


FEATURES:

- Accurate Constant Current Output $\pm 5\%$
- High Efficiency: Up to 92%
- Active Power Factor Correction
- UVLO, Short Circuit, Open Circuit,
- IP65/IP67 design for indoor/outdoor
- Over Temperature Protection
- Meet UL, CE Safety Requirement
- 5 Year Warranty

Models
Single output


| Model | Max Output Power (W) | Output Voltage Range (V) | Output Current (mA) | Input Voltage (VAC/Hz) | Efficiency (%) |
|----------------|----------------------|--------------------------|---------------------|------------------------|----------------|
| AMER175-48360Z | 172.8 | 15-48 | 3600 | 90-305/47-63 | 92.0 |

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 | | 2.5 | Arms |
| Inrush current <2ms | 115 VAC, cold start | | 40 | A |
| | 305 VAC, cold start | | 65 | |
| Leakage current | | | 0.75 | mA |
| Input dissipation | No Load | | 3.0 | W |
| | Output Short | | 5.0 | W |
| Power Factor | 115 VAC, full load | | 0.98 | |
| | 277 VAC, full load | | 0.92 | |
| Input Fuse | 5A/300V | | | |
| Start-up Time | 115 VAC, full load | | 1.0 | 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 | ± 5 | | % |
| Ripple & Noise | | | 200 | mV |
| Output Current Ripple | Full load | | 1.0 | Io% |
| Current Overshoot | LL to HL, full load at cold start, % of rated output current | | 10 | % |
| Hold-up time (min.) | | 10 | 15 | ms |
| 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 | I/P – O/P, 500Vdc | >100M Ω | | Vdc |
| Isolation Capacitance | | 3000 | | pF |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|-------------------------|---------|---------|-------|
| Switching frequency | | 100 | 220 | KHz |
| Over voltage protection | | | 63 | V |
| Short circuit protection | Continuous current mode | | | |

| | | | |
|-----------------------------|---|------------|--------|
| Short circuit restart | Auto Recovery | | |
| Open circuit protection | Continuous voltage mode | | |
| Over Temperature Protection | Threshold – Shutdown Output | +110 | °C |
| | Hysteresis – Auto Recovery | +85 | °C |
| Operating temperature | Without Derating | -40 to +70 | °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 | 1100 | | g |
| Dimensions (L x W x H) | 9.02 x 2.68 x 1.53 Inches, 229.0 x 68.0 x 38.8 mm | | |
| MTBF | >450,000 hrs (MIL-HDBK-217F at +25°C) | | |

Safety Specifications

Parameters

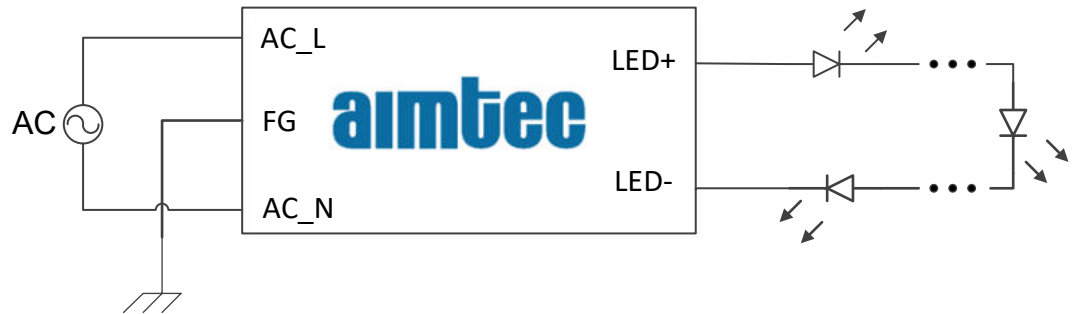
| | | |
|-----------|---|--|
| Standards | Electromagnetic Interference | EN55015 / FCC Part 15, Class B |
| | Harmonic Current Emissions | EN61000-3-2, Class B |
| | Voltage fluctuations and flicker | EN61000-3-3 |
| | Electrostatic Discharge Immunity | EN61000-4-2, 8kV Air, 4kV Contact, Level 3, Criteria 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 4kV, Line/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 |

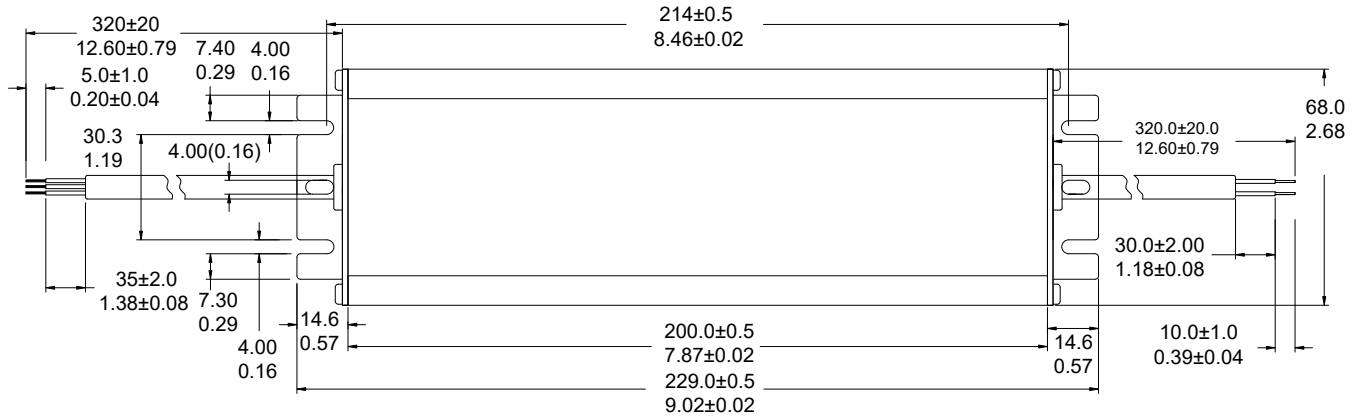
Input wire gauge #18
Output wire gauge #14

