15–130 Watts
AEH Series

- Output Voltages from 2.5 V to 48 V
- Non–standard Outputs Available
- Universal Input
- Single & Multiple Output Versions
- 0 °C to +60 °C Operating Temperature
- Efficiency up to 80%
- Non–standard Connectors Available

Specification

Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• 0.4/0.26 A for AEH15, at 115/230 VAC 1.5/0.7 A for AEH45, at 115/230 VAC 1.9/1.5 A for AEH80, at 115/230 VAC 3.2/1.7 A for AEH130, at 115/230 VAC
Inrush Current	• AEH15, 45 & 80: 30 A max at 230 VAC AEH130: 60 A max at 230 VAC cold start
Earth Leakage Current	• <0.5 mA max at 115 VAC/60 Hz <0.75 mA max at 230 VAC/50 Hz
Power Factor	• EN61000-3-2 class A

Output

Output Voltage	• See tables, non-standard voltages available - contact sales
Initial Set Accuracy	• 5%
Start Up Delay	• 2 s max
Hold Up Time	• 16 ms min (>50 ms AEH130)
Line Regulation	• See tables
Load Regulation	• See tables
Transient Response	• 4% max deviation, recovery to within 1% in 4 ms for a 50% load change
Ripple & Noise	• 2% pk-pk for outputs ≤3.3 V 1% pk-pk for all other outputs 20 MHz bandwidth
Overvoltage Protection	• 112-132% Vnom, auto reset
Overload Protection	• Output 1 only 110-150% of nominal (AEH15 Output protected to short circuit)
Temperature Coefficient	• ±0.04%/°C max

General

Efficiency	• Up to 80%
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 65-80 kHz for AEH15 67-83 kHz for AEH45 58 kHz typical for AEH80 53-76 kHz for AEH130
MTBF	• 100 kHrs per 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	• 5-95% RH, non-condensing
Storage Temperature	• -40 °C to +85 °C
Vibration	• 2 g on 3 axes

EMC & Safety

Emissions	• EN55022 level B, conducted and radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, level 2 Perf Criteria A
Radiated Immunity	• EN61000-4-3, level 3 Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Surge	• EN61000-4-5, level 3 Perf Criteria A
Conducted Immunity	• EN61000-4-6, level 2 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, UL60950-1, CSA C22.2 No. 950 per cUL, CE Mark

Models and Ratings

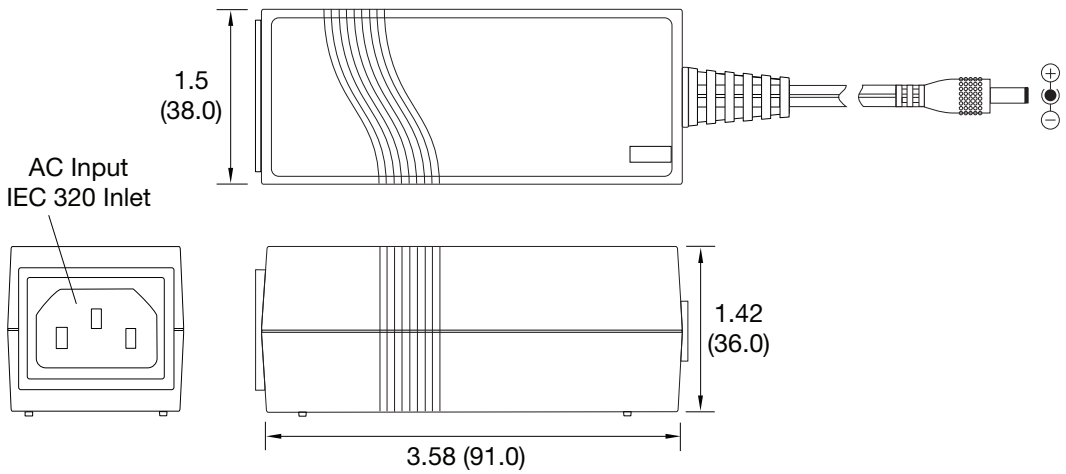
Output Power	Output Voltage Nominal[1]	Output Current		Total Regulation[2]	Model Number
		Minimum	Maximum		
8.25 W	3.3 V	0.0 A	2.50 A	7%	AEH15US03
12.00 W	5.0 V	0.0 A	2.40 A	5%	AEH15US05
12.00 W	7.0 V	0.0 A	1.70 A	5%	AEH15US07
15.00 W	10.0 V	0.0 A	1.50 A	5%	AEH15US10
15.00 W	12.0 V	0.0 A	1.25 A	5%	AEH15US12
15.00 W	15.0 V	0.0 A	1.00 A	5%	AEH15US15
15.00 W	18.0 V	0.0 A	0.83 A	5%	AEH15US18
15.00 W	24.0 V	0.0 A	0.62 A	5%	AEH15US24
15.00 W	30.0 V	0.0 A	0.50 A	5%	AEH15US30
15.00 W	36.0 V	0.0 A	0.42 A	3%	AEH15US36
15.00 W	48.0 V	0.0 A	0.31 A	3%	AEH15US48

