Series AMEQR50N-Z

up to 1000mA | AC-DC LED driver

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 (%)
AMEQR50N-50100Z	50	36-50	1000	90-305/47-63	88.0

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		0.80	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	2.0A / 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		50	mA
Current Overshoot	LL to HL, full load at cold start, % of rated output current		15	%
Hold-up time (min)			0.5	ms
Current adjustment range		NA	NA	%
Minimum Load Voltage	See Models Table Above			

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	I/P – O/P		3750	VAC
	I/P – FG		2000	VAC
	O/P – FG		500	VAC
Isolation Resistance	500Vdc	>100		MΩ
Isolation Capacitance			3000	pF

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency			150	KHz
Over voltage protection			63	V

Short circuit protection	Continuous, Hiccup Mode			
Short circuit restart	Auto Recovery			
Open circuit protection	Continuous, 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)			
IP Rating	IP67			
Weight	750			g
Dimensions (L X W+ X H)	4.88 X 3.57 X 1.75 inches 124.0 X 90.6 X 44.5 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

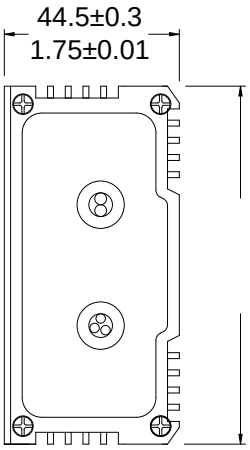
Pin Definition

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

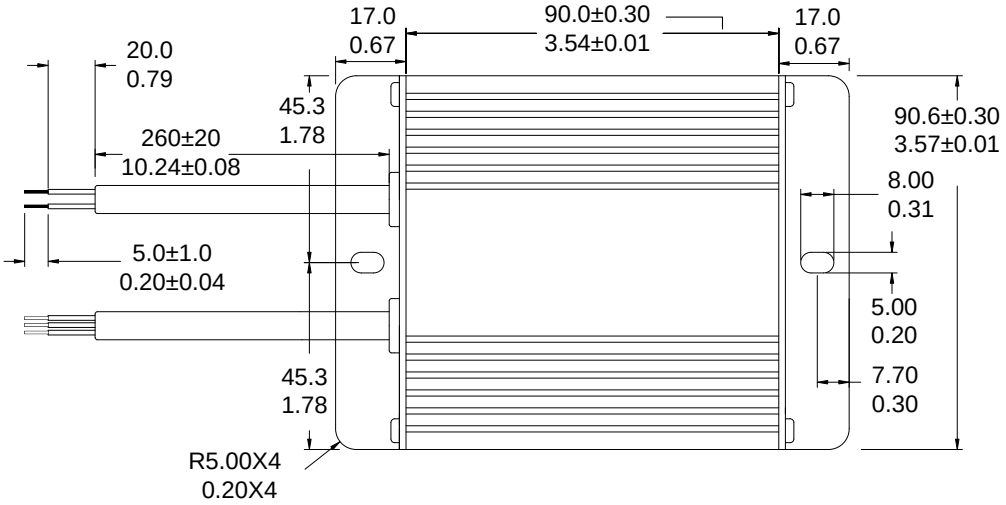
Input Wire specifications: H05RN-F 0.75mm^2
Output Wire specifications: H05RN-F 1.0mm^2

