

15-80 Watts

- Energy Efficiency Level V
- CEC 2008 and EISA 2007 Compliant
- Limited Power Source Approval
- China Compulsory Certification (CCC) Qualified
- +60 °C Operating Temperature
- Compact Dimensions
- 3 Year Warranty



Dimensions:

AEL15: 3.58 x 1.50 x 1.42" (91.0 x 38.0 x 36.0 mm)
AEL20: 3.90 x 1.65 x 1.22" (99.0 x 42.0 x 31.0 mm)
AEL40: 4.65 x 2.05 x 1.36" (118.0 x 52.0 x 34.5 mm)
AEL60: 4.65 x 2.05 x 1.36" (118.0 x 52.0 x 34.5 mm)
AEL80: 5.75 x 1.69 x 2.99" (146.0 x 76.0 x 43.0 mm)

Models & Ratings

Output Power	Output Voltage ⁽³⁾	Output Current	Total Regulation ⁽²⁾	Efficiency ⁽⁵⁾	Model Number ^(1,6)
8 W	3.3 VDC	2.50 A	7%	68%	AEL15US03 ⁽⁴⁾
12 W	5.0 VDC	2.40 A	7%	78%	AEL15US05
	8.0 VDC	1.50 A	5%	79%	AEL15US08
15 W	9.0 VDC	1.66 A	5%	79%	AEL15US09
	12.0 VDC	1.25 A	5%	80%	AEL15US12
	15.0 VDC	1.00 A	5%	81%	AEL15US15
	18.0 VDC	0.83 A	5%	82%	AEL15US18
	24.0 VDC	0.62 A	5%	78%	AEL15US24 ⁽⁴⁾
	30.0 VDC	0.50 A	5%	77%	AEL15US30 ⁽⁴⁾
	36.0 VDC	0.42 A	3%	75%	AEL15US36 ⁽⁴⁾
	48.0 VDC	0.31 A	3%	81%	AEL15US48
15 W	5.0 VDC	3.00 A	5%	79%	AEL20US05
20 W	12.0 VDC	1.67 A	4%	86%	AEL20US12
	15.0 VDC	1.33 A	4%	85%	AEL20US15
	24.0 VDC	0.83 A	3%	87%	AEL20US24
	30.0 VDC	0.67 A	3%	86%	AEL20US30
	48.0 VDC	0.42 A	3%	87%	AEL20US48
25 W	5.0 VDC	5.00 A	7%	79%	AEL40US05 ⁽⁴⁾
35 W	8.0 VDC	4.37 A	5%	82%	AEL40US08 ⁽⁴⁾
	9.0 VDC	3.88 A	5%	83%	AEL40US09 ⁽⁴⁾
40 W	12.0 VDC	3.33 A	5%	87%	AEL40US12
	15.0 VDC	2.67 A	5%	87%	AEL40US15
	18.0 VDC	2.22 A	5%	86%	AEL40US18
	24.0 VDC	1.67 A	3%	86%	AEL40US24
	36.0 VDC	1.11 A	3%	89%	AEL40US36
	48.0 VDC	0.83 A	3%	91%	AEL40US48
57 W	12.0 VDC	4.75 A	5%	87%	AEL60US12
63 W	15.0 VDC	4.20 A	5%	88%	AEL60US15
	18.0 VDC	3.50 A	5%	88%	AEL60US18
	24.0 VDC	2.63 A	5%	88%	AEL60US24
	30.0 VDC	2.15 A	5%	90%	AEL60US30
	36.0 VDC	1.75 A	3%	90%	AEL60US36
	48.0 VDC	1.31 A	3%	90%	AEL60US48
80 W	12.0 VDC	6.66 A	5%	85%	AEL80US12 ⁽⁴⁾
	15.0 VDC	5.38 A	5%	87%	AEL80US15 ⁽⁴⁾
	18.0 VDC	4.44 A	5%	88%	AEL80US18
	24.0 VDC	3.33 A	5%	87%	AEL80US24
	30.0 VDC	2.66 A	5%	87%	AEL80US30
	36.0 VDC	2.22 A	5%	88%	AEL80US36
	48.0 VDC	1.66 A	5%	88%	AEL80US48

Notes

1. Standard input connector is IEC320-C14 Inlet. For optional IEC320-C6 Inlet, add suffix "C6" to model number e.g. AEL15US12C6.
2. Total regulation includes line regulation and load regulation.
3. Other output voltages available, contact sales for details.