Notes

1. Factory-set non-standard outputs available.

2. Total regulation includes initial set accuracy, line and load regulation.

Mechanical Details



Notes

1. Dimensions shown in inches (mm).
2. Tolerance 0.02 (0.5) max.
3. Output connector is 5.5mm outer diameter barrel. Inner diameter is 2.5mm, length is 11 mm, with centre positive (+) and outer shell negative (-).
4. Output cable length is 72.0 (1830).
5. Optional output connectors available, contact sales office.
6. Weight 0.36 lb (165 g) approx.
7. For UK mains lead order part: UK-MAINS-IEC.
   For European mains lead order part: EU-MAINS-IEC.

Models and Ratings

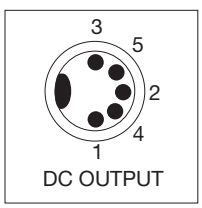
Output Power Max	Output 1[1,2]			Output 2[1,2]			Output 3[1,2]			Model Number
	Voltage Nom.	Current		Voltage Nom.	Current		Voltage Nom.	Current		
		Min	Max		Min	Max		Min	Max	
20 W	2.5 V	0.0 A	8.0 A							AEH45US02
26 W	3.3 V	0.0 A	8.0 A							AEH45US03
40 W	5.0 V	0.0 A	8.0 A							AEH45US05
42 W	7.0 V	0.0 A	6.0 A							AEH45US07
45 W	10.0 V	0.0 A	4.5 A							AEH45US10
44 W	12.0 V	0.0 A	3.7 A							AEH45US12
44 W	15.0 V	0.0 A	2.9 A							AEH45US15
44 W	18.0 V	0.0 A	2.4 A							AEH45US18
48 W	24.0 V	0.0 A	2.0 A							AEH45US24
50 W	30.0 V	0.0 A	1.7 A							AEH45US30
50 W	36.0 V	0.0 A	1.4 A							AEH45US36
50 W	48.0 V	0.0 A	1.0 A							AEH45US48
42 W	+12.0 V	0.5 A	3.0 A	-12.0 V	0.2 A	1.0 A				AEH45UM21
42 W	+15.0 V	0.5 A	2.0 A	-15.0 V	0.2 A	1.0 A				AEH45UM22
42 W	+5.0 V	0.5 A	5.0 A	+12.0 V	0.2 A	2.0 A				AEH45UM23
42 W	+5.0 V	0.5 A	5.0 A	+15.0 V	0.2 A	1.5 A				AEH45UM26
42 W	+5.0 V	0.5 A	5.0 A	+24.0 V	0.1 A	1.0 A				AEH45UM25
42 W	+5.0 V	0.5 A	5.0 A	-24.0 V	0.1 A	1.0 A				AEH45UM27
27 W	+3.3 V	0.5 A	5.0 A	+5.0 V	0.1 A	2.0 A				AEH45UM28
40 W	+3.3 V	0.5 A	5.0 A	+12.0 V	0.2 A	2.0 A				AEH45UM29
42 W	+5.0 V	0.5 A	5.0 A	+12.0 V	0.2 A	2.0 A	-5.0 V	0.0 A	0.8 A	AEH45UM33
42 W	+5.0 V	0.5 A	5.0 A	+12.0 V	0.2 A	2.0 A	-12.0 V	0.0 A	0.8 A	AEH45UM31
42 W	+5.0 V	0.5 A	5.0 A	+15.0 V	0.2 A	2.0 A	-15.0 V	0.0 A	0.8 A	AEH45UM32
40 W	+3.3 V	0.5 A	5.2 A	+12.0 V	0.2 A	2.0 A	-5.0 V	0.0 A	0.8 A	AEH45UM34
42 W	+3.3 V	0.5 A	5.0 A	+12.0 V	0.2 A	2.0 A	-12.0 V	0.0 A	0.8 A	AEH45UM35
42 W	+5.0 V	0.5 A	5.0 A	+24.0 V	0.1 A	1.0 A	-12.0 V	0.0 A	0.8 A	AEH45UM38
42 W	+5.0 V	0.5 A	5.0 A	+24.0 V	0.1 A	1.0 A	-24.0 V	0.0 A	0.5 A	AEH45UM39

