

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 ≤ 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

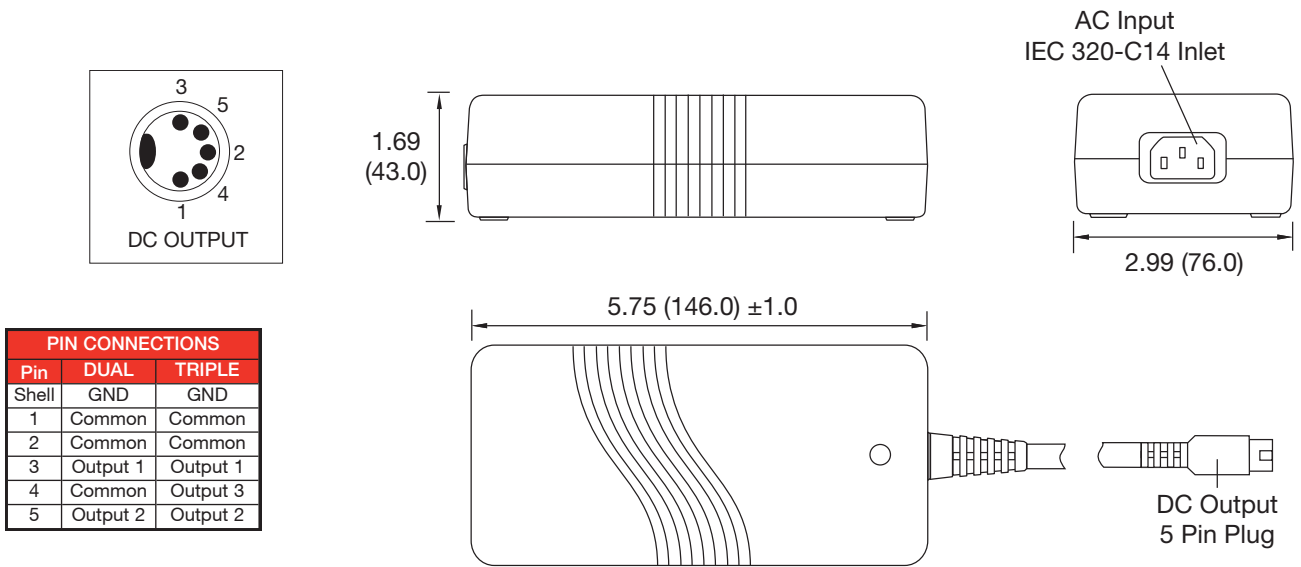
Models and Ratings

Output Power Max	Output 1 ^(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	
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.

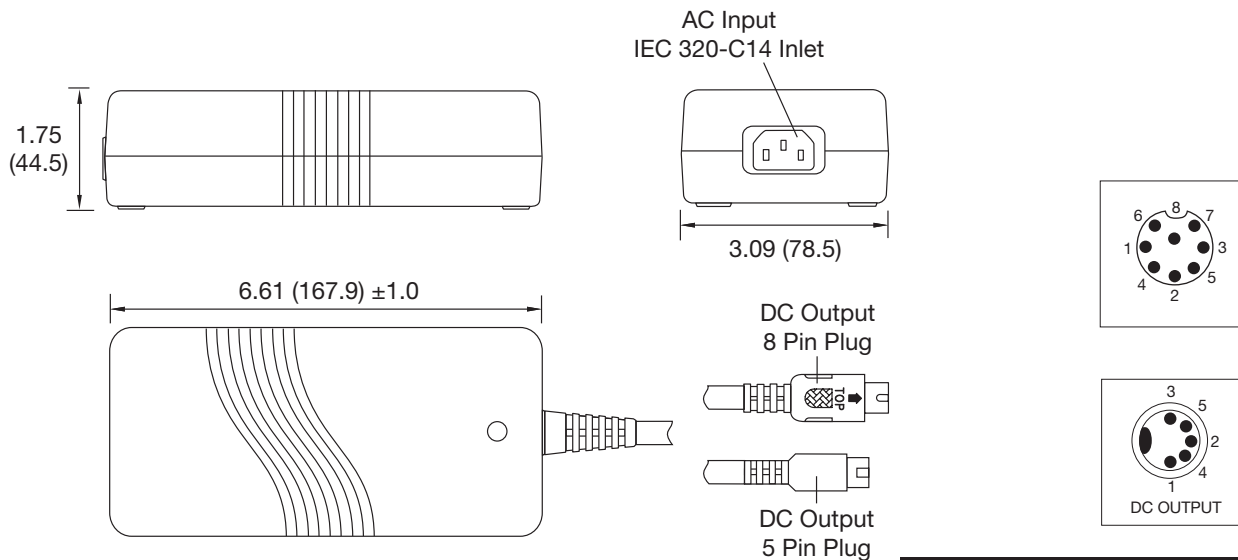
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Output Power Max	Output 1 ^(1,2)			Output 2 ^(1,2)			Output 3 ^(1,2)			Model Number
	Voltage Nom.	Current		Voltage Nom.	Current		Voltage Nom.	Current		
		Min	Max		Min	Max		Min	Max	
50 W	3.3 V	0.0 A	15.1 A							AEH80US03
65 W	5.0 V	0.0 A	13.0 A							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

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For European mains lead order part: EU-MAINS-IEC.

Pin	PIN CONNECTIONS			
	SINGLES		DUAL	TRIPLE
Shell	03, 05 V	07-48 V	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