

Picture coming soon

**FEATURES:**

- Efficiency up to 89%
- Ultra wide 4:1 Input range
- Continuous short circuit protection
- Operating Temperature: -40°C to +85°C
- On/Off Remote Control
- Over Voltage Protection
- Input / Output Isolation 1500VDC
- Over Current protection



**Models**  
**Single output**

| Model            | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Max Capacitive Load(uF) | Efficiency (%) |
|------------------|-------------------|--------------------|-------------------------|-----------------|-------------------------|----------------|
| AM15EW-11003S-NZ | 40-160            | 3.3                | 4000                    | 1500            | 4020                    | 87             |
| AM15EW-11005S-NZ | 40-160            | 5                  | 3000                    | 1500            | 4020                    | 89             |
| AM15EW-11012S-NZ | 40-160            | 12                 | 1250                    | 1500            | 1600                    | 88             |
| AM15EW-11015S-NZ | 40-160            | 15                 | 1000                    | 1500            | 1000                    | 88             |
| AM15EW-11024S-NZ | 40-160            | 24                 | 625                     | 1500            | 470                     | 88             |

Add suffix “-K” for optional heat sink

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           | 110  | 40-160  |         | VDC   |
| Filter                  | π(Pi) Network  |         |         |       |
| Start up time           |  | 10      |         | ms    |
| Absolute Maximum Rating | 110  |         | 200     | VDC   |
| Peak Input Voltage time |  |         | 100     | ms    |
| On/Off control          | ON – open or 3.5-12VDC ; OFF – short to –Vin or 0-1.2VDC, Idle current 1mA |         |         |       |
| No load Input Current   |  |         | 15      | mA    |
| Input reflected current |  | 25      |         | mA    |

**Isolation Specifications**

| Parameters         | Conditions  | Typical | Maximum | Units |
|--------------------|-------------|---------|---------|-------|
| Tested I/O voltage | 60 sec, 1mA | 1500    |         | VDC   |
| Resistance         |             | >1000   |         | MOhm  |
| Capacitance        |             | 2000    |         | pF    |

**Output Specifications**

| Parameters                   | Conditions           | Typical | Maximum | Units    |
|------------------------------|----------------------|---------|---------|----------|
| Voltage accuracy             |                      | ±3      |         | %        |
| Over voltage protection      | Zener Diode Clamp    |         |         | %        |
| Over current protection      |                      | 130     | 170     | % of Io  |
| Short Circuit protection     | Continuous           |         |         |          |
| Short circuit restart        | Auto-Recovery        |         |         |          |
| Line voltage regulation      | Full load, LL-HL     | ±0.5    |         | % of Vin |
| Load voltage regulation      | 5% to 100% load      | ±1      |         | %        |
| Temperature coefficient      |                      |         | ±0.02   | %/°C     |
| Ripple & Noise               | 20MHz Bandwidth      |         | 100     | mV p-p   |
| Voltage adjustment range     |                      |         | ±10     | %        |
| Minimum Load Current         |                      | 5       |         | % of Max |
| Transient recovery time      | 25% load step change |         | 800     | µS       |
| Transient recovery deviation | 25% load step change | ±5      |         | %        |

## General Specifications

| Parameters                    | Conditions                 | Typical   | Maximum               | Units |
|-------------------------------|----------------------------|---|-----------------------|-------|
| Switching frequency           | 100% load                  | 300   |                       | KHz   |
| Operating temperature         | See derating curve         | -40 to +85  |                       | °C    |
| Storage temperature           |                            | -55 to +125   |                       | °C    |
| Maximum case temperature      |                            |   | 105                   | °C    |
| Cooling                       |                            | Free air convection                                       |                       |       |
| Humidity                      |                            |   | 95                    | % RH  |
| Case material                 |                            | Aluminum Alloy  |                       |       |
| Weight                        |                            | 28 without heat sink/ 36 with heat sink                   |                       | g     |
| Dimensions (L x W x H)        |                            | 2 x 1 x 0.47 inches                                       | 50.8 x 25.4 x 11.8 mm |       |
| MTBF                          |                            | >1,000,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C) |                       |       |
| Maximum soldering temperature | 1.5mm from case for 10 sec |   | 300                   | °C    |

