

Picture coming soon

FEATURES:

- I/O Isolation 4000VAC
- Operating Temp: -40 °C to +70 °C
- Input: 85-264VAC/47-440Hz, or 120-370VDC
- Over current, Over Voltage Protection
- Continuous Short circuit protection
- Low no load consumption ≤0.5W
- Efficiency up to 84%
- Output Voltage adjustment



Models

Single output

| Model | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Output Voltage (V) | Output Current max (A) | Maximum capacitive Load (μF) | Efficiency 230VAC (%) |
|--------------|------------------------|---------------------|--------------------|------------------------|------------------------------|-----------------------|
| AME40-12SMJZ | 85-264/47-440 | 120-370 | 12 | 3.33 | 9000 | 84 |
| AME40-24SMJZ | 85-264/47-440 | 120-370 | 24 | 1.66 | 2000 | 84 |
| AME40-48SMJZ | 85-264/47-440 | 120-370 | 48 | 0.83 | 1000 | 84 |

Input Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|----------------------------------|------------|---------|---------|-------|
| Current (full load) | 115 VAC | | 1 | A |
| | 230 VAC | | 0.6 | A |
| Inrush current <2ms (cold start) | 115 VAC | 30 | | A |
| | 230 VAC | 50 | | A |

Output Specifications

| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|-------------------------|---------|---------|-----------|
| Voltage accuracy | Full load | ±2 | | % |
| Line regulation | LL-HL, Full Load | ±0.5 | | % |
| Load regulation | 1-100% load | ±1 | | % |
| Ripple & Noise | 20MHz bandwidth | 50 | 100 | mV p-p |
| Hold-up time | 115VAC, 20MHz bandwidth | 15 | | ms |
| | 230VAC, 20MHz bandwidth | 80 | | ms |
| Voltage adjustment range | Single output only | | ±10 | % of Vout |

Isolation Specifications

| Parameters | Conditions | Typical | Rated | Units |
|----------------------|------------|---------|-------|-------|
| Tested I/O voltage | 60 sec | | 4000 | VAC |
| Isolation Resistance | | >100 | | MΩ |

