



FEATURES:

- Super wide Input range 200-1500VDC
- Operating temperature of -25 to +70°C
- Input under voltage lockout
- Over current and Over Voltage protection
- No minimum load required
- High efficiency of up to 79%
- I/O Isolation of 4000VAC
- Reversed connection protection



Models Single output

| Model | Input Voltage (V) | Output Voltage (V) | Output Current max (A) | Isolation (VAC) | Max Capacitive Load(uF) | Efficiency (800VDC) (%) |
|------------------|-------------------|--------------------|------------------------|-----------------|-------------------------|-------------------------|
| AM15WM-80012S-NZ | 200-1500 | 12 | 1.25 | 4000 | 2000 | 76 |
| AM15WM-80015S-NZ | 200-1500 | 15 | 1 | 4000 | 1200 | 77 |
| AM15WM-80024S-NZ | 200-1500 | 24 | 0.625 | 4000 | 470 | 79 |

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 | Nominal | Typical | Maximum | Units |
|--------------------------------|------------------------|---------|----------|-------|
| Voltage range | 800VDC | | 200-1500 | VDC |
| Input current | 200VDC input | | 130 | mA |
| | 800VDC input | | 30 | |
| | 1500VDC input | | 25 | |
| Inrush current <2ms | 200VDC input | | 50 | A |
| | 800VDC input | | 80 | |
| | 1500VDC input | | 150 | |
| External fuse | Slow blow, 15A/1500VDC | | | |
| Input under voltage protection | Lockout ON | | 170-185 | VDC |
| | Lockout OFF | | 180-195 | |
| Startup time* | Full load | | 2 | s |

*The cooling time between input under voltage ON and OFF is over 15s.

Isolation Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------|------------|---------|---------|-------|
| Tested I/O voltage | 1 min | 4000 | | VAC |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|-------------------|---------|---------|-----------|
| Voltage accuracy | | ±2 | | % |
| Line voltage regulation | LL-HL, full load | ±1 | | % of Vin |
| Load voltage regulation | 0-100% load | ±1 | | % |
| Over voltage protection | Zener diode clamp | | | |
| Over current protection | Auto recovery | ≥120 | | % of Iout |
| Short Circuit protection | Continuous | | | |
| Short circuit restart | Auto recovery | | | |
| Temperature coefficient | | ±0.02 | | %/°C |
| Ripple & Noise | 20MHz Bandwidth | 150 | 300 | mV p-p |

General Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|--------------------|-----------|---------|-------|
| Switching frequency | 100% load | 65 | | kHz |
| Operating temperature | With derating | -25 to 70 | | °C |
| Storage temperature | | -25 to 85 | | °C |
| Maximum case temperature | | | 95 | °C |
| Cooling | Natural convection | | | |

| | | | |
|-------------------------------|---|-----|------|
| Humidity | | 95 | % RH |
| Case material | Heat resistant, black plastic (UL94-V0) | | |
| Weight | 270 | | g |
| Dimensions (L x W x H) | 4.29 x 2.30 x 1.18 inches 109.00 x 58.50 x 30.00 mm | | |
| MTBF | >300,000 hrs (MIL-HDBK -217F, Ground Benign, t _e =+25°C) | | |
| Maximum soldering temperature | 1.5mm from case for 3-5 sec | 360 | °C |

