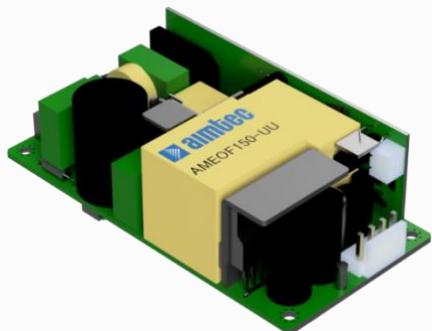


## AMEOF150-UU

Click to  
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samples



Open Frame/Enclosed

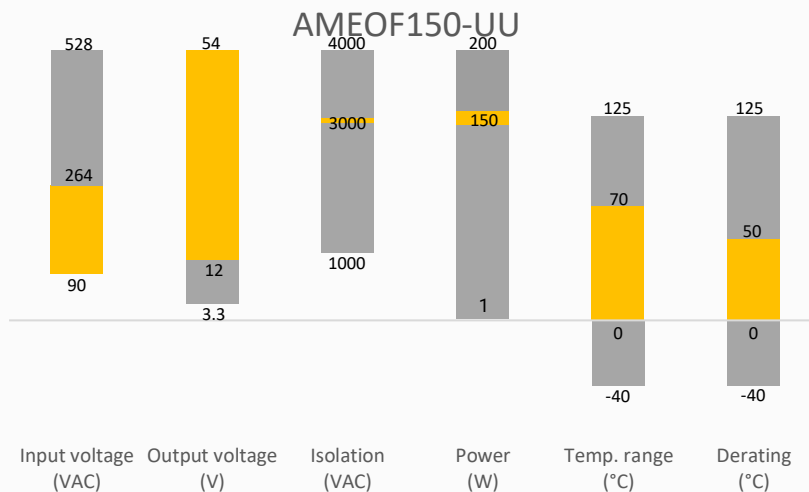
The AMEOF150-UU series is one of Aimtec's compact (2"x4"x1.42") 150W AC/DC converter and is suitable for medical equipment. It features a universal AC input, which also accepts a DC input voltage, is cost-effective, has a high efficiency and high reliability.

These converters offer excellent EMC and safety performance, meet IEC/EN/UL62368-1, IEC/UL60950-1 standards and can be widely used in industrial, LED, street light control, security, telecommunications, smart home and medical applications.

## Features

- Universal Input: 90 - 264VAC/120 - 370VDC
- Low leakage current: 3mA max.
- High isolation voltage: 3000VAC
- Output short circuit, over-current, over-voltage protection
- Designed to meet IEC/EN/62368-1, IEC/UL60950-1
- Agency approvals: UL 62368-1

## Summary



## Training

## Applications



Product Training Video  
(click to open)



Press Release

Coming Soon!

Application Notes



Power Grid



Industrial



Telecom

## Models & Specifications

### Single Output

| Model          | Input Voltage (VAC/Hz) | Input Voltage (VDC) | Cooling method | Max Output wattage (W) | Output Voltage (V) | Max Output Current (A) | Maximum capacitive load (μF) | Efficiency @230VAC Typ. (%) |
|----------------|------------------------|---------------------|----------------|------------------------|--------------------|------------------------|------------------------------|-----------------------------|
| AMEOF150-12SUU | 90-264/47-63           | 120-370             | Free air       | 80                     | 12                 | 6.67                   | 8000                         | 91                          |
|                |                        |                     | 20CFM/600LFM   | 150                    |                    | 12.5                   |                              |                             |
| AMEOF150-15SUU | 90-264/47-63           | 120-370             | Free air       | 80                     | 15                 | 5.33                   | 6000                         | 91                          |
|                |                        |                     | 20CFM/600LFM   | 150                    |                    | 10                     |                              |                             |
| AMEOF150-24SUU | 90-264/47-63           | 120-370             | Free air       | 80                     | 24                 | 3.33                   | 3000                         | 92                          |
|                |                        |                     | 20CFM/600LFM   | 150                    |                    | 6.25                   |                              |                             |
| AMEOF150-48SUU | 90-264/47-63           | 120-370             | Free air       | 80                     | 48                 | 1.67                   | 1500                         | 92                          |
|                |                        |                     | 20CFM/600LFM   | 150                    |                    | 3.125                  |                              |                             |
| AMEOF150-54SUU | 90-264/47-63           | 120-370             | Free air       | 80                     | 54                 | 1.48                   | 1300                         | 92                          |
|                |                        |                     | 20CFM/600LFM   | 150                    |                    | 2.78                   |                              |                             |

