



FEATURES:

- Constant Current LED Driver
- Low Output Current Ripple
- 3 in 1 Dimming (0-10V/PWM/Resistor)
- Short Circuit, Open Circuit, Over Temperature Protection
- No Flicker, IP62
- Low THD
- Active Power Factor Correction
- 5 Year Warranty



Models
Single output

| Model | Max Output Power (W) | Output Voltage Range (V) | Output Current (mA) | Input Voltage (VAC/Hz) | Efficiency (%) |
|-----------------|----------------------|--------------------------|---------------------|------------------------|----------------|
| AMEPR30NC-4250Z | 21.0 | 24-42 | 500 | 90-305/47-63 | 79 |
| AMEPR30NC-4260Z | 25.2 | 24-42 | 600 | 90-305/47-63 | 80 |
| AMEPR30NC-4270Z | 29.4 | 24-42 | 700 | 90-305/47-63 | 81 |

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 | | 0.43 | Arms |
| Inrush current <2ms | 115 VAC, cold start | | 50 | A |
| | 305 VAC, cold start | | 60 | |
| Leakage current | | | 0.75 | mA |
| Input dissipation | No Load, 115Vac | | 1.9 | W |
| | Output Short, 230Vac | | 3.0 | W |
| Power Factor | 115 VAC, full load | | 0.98 | |
| | 277 VAC, full load | | 0.72 | |
| Input Fuse | | | 250V/2A | |
| Start-up Time | 115 VAC, full load | | 1.5 | Sec. |
| | 277 VAC, full load | | 1.0 | Sec. |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|------------------------------|-----------------------------------|---------|---------|-----------|
| Current accuracy | | ±5 | | % |
| Line regulation | LL to HL | ±1 | | % |
| Load regulation | Full Output Voltage Range | ±1 | | % |
| Ripple & Noise | | 210 | 420 | mV p-p |
| Output Current Ripple | Full load | | 35 | mA |
| Current Overshoot | LL to HL, full load at cold start | | 10 | % of Iout |
| Hold-up time | | >1 | | ms |
| Minimum Load Voltage | See Models Table Above | | | |
| Dimming Output Current | DIM+ to DIM- short | 10 | 30 | mA |
| Dimming Voltage | 0-10V dimming | | 12 | V |
| Dimming PWM Freq. | PWM dimming | | 3 | kHz |
| Recommended Dimming Resistor | Variable Resistor dimming | | 36 | kOhm |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|-----------------------|-------------------|---------|-------|-------|
| Isolation Voltage | I/P – O/P | | 3750 | VAC |
| | I/P – FG | | 2000 | VAC |
| | O/P – FG | | 500 | VAC |
| Isolation Resistance | I/P – O/P, 500Vdc | >100MΩ | | VAC |
| Isolation Capacitance | | 150 | | pF |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|-----------------------------|---|------------|---------|--------|
| Switching frequency | | | 138 | KHz |
| Over current protection | Refer to Constant Current vs. Constant Voltage Mode curve | | | |
| Over voltage protection | Refer to Constant Current vs. Constant Voltage Mode curve | | | |
| Short circuit protection | Continuous, Hiccup Mode, Auto recovery | | | |
| Open circuit protection | Continuous Clamping, Constant Output Voltage | | | |
| Over Temperature Protection | Threshold – Shutdown Output | +103 | | °C |
| | Hysteresis – Auto Recovery | +85 | | °C |
| Operating temperature | Without derating | -30 to +50 | | °C |
| Maximum case temperature | | -30 to +80 | | °C |
| Storage temperature | | -40 to +85 | | °C |
| Temperature coefficient | | | 0.05 | % / °C |
| Cooling | Free Air Convection | | | |
| Humidity | | | 90 | % RH |
| Case material | Plastic | | | |
| Weight | | 180 | | g |
| Dimensions (L X W X H) | 6.61 X 1.85 X 0.98 inches 168.0 X 47.0 X 25.0 mm | | | |
| MTBF | 450,000 hrs (MIL-HDBK-217F at +25°C) | | | |

