



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

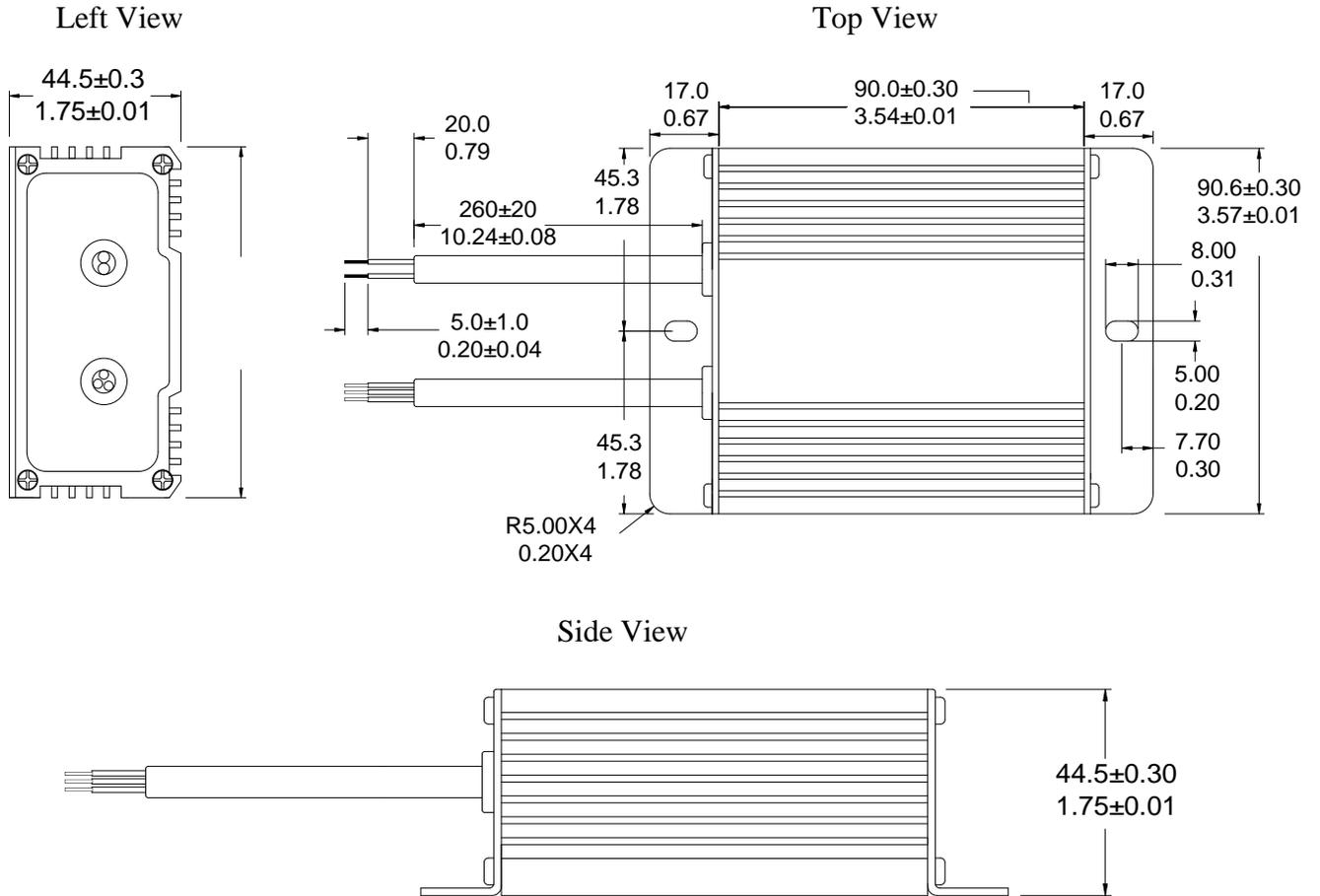
| Parameters | | |
|------------|---|--|
| Standards | Electromagnetic Interference | EN55015 / FCC Part 15, Class B |
| | Harmonic Current Emissions | EN61000-3-2, Class B |
| | Voltage fluctuations and flicker | EN61000-3-3 |
| | Electrostatic Discharge Immunity | EN61000-4-2, 8kV Air, 4kV Contact,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