4. Energy Efficiency Level IV.
5. Minimum average of efficiencies measured at 25%, 50%, 75% & 100% load.
6. For output negative connected to ground add suffix G.

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	90		264	VAC	
Input Frequency	47		63	Hz	
Input Current			0.4	A	AEL15/20, Measured at 115/230 VAC
			1.0		AEL40, Measured at 115/230 VAC
			1.6		AEL60, Measured at 115/230 VAC
			1.1		AEL80, Measured at 115/230 VAC
Inrush Current			15/30	A	AEL15/20, Measured at 115/230 VAC
			25/50		AEL40, Measured at 115/230 VAC
			35/70		AEL60, Measured at 115/230 VAC
			45/92		AEL80, Measured at 115/230 VAC
Earth Leakage Current		0.75		mA	Measured at 240 VAC
Power Factor					EN61000-3-2 Class A
No Load Input Power			0.5	W	Model dependant
Input Protection	Internal fuse in both line, AEL15020: T1 A, 250 V, AEL40: T2 A, 250 V, AEL60/80: T3.15 A, 250 V				

Output

Characteristic	Min.	Typ.	Max.	Units	Notes & Conditions
Output Voltage					See Models and Ratings table
Minimum Load					No minimum load required
Hold Up Time	5			s	Full load, 110 VAC
	12				
	16				
Start Up Delay			0.5	s	AEL20/40 at full load, 100 VAC
			2.0		AEL15/60/80 at full load, 100 VAC
Transient Response			2	%	Maximum deviation, recovering to less than 1% within 500 μ s for 50% step load
Ripple and Noise			1	% pk-pk	20 MHz bandwidth
Overvoltage Protection	112		132	%	AEL40/60/80 models only
Overload Protection	110		150	%	AEL20/40/60/80 models only
Short Circuit Protection	Trip and restart (hiccup)				
Temperature Coefficient		0.04		%/°C	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-20		+60	°C	Derate from 100% load at 40 °C to 50% load at +60 °C
Cooling	Convection cooled				
Operating Humidity	5		95	%RH	Non-condensing
Storage Temperature	-40		+85	°C	
Operating Altitude			2000	m	
Shock	10 g, 10 ms on 3 axes				

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency				%	See Models and Ratings table
Energy Efficiency					Model dependent, see tables
Isolation: Input to Output Input to Ground Output to Ground			3000	VAC	*Not class 8 version
			1500	VAC*	All class I models available with output negative connected ground. See notes.
			500	VDC*	
Switching Frequency		63 KHz		kHz	
Mean Time Between Failure		>100		kHrs	MIL-HDBK-217F at 25 °C GB
Weight		0.36 (165)		lb (g)	AEL15
		0.37 (170)			AEL20
		0.64 (275)			AEL40
		0.79 (340)			AEL60
		1.5 (700)			AEL80

EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Emissions	EN55022	Level B	Conducted & Radiated
Harmonic Current	EN61000-3-2	Class A	
Voltage Flicker	EN61000-3-3		

