



**FEATURES:**

- RoHS compliant
- Wide 4:1 input range
- Low ripple and noise
- Remote On/Off control
- Power modules for PCB mounting
- Regulated output
- Operating temperature range: -40 to +85°C
- Capacitive loading up to 4500  $\mu\text{F}$  (18-75V input)

**Models**  
**Single output**



| Model          | Input Voltage (V) | Output Voltage (V) | Output Current max (A) | Ripple & Noise typ | Isolation (VDC) | Efficiency (%) |
|----------------|-------------------|--------------------|------------------------|--------------------|-----------------|----------------|
| AM15EW-2403SIZ | 9-36              | 3.3                | 4                      | 80mV p-p           | 1500            | 77             |
| AM15EW-2405SIZ | 9-36              | 5                  | 3                      | 80mV p-p           | 1500            | 80             |
| AM15EW-2412SIZ | 9-36              | 12                 | 1.25                   | 120mVp-p           | 1500            | 85             |
| AM15EW-2415SIZ | 9-36              | 15                 | 1                      | 150mVp-p           | 1500            | 84             |
| AM15EW-4803SIZ | 18-75             | 3.3                | 4                      | 80mV p-p           | 1500            | 77             |
| AM15EW-4805SIZ | 18-75             | 5                  | 3                      | 80mV p-p           | 1500            | 80             |
| AM15EW-4812SIZ | 18-75             | 12                 | 1.25                   | 120mVp-p           | 1500            | 85             |
| AM15EW-4815SIZ | 18-75             | 15                 | 1                      | 150mVp-p           | 1500            | 84             |

**Models**  
**Dual output**

| Model          | Input Voltage (V) | Output Voltage (V) | Output Current max (A) | Ripple & Noise typ | Isolation (VDC) | Efficiency (%) |
|----------------|-------------------|--------------------|------------------------|--------------------|-----------------|----------------|
| AM15EW-2405DIZ | 9-36              | $\pm 5$            | $\pm 1.5$              | 50mVp-p            | 1500            | 80             |
| AM15EW-2412DIZ | 9-36              | $\pm 12$           | $\pm 0.625$            | 120mVp-p           | 1500            | 85             |
| AM15EW-2415DIZ | 9-36              | $\pm 15$           | $\pm 0.5$              | 150mVp-p           | 1500            | 84             |
| AM15EW-4805DIZ | 18-72             | $\pm 5$            | $\pm 1.5$              | 50mVp-p            | 1500            | 80             |
| AM15EW-4812DIZ | 18-72             | $\pm 12$           | $\pm 0.625$            | 120mVp-p           | 1500            | 85             |
| AM15EW-4815DIZ | 18-72             | $\pm 15$           | $\pm 0.5$              | 150mVp-p           | 1500            | 84             |

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                         | 24<br>48           | 9-36<br>18-75 |          | VDC   |
| Filter                                | $\pi$ (Pi) Network |               |          |       |
| Absolute Maximum Rating               | 24 Vin<br>48 Vin   |               | 40<br>83 | VDC   |
| Permissible absolute maximum duration |                    |               | 2        | h     |

**Isolation Specifications**

| Parameters         | Conditions | Typical | Rated | Units |
|--------------------|------------|---------|-------|-------|
| Tested I/O voltage | 60 sec     |         | 1500  | VDC   |
| Resistance         |            | > 1000  |       | MOhm  |
| Capacitance        |            | 1000    |       | pF    |

**Output Specifications**

| Parameters               | Conditions | Typical                      | Maximum | Units |
|--------------------------|------------|------------------------------|---------|-------|
| Voltage accuracy         |            | $\pm 2$                      |         | %     |
| Short Circuit protection |            | Continuous                   |         |       |
| Short Circuit restart    |            | Auto recovery                |         |       |
| Over voltage protection  |            | Zener diode clamp protection |         |       |