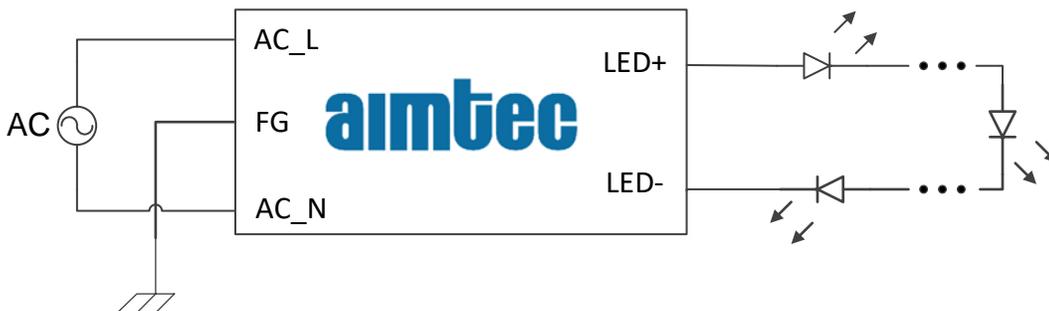
| Wire | Pin |
|--------------|-----------|
| Blue | AC N |
| Brown | AC L |
| Yellow/Green | FG |
| Red | +V Output |
| Black | -V Output |

Input Wire specifications: H05RN-F 0.75mm²
Output Wire specifications: H05RN-F 1.0mm²

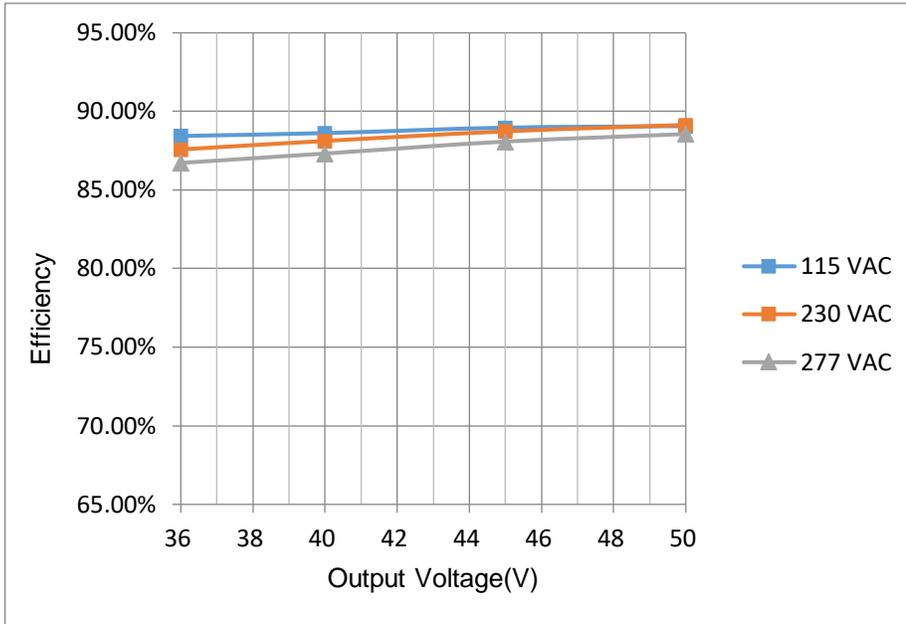
Dimensions



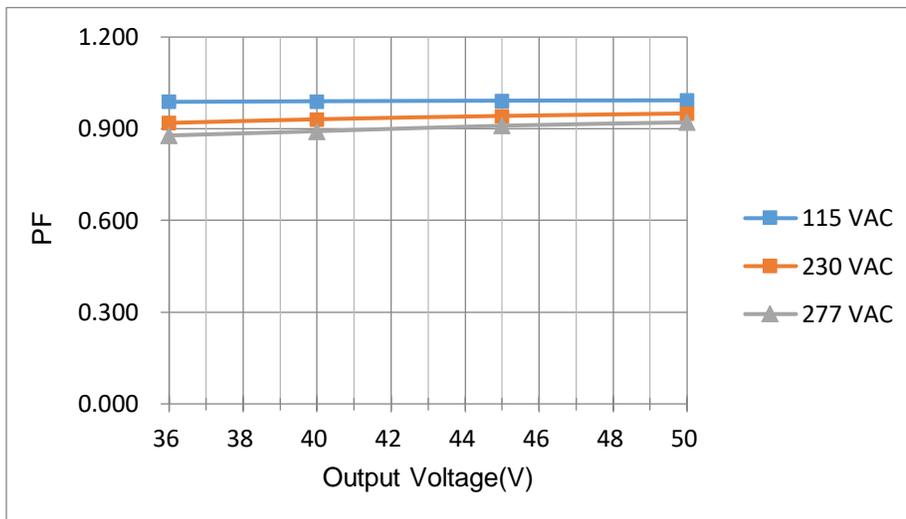
Application circuit



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



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



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