

FEATURES:



- Accurate Constant Current Output $\pm 5\%$
- High Efficiency: Up to 88%
- Active Power Factor Correction
- Short Circuit / Open Circuit Protection
- Class 2 Power Unit
- Long Life, High reliability
- IP20, Suitable for Indoor LED Lighting
- 3 Years Limited Warranty



Models
Single output

Model	Max Output Power (W)	Output Voltage Range (V)	Output Current (mA)	Input Voltage (VAC/Hz)	Efficiency (%)
AMEPR40-10040Z	40.0	80-100	400	90-264/47-63	88
AMEPR40-42100Z	42.0	30-42	1000	90-264/47-63	88

NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity <75%, nominal input voltage and at rated output load unless otherwise specified.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input Current	90 VAC, full load		0.6	Arms
Inrush current <2ms	115 VAC, cold start		20	A
	230 VAC, cold start		40	
Leakage current			0.75	mA
Input dissipation	No Load		1	W
	Output Short		2	W
Power Factor	115 VAC, full load		0.98	
	230 VAC, full load		0.95	
Input Fuse			2A / 250V	
Start-up Time	115 VAC, full load		2.0	Sec.
	230 VAC, full load		1.0	Sec.

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		± 5		%
Line regulation	LL to HL	± 3		%
Load regulation	Full Output Voltage Range	± 5		%
Ripple & Noise			5	V p-p
Output Current Ripple	Full load, 16.7-20ms duration		1.6	A p-p
Current Overshoot	LL to HL, full load at cold start, % of rated output current		10	%
Minimum Load Voltage	See Models Table Above			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	IEC61347		3750	VAC
Isolation Resistance	500Vdc	>100M Ω		Vdc
Isolation Capacitance		100		pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			135	KHz
Over voltage protection	AMEPR40-10040Z		120	V
	AMEPR40-42100Z		50	V
Short circuit protection	Continuous, Hiccup Mode			
Short circuit restart	Auto Recovery			

Open circuit protection	Continuous, Hiccup Mode		
Operating temperature		-20 to +50	°C
Maximum case temperature		80	°C
Storage temperature		-30 to +90	°C
Temperature coefficient			0.05 % / °C
Cooling	Free Air Convection		
Humidity		90	% RH
Case material	Plastic		
Weight		150	g
Dimensions (L X W+ X H)	5.71 X 1.89 X 1.26 inches 145.0 X 48.0 X 32.0 mm		
MTBF	>300,000 hrs (MIL-HDBK-217F at +25°C)		

Safety Specifications

Parameters		
Standards	Electromagnetic Interference	EN55015 / FCC Part 15, Class B
	Harmonic Current Emissions	EN61000-3-2, Class B
	Voltage fluctuations and flicker	EN61000-3-3
	Electrostatic Discharge Immunity	EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria A
	RF, Electromagnetic Field Immunity	EN61000-4-3, Test-RS Level 3, Criteria A
	Electrical Fast Transient / Burst Immunity	EN61000-4-4, Burst EFT Level 3, Criteria A
	Surge Immunity	EN61000-4-5, Line to Neutral 2kV
	RF, Conducted Disturbance Immunity	EN61000-4-6, Test-CS Level 3, Criteria A
	Power frequency Magnetic Field Immunity	EN61000-4-8, Test 3A/m, Criteria A
	Voltage dips, Short Interruptions Immunity	EN61000-4-11, Criteria B
	Electromagnetic Immunity Requirements Applies to Lighting Equipment	EN61547

