



### FEATURES:

- I/O Isolation 3000VAC
- Operating Temp: -25°C to +70°C
- Input: 85-305VAC, 47-63Hz, or 120-430 VDC
- Over current, Short Circuit Protection
- Class II Power supply
- Energy Star compliant
- Ultra-small package



### Models Single Output

| Model       | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Temperature range (°C) | Output Voltage (V) | Output Current max (mA) | Maximum capacitive Load (µF) | Efficiency (%) |
|-------------|------------------------|---------------------|------------------------|--------------------|-------------------------|------------------------------|----------------|
|             |                        |                     |                        |                    |                         |                              | 230 VAC        |
| AME1-3.3SJZ | 85-305/47-63           | 120-430             | -25 to +70             | 3.3                | 300                     | 4000                         | 63             |
| AME1-5SJZ   | 85-305/47-63           | 120-430             | -25 to +70             | 5                  | 200                     | 4000                         | 68             |
| AME1-9SJZ   | 85-305/47-63           | 120-430             | -25 to +70             | 9                  | 111                     | 2200                         | 72             |
| AME1-12SJZ  | 85-305/47-63           | 120-430             | -25 to +70             | 12                 | 83                      | 2200                         | 73             |
| AME1-15SJZ  | 85-305/47-63           | 120-430             | -25 to +70             | 15                 | 67                      | 1000                         | 74             |
| AME1-24SJZ  | 85-305/47-63           | 120-430             | -25 to +70             | 24                 | 42                      | 680                          | 75             |

Add suffix “-ST” for optional screw terminal bottom plate or “-STD” for optional DIN Rail screw terminal bottom plate.

### Input Specifications

| Parameters                       | Conditions                 | Typical | Maximum | Units |
|----------------------------------|----------------------------|---------|---------|-------|
| Current (full load)              | 115 VAC                    |         | 30      | mA    |
|                                  | 230 VAC                    |         | 17      | mA    |
| Inrush current <2ms (cold start) | 115 VAC                    | 5       |         | A     |
|                                  | 230 VAC                    | 11      |         | A     |
| Leakage current                  |                            |         | 0.15    | mA    |
| External fuse                    | Recommended slow blow type | 1       |         | A     |

### Output Specifications

| Parameters       | Conditions                     | Typical | Maximum | Units  |
|------------------|--------------------------------|---------|---------|--------|
| Voltage accuracy | Full load, nominal input       | ±6      |         | %      |
| Line regulation  | LL-HL, Full Load               | ±2      |         | %      |
| Load regulation  | 10% - 100% load, nominal input | ±5      |         | %      |
| Minimum load     |                                | 10      |         | %      |
| Ripple & Noise*  | 3.3/5 VDC With 560µF E/C       | 100     | 200     | mV p-p |

\*Ripple & Noise measured at 20MHz bandwidth with 1µF C/C and 10µF E/C and 115/230VAC with Full Load.

### Isolation Specifications

| Parameters           | Conditions | Typical | Rated | Units |
|----------------------|------------|---------|-------|-------|
| Tested I/O voltage   | 60 sec     |         | 3000  | VAC   |
| Isolation Resistance |            | >1000   |       | MΩ    |

### General Specifications

| Parameters               | Conditions                               | Typical       | Maximum | Units |
|--------------------------|--|---------------|---------|-------|
| Switching frequency      |  | 100           |         | KHz   |
| Over Current protection  | Auto recovery                            | ≥110%         |         |       |
| Short circuit protection |  | Auto recovery |         |       |
| Operating temperature    | With derating above 55°C                 | -25 to +70    |         | °C    |
| Storage temperature      |  | -40 to +85    |         | °C    |
| Maximum Case temperature |  |               | 100     | °C    |
| Humidity                 | Non condensing                           | 20 ~ 90       |         | % RH  |
| Case material            | Plastic resin (flammability to UL 94V-0) |               |         |       |
| Weight                   | PCB mountable models                     | 20            |         | g     |
|                          | With optional -ST mounting plate:        | 40            |         |       |
|                          | With optional -STD mounting plate:       | 60            |         |       |

|                        |   |   |
|------------------------|---|---|
| Cooling                | Free air convection   |   |
| Dimensions (L x W x H) | PCB mountable models  | 1.33 x 0.87 x 0.71 inches (33.70 x 22.20 x 18.00mm) |
|                        | With optional -ST mounting plate:                               | 2.99 x 1.24 x 1.06 inches 76.00 x 31.50 x 26.80 mm  |
|                        | With optional -STD mounting plate:                              | 2.99 x 1.24 x 1.24 inches 76.00 x 31.50 x 31.40 mm  |
| MTBF                   | > 300,000 hrs (MIL-HDBK -217F, t <sub>a</sub> =+25oC)/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

