

## AEH Series



- Output Voltages from 3.3 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	• 1.5/0.7 A for AEH45, at 115/230 VAC 1.9/1.5 A for AEH80, at 115/230 VAC
Inrush Current	• 30 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
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 $\leq 3.3$ 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
Temperature Coefficient	• $\pm 0.04\%/^{\circ}\text{C}$ max

### General

---

Efficiency	• Up to 80%
Isolation	• 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground
Switching Frequency	• 67-83 kHz for AEH45 58 kHz typical for AEH80
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	• AEH45: EN62368-1, UL 60950-1, AEH80: EN62368-1, UL62368-1 CE Mark

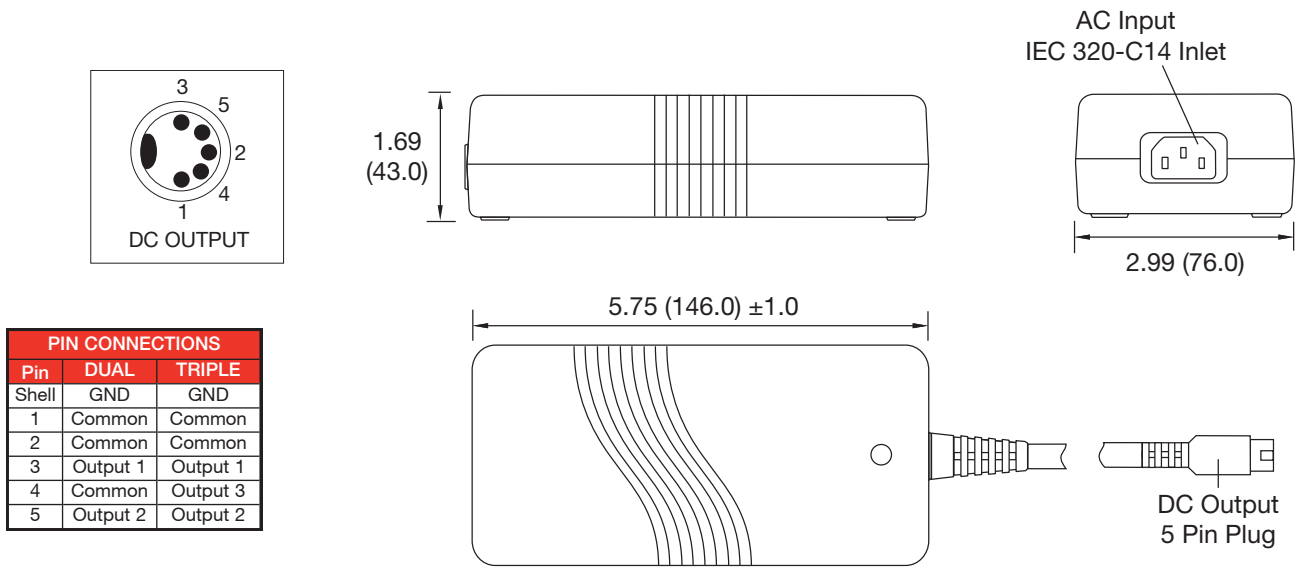
**Models and Ratings**

Output Power Max	Output 1 <sup>(1,2)</sup>			Output 2 <sup>(1,2)</sup>			Output 3 <sup>(1,2)</sup>			Model Number
	Voltage Nom.	Current		Voltage Nom.	Current		Voltage Nom.	Current		
		Min	Max		Min	Max		Min	Max	
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**



**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.

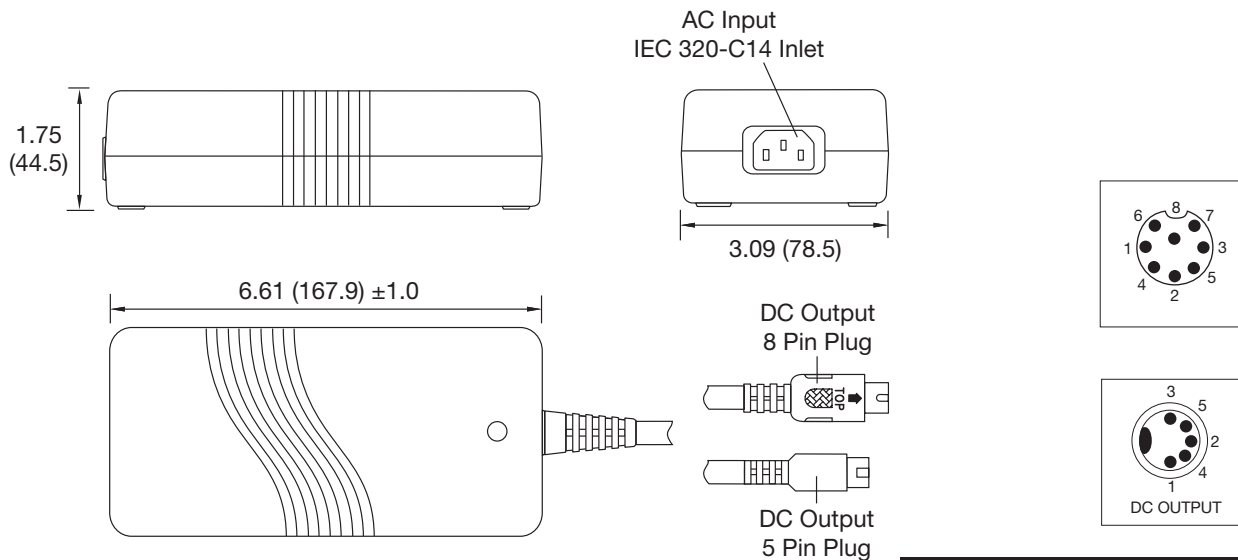
## Models and Ratings

Output Power Max	Output 1 <sup>(1,2)</sup>			Output 2 <sup>(1,2)</sup>			Output 3 <sup>(1,2)</sup>			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	PIN CONNECTIONS			
	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