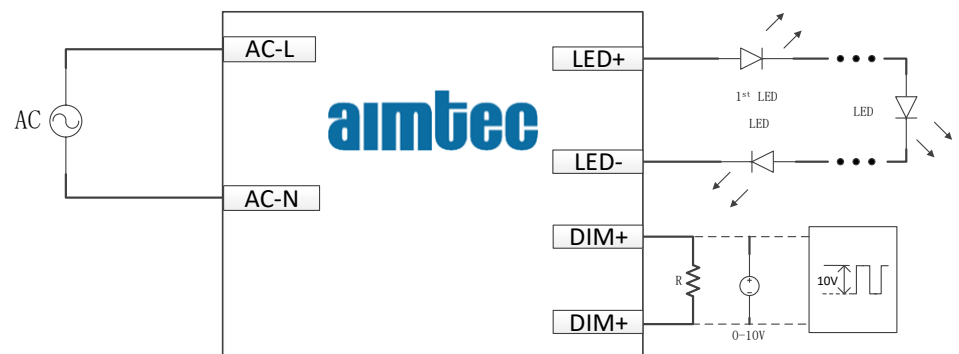
Safety Specifications

| 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, Line/Neutral to PE 4kV |
| | 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 |

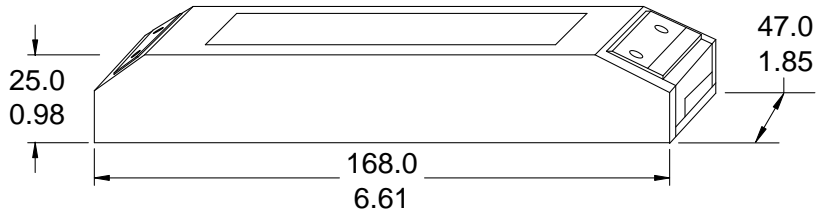
Wire connection:

| Recommended Wire gauge | Connection |
|------------------------|------------|
| 20-24 | AC L |
| 20-24 | AC N |
| 14-26 | LED+ |
| 14-26 | LED- |
| 14-26 | DIM+ |
| 14-26 | DIM- |