Add suffix -F for enclosed package. (ex. AMEOF150-12SUU-F is enclosed package version)

### Input Specifications

| Parameters      | Conditions         | Typical | Maximum | Units |
|-----------------|--------------------|---------|---------|-------|
| Input current   | 90VAC, full load   |         | 2.2     | A     |
| Inrush current  | 230VAC, cold start |         | 130     | A     |
| Leakage current |                    |         | 3       | mA    |

### Output Specifications

| Parameters       | Conditions              | Typical | Maximum | Units  |
|------------------|-------------------------|---------|---------|--------|
| Voltage accuracy | 0-100% load             | ±5      |         | %      |
| Line regulation  | Full load               | ±0.5    |         | %      |
| Load regulation  | 0-100% load             | ±1      |         | %      |
| Ripple & Noise*  | 12V output              | 120     |         | mV p-p |
|                  | 15V output              | 150     |         | mV p-p |
|                  | 24V output              | 240     |         | mV p-p |
|                  | 48V output              | 480     |         | mV p-p |
|                  | 54V output              | 540     |         | mV p-p |
| Hold up time     | 115VAC input, full load | 10      |         | ms     |

\* Ripple and Noise are measured at 20MHz bandwidth with a 0.1μF ceramic capacitor and a 10μF E.L. capacitor to the output connector.

### Isolation Specification

| Parameters          | Conditions | Typical | Maximum | Units |
|---------------------|------------|---------|---------|-------|
| Tested I/O voltage  |            | 3000    |         | VAC   |
| Tested I/PE voltage |            | 1768    |         | VAC   |
| Resistance I/O      | 500VDC     | >50     |         | MΩ    |

## General Specifications

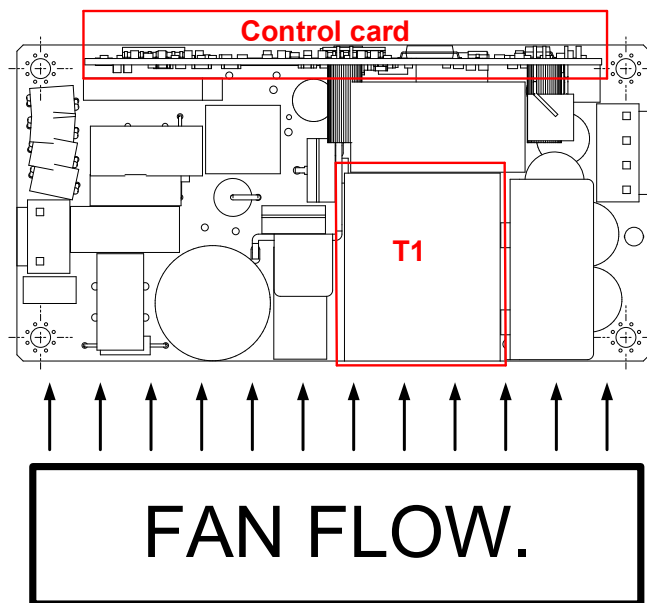
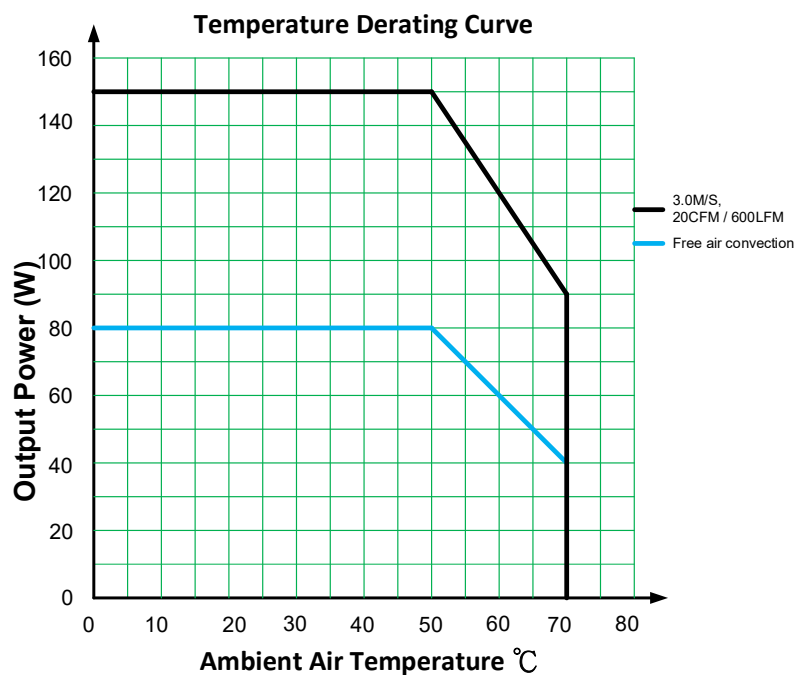
| Parameters               | Conditions                                                | Typical                                            | Maximum | Units     |
|--------------------------|-----------------------------------------------------------|----------------------------------------------------|---------|-----------|
| Over current protection  |                                                           | ≥ 105                                              | 200     | % of Iout |
| Over voltage protection  |                                                           | ≥ 110                                              | 150     | % of Vout |
| Short circuit protection | Auto recovery                                             |                                                    |         |           |
| Operating temperature    | See derating graph                                        | 0 to +70                                           |         | °C        |
| Storage temperature      |                                                           | -40 to +85                                         |         | °C        |
| Power Derating           | +50 °C to +70 °C, forced air convection 20CFM/600LFM      | 3.5                                                |         | W/°C      |
|                          | +50 °C to +70 °C, free air convection                     | 2                                                  |         | W/°C      |
| Cooling                  | Free air convection, forced air convection 20CFM / 600LFM |                                                    |         |           |
| Humidity                 | Non-condensing                                            |                                                    | 95      | % RH      |
| Operating altitude       |                                                           |                                                    | 5000    | M         |
| Weight                   | Open frame                                                | 194                                                |         | g         |
|                          | Enclosed                                                  | 264                                                |         | g         |
| Dimensions (L x W x H)   | Open frame                                                | 4.00 x 2.00 x 1.42 inches (101.6 x 50.8 x 36.1 mm) |         |           |
|                          | Enclosed                                                  | 4.53 x 2.49 x 1.67 inches (115.0 x 63.2 x 42.4 mm) |         |           |
| MTBF                     | > 300 000 hrs Telcordia SR-332                            |                                                    |         |           |