### Output Specifications (continued)

| Parameters                       | Conditions    | Typical             | Maximum | Units |
|----------------------------------|---------------|---------------------|---------|-------|
| Over load protection             | Auto recovery | Over 110% full load |         |       |
| Line voltage regulation (Single) | HL-LL         | ±0.5                |         | %     |
| Line voltage regulation (Dual)   | HL-LL         | ±0.5                |         | %     |
| Load voltage regulation (Single) | 25-100%       | ±0.5                |         | %     |
| Load voltage regulation (Dual)   | 25-100%       | ±2                  |         | %     |
| Temperature coefficient          |               | ±0.05               |         | %/°C  |

### General Specifications

| Parameters            | Conditions                                             | Typical                   | Maximum                  | Units |
|-----------------------|--------------------------------------------------------|---------------------------|--------------------------|-------|
| Switching frequency   | 100% load                                              | 200                       |                          | KHz   |
| Operating temperature | With derating above +75                                |                           | -40 to +85               | °C    |
| Storage temperature   |                                                        |                           | -55 to +115              | °C    |
| Max Case temperature  |                                                        |                           | 95                       | °C    |
| Cooling               | Free air convection                                    |                           |                          |       |
| Humidity              |                                                        |                           | 95                       | %     |
| Case material         | Nickel coated copper with non-conductive base          |                           |                          |       |
| Weight                |                                                        | 33                        |                          | g     |
| Dimensions(L x W x H) | Tolerance ±0.5mm                                       | 2.00 x 1.00 x 0.40 inches | 50.80 x 25.40 x 10.50 mm |       |
| MTBF                  | > 800 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) |                           |                          |       |

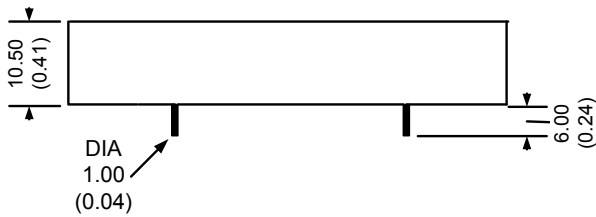
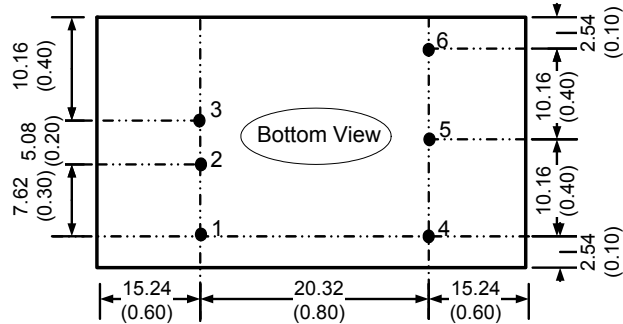
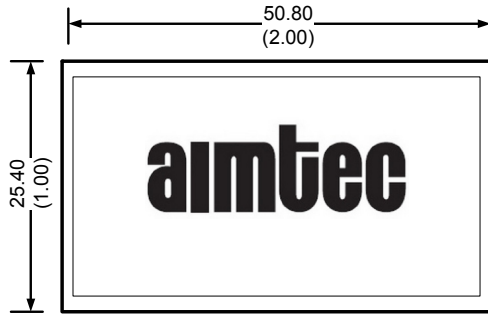
### Safety Specifications

| Parameters                                            |                                |
|-------------------------------------------------------|--------------------------------|
| Agency Approvals                                      | CE                             |
| Standards                                             | EN 55022, EN 55024             |
|                                                       | IEC61000-3-2                   |
|                                                       | IEC61000-3-3                   |
|                                                       | IEC61000-4-2, Perf. Criteria B |
|                                                       | IEC61000-4-3 Perf. Criteria A  |
|                                                       | IEC61000-4-4, Perf. Criteria B |
|                                                       | IEC61000-4-6, Perf. Criteria A |
|                                                       | IEC61000-4-8, Perf. Criteria A |
| NOTE: also designed to meet standard IEC 60950-1:2001 |                                |