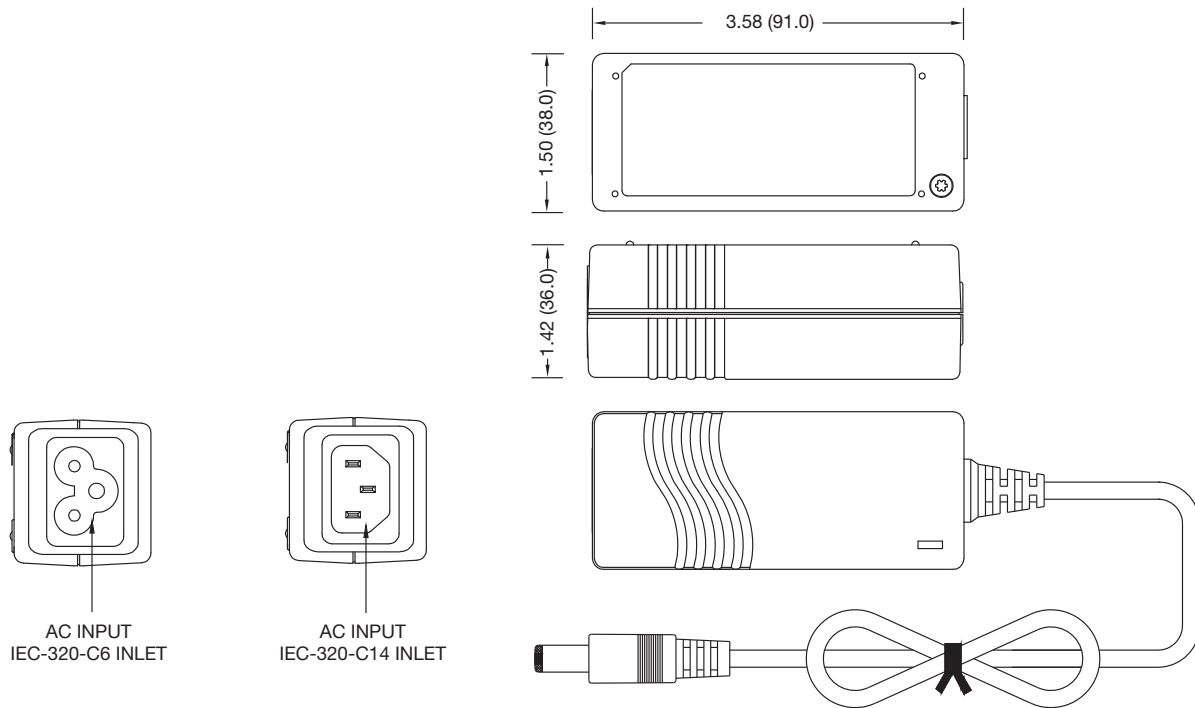
EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD	EN61000-4-2	2	A	
Radiated	EN61000-4-3	3 V/m	A	
EFT/Burst	EN61000-4-4	2	A	
Surge	EN61000-4-5	Installation Class 3	A	
Conducted	EN61000-4-6	2	A	
Magnetic Fields	EN61000-4-8	1 A/m	A	
Dips and Interruptions	EN61000-4-11	Dip: 30% 10 ms	A	
		Dip: 60% 100 ms	B	
		Dip: 100% 5000 ms	B	

