



### FEATURES:

- Ultra-Wide 4:1 Input
- Continuous Short Circuit Protection
- Remote On/Off control
- Standard package 2"x1.6"
- High efficiency up to 85%
- RoHS compliant

### Models

#### Single output



| Model             | Input Voltage (V) | Output Voltage (V) | Output Current max (A) | Isolation (VDC) | Efficiency (%) |
|-------------------|-------------------|--------------------|------------------------|-----------------|----------------|
| AM30KW-2403SIZ    | 9-36              | 3.3                | 5.4                    | 1500            | 78             |
| AM30KW-2405SIZ    | 9-36              | 5                  | 6                      | 1500            | 81             |
| AM30KW-2412SIZ    | 9-36              | 12                 | 2.5                    | 1500            | 84             |
| AM30KW-2415SIZ    | 9-36              | 15                 | 2                      | 1500            | 82             |
| AM30KW-2424SIZ    | 9-36              | 24                 | 1.25                   | 1500            | 82             |
| AM30KW-4803SIZ    | 18-75             | 3.3                | 5.4                    | 1500            | 78             |
| AM30KW-4805SIZ    | 18-75             | 5                  | 6                      | 1500            | 80             |
| AM30KW-4812SIZ    | 18-75             | 12                 | 2.5                    | 1500            | 83             |
| AM30KW-4815SIZ    | 18-75             | 15                 | 2                      | 1500            | 83             |
| AM30KW-4824SIZ    | 18-75             | 24                 | 1.25                   | 1500            | 83             |
|                   |                   |                    |                        |                 |                |
| AM30KW-2403SH30IZ | 9-36              | 3.3                | 5.4                    | 3000            | 78             |
| AM30KW-2405SH30IZ | 9-36              | 5                  | 6                      | 3000            | 81             |
| AM30KW-2412SH30IZ | 9-36              | 12                 | 2.5                    | 3000            | 84             |
| AM30KW-2415SH30IZ | 9-36              | 15                 | 2                      | 3000            | 82             |
| AM30KW-2424SH30IZ | 9-36              | 24                 | 1.25                   | 3000            | 82             |
| AM30KW-4803SH30IZ | 18-75             | 3.3                | 5.4                    | 3000            | 78             |
| AM30KW-4805SH30IZ | 18-75             | 5                  | 6                      | 3000            | 80             |
| AM30KW-4812SH30IZ | 18-75             | 12                 | 2.5                    | 3000            | 83             |
| AM30KW-4815SH30IZ | 18-75             | 15                 | 2                      | 3000            | 83             |
| AM30KW-4824SH30IZ | 18-75             | 24                 | 1.25                   | 3000            | 83             |

### Models

#### Dual output

| Model             | Input Voltage (V) | Output Voltage (V) | Output Current max (mA) | Isolation (VDC) | Efficiency (%) |
|-------------------|-------------------|--------------------|-------------------------|-----------------|----------------|
| AM30KW-2405DIZ    | 9-36              | ±5                 | ±3                      | 1500            | 81             |
| AM30KW-2412DIZ    | 9-36              | ±12                | ±1.25                   | 1500            | 82             |
| AM30KW-2415DIZ    | 9-36              | ±15                | ±1                      | 1500            | 83             |
| AM30KW-4805DIZ    | 18-75             | ±5                 | ±3                      | 1500            | 83             |
| AM30KW-4812DIZ    | 18-75             | ±12                | ±1.25                   | 1500            | 85             |
| AM30KW-4815DIZ    | 18-75             | ±15                | ±1                      | 1500            | 85             |
|                   |                   |                    |                         |                 |                |
| AM30KW-2405DH30IZ | 9-36              | ±5                 | ±3                      | 3000            | 81             |
| AM30KW-2412DH30IZ | 9-36              | ±12                | ±1.25                   | 3000            | 82             |
| AM30KW-2415DH30IZ | 9-36              | ±15                | ±1                      | 3000            | 83             |
| AM30KW-4805DH30IZ | 18-75             | ±5                 | ±3                      | 3000            | 83             |
| AM30KW-4812DH30IZ | 18-75             | ±12                | ±1.25                   | 3000            | 85             |
| AM30KW-4815DH30IZ | 18-75             | ±15                | ±1                      | 3000            | 85             |