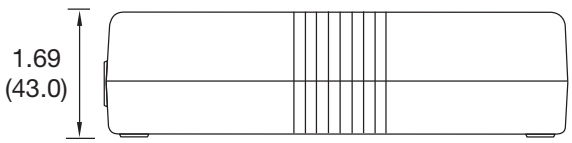
Notes

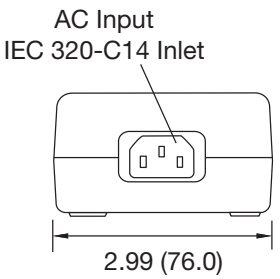
1. Factory-set non-standard outputs available.

2. Total regulation includes initial set accuracy, line and load regulation and is typically 3% for output 1 and 5% for auxiliaries.

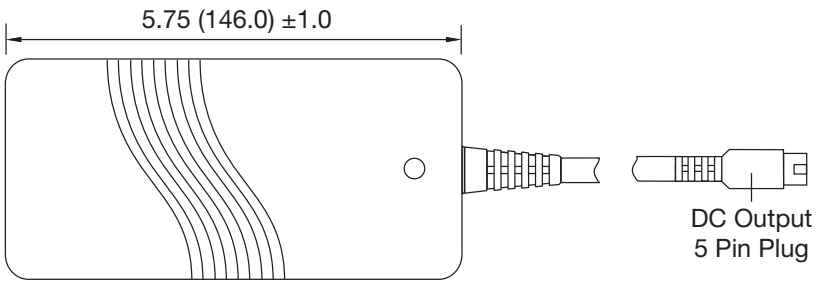
Mechanical Details







PIN CONNECTIONS			
Pin	SINGLE	DUAL	TRIPLE
Shell	GND	GND	GND
1	Common	Common	Common
2	Common	Common	Common
3	Output	Output 1	Output 1
4	Common	Common	Output 3
5	Output	Output 2	Output 2



Notes

1. Dimensions shown in inches (mm).
2. Tolerance 0.02 (0.5) max.
3. Output cable length is 48” (1220 mm) approx.
4. Optional output connectors available, contact sales.
5. Weight 0.9-1.1 lb (400-500 g) approx.
6. For UK mains lead order part: UK-MAINS-IEC.
   For European mains lead order part: EU-MAINS-IEC.
7. For mating DIN connector, use standard 5 pin 180° socket.