Safety Approvals

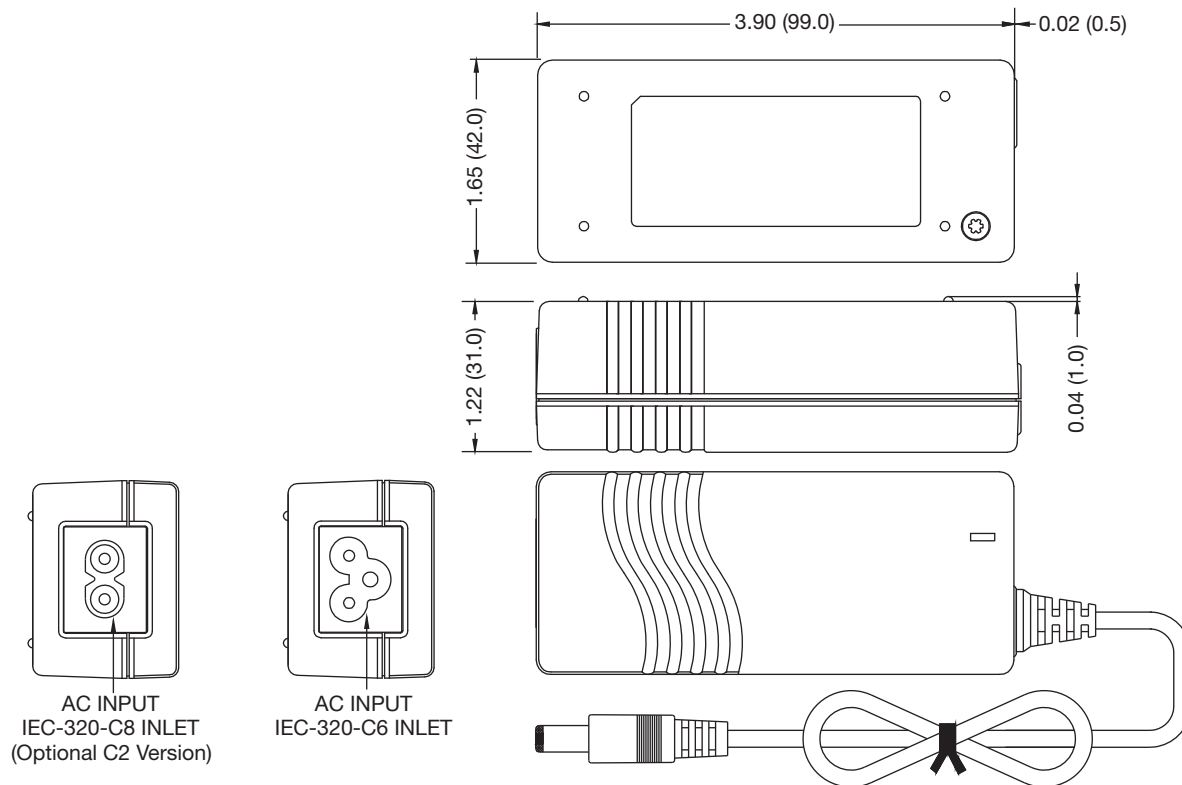
Safety Agency	Safety Standard	Notes & Conditions
EN	EN60950-1: UL/cUL60950-1, Approved as Limited Power Source (AEL15-60 only), China Compulsory Certification (CCC) qualified.	
CE	Meets all applicable directives	
UKCA	Meets all applicable legislation	