Dimensions

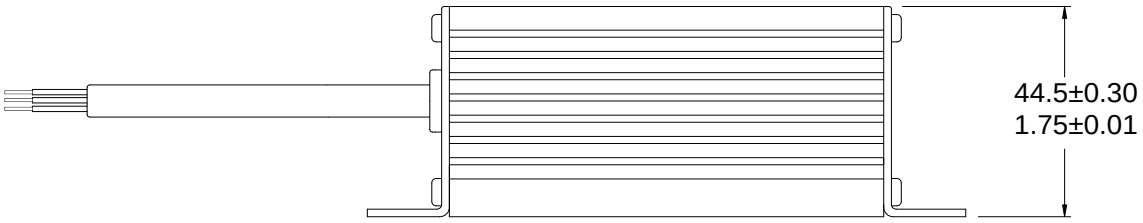
Left View



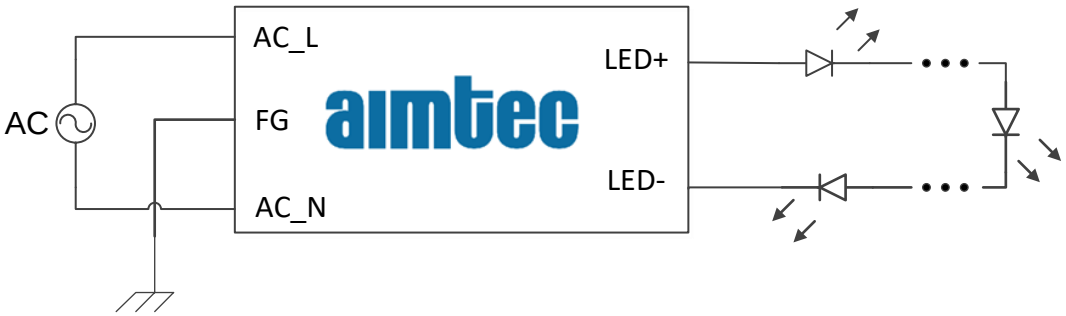
Top View



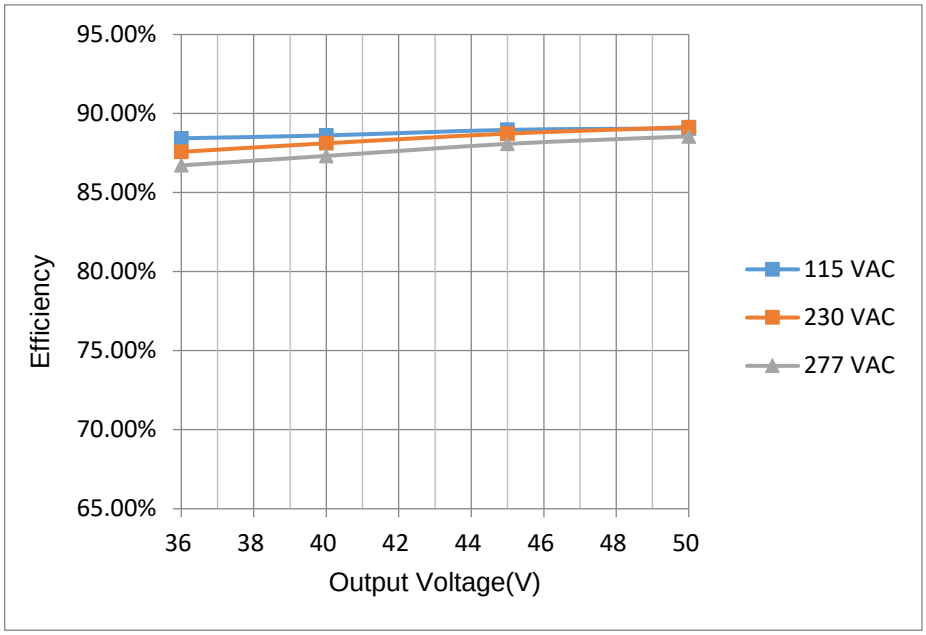
Side View



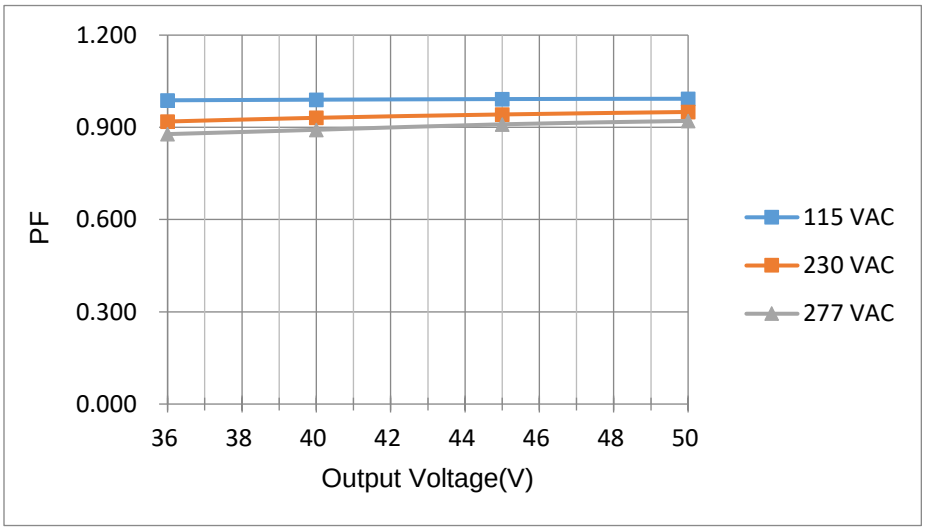
Application circuit



Efficiency Vs. Input Voltage & Output Current (Constant current load)



PF Vs. Input Voltage & Output Current (Constant current load)



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