Safety Specifications

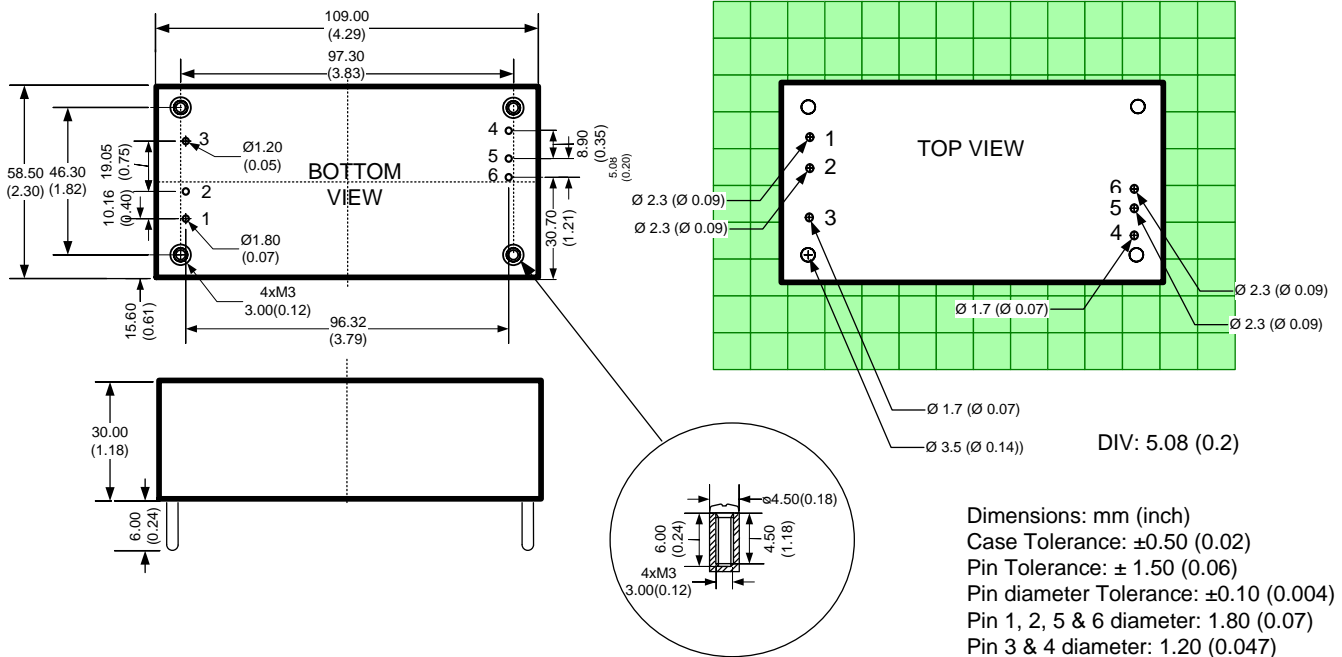
| Parameters | | |
|------------|--|--|
| Standards | EMI - Conducted and radiated emission | EN55022, class A (with the recommended EMC circuit) EN55024: 2010 |
| | Electrostatic Discharge Immunity | IEC 61000-4-2: Contact ±6KV/Air ±8KV, Criteria B |
| | RF, Electromagnetic Field Immunity | IEC 61000-4-3: 10V/m, Criteria A |
| | Electrical Fast Transient/Burst Immunity | IEC 61000-4-4: ±2KV, Criteria B (with the recommended EMC circuit) |
| | Surge Immunity | IEC 61000-4-5: ±1KV, Criteria B (with the recommended EMC circuit) |
| | RF, Conducted Disturbance Immunity | IEC 61000-4-6: 10Vrms, Criteria A |

Pin Out Specifications

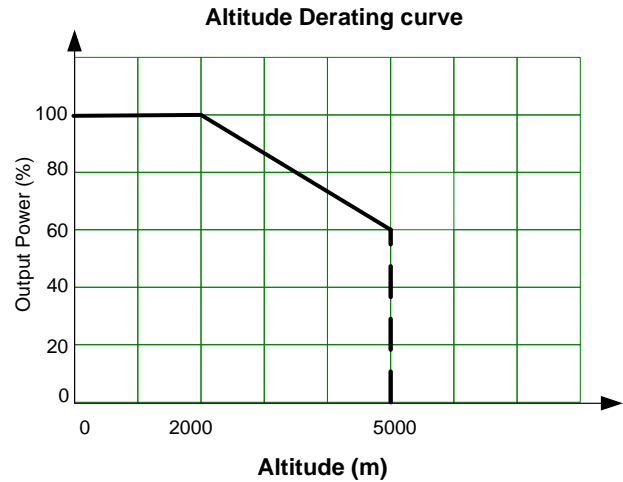
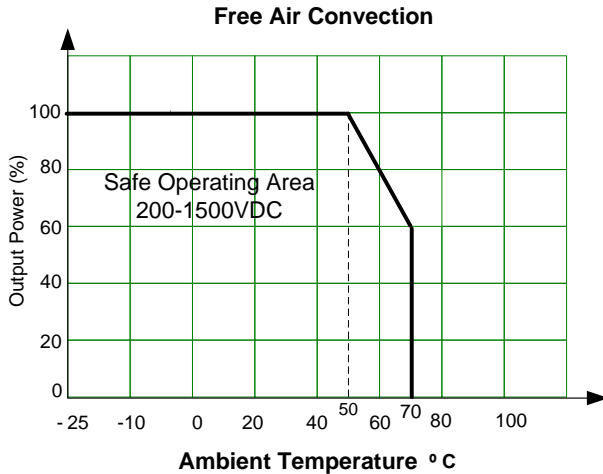
| Pin | Single |
|-------|--------|
| 1 | +Vin |
| 2 | -Vin |
| 3 & 4 | N.C. |
| 5 | -Vout |
| 6 | +Vout |