Mechanical Details



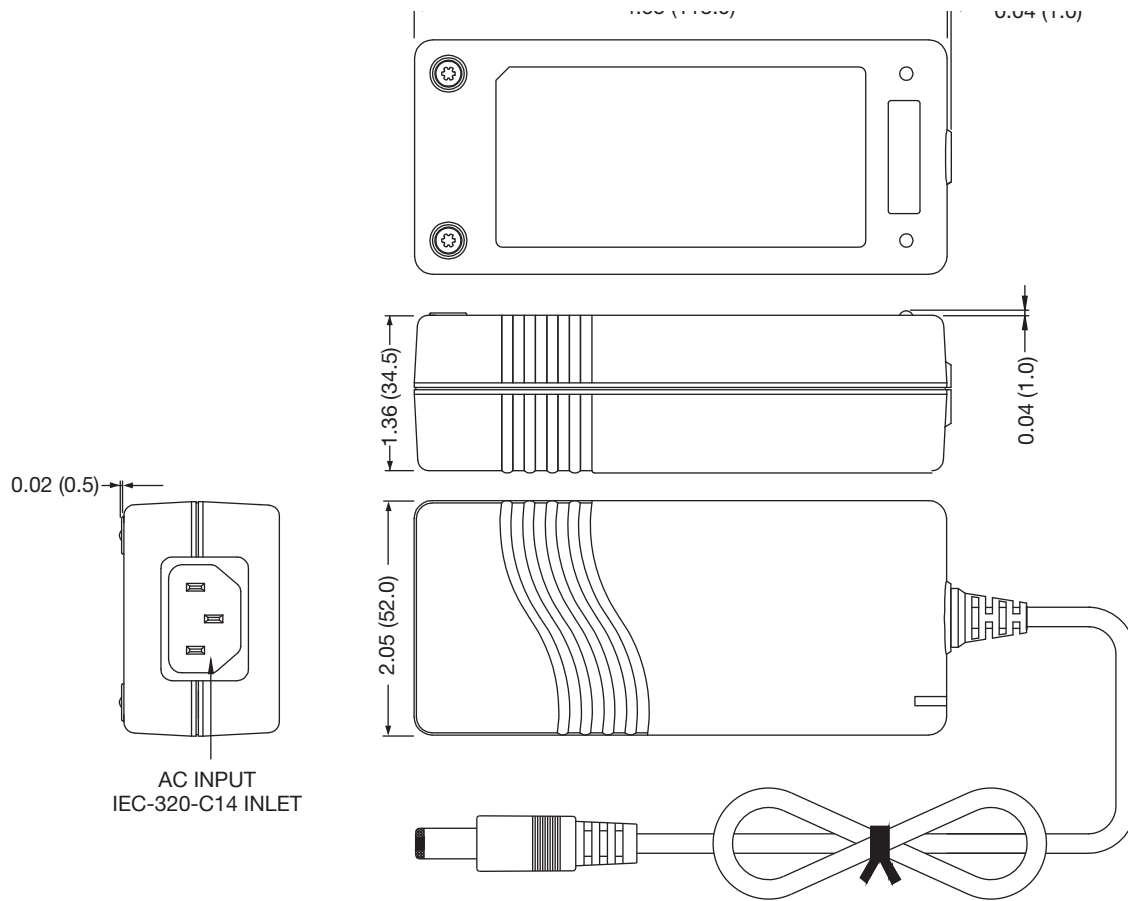
Notes

1. All dimensions are shown in inches (mm). Tolerance ± 0.04 (± 1.0) max.
2. Output connector: is 0.22 (5.5) outer diameter barrel, 0.10 (2.5) inner diameter barrel with centre positive (+) and outer shell negative (-). Length is 0.433 (11.0).
3. Output cable length is 48" (1220mm) approx.
4. Weight: 0.36 lbs (165 g)
5. For European mains lead order part: EU-MAINS-IEC or EU-MAINS-5 for C6 version.
6. For UK mains lead order part: UK-MAINS-IEC or UK-MAINS-5 for C6 version.
7. For US mains lead order part: US-MAINS-IEC or US-MAINS-5 for C6 version.
8. Mains lead length is 78" (2000 mm) approx