General Specifications

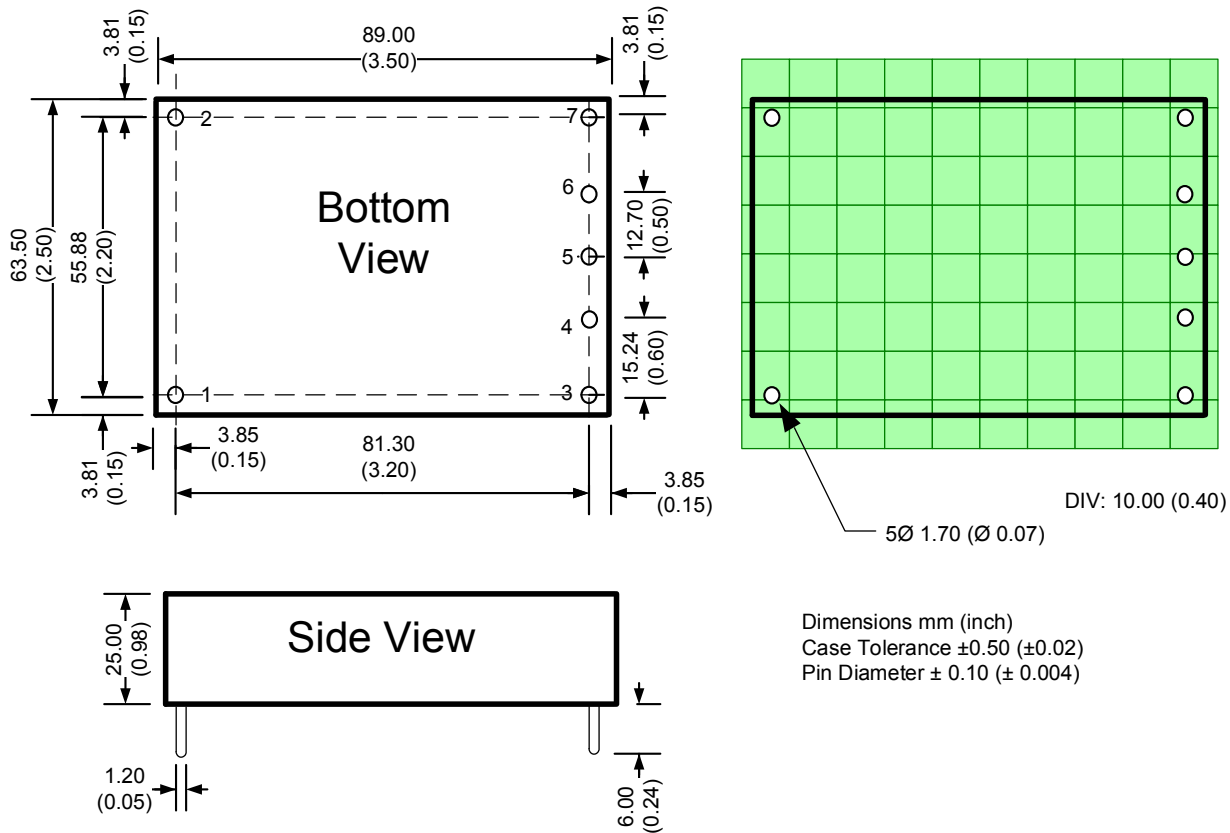
| Parameters | Conditions | Typical | Maximum | Units |
|--------------------------|---------------------|---|-----------------------|-----------|
| Switching frequency | 100% load | 65 | | KHz |
| Protection class | | Class II | | |
| Over current protection | | ≥110 | | % of Iout |
| Over voltage protection | | Zener diode clamp | | |
| Short circuit protection | | Continuous, Auto recovery | | |
| Operating temperature | See derating curve | -40 to +70 | | °C |
| Storage temperature | | -40 to +85 | | °C |
| Maximum Case temperature | | | 100 | °C |
| Temperature coefficient | | ±0.02 | | % / °C |
| Cooling | Free air convection | | | |
| Humidity | Non condensing | | 95 | % RH |
| Case material | | Plastic (flammability to UL 94V-0) | | |
| Weight | | 225 | | g |
| Dimensions (L x W x H) | | 3.5 x 2.5 x 0.98 inches | 89.0 x 63.5 x 25.0 mm | |
| MTBF | | > 200,000 hrs (MIL-HDBK -217F, t _a =+25°C)/Full Load | | |

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.

Safety Specifications

| Parameters | | |
|------------|--|------------------------|
| Standards | Information technology Equipment | IEC/EN/UL 60950-1 |
| | EMI - Conducted and radiated emission | EN55022, class B |
| | Electrostatic Discharge Immunity | IEC 61000-4-2 Level 3 |
| | RF, Electromagnetic Field Immunity | IEC 61000-4-3 Level 3 |
| | Electrical Fast Transient/Burst Immunity | IEC 61000-4-4 Level 3 |
| | Surge Immunity | IEC 61000-4-5 Level 3 |
| | RF, Conducted Disturbance Immunity | IEC 61000-4-6 Level 3 |
| | Power frequency Magnetic Field Immunity | IEC 61000-4-8 Level 3 |
| | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11 Class 2 |

