



**FEATURES:**

- AC-DC Constant current LED Driver
- Input range 90-305VAC/47-440Hz
- High Efficiency up to 89%
- Operating temperature -40 to 85°C
- Dimmable via analog/0-10V dimming
- Over Temperature Protection
- Waterproof Case rated IP68
- Power Factor Correction
- Short Circuit Protection
- Over Current Protection

**Models**  
**Single output**



Model	Max Output Power (W) *	Output Voltage Range (V)	Output Current (A)	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Efficiency (%)
AMEPR60-50120AZ	60	36-50	1.2	90-305/47-440	120-430	89
AMEPR60-36170AZ	59.8	24-36	1.66	90-305/47-440	120-430	88
AMEPR60-24250AZ	60	12-24	2.5	90-305/47-440	120-430	87
AMEPR60-12500AZ	60	5-12	5	90-305/47-440	120-430	85

\*Exceeding the maximum output power will permanently damage the converter

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
Inrush current <2ms	115VAC	30		A
	230VAC	50		
Leakage current	115VAC	0.5		mA
	230VAC	0.7		
AC current	115VAC	0.73		A
	230VAC	0.33		
Power Factor	115VAC		0.97	
	230VAC		0.93	
External fuse			250V/1.5A	
Start up time		250		ms
Surge voltage	2sec		440	V

**Output Specifications**

Parameters	Conditions	Typical	Maximum	Units
Current accuracy		±3		%
Line regulation	LL-HL	±1		%
Load regulation	0-100% load	±3		%
Ripple & Noise *	20MHz Bandwidth	75		mV p-p
Hold-up time		90		ms
Current adjustment range		100-0		%
Minimum Load Voltage	See the models table			

\* Tested with 0.1µF (M/C) or (C/C) and 10µF (E/C) parallel capacitors at the end.

**Isolation Specifications**

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	3 sec/3.5mA		3000	VAC
Isolation Resistance	500VDC	>1000		MΩ
Isolation Capacitance		1000		pF

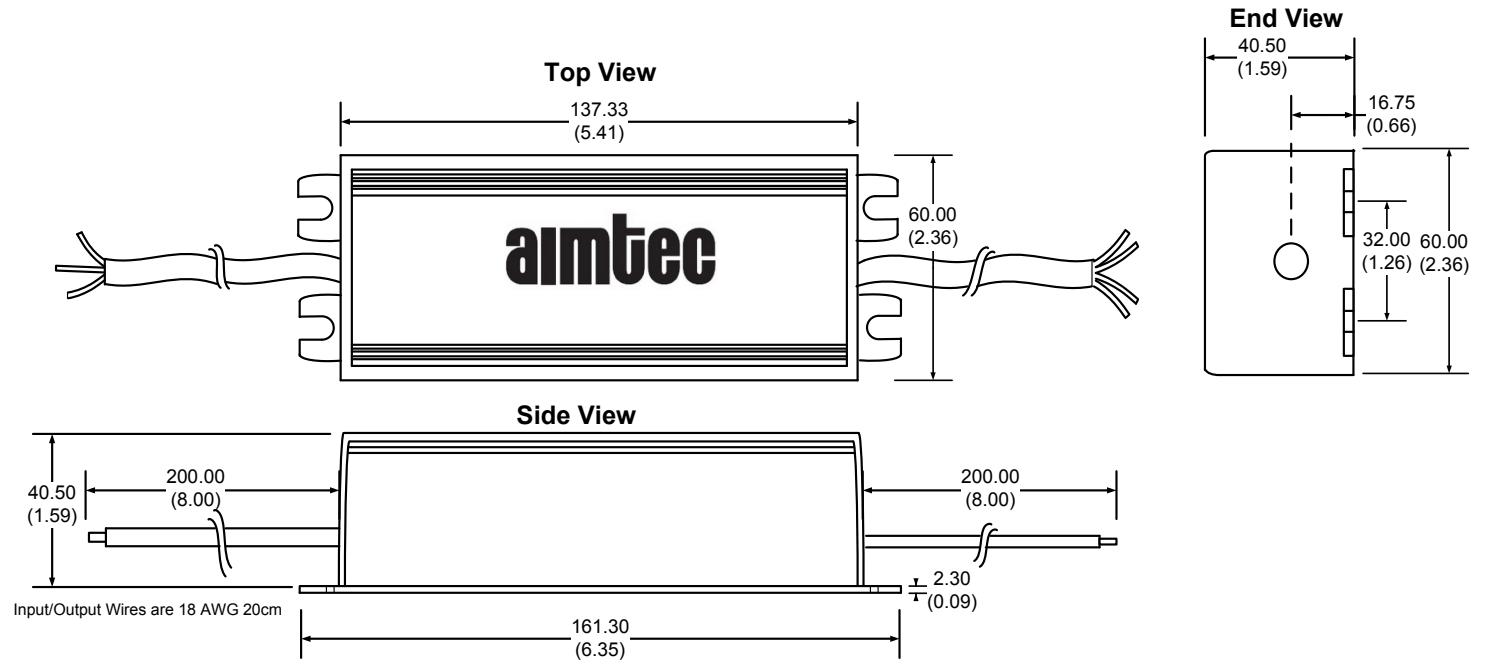
## General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency		130		KHz
Over current protection		95-110% of Iout		
Over voltage protection		110% of Vout		
Short circuit protection		Continuous		
Short circuit restart		Auto recovery		
Over temperature protection		>105°C		
Operating temperature	With derating over 55°C	-40 to +85		°C
Maximum case temperature			100	°C
Storage temperature		-40 to +95		°C
Temperature coefficient		±0.02		% / °C
Cooling		Free air convection		
Humidity			95	% RH
Case material		Plastic		
Potting		Epoxy (IP67 rated)		
Wires		UL1015 18AWG *20CM		
Weight		350		g
Dimensions (L x H x W)		5.30 x 2.27 x 1.59 inches		134.80 x 57.68 x 40.50 mm
MTBF		>400,000 hrs (MIL-HDBK-217F at +25°C)		