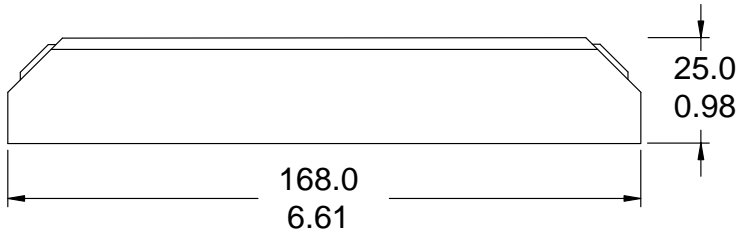
Block diagram



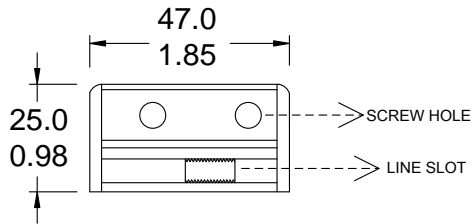
Dimensions



Side View1

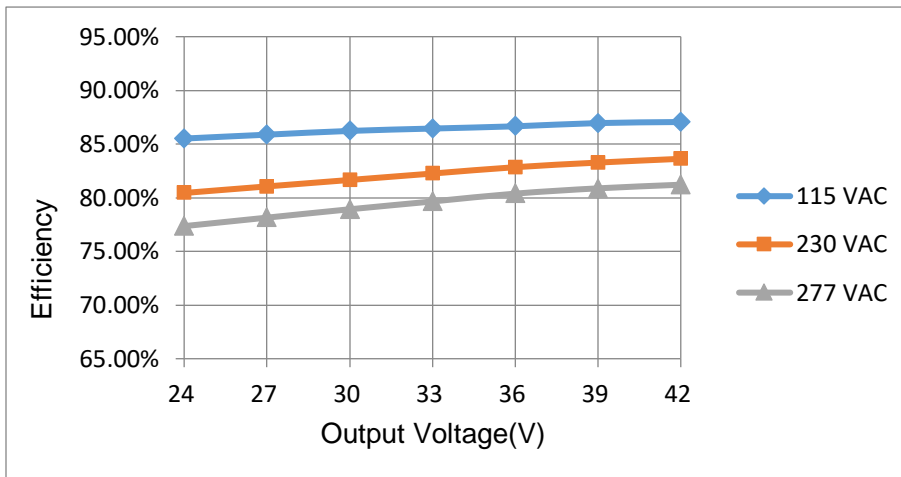


Side View2

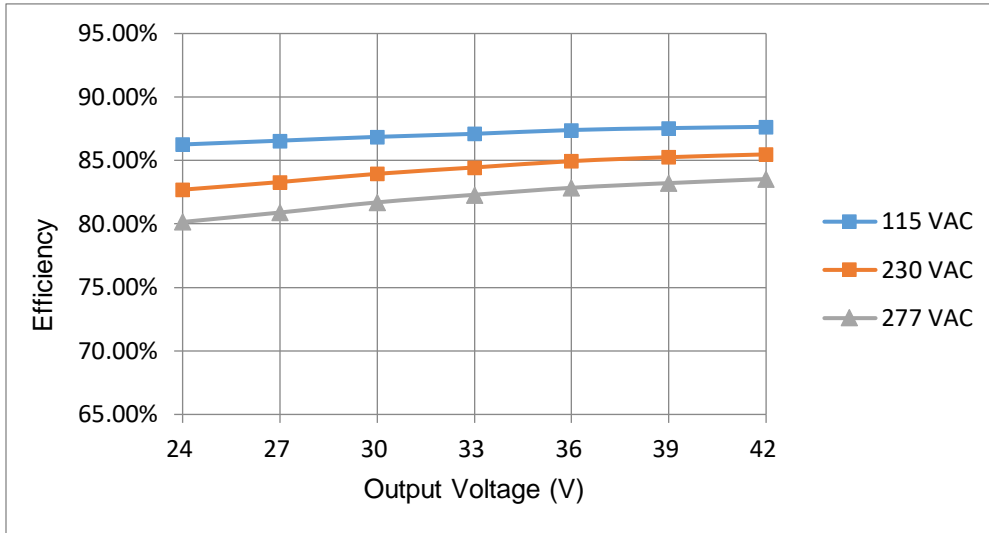


Efficiency vs. Input Voltage & Output Voltage (Constant current load)

