

40 Watts

- Energy Efficiency Level VI
- European CoC Tier 2
- <0.075 W Standby Power
- Single Outputs 5 to 48 V
- 0 °C to 60 °C Operation
- Universal Input
- 3 Year Warranty



Dimensions:

AEK40:

4.21 x 1.85 x 1.19" (107.0 x 47.0 x 30.1 mm)

Models & Ratings

Output Power	Output Voltage	Output Current	Total Regulation	Ripple & Noise ⁽³⁾	Efficiency ⁽¹⁾	Model Number
25 W	5.0 V	5.00 A	±5%	50 mV	85.9%	AEK40US05
40 W	12.0 V	3.33 A		100 mV	88.5%	AEK40US12
	15.0 V	2.67 A		100 mV	88.5%	AEK40US15
	18.0 V	2.22 A		100 mV	88.0%	AEK40US18
50 W	24.0 V	2.08 A		100 mV	88.0%	AEK40US24 ⁽²⁾
	48.0 V	1.04 A		100 mV	88.0%	AEK40US48 ⁽²⁾

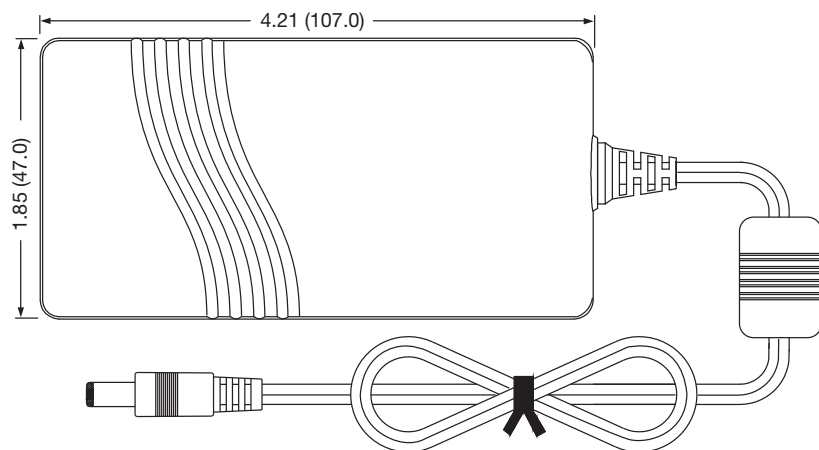
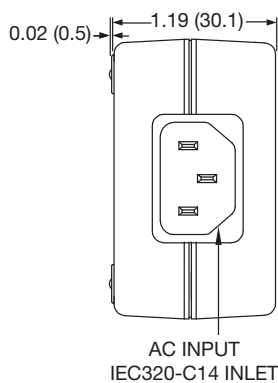
Notes

1. Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 230 VAC input.

2. No load input power is <0.15 W.

3. Pk Pk value measured with 20 MHz bandwidth and 0.47 µF ceramic capacitor.

Mechanical Details



Notes

1. All dimensions shown in inches (mm).

2. Weight: 0.38 lbs (190 g) approx.

3. Tolerance is ±0.02 (±0.5) maximum, except output cable length which is ±2" (±50 mm)

4. Output connector is 5.5 mm dia. outer barrel, inner dia. is 2.5 mm with a center + and outer shell - polarity.

5. Cable length: 5 & 12 V: 48" (1220 mm) 16 AWG
Others: 48" (1220 mm) 18 AWG

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage	90		264	VAC	
Input Frequency	47		63	Hz	
Input Current		0.9/0.52		A	Measured at 100 VAC/240 VAC
Inrush Current			110	A	230 VAC, cold start at 25 °C
Leakage Current			0.75	mA	240 VAC, 60 Hz
No Load Input Power			75	mW	150 mW for 24 V and 48 V models
Input Protection	T2.0A/250 VAC internal fuse in line				