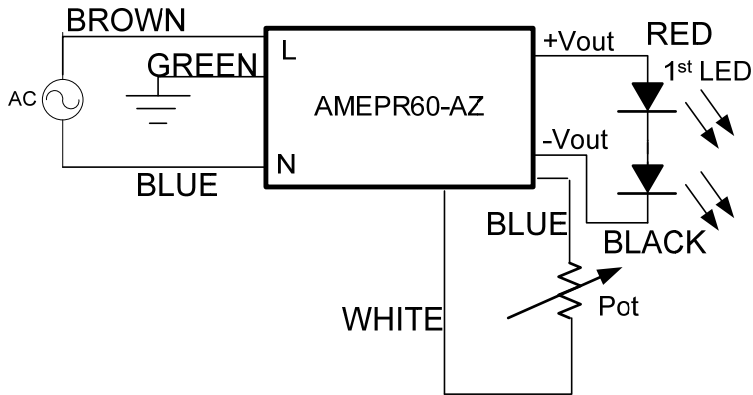
## Safety Specifications

Parameters		
Agency approvals	cULus, CE	
Standards	UL8750, UL60950-1, EN55022, class B, EN60529(IP68), EN61347-1, EN61347-2-13	
	Information Technology Equipment	EN55022 Class B
	Harmonic Current Emissions	IEC/EN 61000-3-2, Class A (EN60555-2)
	Voltage fluctuations and flicker	IEC/EN 61000-3-3, (EN60555-3)
	Electrostatic Discharge Immunity	IEC 61000-4-2
	RF, Electromagnetic Field Immunity	IEC 61000-4-3
	Electrical Fast Transient / Burst Immunity	IEC 61000-4-4
	Surge Immunity	IEC 61000-4-5
	RF, Conducted Disturbance Immunity	IEC 61000-4-6
	Power frequency Magnetic Field Immunity	IEC 61000-4-8
Voltage dips, Short Interruptions Immunity	IEC 61000-4-11	