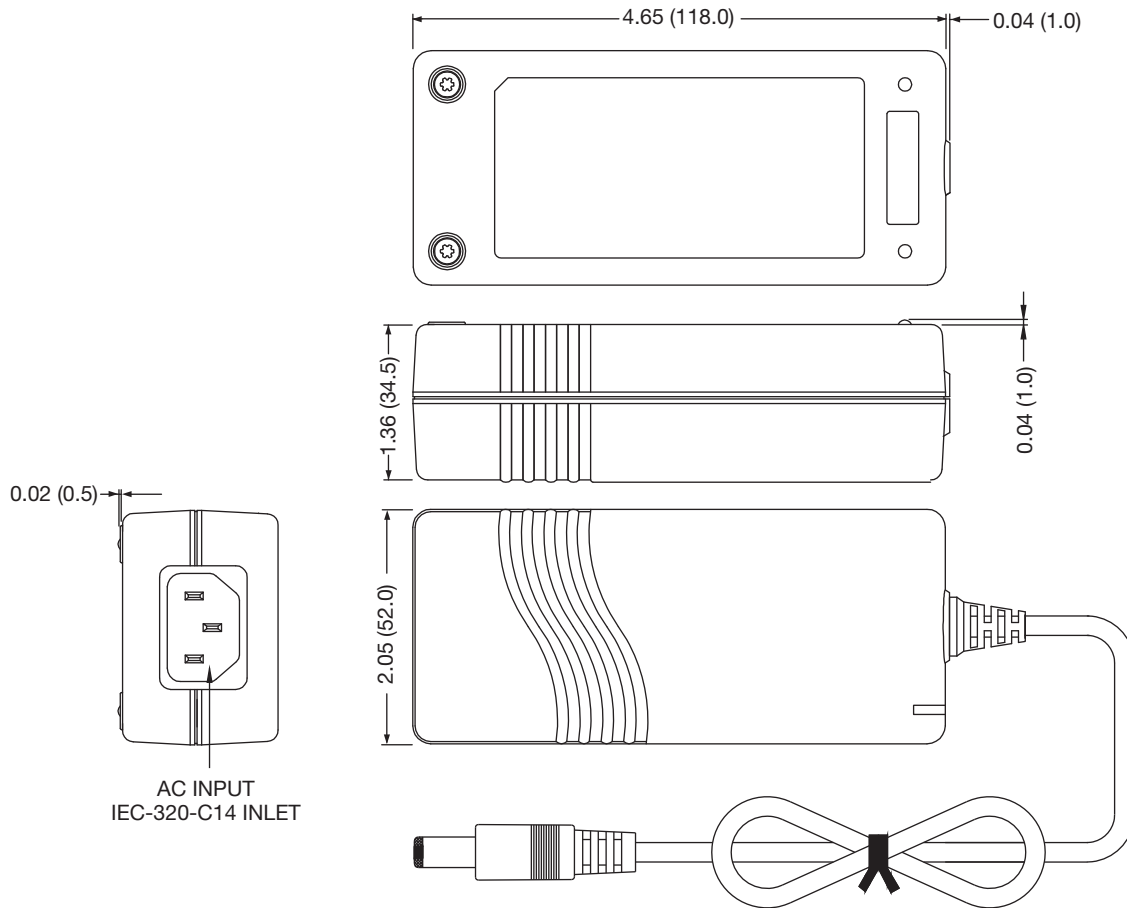
Notes

1. All dimensions are shown in inches (mm). Tolerance ± 0.04 (± 1.0) max.
2. Output connector: 0.22 (5.5) outer diameter barrel, 0.10 (2.5) inner diameter barrel with centre positive (+) and outer shell negative (-). Length is 0.433 (11.0).
3. Output cable length is 48" (1220mm) approx.
4. Weight: 0.37 lbs (170 g)
5. For European mains lead order part: EU-MAINS-C5 for AEL20, EU-MAINS-8 for AEL20 Class II.
6. For UK mains lead order part: UK-MAINS-5 for AEL20, UK-MAINS-8 for AEL20 Class II.
7. For US mains lead order part: US-MAINS-5 for AEL20, US-MAINS-8 for AEL20 Class II.
8. Mains lead length is 78" (2000 mm) approx