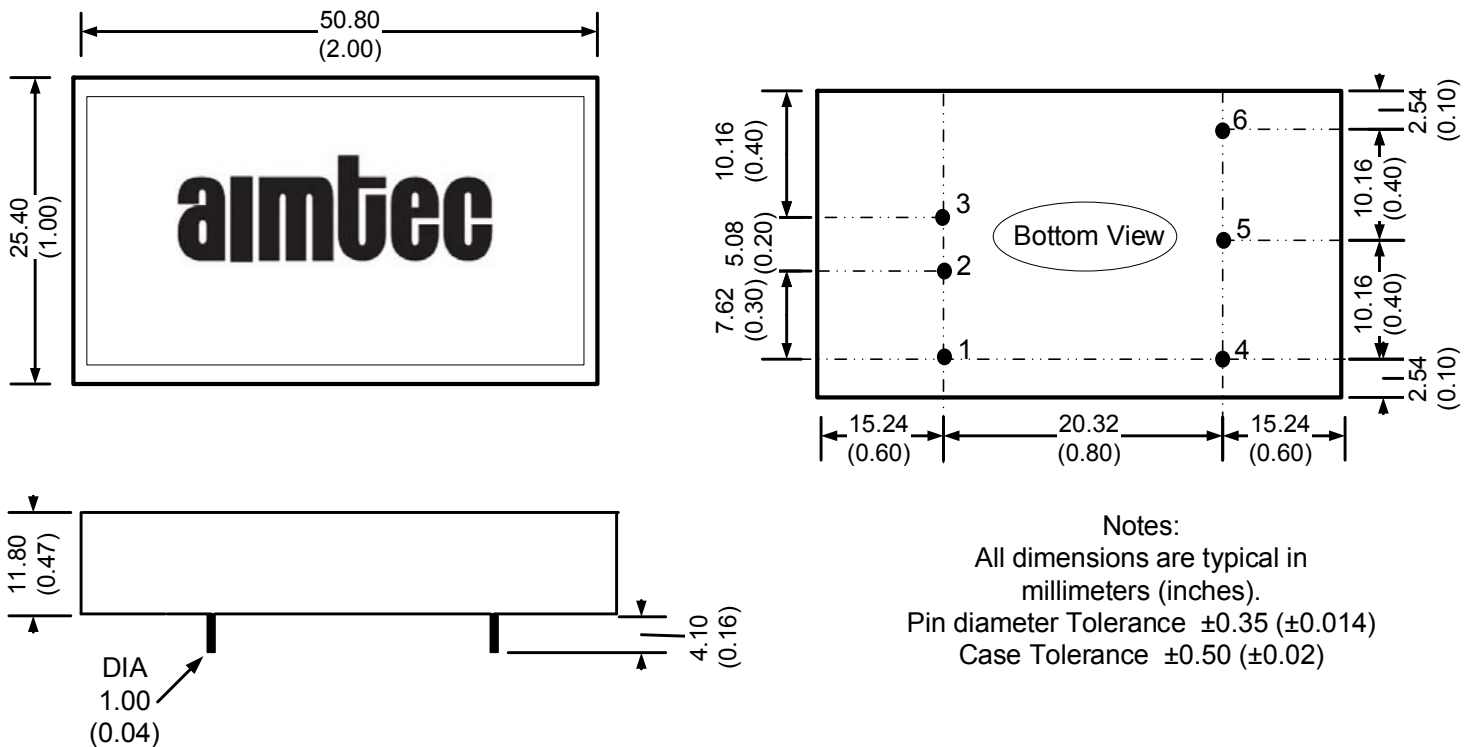
## Safety Specifications

| Parameters |   |
|------------|---|
| Standards  | Meets EN60950-1<br>EN 55022, class B (with the recommended EMC circuit) |