**Dimensions**

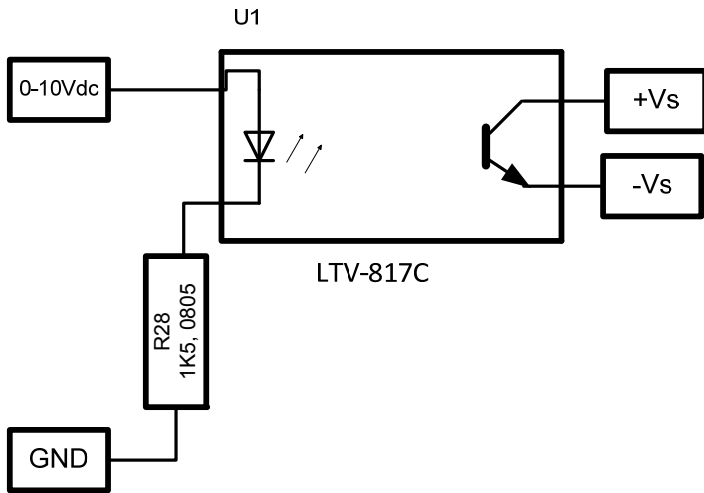


**Analog (resistive) Dimming Application Circuit**



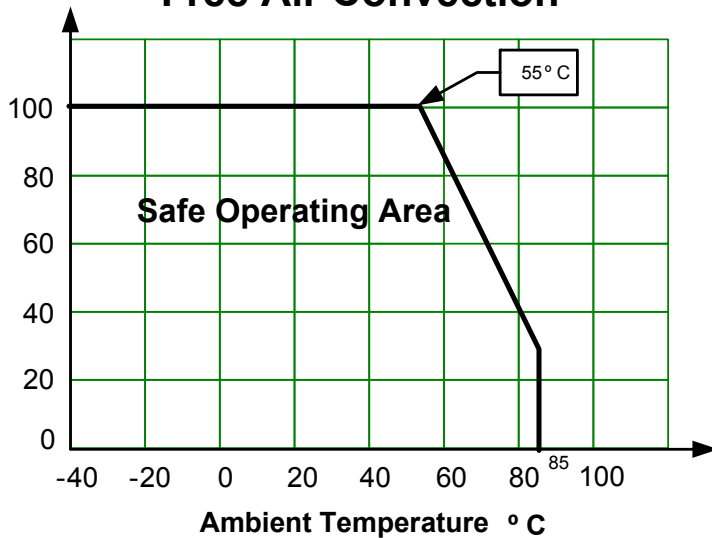
Model Number	Maximum Pot Value (kΩ)
AMEPR60-50120AZ	26.00
AMEPR60-36170AZ	16.95
AMEPR60-24250AZ	26.10
AMEPR60-12500AZ	34.10