N.C. Not connected

Dimensions

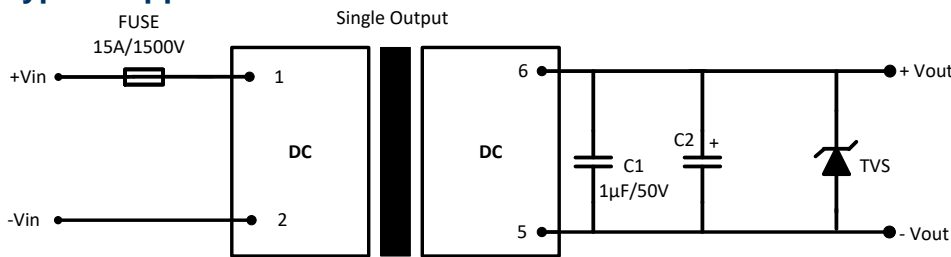


Derating



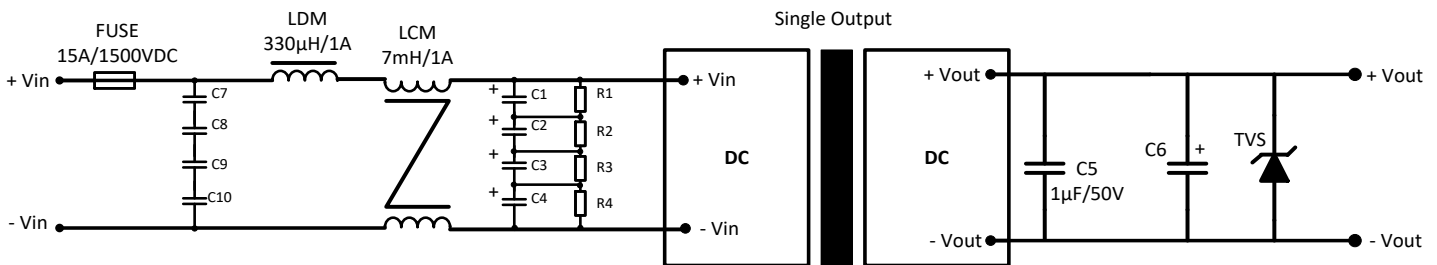
*NOTE: Derating is indicated at natural convection. Sufficient air space around is needed.

Typical Application circuit *



| Model | C2 | TVS |
|--------------|--------------|-----|
| 12 & 15 Vout | 120 µF / 35V | 20V |
| 24 Vout | 68 µF / 35V | 30V |

Recommended EMC Circuit



| Model | C1, C2, C3 & C4 | C7, C8, C9 & C10 | R1, R2, R3 & R4 | C6 | TVS |
|--------------|-----------------|------------------|-----------------|--------------|-----|
| 12 & 15 Vout | 47 µF/450V | 100 nF/275V | 1MΩ / 2W | 120 µF / 35V | 20V |
| 24 Vout | | | | 68 µF / 35V | 30V |

NOTE: 1. Datasheets are updated as needed and as such, specifications are subject to change without notice. Once printed or downloaded, datasheets are no longer controlled by Aimtec; refer to www.aimtec.com for the most current product specifications. 2. Product labels shown, including safety agency certifications on labels, may vary based on the date manufactured. 3. Mechanical drawings and specifications are for reference only. 4. All specifications are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified. 5. Aimtec may not have conducted destructive testing or chemical analysis on all internal components and chemicals at the time of publishing this document. CAS numbers and other limited information are considered proprietary and may not be available for release. 6. This product is not designed for use in critical life support systems, equipment used in hazardous environments, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com