

## Series AME15-MJZ

### 15 Watt | AC-DC / DC-DC Converter

Picture coming soon

#### FEATURES:

- Isolation 4000VAC
- Operating Temp: -40 °C to +70 °C
- Input: 85-264VAC, 47-440Hz, or 100-370VDC
- Leakage current <100µF
- 2xMOPP compliance
- No load consumption <0.1W
- 5000m altitude compliance
- Efficiency up to 86%

#### Models

##### Single output



| Model        | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Output Voltage (V) | Output Current max (A) | Maximum capacitive Load (µF) | Efficiency 230VAC (%) |
|--------------|------------------------|---------------------|--------------------|------------------------|------------------------------|-----------------------|
| AME15-5SMJZ  | 85-264/47-440          | 120-370             | 5                  | 2.8                    | 8000                         | 78                    |
| AME15-12SMJZ | 85-264/47-440          | 120-370             | 12                 | 1.25                   | 4000                         | 83                    |
| AME15-15SMJZ | 85-264/47-440          | 120-370             | 15                 | 1                      | 3000                         | 83                    |
| AME15-18SMJZ | 85-264/47-440          | 120-370             | 18                 | 0.833                  | 2000                         | 84                    |
| AME15-24SMJZ | 85-264/47-440          | 120-370             | 24                 | 0.625                  | 800                          | 86                    |

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 |
|----------------------------------|-------------------------|---------|---------|-------|
| Current (full load)              | 115 VAC                 |         | 370     | mA    |
|                                  | 230 VAC                 |         | 220     | mA    |
| Inrush current <2ms (cold start) | 115 VAC                 | 10      |         | A     |
|                                  | 230 VAC                 | 20      |         | A     |
| Leakage current                  | 264VAC/60Hz             |         | 0.1     | mA    |
| External fuse                    | Recommended slow fusing | 2       |         | A     |

#### Output Specifications

| Parameters       | Conditions              | Typical | Maximum | Units  |
|------------------|-------------------------|---------|---------|--------|
| Voltage accuracy |                         | ±2      |         | %      |
| Line regulation  | Full load               | ±0.5    |         | %      |
| Load regulation  | 0-100% load             | ±1      |         | %      |
| Ripple and Noise | 20 MHz bandwidth        | 50      | 100     | mV p-p |
| Hold-up time     | 115VAC, 20MHz bandwidth | 15      |         | ms     |
|                  | 230VAC, 20MHz bandwidth | 80      |         | ms     |

#### Isolation Specifications

| Parameters           | Conditions   | Typical | Rated | Units |
|----------------------|--------------|---------|-------|-------|
| Tested I/O voltage   | 60 sec, ≤5mA |         | 4000  | VAC   |
| Isolation Resistance |              | >1000   |       | MΩ    |

#### General Specifications

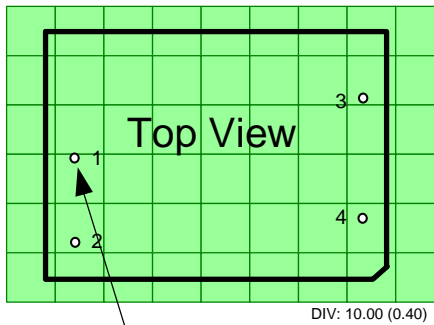
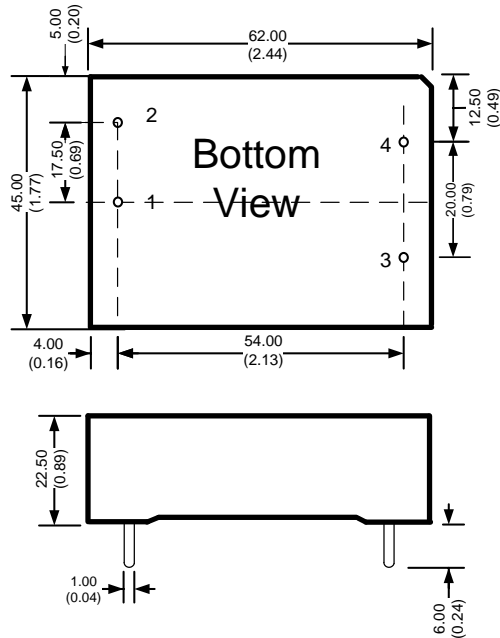
| Parameters               | Conditions          | Typical                   | Maximum | Units     |
|--------------------------|---------------------|---------------------------|---------|-----------|
| Switching frequency      | 100% load           | 65                        |         | KHz       |
| 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                 | 85  |                        | g |
| Dimensions (L x W x H) | 2.44 x 1.77 x 0.89 inches                         | 62.0 x 45.0 x 22.50 mm |   |
| MTBF                   | > 300,000 hrs (MIL-HDBK -217F, t=+25°C)/Full Load |                        |   |

## Safety Specifications

| Parameters |  |  |
|------------|--|--|
| Approvals  | CE, Designed to meet cULus                 |  |
| Standards  | Medical Devices and Equipment              | IEC/EN/UL 60601-1, 2xMOPP                          |
|            | EMI - Conducted and radiated emission      | EN55022, class B                                   |
|            | 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                    |
|            | Surge Immunity                             | IEC 61000-4-5, ±1KV, Criteria B                    |
|            | RF, Conducted Disturbance Immunity         | IEC 61000-4-6, 10Vrms, Criteria A                  |
|            | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11, 0-70%, Criteria B                  |

