

**FEATURES:**



- Universal Input: 90~305 Vac
- High Efficiency: Up to 88%
- Active Power Factor Correction
- Short Circuit / Open Circuit Protection
- IP65/67 Design for outdoor application
- Long Life, High reliability
- Ultra-low ripple without flickering
- 5-year limited warranty



**Models**  
**Single output**

Model	Max Output Power (W)	Output Voltage Range (V)	Output Current (mA)	Input Voltage (VAC/Hz)	Efficiency (%)
AMER50N-42105Z	44.1	30-42	1050	90-305/47-63	87
AMER50N-42120Z	50.4	30-42	1200	90-305/47-63	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		0.78	Arms
Inrush current <2ms	115 VAC, cold start		40	A
	230 VAC, cold start		60	
Leakage current			0.75	mA
Input dissipation	No Load		1.5	W
	Output Short		4.5	W
Power Factor	115 VAC, full load		0.98	
	230 VAC, full load		0.95	
Input Fuse	3.15A / 300V			
Start-up Time	115 VAC, full load		1.5	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			200	mV p-p
Output Current Ripple	Full load		80	mA
Current Overshoot	LL to HL, full load at cold start, % of rated output current		15	%
Hold-up time (min)			1.0	ms
Minimum Load Voltage	See Models Table Above			

**Isolation Specifications**

Parameters	Conditions	Typical	Rated	Units
Tested I/O Isolation Voltage	I/P – O/P		3750	VAC
	I/P – FG		2000	VAC
	O/P – FG		500	VAC
Isolation Resistance	500Vdc	>100		MΩ
Isolation Capacitance			5000	pF

**General Specifications**

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			150	KHz
Over voltage protection			50	V
Short circuit protection	Continuous / Hiccup Mode			

Short circuit restart	Auto Recovery		
Open circuit protection	Hiccup Mode		
Operating temperature	Without Derating	-40 to +60	°C
Maximum case temperature		90	°C
Storage temperature		-40 to +85	°C
Temperature coefficient			0.03 % / °C
Cooling	Free Air Convection		
Humidity		90	% RH
Case material	Metal (Aluminum)		
Potting material	polysiloxane		
IP Rating	IP67		
Weight		490	g
Dimensions (L X W X H)	7.36 x 1.91 x 1.31 inches	187.00 x 48.60 x 33.30 mm	
MTBF	>400,000 hrs (MIL-HDBK-217F at +25°C)		

## Safety Specifications

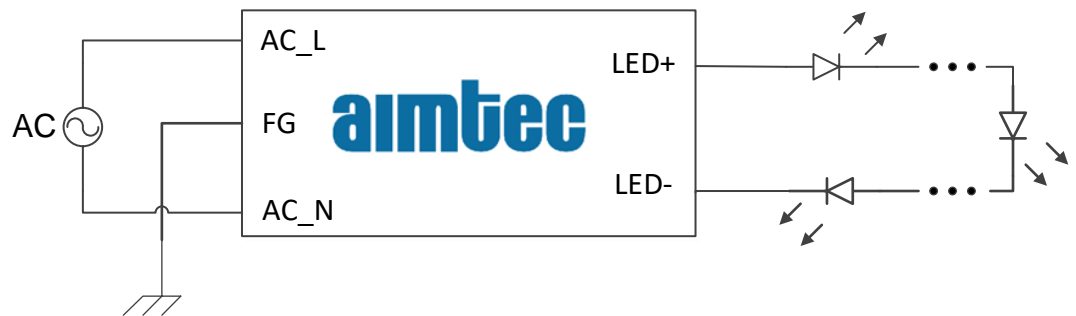
### Parameters

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 4kV, Neutral to FG 6kV
	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	