Dimensions

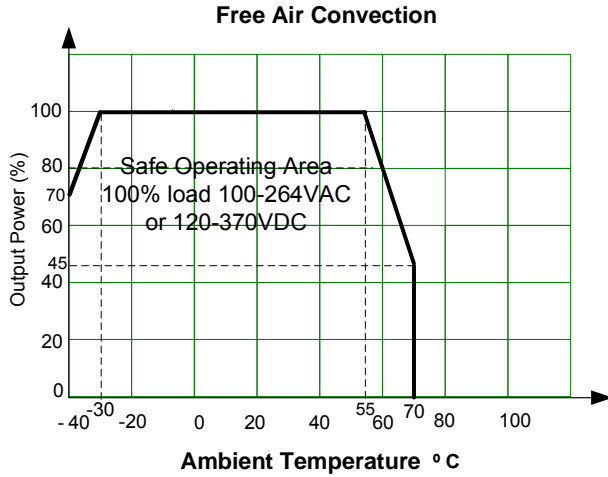


Pin Out Specifications

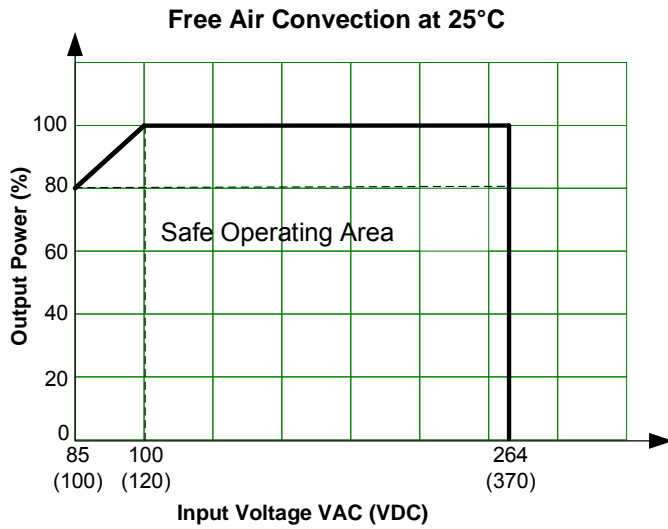
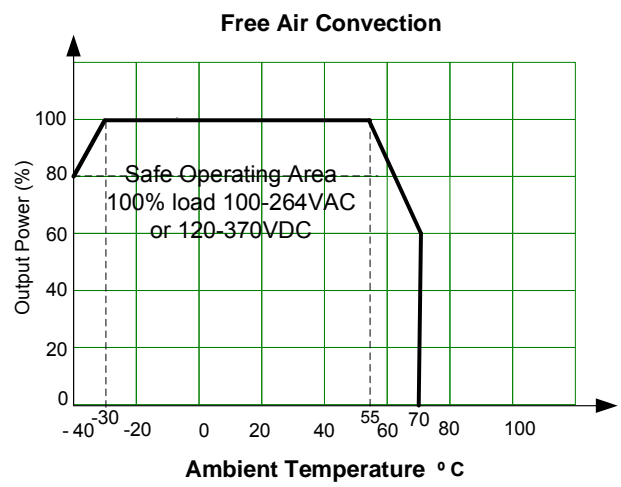
| Pin | Single |
|-----|--------------|
| 1 | AC Input (L) |
| 2 | AC Input (N) |
| 3 | +V Output |
| 4 | No pin |
| 5 | -V Output |
| 6 | No pin |
| 7 | Trim |