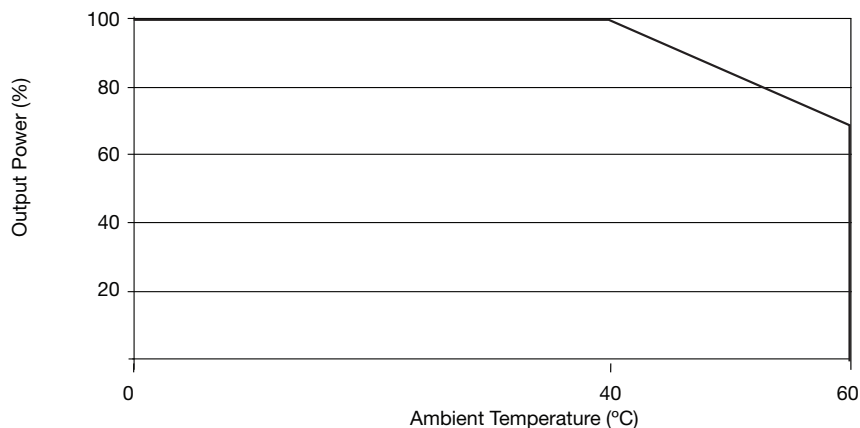
Output

Characteristic	Min.	Typ.	Max.	Units	Notes & Conditions
Output Voltage	5		48	VDC	See Models and Ratings table
Initial Set Accuracy			±2	%	At 60% load
Minimum Load					No minimum load required
Start Up Delay			2	s	
Hold Up Time	12			ms	Full load and 115 VAC
Line Regulation			±1	%	From minimum to maximum input voltage at full load
Load Regulation			±4	%	Load regulation measured from 10% to 100% load
Transient Response			5	%	Maximum deviation, recovering to less than 1% within 500 µs for 25% step load
Ripple and Noise				mV pk-pk	See Models and Ratings table
Overshoot		5		%	At turn on / turn off
Overload Protection	110		150	%	
Short Circuit Protection	Trip and restart (hiccup), auto resetting				
Temperature Coefficient		0.04		%/°C	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	0		+60	°C	Derate from 100% load at 40 °C to 67% load at 60 °C
Cooling	Natural convection				
Operating Humidity	0		95	%RH	Non-condensing
Storage Temperature	-40		+85	°C	
Operating Altitude			5000	m	
Shock	IEC68-2-27, 30 g, 11 ms half sine, 3 times in each of 6 axes				
Vibration	IEC68-2-6, 10-500 Hz, 5 g 10 mins/sweep, 60 mins for each of 3 axes				