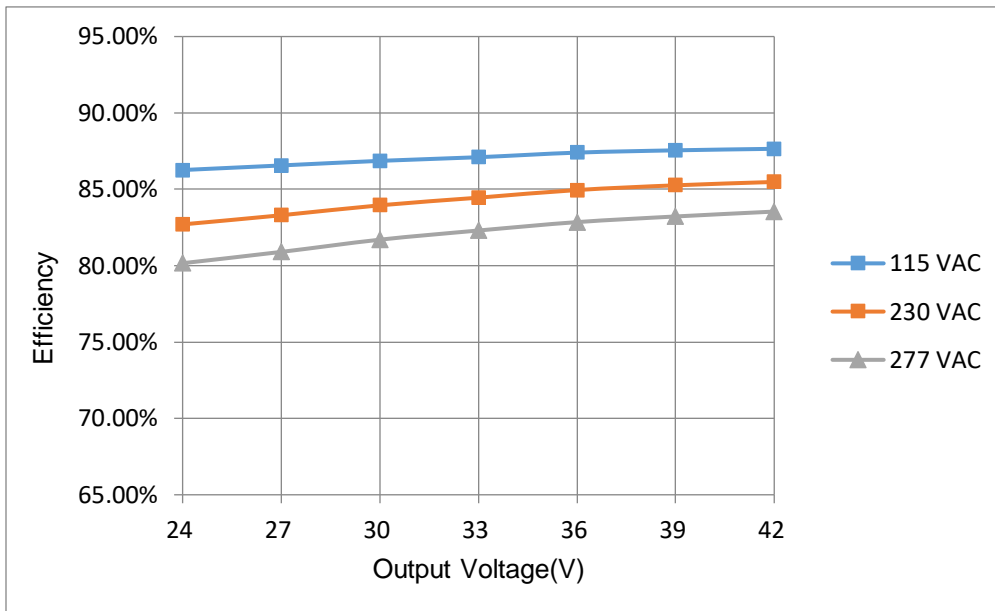
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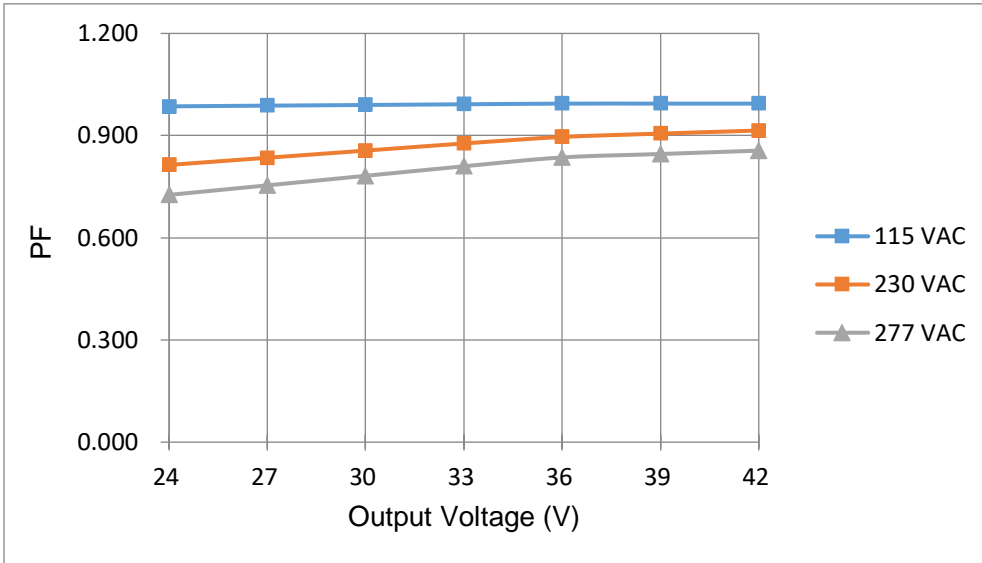


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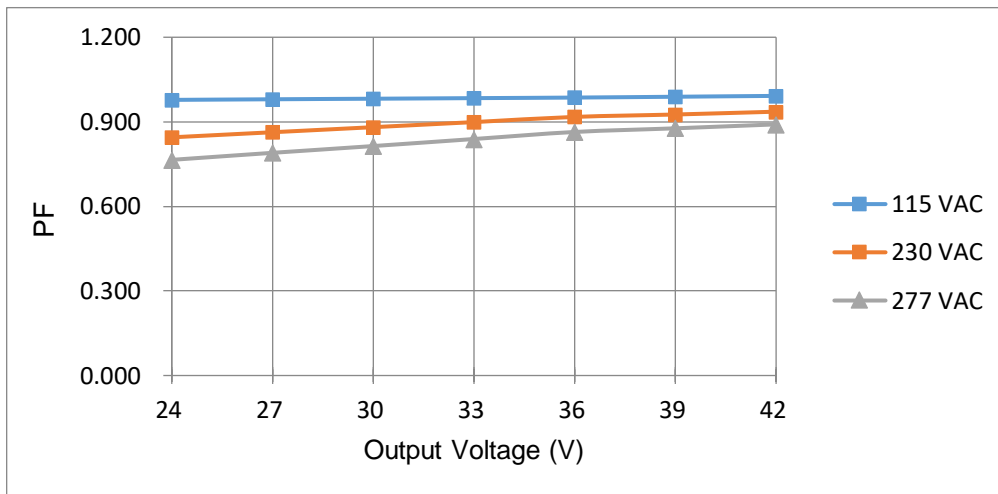


PFC Value vs. Output Load Voltage (constant current mode)