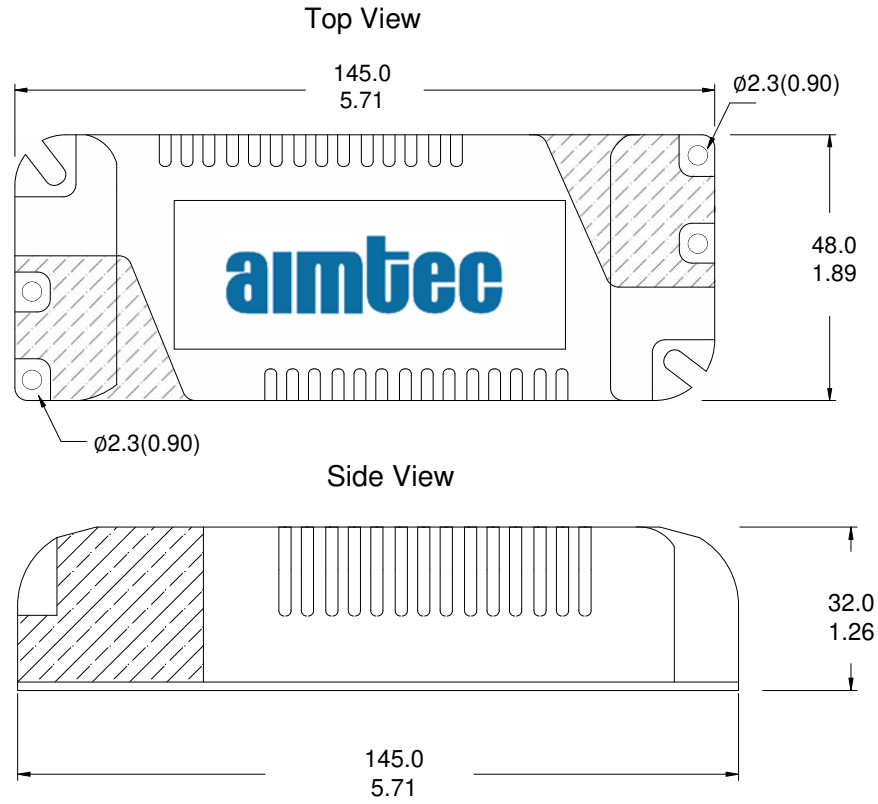
Application Block diagram



Pin Definition

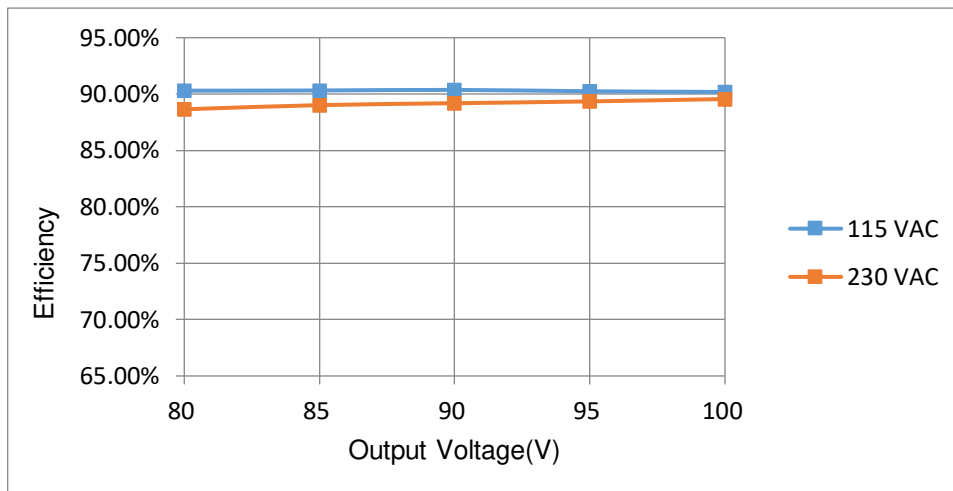
Pin	Description
L, N	Input terminals, Connected to L and N lines
LED+	Output terminal, Connected to the positive pole of LEDs
LED-	Output terminal, Connected to the negative pole of LEDs