**0-10V Dimming Application Circuit**



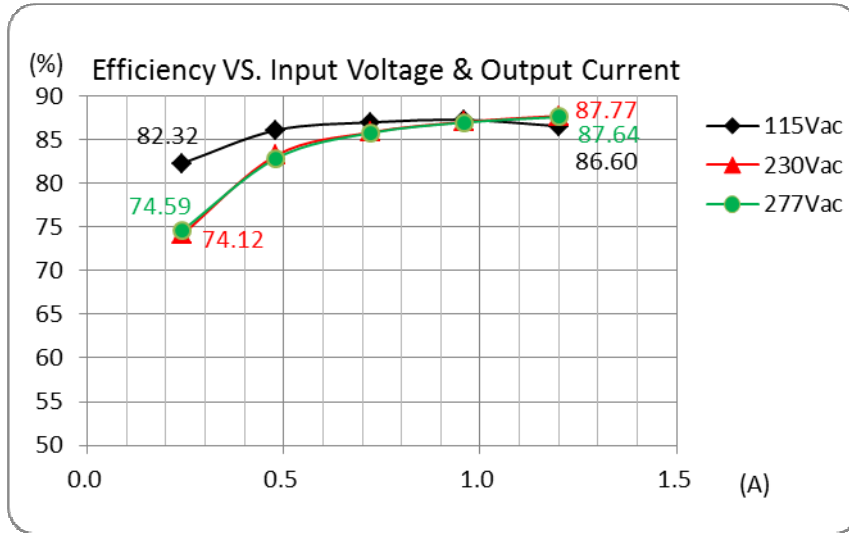
**Temperature graph**

**Free Air Convection**

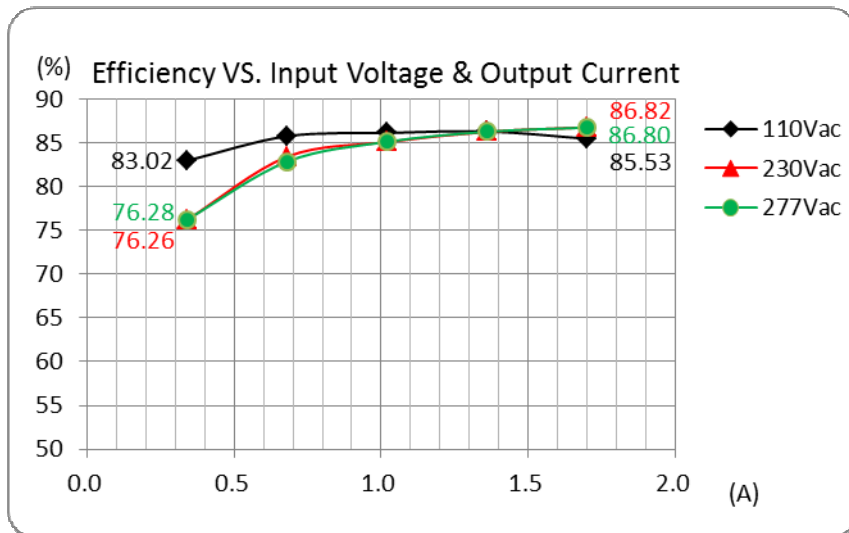


**Efficiency Vs. Input Voltage & Output Current (Constant current load)**

**AMEPR60-50120AZ**

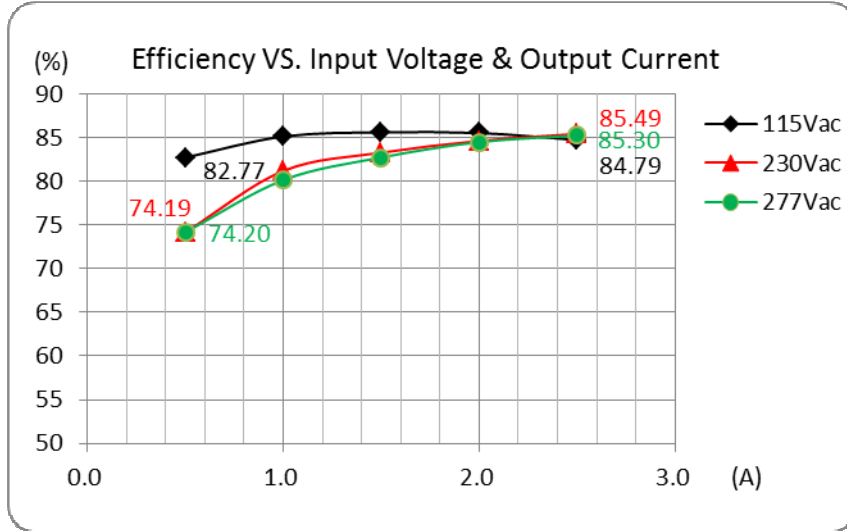