### Pin Out Specifications

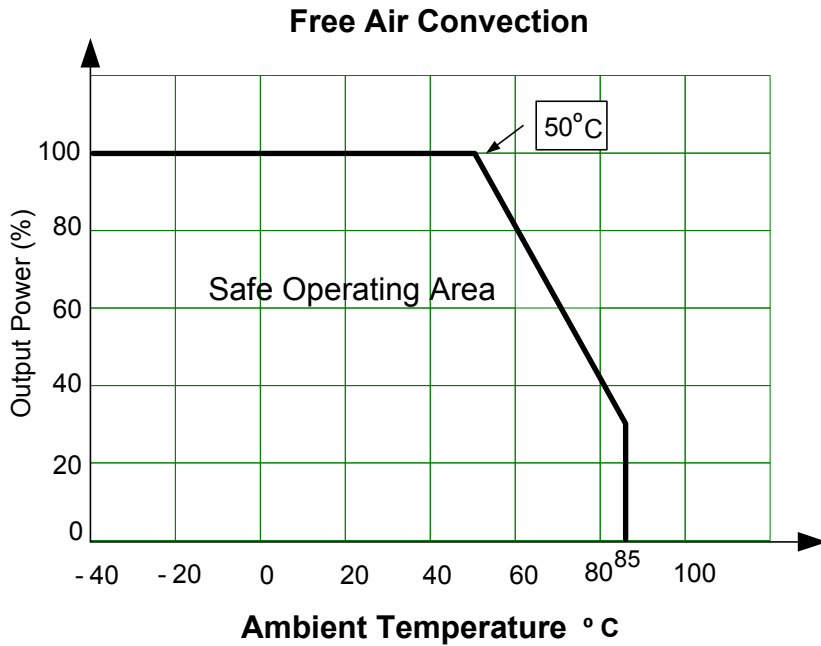
| Pin | Single         | Dual           |
|-----|----------------|----------------|
| 1   | On/Off Control | On/Off Control |
| 2   | -V Input       | -V Input       |
| 3   | +V Input       | +V Input       |
| 4   | -V Output      | -V Output      |
| 5   | No pin         | Common         |
| 6   | +V Output      | +V Output      |

**Dimensions**



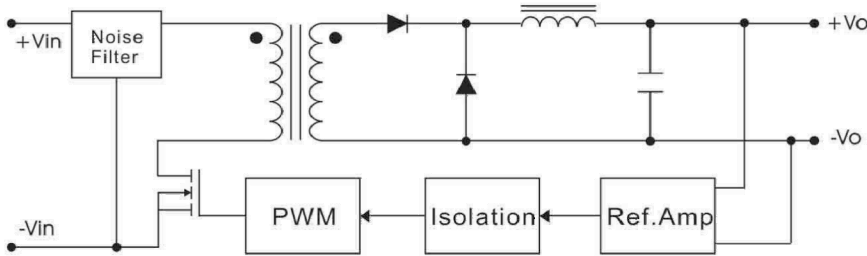
Notes:  
All dimensions are typical  
in millimeters (inches).  
Tolerance  $\pm 0.25$  ( $\pm 0.01$ )

**Derating**

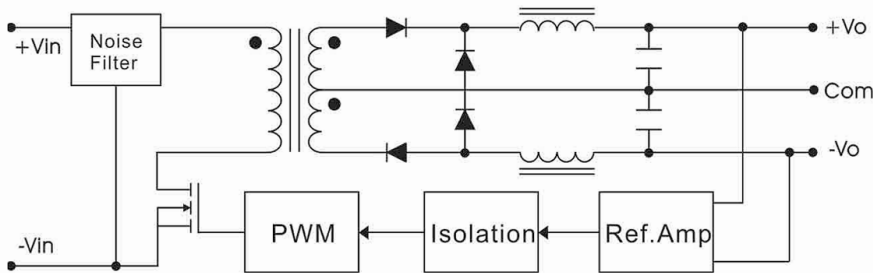


## Block diagram

### Single Output



### Dual Output



**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).