## Pin Out Specifications

| Pin | Single         |
|-----|----------------|
| 1   | On/Off Control |
| 2   | -Vin           |
| 3   | +Vin           |
| 4   | -Vout          |
| 5   | Trim           |
| 6   | +Vout          |

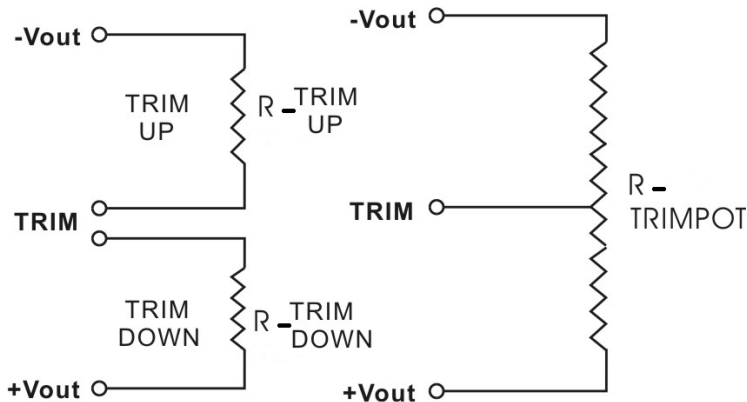
## Dimensions



## Trimming

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

### Fixed Resistor      Variable Potentiometer



Leave open if not used.

#### AM15EW-11003S-NZ

|              |         |         |        |        |        |        |        |        |        |       |
|--------------|---------|---------|--------|--------|--------|--------|--------|--------|--------|-------|
| Trim down %  | 1       | 2       | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10    |
| Vout (VDC)   | 3.267   | 3.234   | 3.201  | 3.168  | 3.135  | 3.102  | 3.069  | 3.036  | 3.003  | 2.970 |
| Rt down (KΩ) | 173.432 | 98.098  | 65.027 | 46.445 | 34.541 | 26.263 | 20.174 | 15.507 | 11.815 | 8.823 |
| Trim up %    | 1       | 2       | 3      | 4      | 5      | 6      | 7      | 8      | 9      | 10    |
| Vout (VDC)   | 3.333   | 3.366   | 3.399  | 3.432  | 3.465  | 3.498  | 3.531  | 3.564  | 3.597  | 3.63  |
| Rt up (KΩ)   | 399.723 | 110.716 | 59.087 | 37.519 | 25.677 | 18.193 | 13.034 | 9.264  | 6.387  | 4.12  |

#### AM15EW-11005S-NZ

|              |         |        |        |        |        |        |        |       |       |       |
|--------------|---------|--------|--------|--------|--------|--------|--------|-------|-------|-------|
| Trim down %  | 1       | 2      | 3      | 4      | 5      | 6      | 7      | 8     | 9     | 10    |
| Vout (VDC)   | 4.95    | 4.9    | 4.85   | 4.8    | 4.75   | 4.7    | 4.65   | 4.6   | 4.55  | 4.5   |
| Rt down (KΩ) | 96.08   | 49.349 | 30.67  | 20.616 | 14.333 | 10.034 | 6.909  | 4.533 | 2.667 | 1.162 |
| Trim up %    | 1       | 2      | 3      | 4      | 5      | 6      | 7      | 8     | 9     | 10    |
| Vout (VDC)   | 5.05    | 5.1    | 5.15   | 5.2    | 5.25   | 5.3    | 5.35   | 5.4   | 5.45  | 5.5   |
| Rt up (KΩ)   | 205.698 | 76.406 | 44.023 | 29.296 | 20.879 | 15.431 | 11.617 | 8.798 | 6.63  | 4.91  |

#### AM15EW-11012S-NZ

|              |         |         |         |         |         |         |        |        |        |        |
|--------------|---------|---------|---------|---------|---------|---------|--------|--------|--------|--------|
| 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) | 505.529 | 303.041 | 211.851 | 159.978 | 126.504 | 103.114 | 85.849 | 72.581 | 62.066 | 53.527 |
| 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)   | 614.769 | 150.097 | 78.994  | 50.198  | 34.607  | 24.832  | 18.13  | 13.249 | 9.536  | 6.616  |