Derating Curve

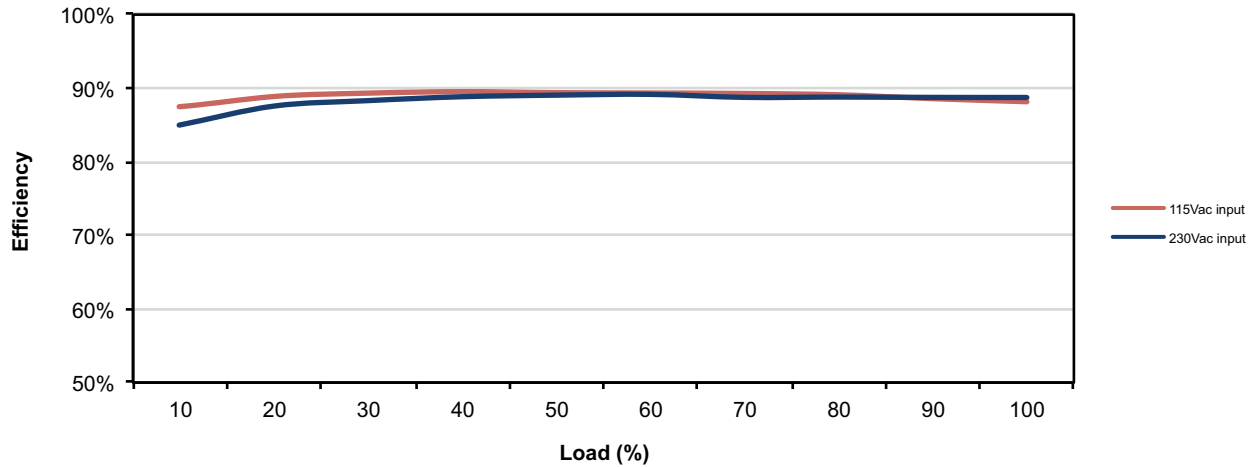


General

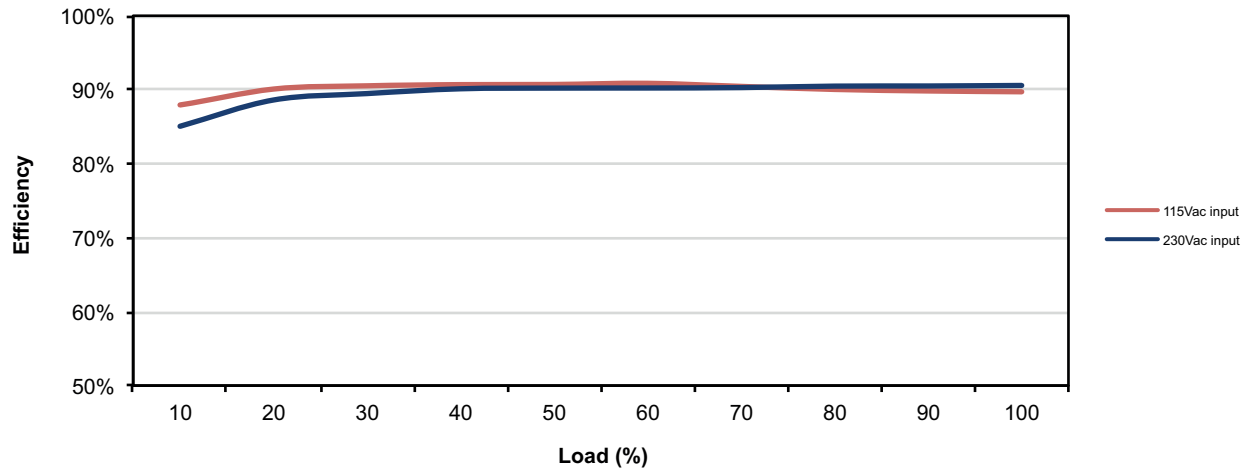
Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency		88		%	See Models and Ratings table and curves.
Isolation: Input to Ground	1500			VAC	
Isolation: Input to Output	3000			VAC	
Isolation: Output to Ground	500			VDC	
Switching Frequency		65		kHz	
Power Density		4.3		W/in ³	
Mean Time Between Failure	100			kHrs	MIL-HDBK-217F at 25 °C GB
Weight		0.38 (190)		lb (g)	

Efficiency Curves

AEK40US12



AEK40US24



EMC: Emissions

Phenomenon	Standard	Test Level	Notes & Conditions
Emissions	EN55032	Level B	Conducted & Radiated
Harmonic Current	EN61000-3-2	Class A	
Voltage Flicker	EN61000-3-3		

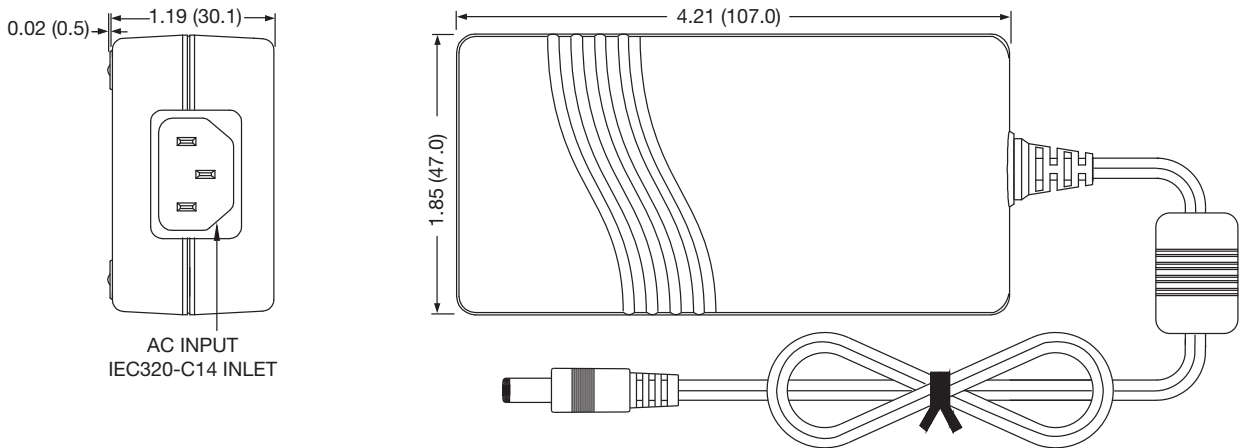
EMC: Immunity

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD	EN61000-4-2	±8 kV Air, ±6 kV contact	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	3 V	A	
Magnetic Fields	EN61000-4-8	3 A/m	A	
Dips and Interruptions	EN61000-4-11	Dip: 30% 10 ms	A	High Line/Low Line
		Dip: 60% 100 ms	A/B	
		Int: 100% 5000 ms	B	

Safety Approvals

Safety Agency	Safety Standard	Notes & Conditions
UL	UL60950-1	
TUV	EN60950-1	
CB	IEC60950-1	
AU/NZ	AU/NZ 60950.1	

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