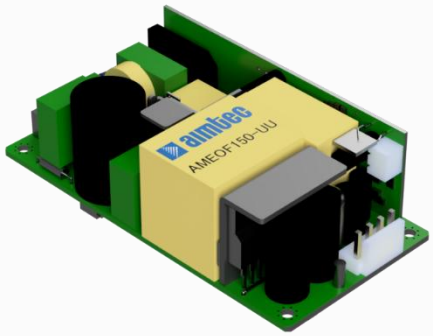
Click to ORDER samples

AMEOF150-UU



Open Frame/Enclosed

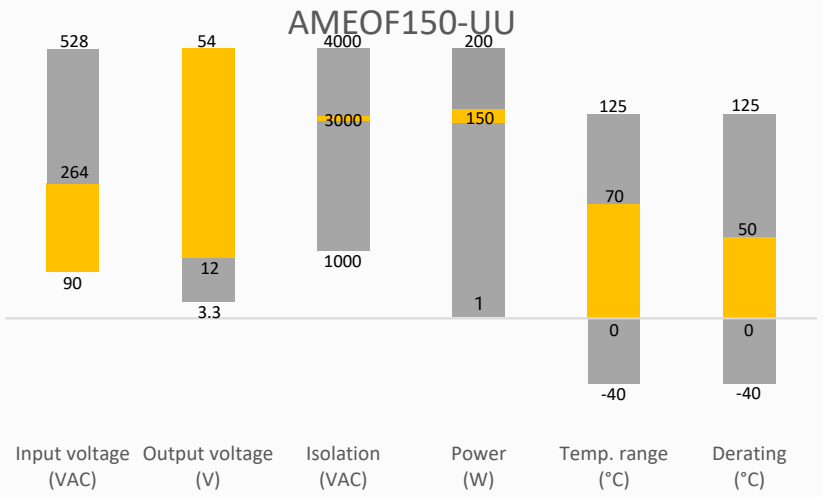
The AMEOF150-UU series is one of Aimtec's compact (2"x4"x1.42") 150W AC/DC converter and is suitable for medical equipment. It features a universal AC input, which also accepts a DC input voltage, is cost-effective, has a high efficiency and high reliability.

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

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

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
Power factor	115/230VAC, 100% load	>0.90		

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 0.1uF ceramic capacitor and a 10uF 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

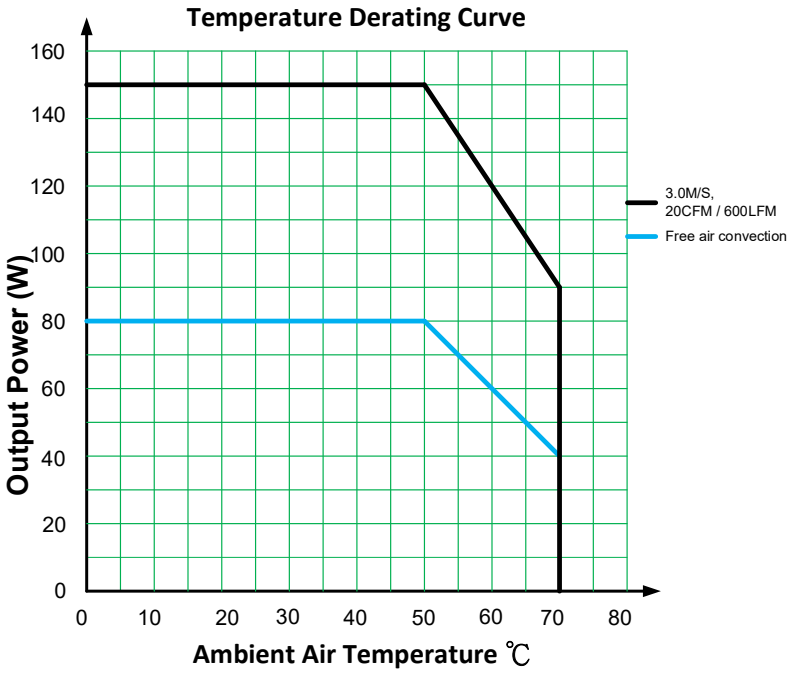
Parameters	Conditions	Typical	Maximum	Units
Over current protection		≥ 105	200	% of Iout
Over voltage protection		≥ 110	150	% of Vout
Short circuit protection	Auto recovery			
Operating temperature	See derating graph	0 to +70		°C
Storage temperature		-40 to +85		°C
Power Derating	+50 °C to +70 °C, forced 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			