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

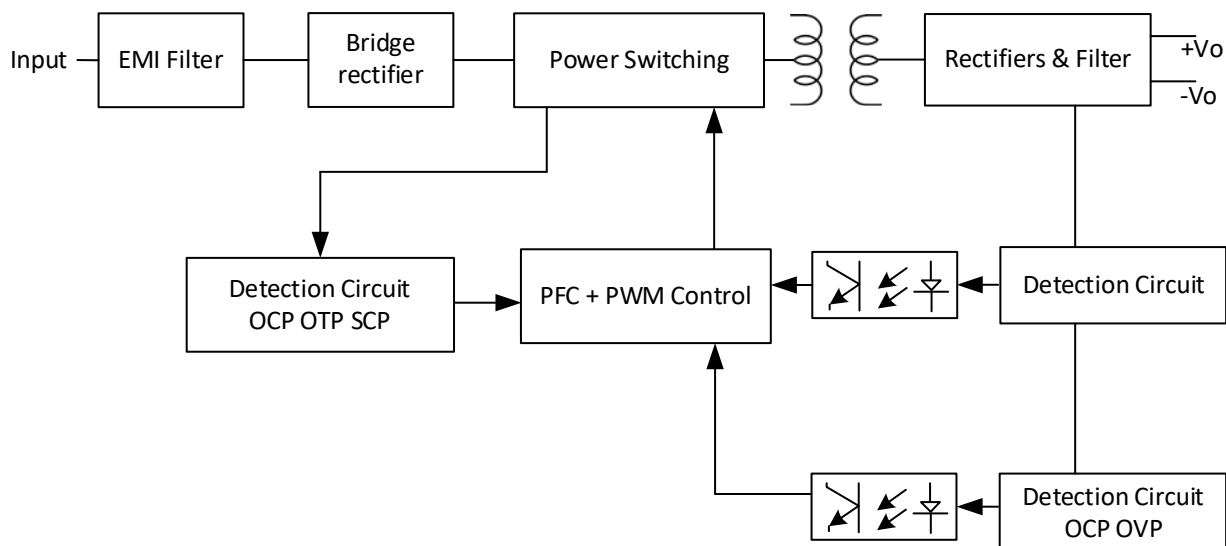
| Parameters       |                                              |                                                                                       |
|------------------|----------------------------------------------|---------------------------------------------------------------------------------------|
| Agency approvals | UL 62368-1                                   |                                                                                       |
| Standards        | Design to meet IEC/EN 62368-1, IEC/UL60950-1 |                                                                                       |
|                  | EMC - Conducted and radiated emission        | CISPR32/EN55032, Class B                                                              |
|                  | EMC - Harmonic current emissions             | EN 61000-3-2                                                                          |
|                  | EMC – Voltage flicker                        | EN 61000-3-3                                                                          |
|                  | Electrostatic Discharge Immunity             | EN 61000-4-2 Level 2, Contact ±8KV, Air ±4KV, Criteria A                              |
|                  | RF, Electromagnetic Field Immunity           | EN 61000-4-3 Level 2, 3V/m, Criteria A                                                |
|                  | Electrical Fast Transient/Burst Immunity     | EN 61000-4-4 Level 2, ±1KV, Criteria A                                                |
|                  | Surge Immunity                               | EN 61000-4-5 L-L ±1KV L-G ±2KV, Criteria A                                            |
|                  | RF, Conducted Disturbance Immunity           | EN 61000-4-6 Level 2, 3Vr.m.s, Criteria A                                             |
|                  | Voltage dips, Short Interruptions Immunity   | EN 61000-4-11 30% dip 25 periods, 60% dip 5 periods, 100% dip 250 periods, Criteria B |