Application circuit

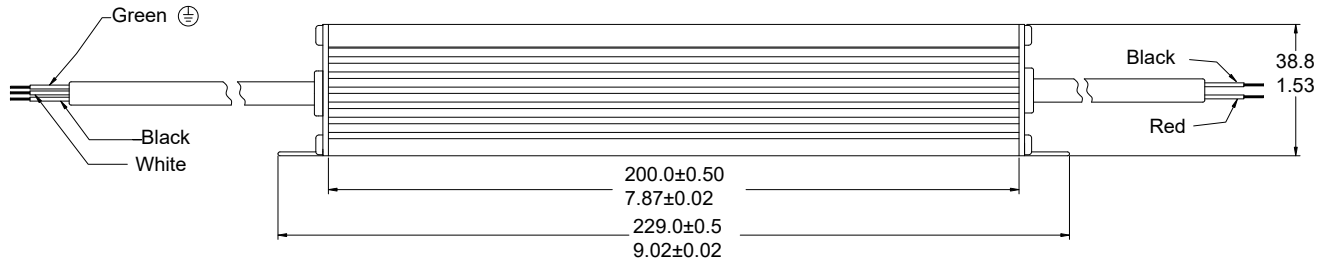


Dimensions

Top View

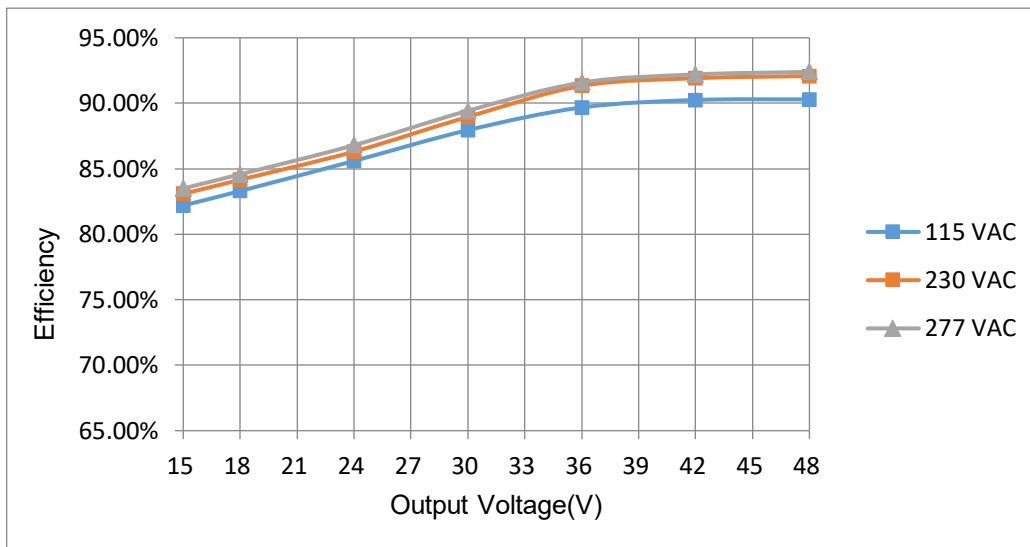


Side View



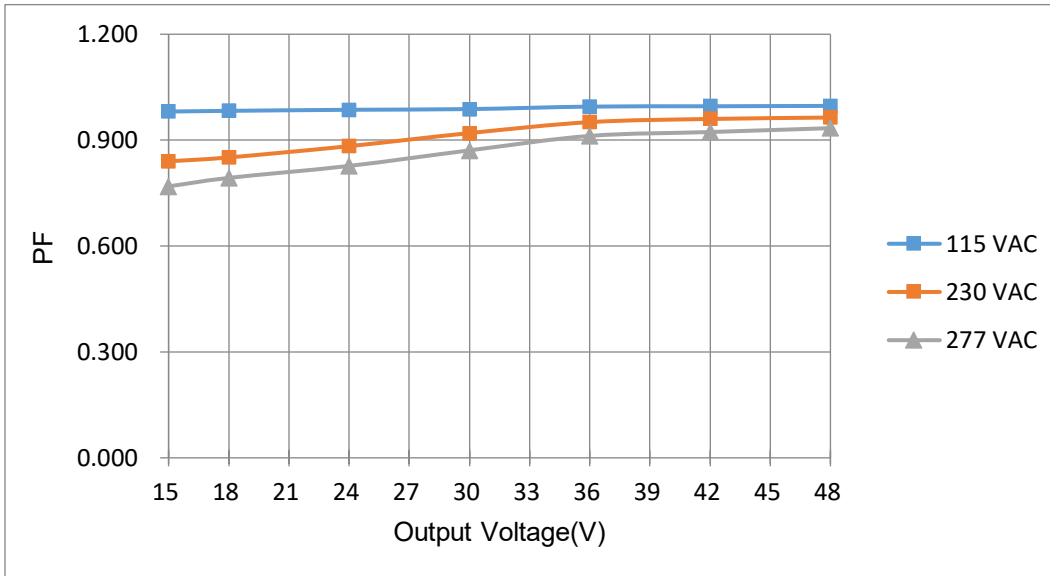
Efficiency Vs. Input Voltage & Output Voltage (Constant current load)

AMER175-48360Z



PF vs. Input Voltage & Output Voltage (constant current mode)

AMER175-48360Z



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