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                                             | 9-36    |         | VDC   |
|                                    | 48                                             | 18-75   |         |       |
| Filter                             | π (Pi) Network                                 |         |         |       |
| Start up time                      |                                                |         |         | ms    |
| Recommended input fuse (Slow Blow) | 24                                             | 4A/250V |         |       |
|                                    | 48                                             | 2A/250V |         |       |
| Absolute Maximum Rating            | 24                                             |         | 50      | VDC   |
|                                    | 48                                             |         | 100     |       |
| Peak Input Voltage time            |                                                |         |         | ms    |
| On/Off control                     | ON – TTL High or Open ; OFF – TTL Low or Short |         |         |       |
| No Load Input Current              |                                                |         |         | mA    |

### Isolation Specifications

| Parameters         | Conditions | Typical     | Maximum | Units |
|--------------------|------------|-------------|---------|-------|
| Tested I/O voltage | 3 sec      | 1500 & 3000 |         | VDC   |
| Resistance         | 500VDC     | >1000       |         | MOhm  |

### Output Specifications

| Parameters                       | Conditions        | Typical | Maximum | Units    |
|----------------------------------|-------------------|---------|---------|----------|
| Voltage accuracy                 |                   |         | ±2      | %        |
| Over voltage Protection          | Zener diode clamp |         |         | VDC      |
|                                  | 3.3 Vout models   | 3.71    | 4.1     |          |
|                                  | 5 Vout models     | 5.89    | 6.51    |          |
|                                  | 12 Vout models    | 14.25   | 15.75   |          |
|                                  | 15 Vout models    | 17.1    | 18.9    |          |
|                                  | 24 Vout models    | 25.65   | 28.35   |          |
| Over current protection          |                   | >110    |         | %        |
| Short Circuit protection         | Continuous        |         |         |          |
| Short circuit restart            | Auto Recovery     |         |         |          |
| Line voltage regulation          | HL-LL             |         | ±0.5    | % of Vin |
| Load voltage regulation (Single) | 25-100%           |         | ±0.5    | %        |
| Load voltage regulation (Dual)   | 25-100%           |         | ±1      | %        |
| Temperature coefficient          |                   |         | ±0.05   | %/°C     |
| Ripple & Noise                   | 20MHz Bandwidth   | 150     |         | mV p-p   |
| Voltage adjustment range         |                   | ±10     |         | %        |
| Minimum Load Current             |                   | 25      |         | % of Max |

### General Specifications

| Parameters                    | Conditions                                    | Typical                                                | Maximum                  | Units |
|-------------------------------|-----------------------------------------------|--------------------------------------------------------|--------------------------|-------|
| Switching frequency           | 100% load                                     | 250                                                    |                          | KHz   |
| Operating temperature         | With derating above 70°C                      | -40 to +85                                             |                          | °C    |
| Storage temperature           |                                               | -55 to +105                                            |                          | °C    |
| Maximum case temperature      |                                               |                                                        | 100                      | °C    |
| Cooling                       | Free Air Convection                           |                                                        |                          |       |
| Humidity                      |                                               |                                                        | 95                       | % RH  |
| Case material                 | Nickel coated copper with non-conductive base |                                                        |                          |       |
| Weight                        |                                               | 50                                                     |                          | g     |
| Dimensions (L x W x H)        |                                               | 2.00 x 1.60 x 0.40 inches                              | 50.80 x 40.60 x 10.20 mm |       |
| MTBF                          |                                               | > 550 000 hrs (MIL-HDBK -217F, Ground Benign, t=+25°C) |                          |       |
| Maximum soldering temperature |                                               |                                                        |                          | °C    |
| Transient recovery time       | 25% step change                               | 280                                                    |                          | µS    |
| Transient recovery deviation  |                                               |                                                        |                          | mS    |