## Derating



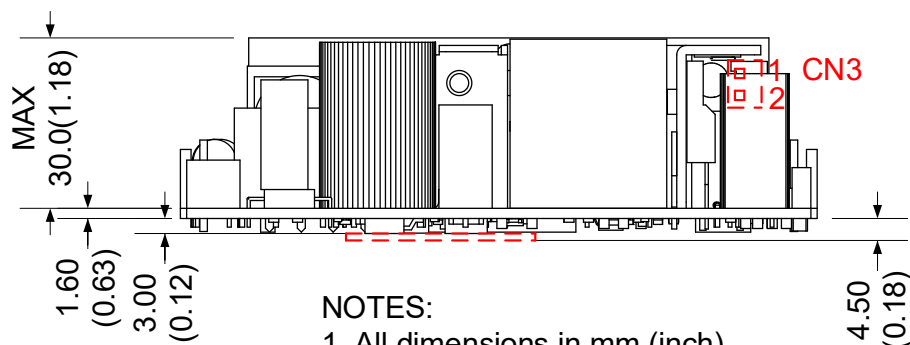
※ Output power vs Temperature with Forced Air Cooling with Airflow Direction from T1 to control card  
Vin=90Vac

## Block Diagram



## Dimensions

### Open frame model



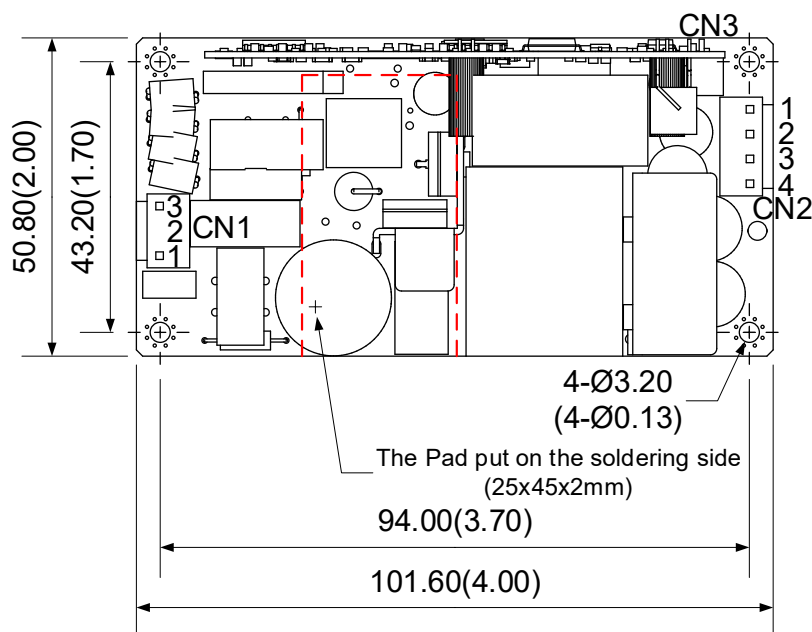
#### NOTES:

1. All dimensions in mm (inch)
2. Tolerance  $\pm 1.00(\pm 0.04)$

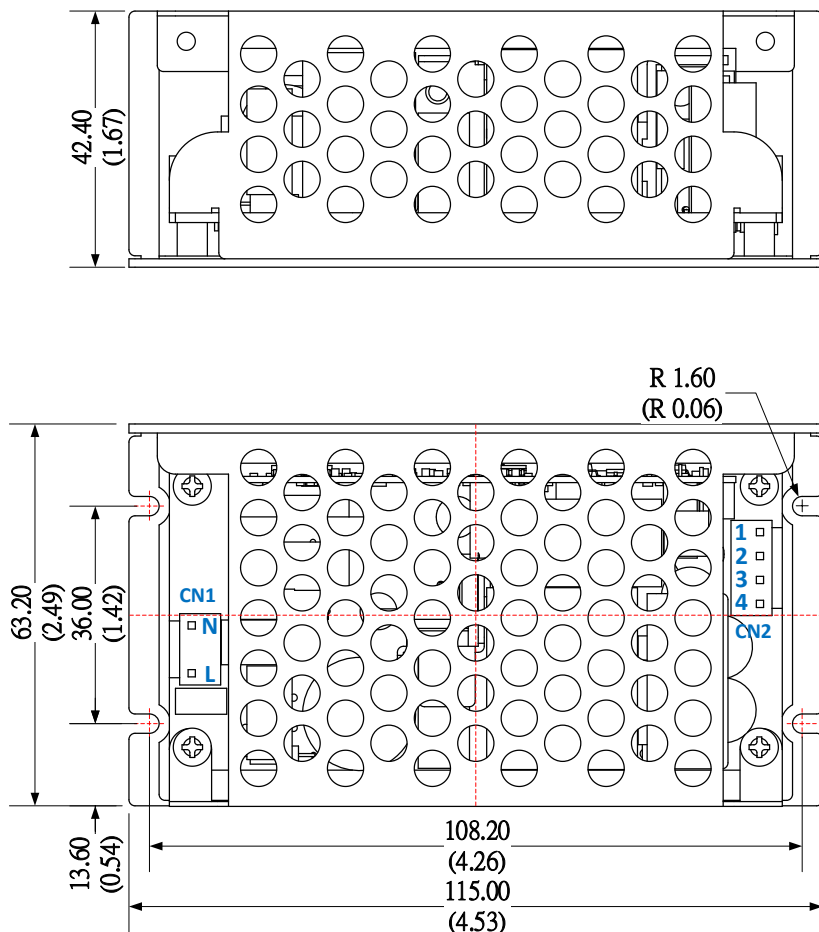
| CN1 JST B 3P-VH<br>with second pin removed or equivalent |          |
|----------------------------------------------------------|----------|
| Pin                                                      | Function |
| 1                                                        | AC L     |
| 2                                                        | NP       |
| 3                                                        | AC N     |

| CN2<br>JST B 4P-VH 4 Pin or equivalent |           |
|----------------------------------------|-----------|
| Pin                                    | Function  |
| 1                                      | -V output |
| 2                                      | -V output |
| 3                                      | +V output |
| 4                                      | +V output |

| CN3 FAN connector<br>P110I-02 2PIN or equivalent |          |
|--------------------------------------------------|----------|
| Pin                                              | Function |
| 1                                                | FAN+     |
| 2                                                | FAN-     |



## Enclosed model



| CN1 JST B 3P-VH<br>with second pin removed or equivalent |          |
|----------------------------------------------------------|----------|
| Pin                                                      | Function |
| 1                                                        | AC L     |
| 2                                                        | NP       |
| 3                                                        | AC N     |

| CN2<br>JST B 4P-VH 4 Pin or equivalent |           |
|----------------------------------------|-----------|
| Pin                                    | Function  |
| 1                                      | -V output |
| 2                                      | -V output |
| 3                                      | +V output |
| 4                                      | +V output |

### Note:

Unit: mm(inch)

General tolerance:  $\pm 1.00$  (0.04)

Tolerance between screw holes:  $\pm 0.5$  (0.02)

**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).