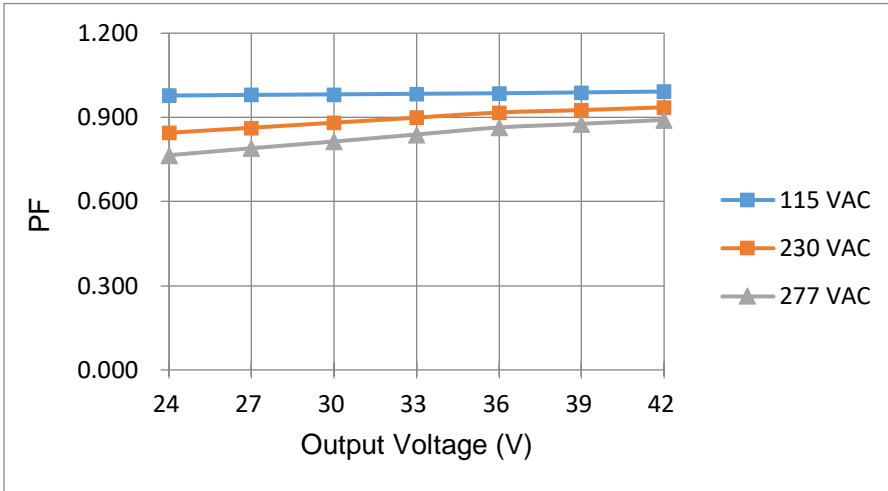
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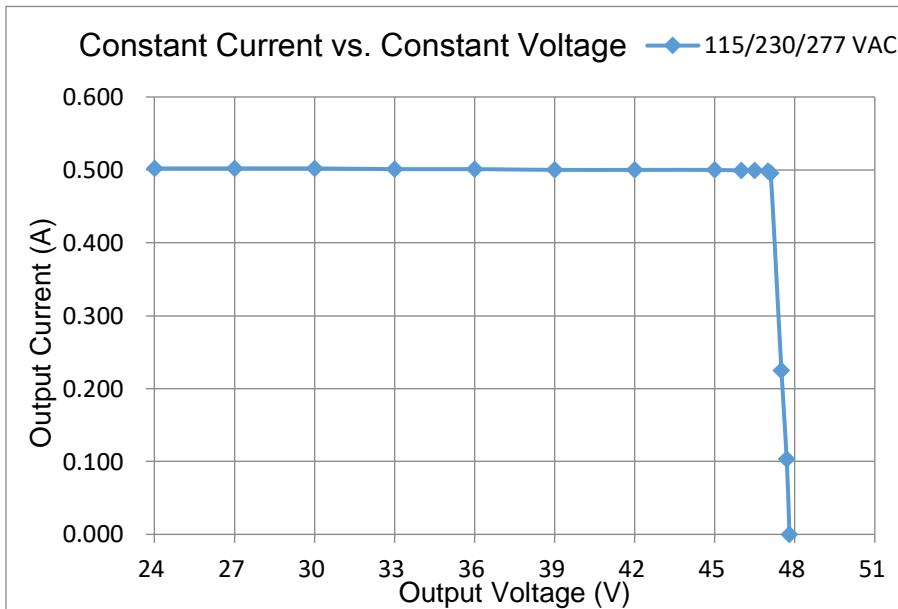


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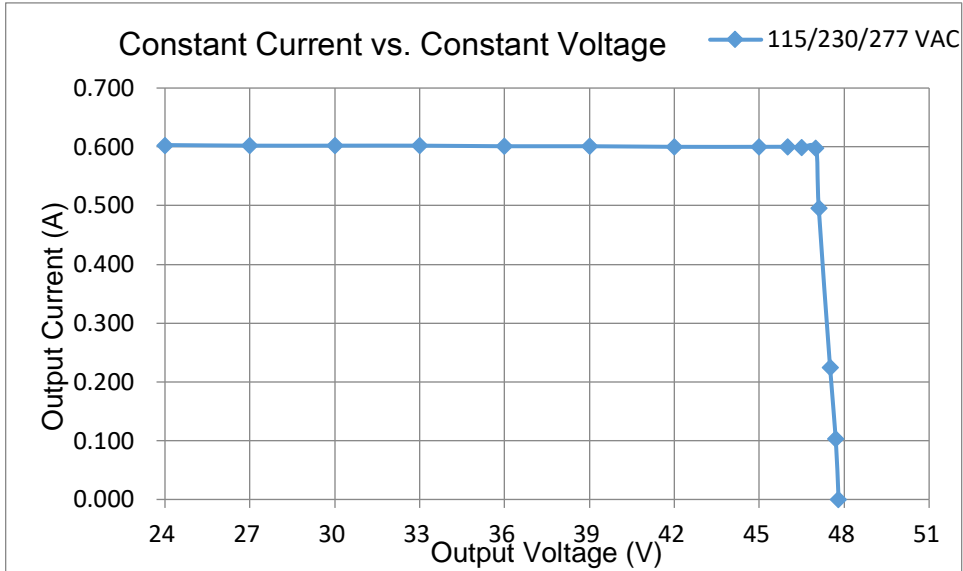