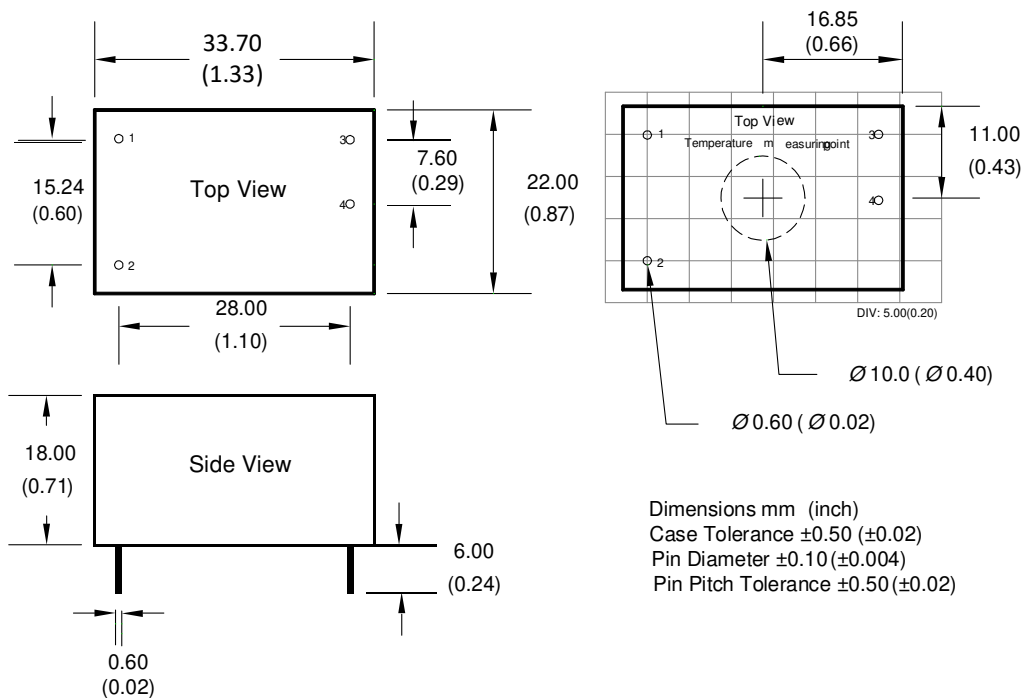
### Parameters

|           |  |  |
|-----------|--|--|
| Approvals | cULus, CE                                  |  |
| Standards | Information technology Equipment           | IEC/EN/UL 60950-1:2006+A11:2009                                    |
|           | EMI - Conducted and radiated emission      | EN55022, class B   |
|           | Electrostatic Discharge Immunity           | IEC 61000-4-2, Contact: ±4KV/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 EMC recommended circuit      |
|           | Surge Immunity(1KV)                        | IEC 61000-4-5, ±1KV/±2KV, Criteria B, with EMC recommended circuit |
|           | RF, Conducted Disturbance Immunity         | IEC 61000-4-6, 10Vrms, Criteria A                                  |
|           | Power frequency Magnetic Field Immunity    | IEC 61000-4-8, 10A/m, Criteria A                                   |
|           | Voltage dips, Short Interruptions Immunity | IEC 61000-4-11, 0-70%, Criteria B                                  |