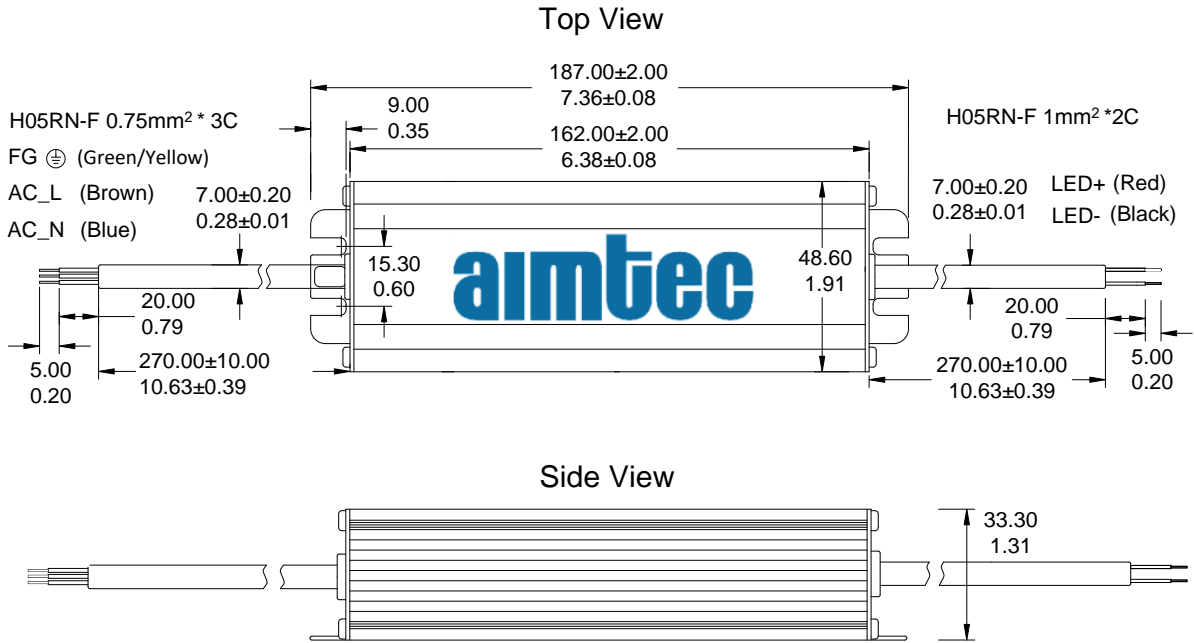
## Pin Definition

Wire	Connection
Brown	AC L
Blue	AC N
Yellow/Green	FG
Red	+V Output
Black	-V Output