**AMEPR60-36170AZ**

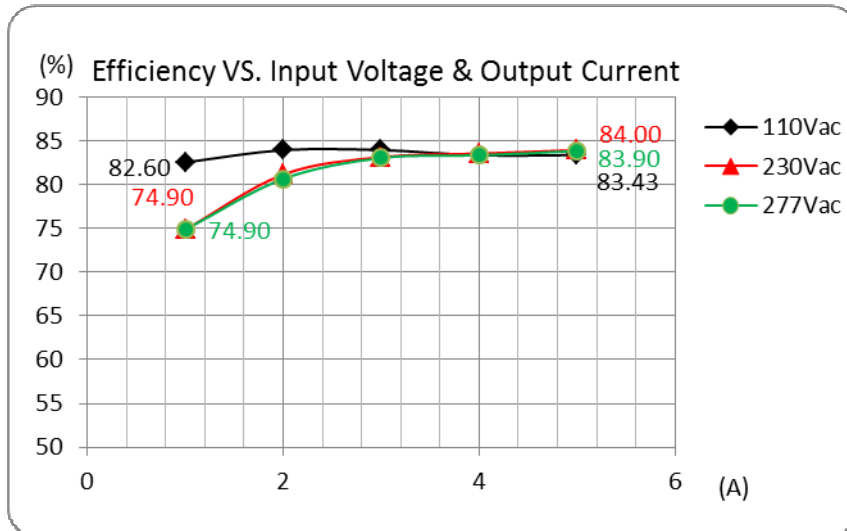


**Efficiency Vs. Input Voltage & Output Current (Constant current load)**  
**Continued**

**AMEPR60-24250AZ**

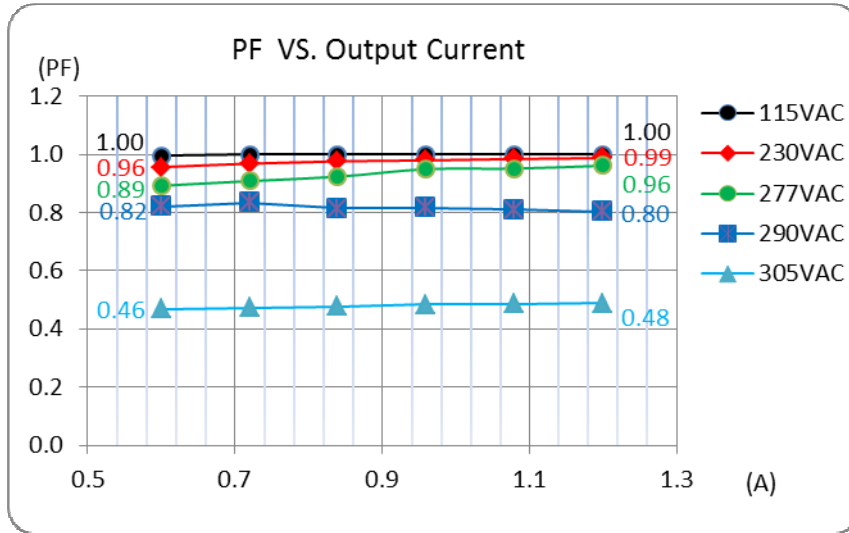


**AMEPR60-12500AZ**

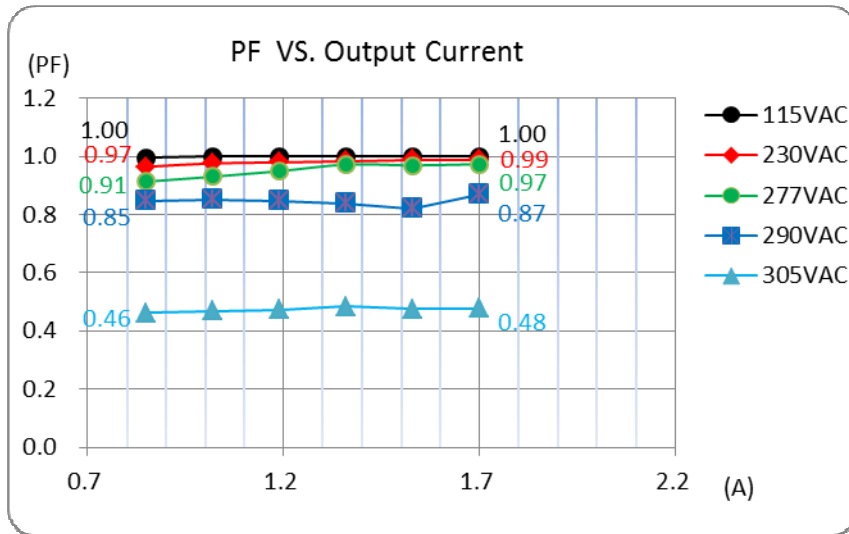


**PFC Value vs. Output Load Current (constant current mode)**