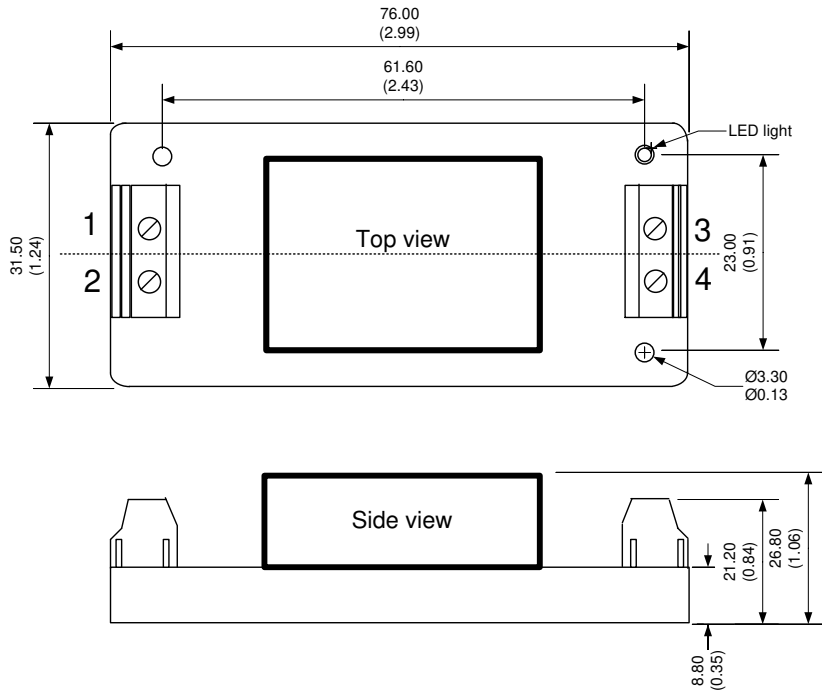
## Pin Out Specifications

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

## Dimensions



**With optional -ST bottom plate**

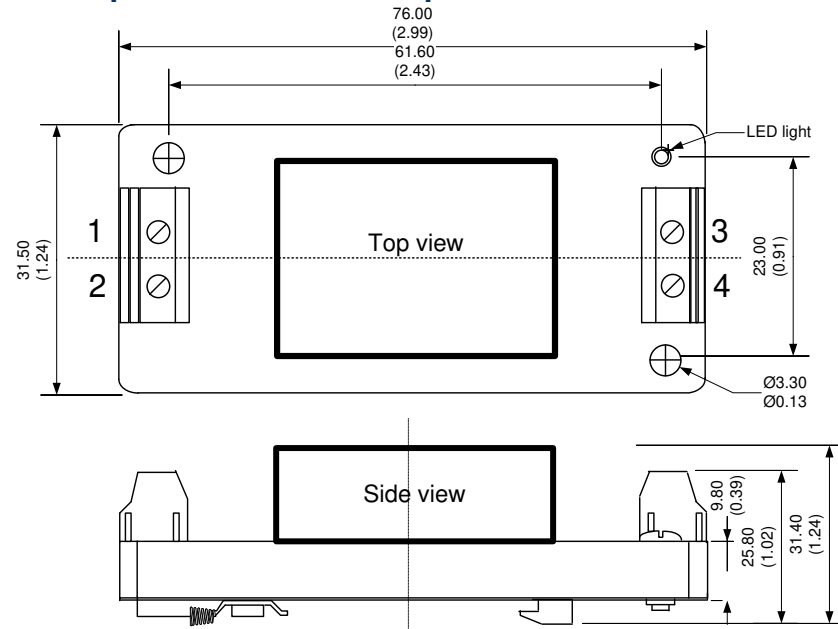


**Pin Out Specifications**

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

Dimensions: mm (inch)  
Case Tolerance:  $\pm 0.50$  (0.02)  
Wire gauge: 24-12AWG