## Block diagram

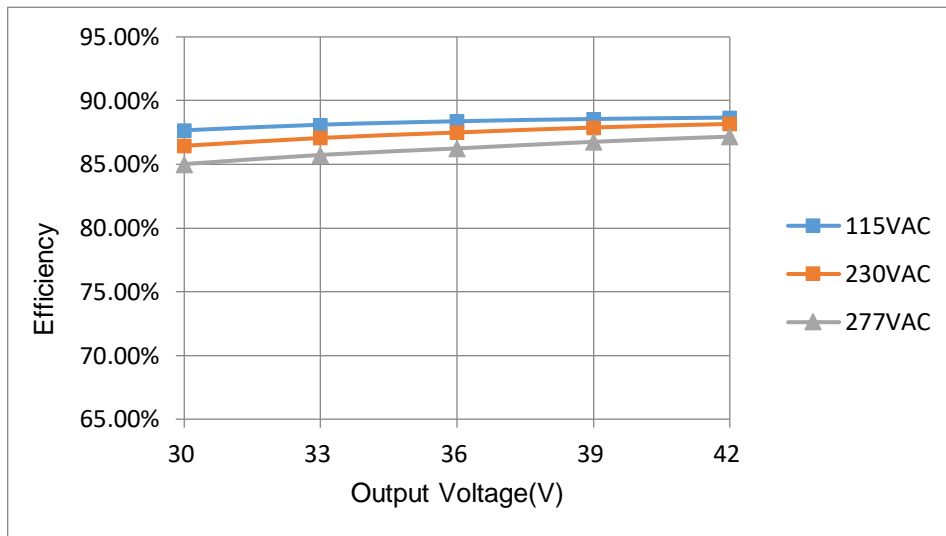


**Dimensions**

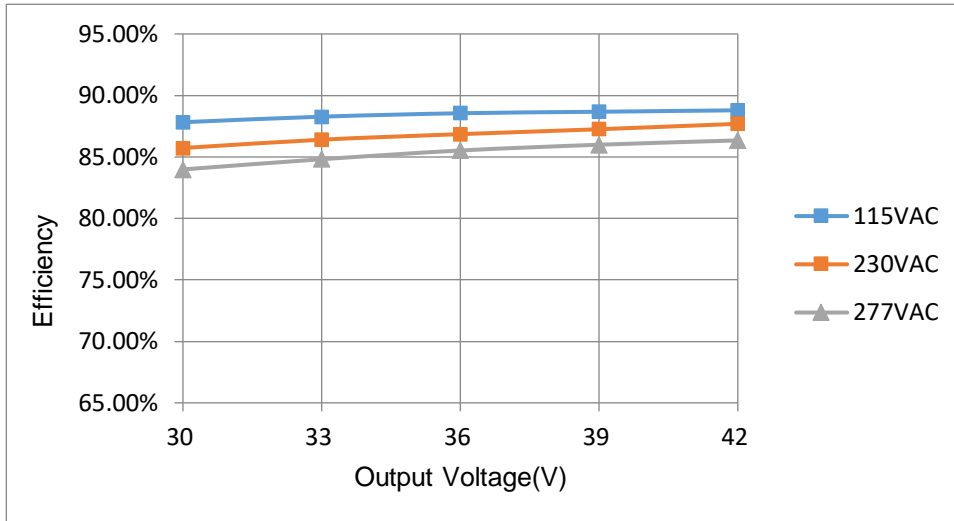


**Efficiency Vs. Input Voltage & Output Voltage**

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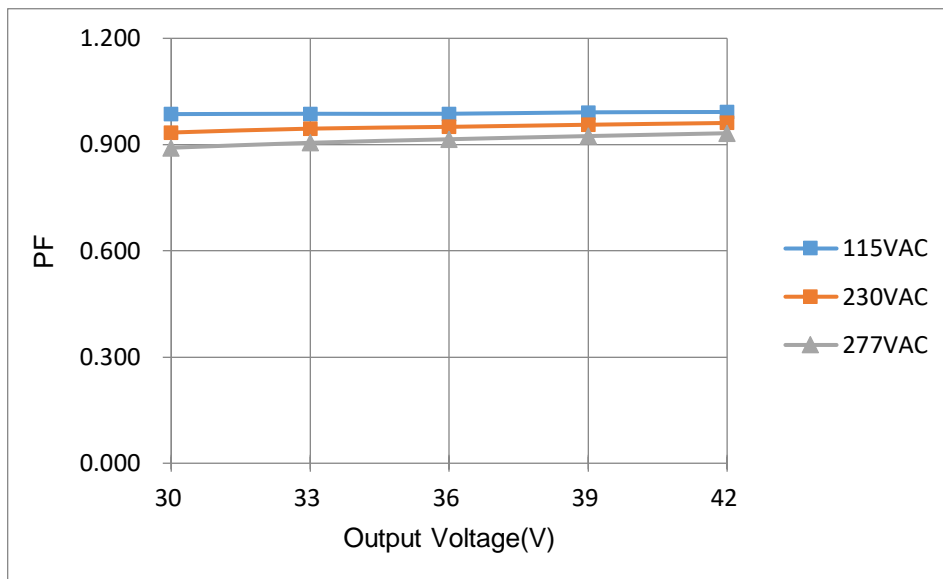


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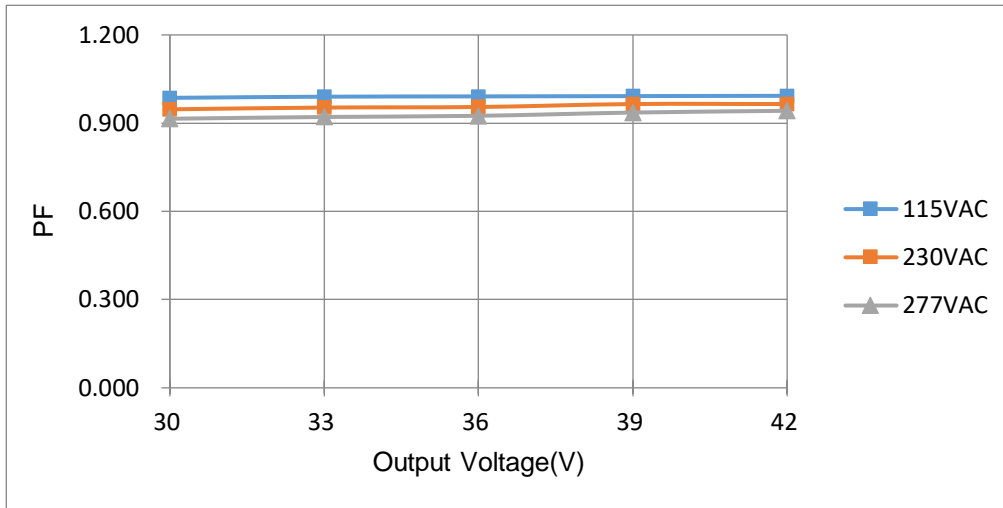


**PF vs. Input Voltage & Output Voltage**

AMER50N-42105Z



AMER50N-42120Z



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