Notes

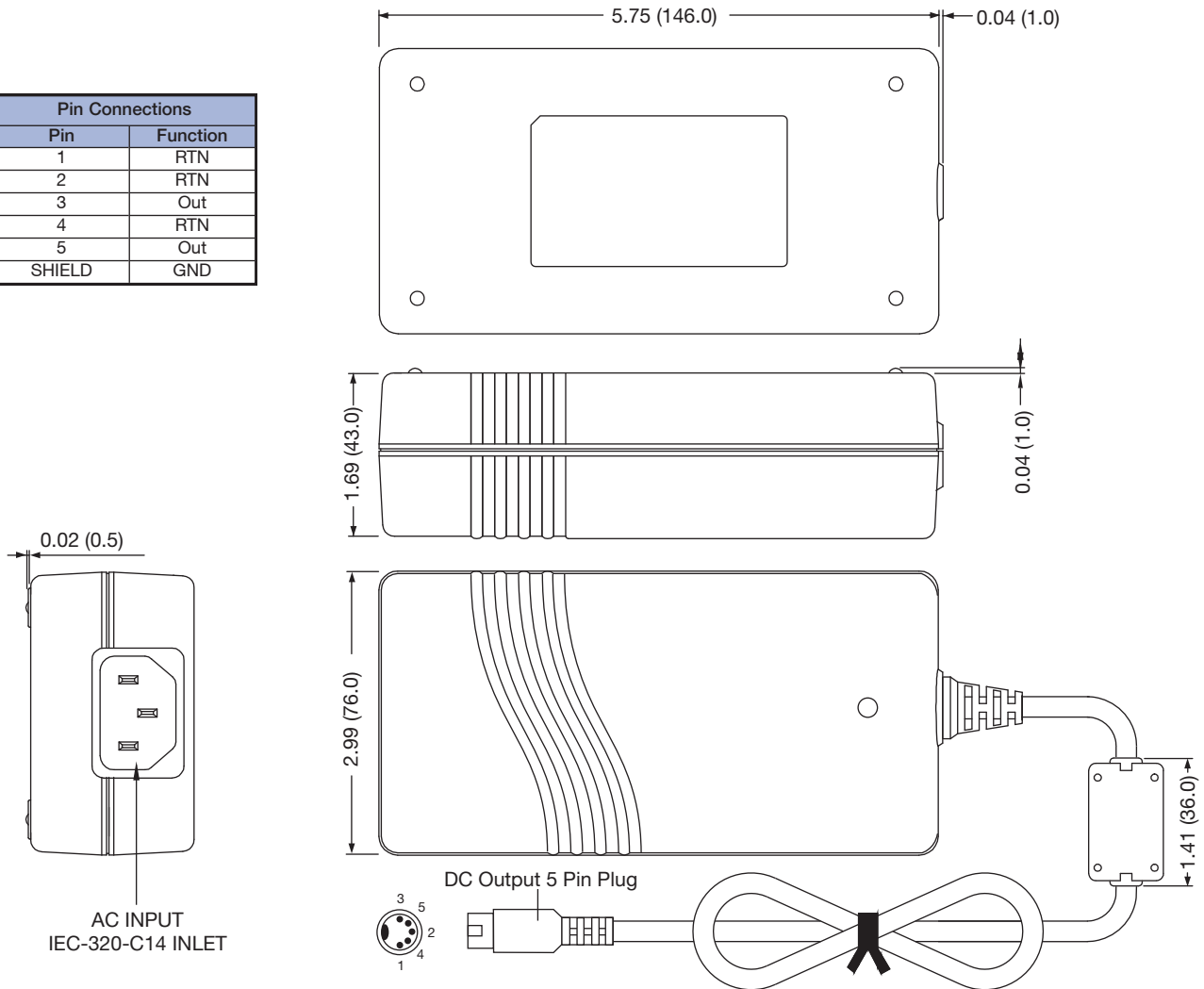
1. All dimensions are shown in inches (mm). Tolerance ± 0.04 (± 1.0) max.
2. Output connector: 0.22 (5.5) outer diameter barrel, 0.10 (2.5) inner diameter barrel with centre positive (+) and outer shell negative (-). Length is 0.433 (11.0).
3. Output cable length is 48" (1220mm) approx.
4. Weight: 0.64 lbs (275 g).
5. For European mains lead order part: EU-MAINS-IEC.
6. For UK mains lead order part: UK-MAINS-IEC.
7. For US mains lead order part: US-MAINS-IEC.
8. Mains lead length is 78" (2000 mm) approx



Notes

1. All dimensions are shown in inches (mm). Tolerance ± 0.04 (± 1.0) max.
2. Output connector: 0.22 (5.5) outer diameter barrel, 0.10 (2.5) inner diameter barrel with centre positive (+) and outer shell negative (-). Length is 0.433 (11.0).
3. Output cable length is 48" (1220mm) approx.
4. Weight: 0.79 lbs (340 g).
5. For European mains lead order part: EU-MAINS-IEC.
6. For UK mains lead order part: UK-MAINS-IEC.
7. For US mains lead order part: US-MAINS-IEC.
8. Mains lead length is 78" (2000 mm) approx.

Pin Connections	
Pin	Function
1	RTN
2	RTN
3	Out
4	RTN
5	Out
SHIELD	GND



Notes

1. All dimensions are shown in inches (mm). Tolerance ± 0.04 (± 1.0) max.
2. Output connector: 5 pin 180° DIN
3. Output cable length: 48" (1220mm) approx.
4. Weight: 1.5 lbs (700 g)
5. For European mains lead order part: EU-MAINS-IEC.
6. For UK mains lead order part: UK-MAINS-IEC.
7. For US mains lead order part: US-MAINS-IEC.
8. Mains lead length is 78" (2000 mm) approx