**AMEPR60-50120AZ**

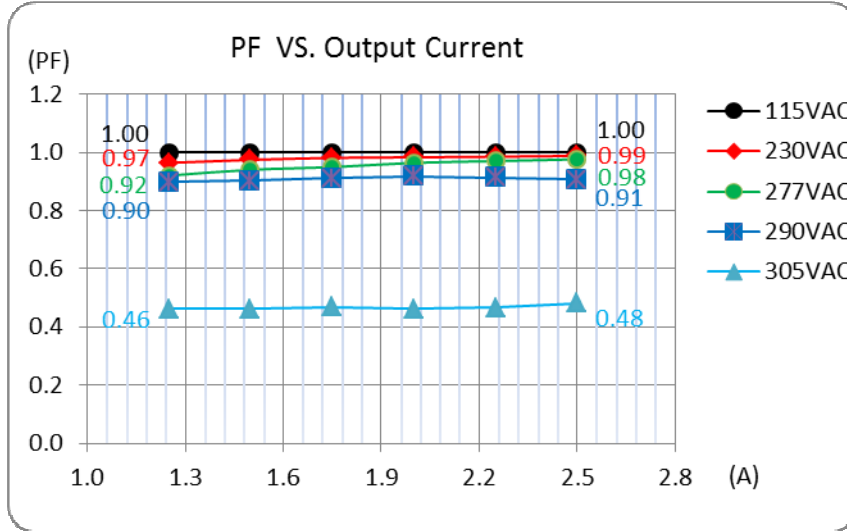


**AMEPR60-36170AZ**

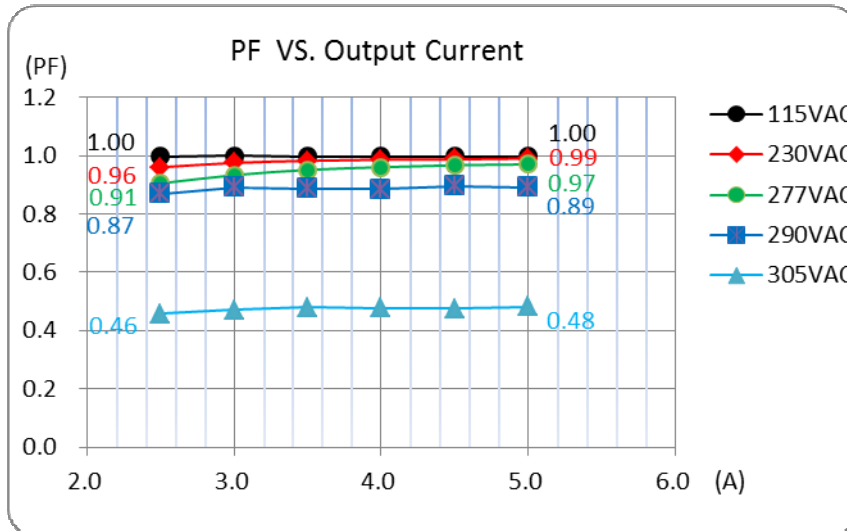


**PFC Value vs. Output Load Current (constant current mode)**  
**Continued**

**AMEPR60-24250AZ**

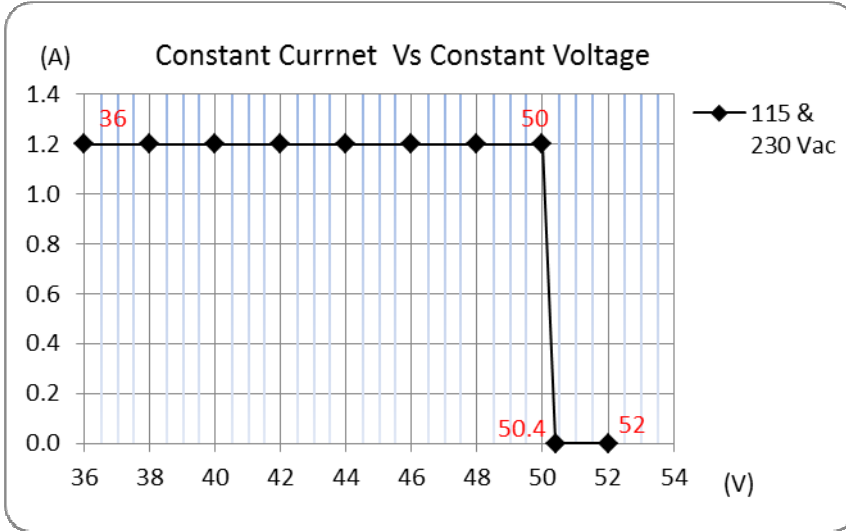


**AMEPR60-12500AZ**

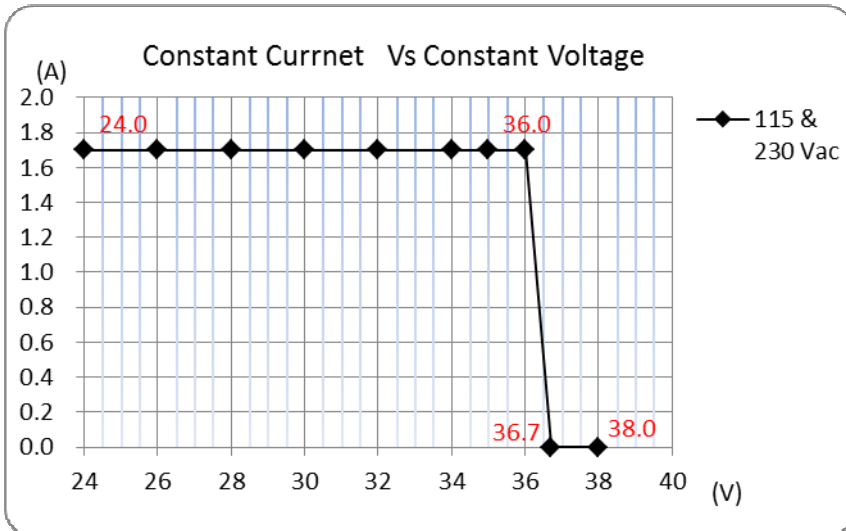