Models and Ratings

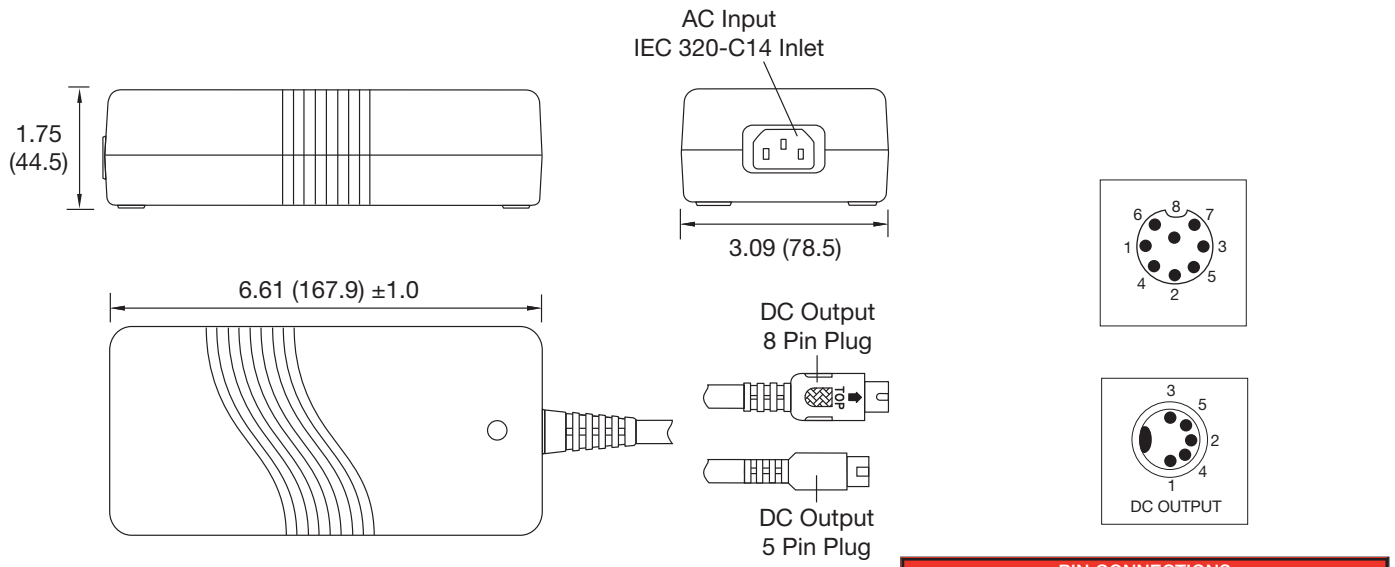
Output Power Max	Output 1[1,2]			Output 2[1,2]			Output 3[1,2]			Model Number
	Voltage Nom.	Current		Voltage Nom.	Current		Voltage Nom.	Current		
		Min	Max		Min	Max		Min	Max	
50 W	3.3 V	0.0 A	15.1 A							AEH80US03
65 W	5.0 V	0.0 A	13.0 A							AEH80US05
70 W	7.0 V	0.0 A	9.9 A							AEH80US07
75 W	10.0 V	0.0 A	7.5 A							AEH80US10
80 W	12.0 V	0.0 A	6.6 A							AEH80US12
80 W	15.0 V	0.0 A	5.3 A							AEH80US15
80 W	18.0 V	0.0 A	4.4 A							AEH80US18
80 W	24.0 V	0.0 A	3.3 A							AEH80US24
80 W	30.0 V	0.0 A	2.6 A							AEH80US30
80 W	36.0 V	0.0 A	2.2 A							AEH80US36
80 W	48.0 V	0.0 A	1.6 A							AEH80US48
60 W	+5.0 V	0.7 A	7.0 A	+12.0 V	0.3 A	3.0 A				AEH80UM23
60 W	+5.0 V	1.4 A	7.0 A	+15.0 V	0.6 A	3.0 A				AEH80UM26
60 W	+5.0 V	1.4 A	7.0 A	+24.0 V	0.2 A	2.0 A				AEH80UM25
60 W	+5.0 V	1.4 A	7.0 A	-24.0 V	0.2 A	2.0 A				AEH80UM29
38 W	+3.3 V	1.4 A	7.0 A	+5.0 V	0.6 A	3.0 A				AEH80UM28
56 W	+3.3 V	0.7 A	7.0 A	+12.0 V	0.5 A	3.0 A				AEH80UM27
65 W	+5.0 V	0.6 A	6.0 A	+12.0 V	0.3 A	3.0 A	-5.0 V	0.0 A	0.8 A	AEH80UM33
65 W	+5.0 V	0.6 A	6.0 A	+12.0 V	0.3 A	3.0 A	-12.0 V	0.0 A	0.8 A	AEH80UM31
65 W	+5.0 V	0.6 A	6.0 A	+15.0 V	0.3 A	2.1 A	-15.0 V	0.0 A	0.8 A	AEH80UM32
63 W	+3.3 V	0.7 A	7.0 A	+12.0 V	0.6 A	3.0 A	-5.0 V	0.0 A	0.8 A	AEH80UM34
65 W	+3.3 V	1.4 A	7.0 A	+12.0 V	0.6 A	3.0 A	-12.0 V	0.1 A	0.8 A	AEH80UM37
65 W	+5.0 V	0.7 A	7.0 A	+24.0 V	0.2 A	2.0 A	-24.0 V	0.0 A	0.8 A	AEH80UM38
65 W	+5.0 V	0.6 A	6.0 A	+24.0 V	0.2 A	2.0 A	-12.0 V	0.0 A	0.8 A	AEH80UM39