**With optional -STD bottom plate**

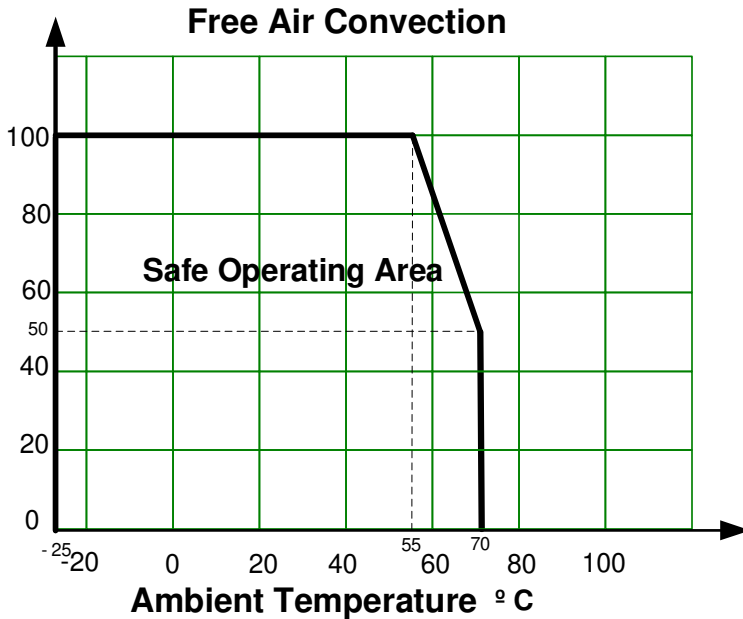


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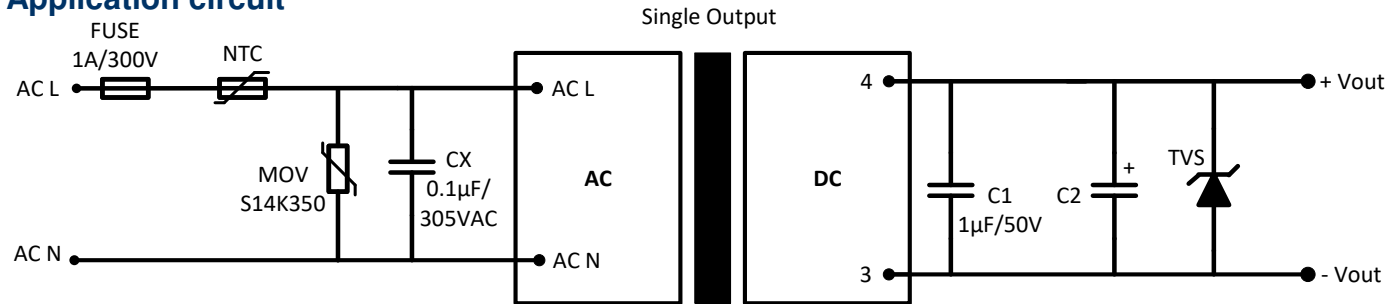
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### Derating

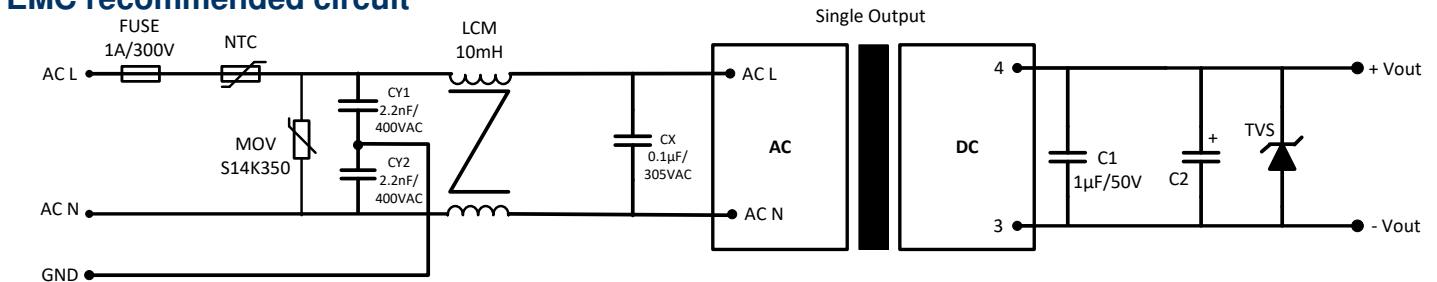


### Application circuit



\*GND connection not allowed

### EMC recommended circuit



| Model        | C2           | TVS |
|--------------|--------------|-----|
| 3.3 & 5 Vout | 220 µF / 35V | 7V  |
| 9 Vout       | 120 µF / 35V | 12V |
| 12 & 15 Vout | 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](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).