**Constant Current vs. Constant Voltage Mode**

AMEPR60-50120AZ

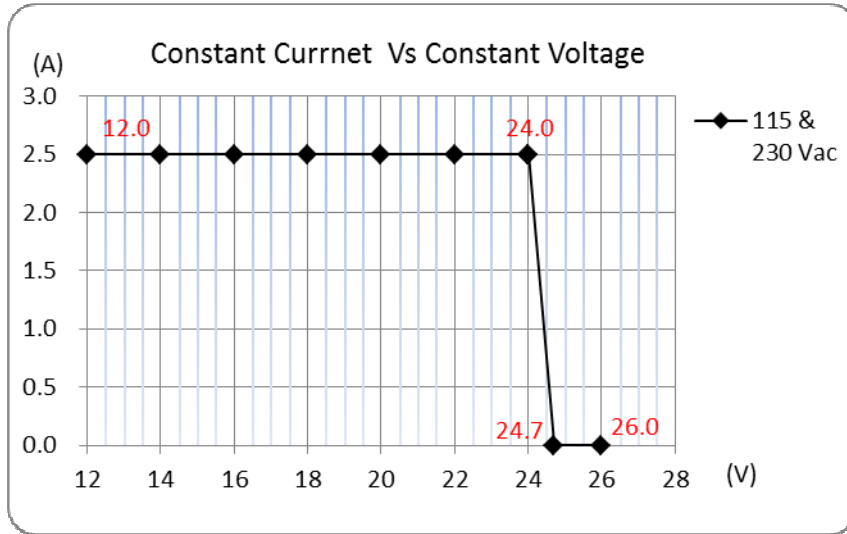


AMEPR60-36170AZ

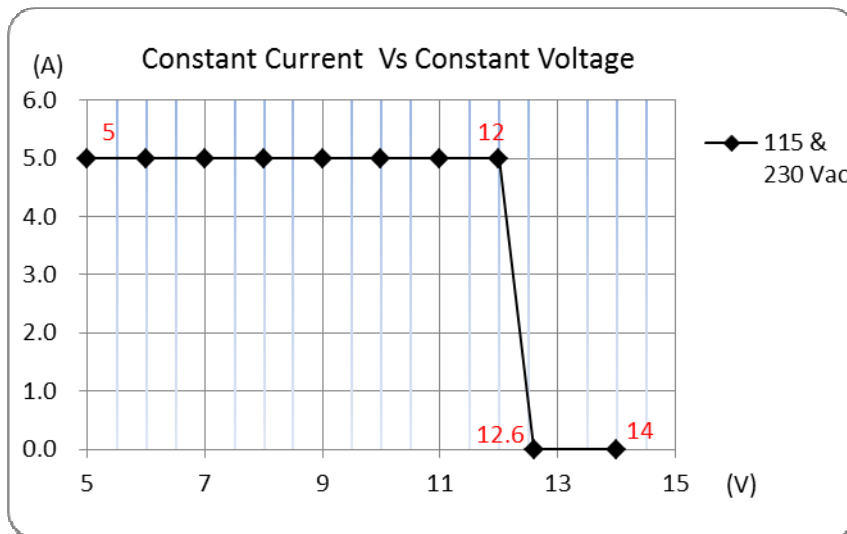


**Constant Current vs. Constant Voltage Mode  
Continued**

AMEPR60-24250AZ

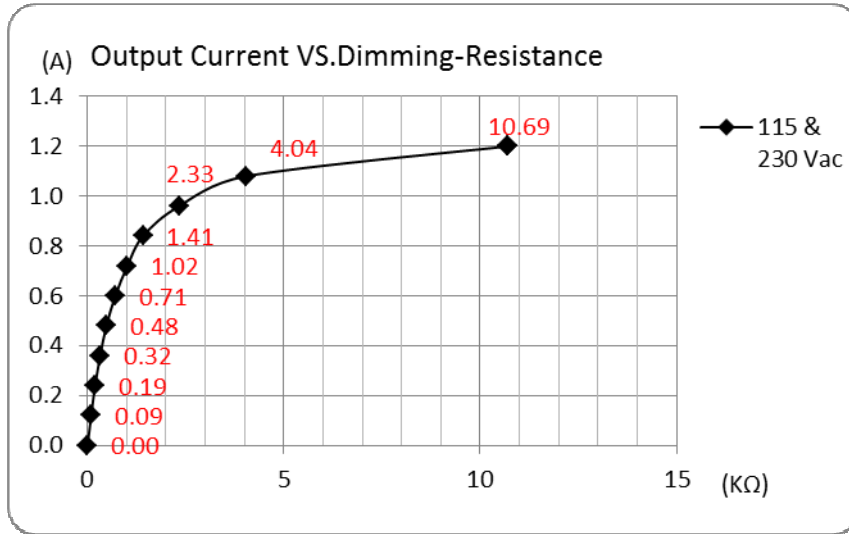


AMEPR60-12500AZ

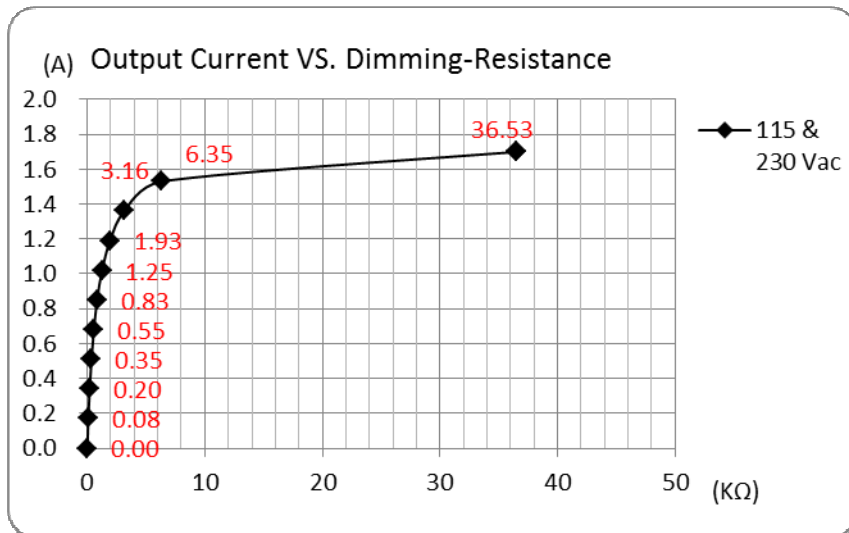