AM15EW-11015S-NZ

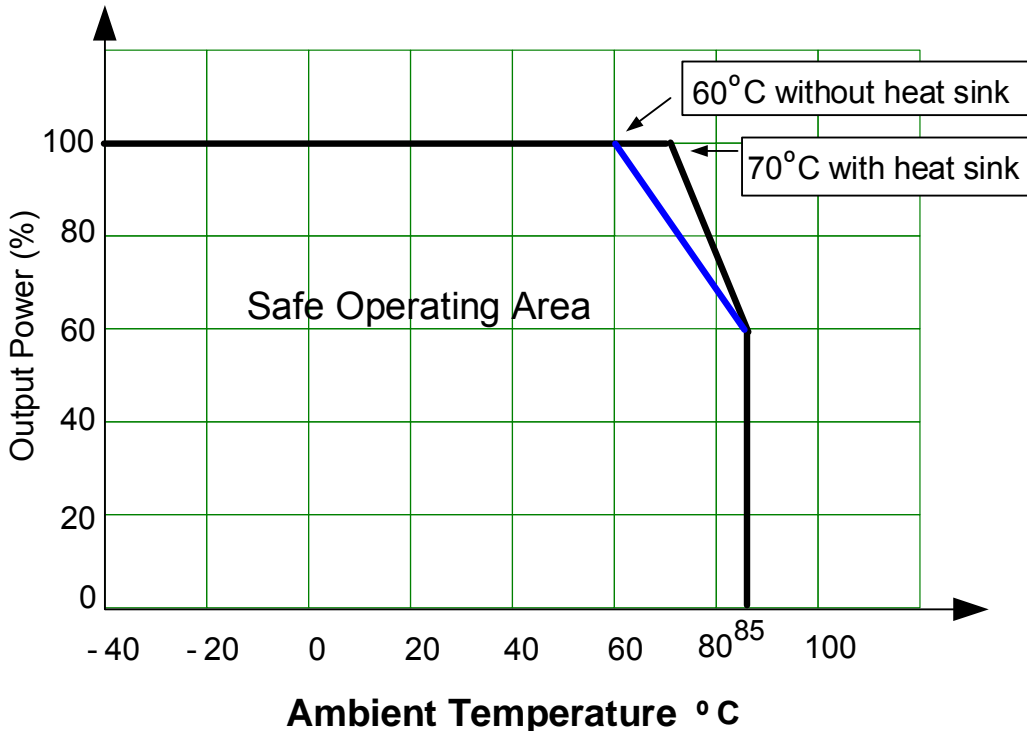
|              |          |         |         |         |         |         |         |         |        |        |
|--------------|----------|---------|---------|---------|---------|---------|---------|---------|--------|--------|
| Trim down %  | 1        | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9      | 10     |
| Vout (VDC)   | 14.85    | 14.7    | 14.55   | 14.4    | 14.25   | 14.1    | 13.95   | 13.8    | 13.65  | 13.5   |
| Rt down (KΩ) | 570.165  | 371.335 | 271.179 | 210.846 | 170.524 | 141.673 | 120.008 | 103.142 | 89.638 | 78.584 |
| Trim up %    | 1        | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9      | 10     |
| Vout (VDC)   | 15.15    | 15.3    | 15.45   | 15.6    | 15.75   | 15.9    | 16.05   | 16.2    | 16.35  | 16.5   |
| Rt up (KΩ)   | 3208.668 | 231.297 | 104.85  | 63.553  | 43.061  | 30.815  | 22.672  | 16.865  | 12.516 | 9.136  |

AM15EW-11024S-NZ

|              |          |         |         |         |         |         |         |         |         |         |
|--------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 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) | 1135.537 | 730.699 | 532.922 | 415.701 | 338.146 | 283.038 | 241.862 | 209.929 | 184.441 | 163.624 |
| 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)   | 2871.219 | 219.961 | 106.182 | 66.054  | 45.551  | 33.104  | 24.745  | 18.744  | 14.226  | 10.703  |

## Derating

### Free Air Convection



**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 than 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).