## Safety Specifications

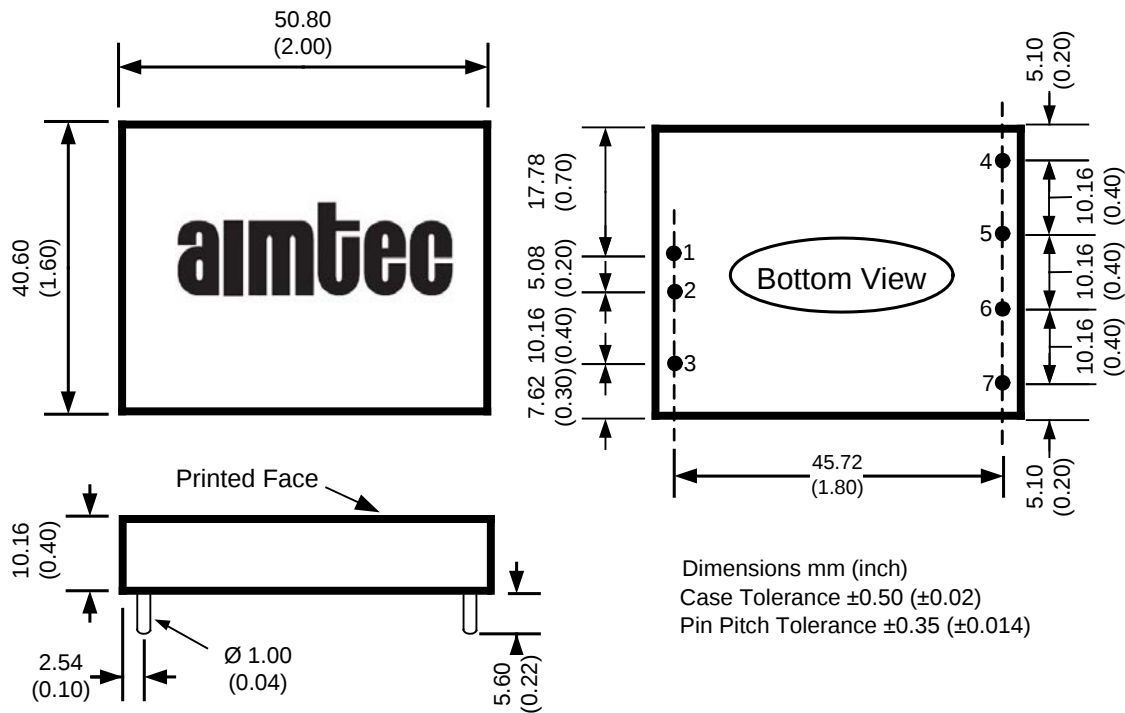
### Parameters

|                  |                            |
|------------------|----------------------------|
| Agency approvals | CE                         |
| Standards        | EN 55022, EN 55024 class A |

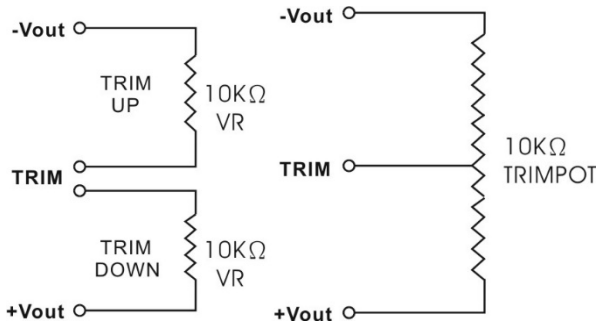
## Pin Out Specifications

| Pin | Single         | Dual           |
|-----|----------------|----------------|
| 1   | +V Input       | +V Input       |
| 2   | -V Input       | -V Input       |
| 3   | On/OFF Control | On/OFF Control |
| 4   | No pin         | +V Output      |
| 5   | +V Output      | Common         |
| 6   | -V Output      | -V Output      |
| 7   | Trim           | Trim           |