**Dimming Control (Output Current vs. Radj)**

**AMEPR60-50120AZ**

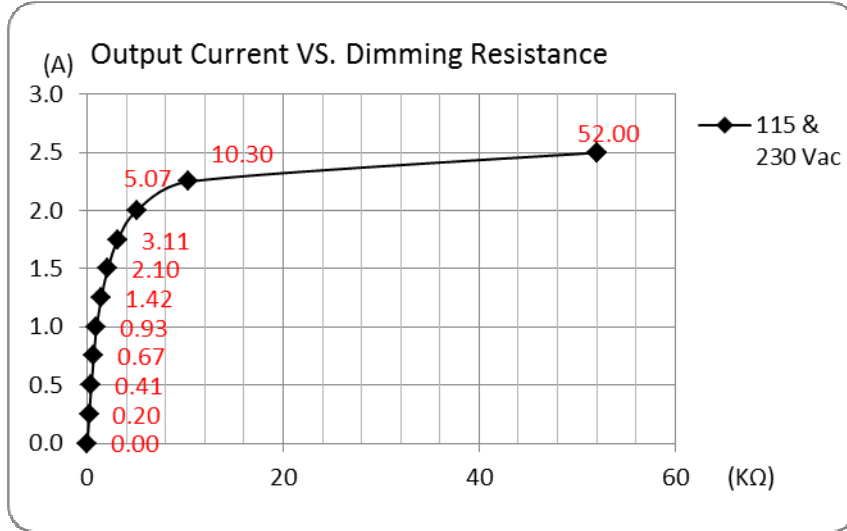


**AMEPR60-36170AZ**

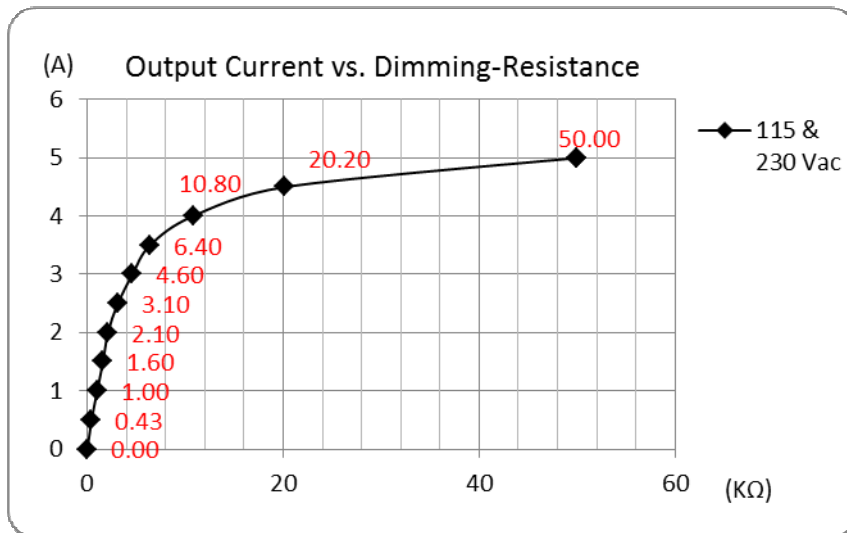


Constant Current vs. Constant Voltage Mode  
Continued

AMEPR60-24250AZ



AMEPR60-12500AZ



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