Notes

1. Factory-set non-standard outputs available.

2. Total regulation includes initial set accuracy, line and load regulation and is typically 3% for output 1 and 5% for auxiliaries.

Mechanical Details



Notes

1. Dimensions shown in inches (mm).
2. Tolerance 0.02 (0.5) max.
3. Output cable length is 48" (1220mm) approx.
4. Optional output connectors available, contact sales.
5. Weight 0.9-1.1 lb (400-500 g) approx.
6. For UK mains lead order part: UK-MAINS-IEC,
   For European mains lead order part: EU-MAINS-IEC.

PIN CONNECTIONS				
Pin	SINGLES		DUAL	TRIPLE
	03, 05 V	07-48 V		
Shell	GND	GND	GND	GND
1	Common	Common	Common	Common
2	Common	Common	Output 2	Output 3
3	Output	Output	Output 1	Output 1
4	Common	Common	Output 2	Output 2
5	Output	Output	Output 1	Output 2
6	Common		Common	Common
7	Output		Output 1	Output 1
8	Output		Common	Output 3

Models and Ratings

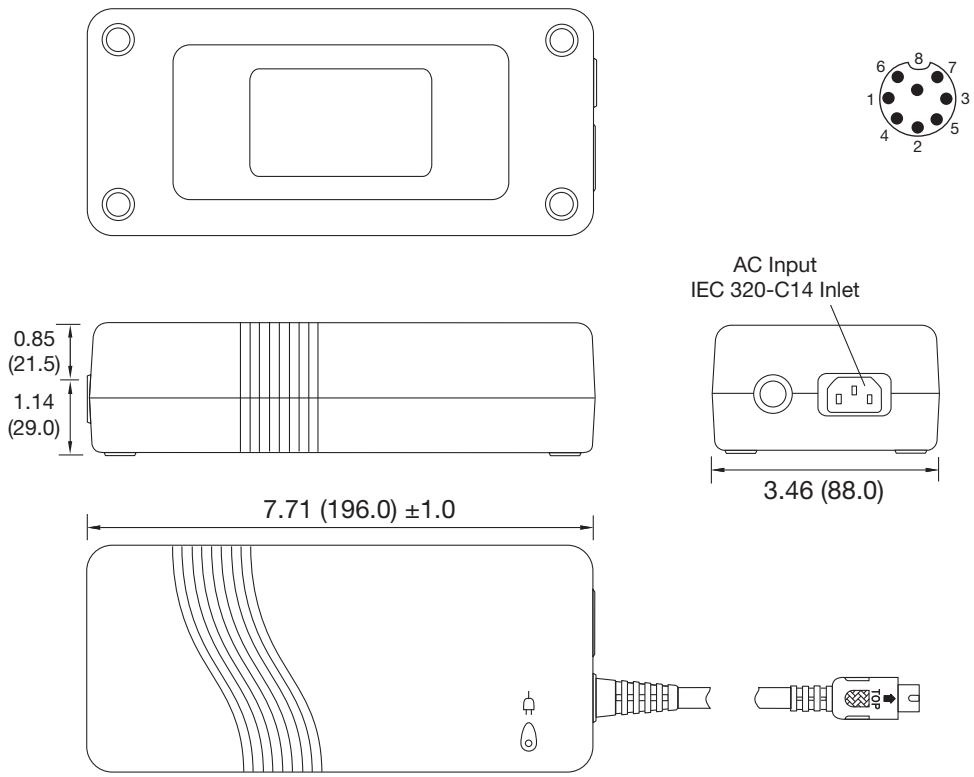
Output Power Max	Output 1[1,2]				Output 2[1,2]				Model Number
	Voltage Nom.	Current		Total Regulation	Voltage Nom.	Current		Total Regulation	
		Min	Max			Min	Max		
90 W	3.3 V	0.0 A	27.2 A	7%					AEH130PS3V3
115 W	5.0 V	0.0 A	23.0 A	7%					AEH130PS05
130 W	7.0 V	0.0 A	18.5 A	7%					AEH130PS07
130 W	9.0 V	0.0 A	14.4 A	5%					AEH130PS09