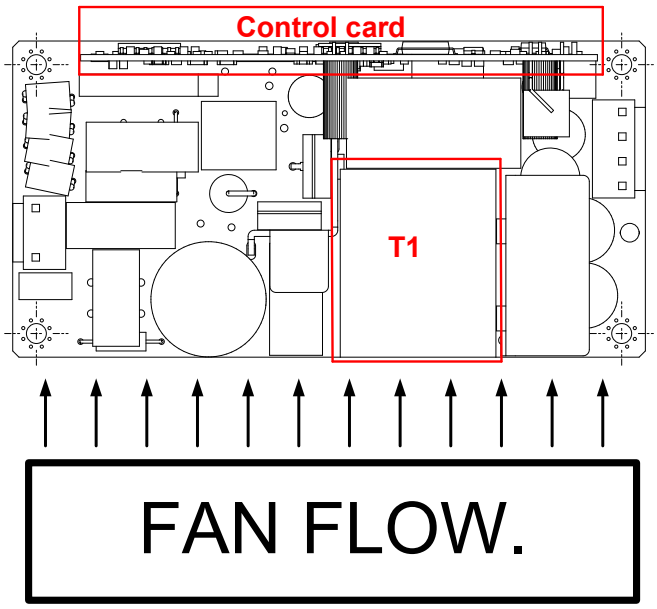
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

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

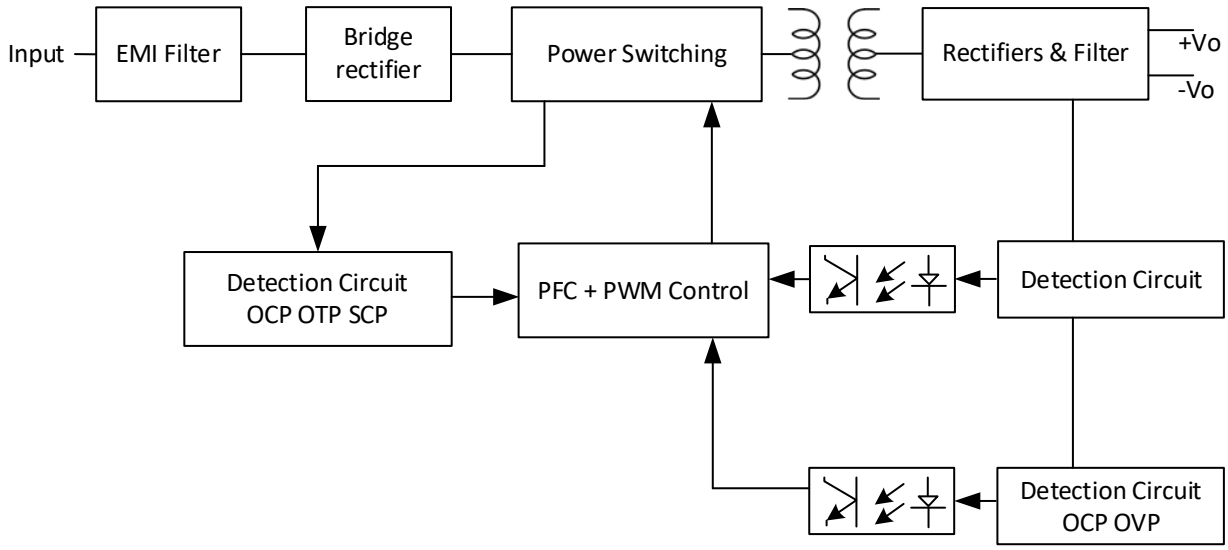
Derating





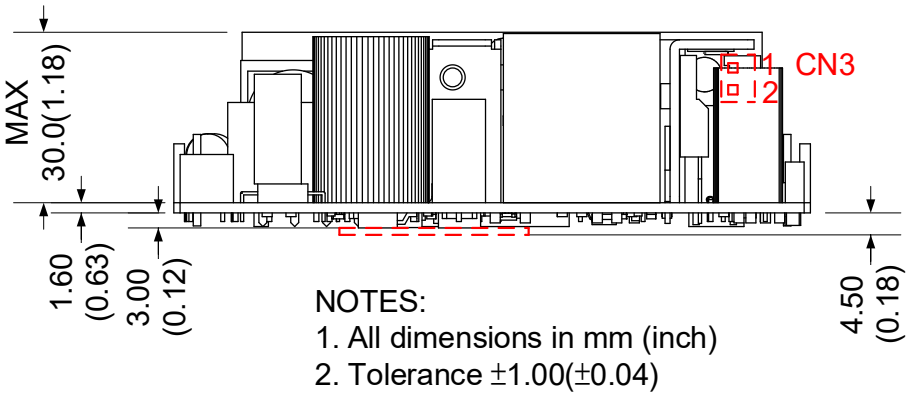
※ Output power vs Temperature with Forced Air Cooling with Airflow Direction from T1 to control card
Vin=90Vac