## Dimensions

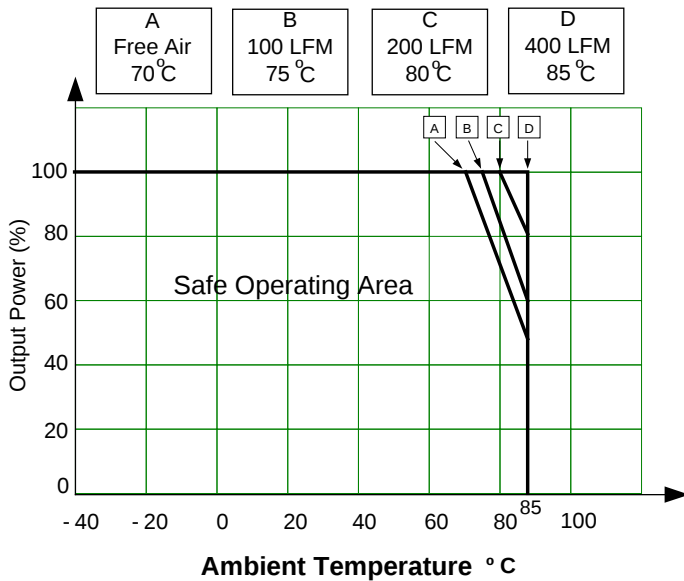


## Trimming

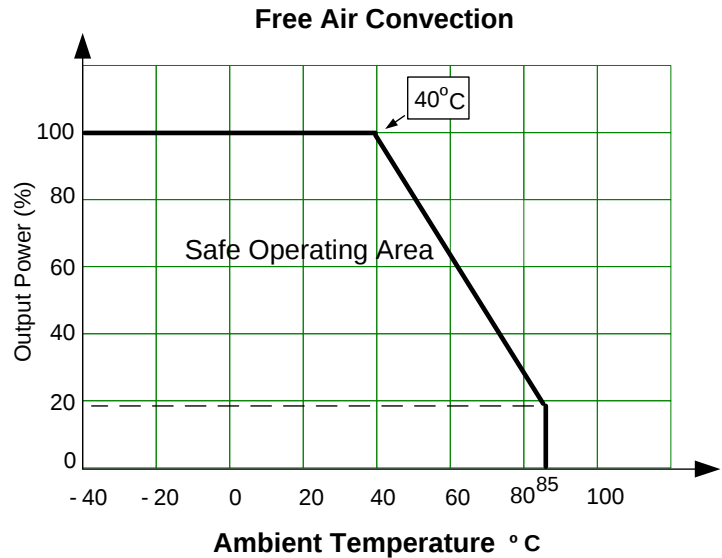


## Derating

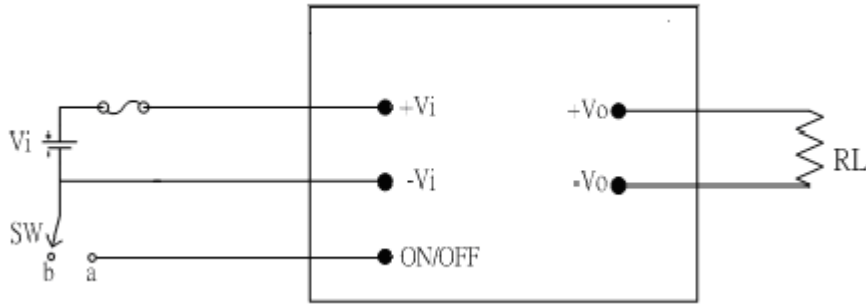
### 1500VDC Isolation



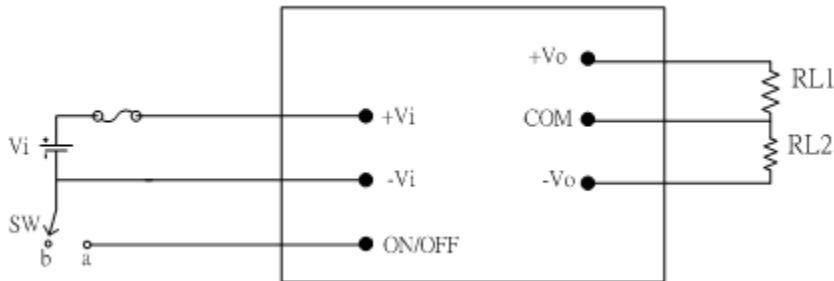
### 3000VDC Isolation



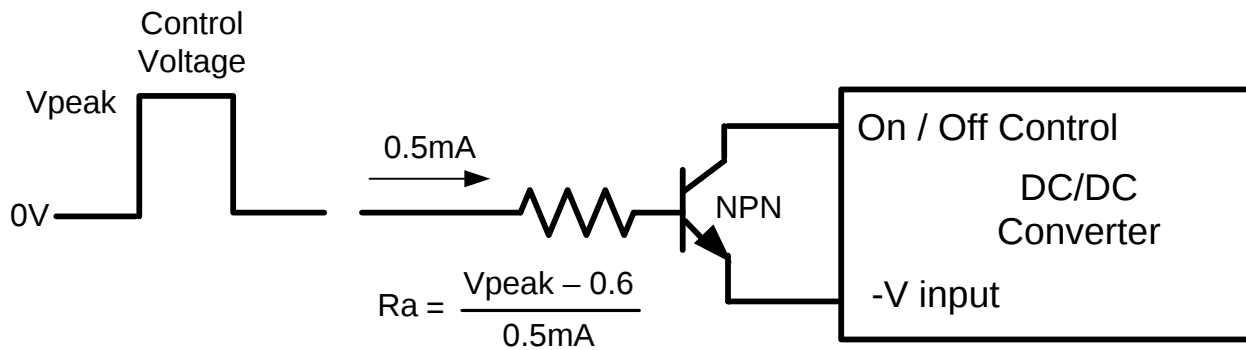
## Control ON/OFF pin connection example Single Output



## Dual Output



## Digital Control Circuit:



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