130 W	12.0 V	0.0 A	10.8 A	5%					AEH130PS12
130 W	15.0 V	0.0 A	8.6 A	5%					AEH130PS15
130 W	18.0 V	0.0 A	7.2 A	5%					AEH130PS18
130 W	24.0 V	0.0 A	5.4 A	5%					AEH130PS24
130 W	28.0 V	0.0 A	4.6 A	5%					AEH130PS28
130 W	36.0 V	0.0 A	3.6 A	5%					AEH130PS36
130 W	48.0 V	0.0 A	2.7 A	3%					AEH130PS48
130 W	54.0 V	0.0 A	2.4 A	3%					AEH130PS54
90 W	+3.3 V	4.0 A	20.0 A	10%	+12.0 V	0.2 A	2.0 A	5%	AEH130PD01
120 W	+5.0 V	4.0 A	20.0 A	7%	+12.0 V	0.2 A	2.0 A	5%	AEH130PD02
120 W	+5.0 V	4.0 A	20.0 A	7%	+15.0 V	0.2 A	2.0 A	5%	AEH130PD03
120 W	+5.0 V	4.0 A	20.0 A	7%	+24.0 V	0.2 A	2.0 A	5%	AEH130PD04

Notes

1. Factory-set non-standard outputs available.

2. Total regulation includes initial set accuracy, line and load regulation.

Mechanical Details



PIN CONNECTIONS		
Pin	SINGLE	DUAL
Shell	GND	GND
1	Common	Common
2	Common	Output 2
3	Output	Output 1
4	Common	Output 2
5	Output	Output 1
6	Common	Common
7	Output	Output 1
8	Output	Common

Notes

1. Dimensions shown in inches (mm).
2. Tolerance 0.02 (0.5) max.
3. Output cable length is 48” (1220mm) approx.
4. Optional output connectors available, contact sales.
5. Weight 1.9 lb (860 g) approx.
6. For UK mains lead order part: UK-MAINS-IEC, For European mains lead order part: EU-MAINS-IEC.