Block Diagram

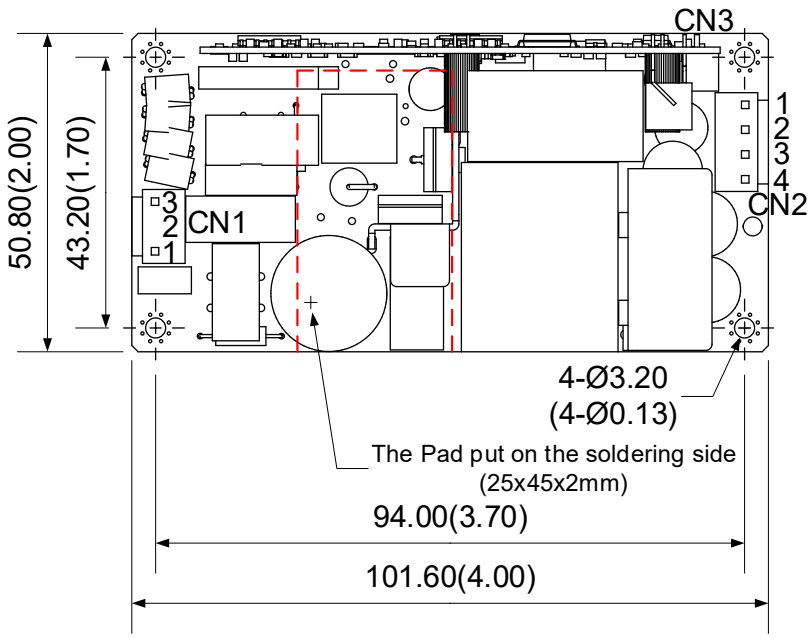


Dimensions

Open frame model



NOTES:
1. All dimensions in mm (inch)
2. Tolerance ±1.00(±0.04)

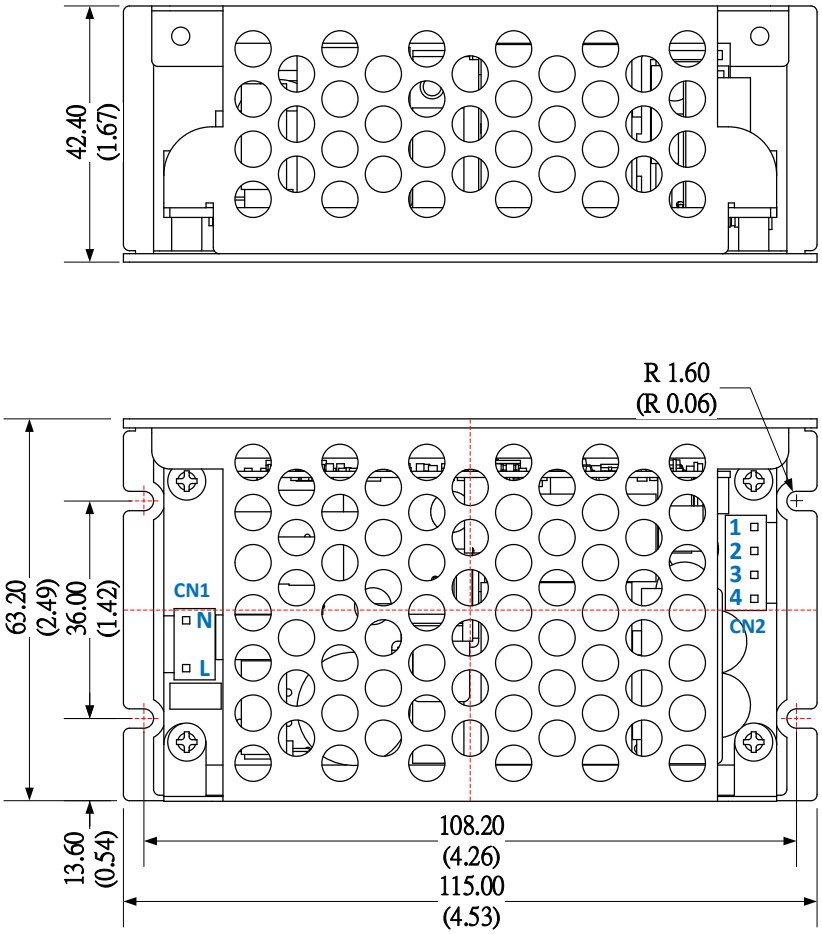


CN1 JST B 3P-VH with second pin removed or equivalent	
Pin	Function
1	AC L
2	NP
3	AC N

CN2 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 P110I-02 2PIN or equivalent	
Pin	Function
1	FAN+
2	FAN-

Enclosed model



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

CN2 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: ±1.00 (0.04)
Tolerance between screw holes: ±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 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.