## Dimensions



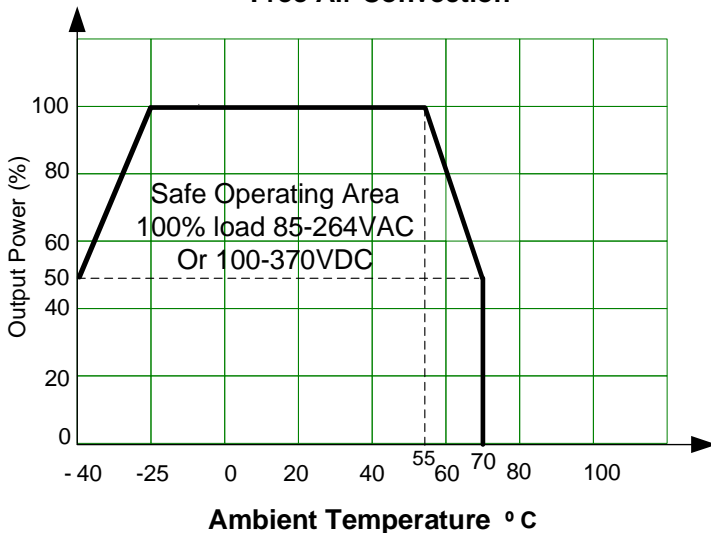
Dimensions mm (inch)  
Case Tolerance ±0.50 (±0.02)  
Pin Diameter 1.0 ± 0.10 (0.04 ± 0.004)

## Pin Out Specifications

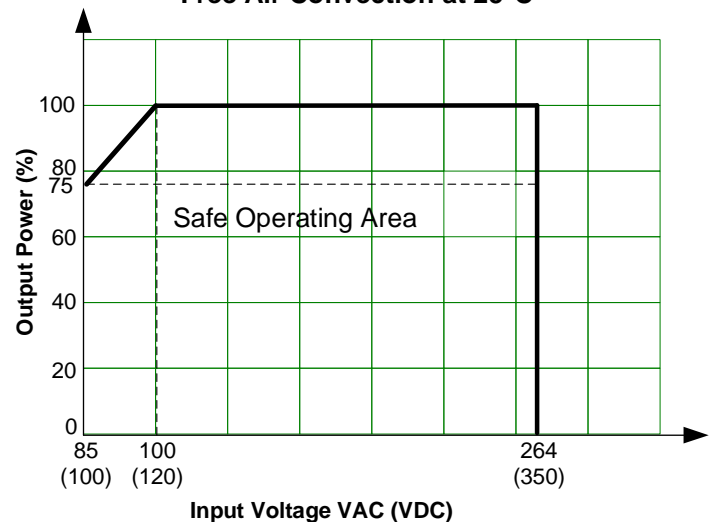
| Pin | Single       |
|-----|--------------|
| 1   | AC Input (N) |
| 2   | AC Input (L) |
| 3   | -V Output    |
| 4   | +V Output    |

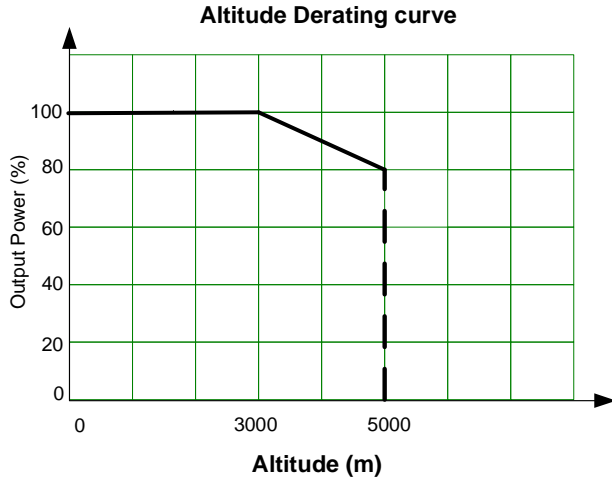
## Derating

Free Air Convection

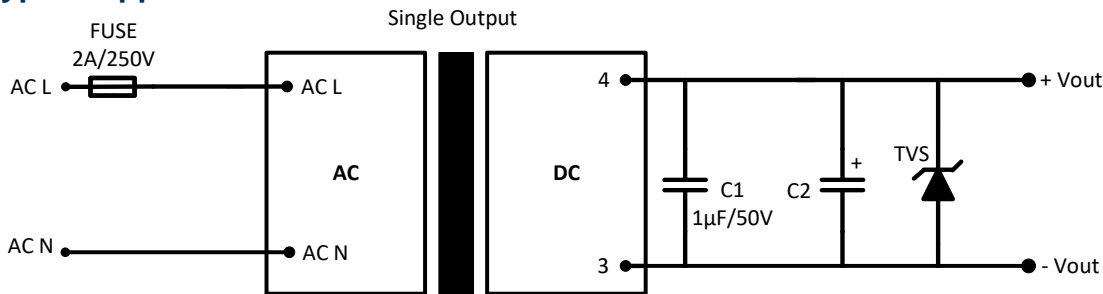


Free Air Convection at 25°C





### Typical application circuits



| Model   | C2           | TVS |
|---------|--------------|-----|
| 5 Vout  | 680 µF / 16V | 7V  |
| 12 Vout | 470 µF / 16V | 20V |
| 15 Vout | 220 µF / 35V |     |
| 18 Vout |              | 30V |
| 24 Vout | 68 µF / 35V  |     |

**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](http://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](http://www.aimtec.com).