Deratings

AME40-12SMJZ

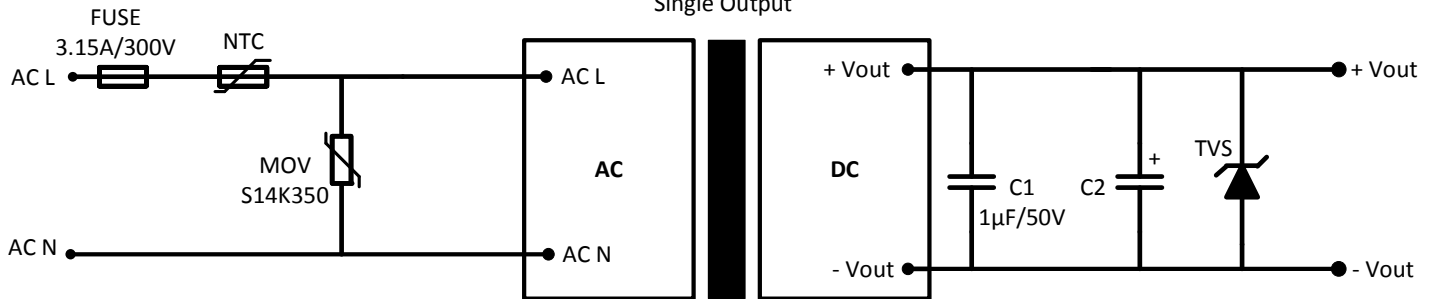


AME40-24SMJZ & AME40-48SMJZ



Typical application circuits

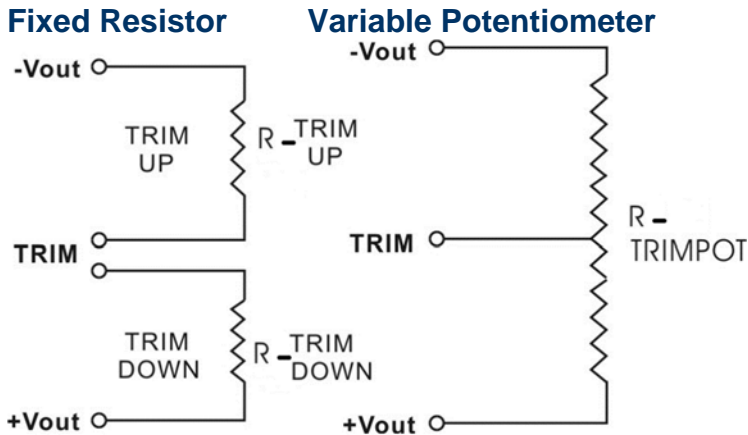
Single Output



| Model | C2 | TVS |
|----------------|--------|-----|
| Single 12 Vout | 220 µF | 20V |
| Single 24 Vout | 120 µF | 30V |
| Single 48 Vout | 100 µF | 64V |

Trimming

Output voltage can be externally trimmed by utilizing the methods as shown below



Leave open if not used.

AME40-12SMJZ

| | | | | | | | | | | |
|--------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Trim down % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vout (VDC) | 11.88 | 11.76 | 11.64 | 11.52 | 11.4 | 11.28 | 11.16 | 11.04 | 10.92 | 10.8 |
| Rt down (KΩ) | 183.233 | 111.59 | 79.474 | 61.246 | 49.499 | 41.299 | 35.249 | 30.602 | 26.921 | 23.933 |
| Trim up % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vout (VDC) | 12.12 | 12.24 | 12.36 | 12.48 | 12.6 | 12.72 | 12.84 | 12.96 | 13.08 | 13.2 |
| Rt up (KΩ) | 211.778 | 57.03 | 32.596 | 22.642 | 17.238 | 13.845 | 11.516 | 9.819 | 8.527 | 7.511 |

AME40-24SMJZ

| | | | | | | | | | | |
|--------------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| Trim down % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vout (VDC) | 23.76 | 23.52 | 23.28 | 23.04 | 22.8 | 22.56 | 22.32 | 22.08 | 21.84 | 21.6 |
| Rt down (KΩ) | 471.081 | 287.942 | 205.845 | 159.249 | 129.221 | 108.258 | 92.793 | 80.914 | 71.504 | 63.865 |
| Trim up % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vout (VDC) | 24.24 | 24.48 | 24.72 | 24.96 | 25.2 | 25.44 | 25.68 | 25.92 | 26.16 | 26.4 |
| Rt up (KΩ) | 239.556 | 64.606 | 36.982 | 25.728 | 19.619 | 15.783 | 13.15 | 11.232 | 9.771 | 8.622 |

AME40-48SMJZ

| | | | | | | | | | | |
|--------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Trim down % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vout (VDC) | 47.52 | 47.04 | 46.56 | 46.08 | 45.6 | 45.12 | 44.64 | 44.16 | 43.68 | 43.2 |
| Rt down (KΩ) | 1216.754 | 756.639 | 545.609 | 424.485 | 345.902 | 290.797 | 250.014 | 218.613 | 193.691 | 173.429 |
| Trim up % | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Vout (VDC) | 48.48 | 48.96 | 49.44 | 49.92 | 50.4 | 50.88 | 51.36 | 51.84 | 52.32 | 52.8 |
| Rt up (KΩ) | 374 | 86.766 | 48.699 | 33.664 | 25.613 | 20.597 | 17.172 | 14.684 | 12.796 | 11.313 |

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.