Constant Current vs. Constant Voltage Mode

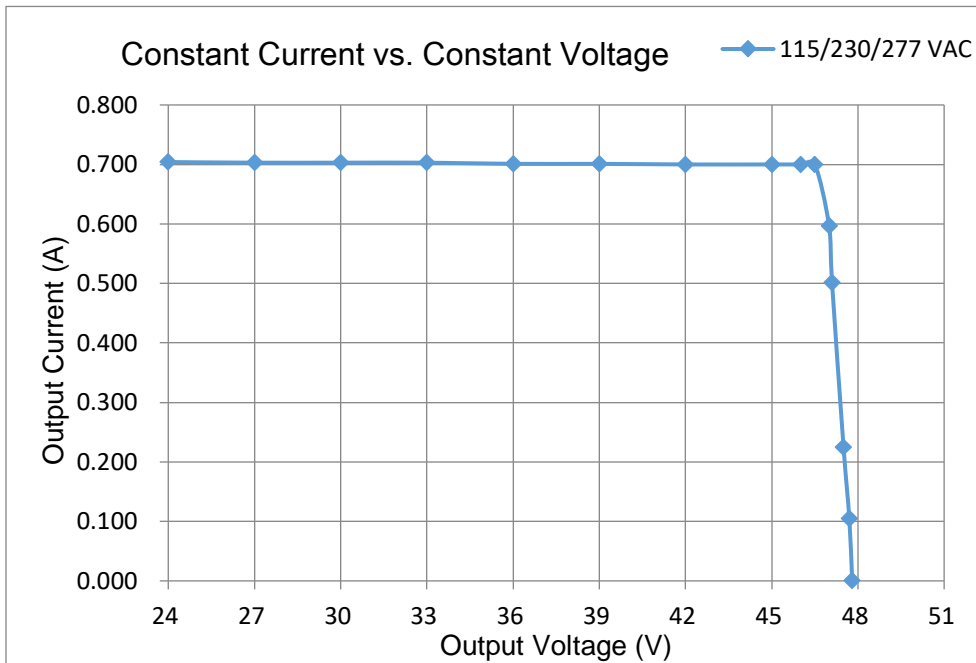
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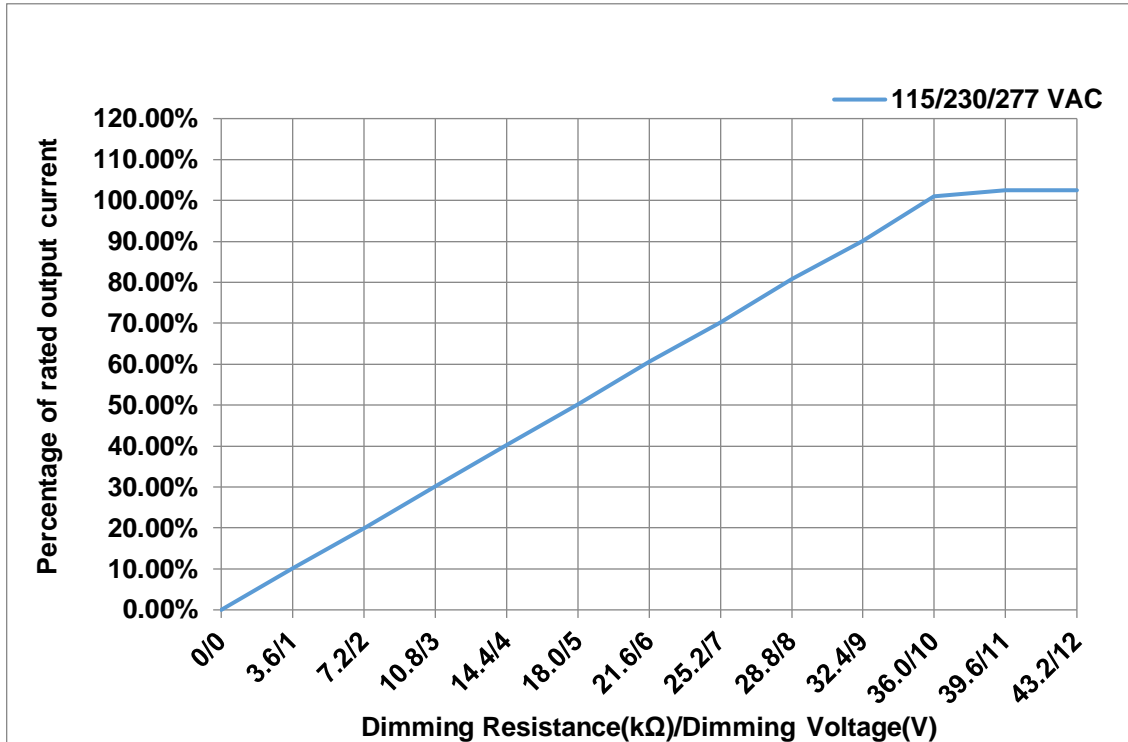
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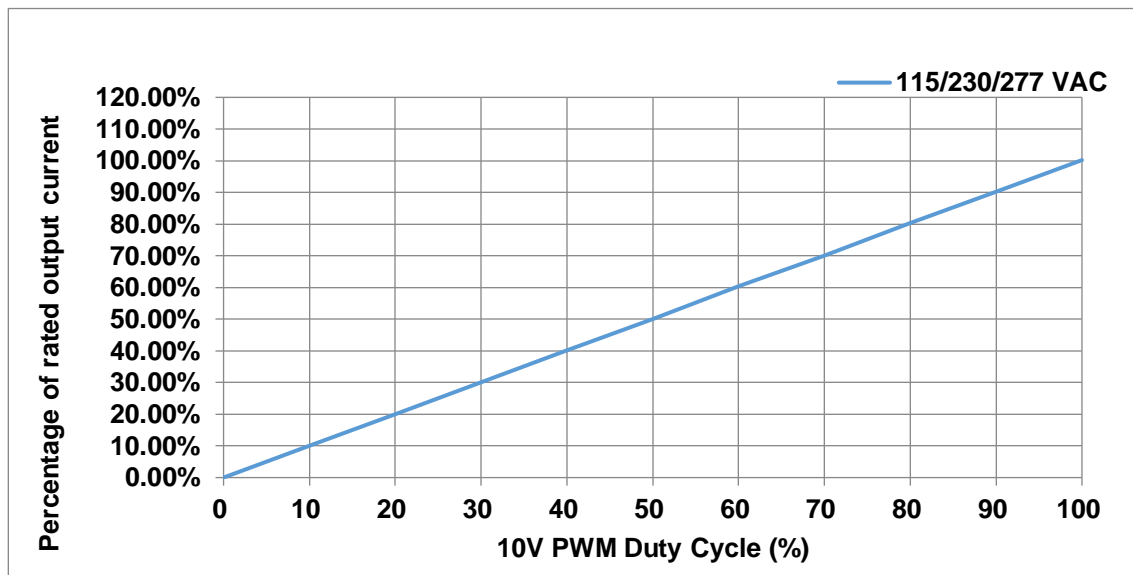
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Dimming Resistor/Dimming Voltage vs. Percentage of Output Current



10V PWM duty cycle vs Percentage of Output Current



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