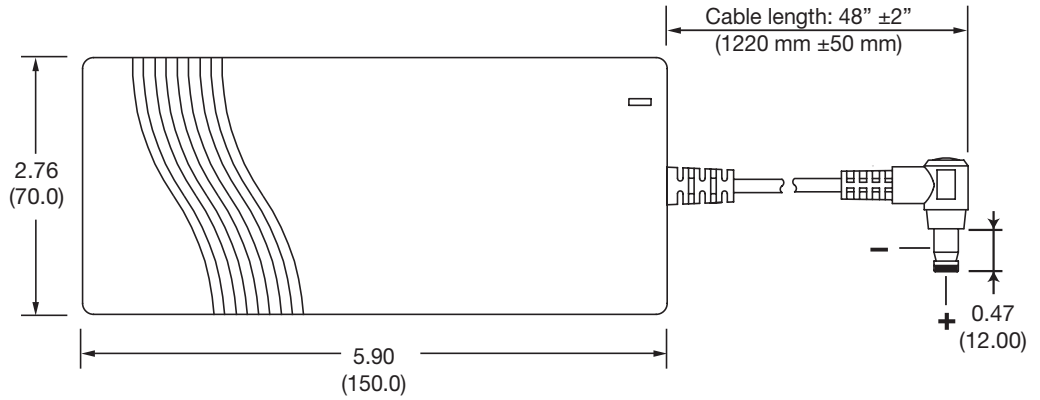
Notes

1. Output connector is 5.5 mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
2. Optional output connectors available, contact sales for details.
3. Weight: 0.76 lbs (345 g) approx.
4. Tolerance is ±0.02 (±0.5) maximum, except output cable length.
5. Length of mains lead: 76 inches (1930 mm) approx

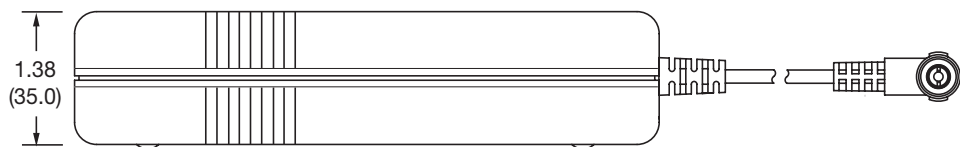
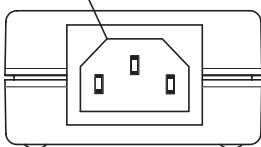
AEB100

Power Cord Order Part:
 UK - UK-MAINS-IEC
 European - EU-MAINS-IEC
 US - US-MAINS-IEC

Cable length: 48" ±2"
 (1220 mm ±50 mm)



IEC320-C14



Notes

1. Output connector is 5.5 mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
2. Optional output connectors available, contact sales for details.
3. Weight: 1.36 lbs (600 g) approx.
4. Tolerance is ±0.02 (±0.5) maximum, except output cable length.
5. Length of mains lead: 76 inches (1930 mm) approx