Dimensions

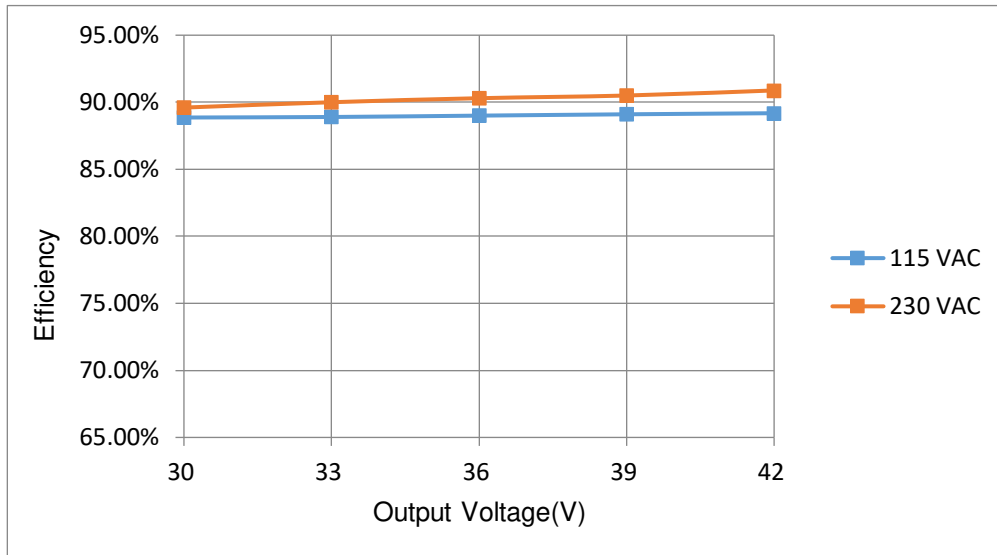


Efficiency Vs. Input Voltage & Output Load Voltage

AMEPR40-10040Z

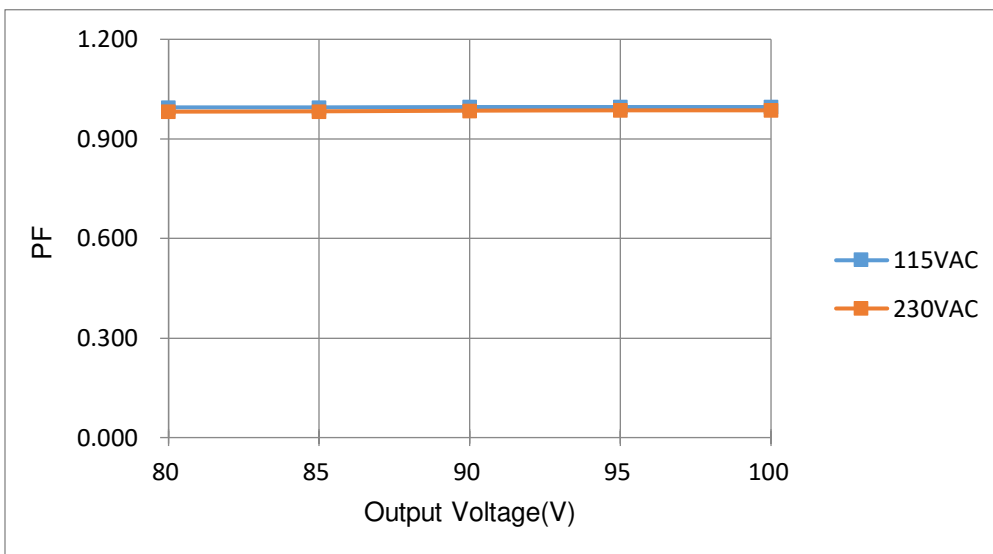


AMEPR40-42100Z

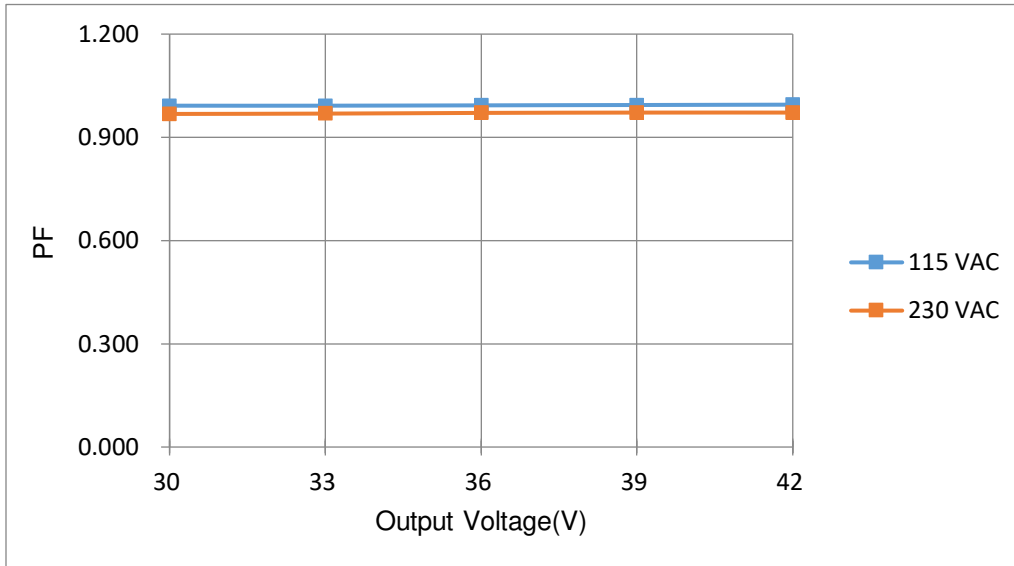


PF vs. Input Voltage & Output Load Voltage

AMEPR40-10040Z



AMEPR40-42100Z



NOTE: **1.** Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. **2.** Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. **3.** Mechanical drawings and specifications are for reference only. **4.** All specifications are measured at an ambient temperature of 25°C, humidity < 75%, nominal input voltage and at rated output load unless otherwise specified. **5.** Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. **6.** This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet. **7.** Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.