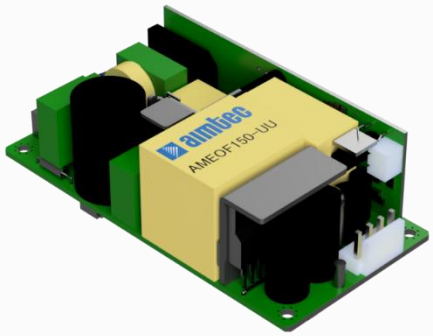
Click to ORDER samples

AMEOF150-UU



Open Frame/Enclosed

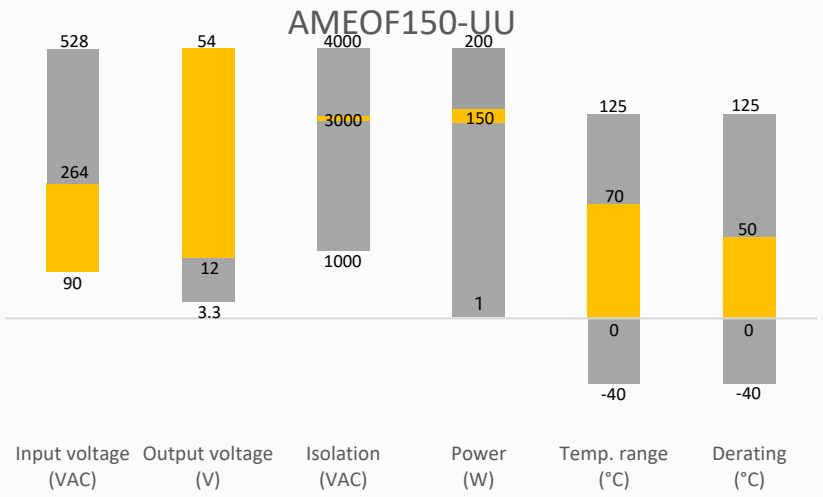
The AMEOF150-UU series is one of Aimtec's compact (2"x4"x1.42") 150W AC/DC converter and is suitable for medical equipment. It features a universal AC input, which also accepts a DC input voltage, is cost-effective, has a high efficiency and high reliability.

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/UL62368-1, IEC/UL60950-1

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

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

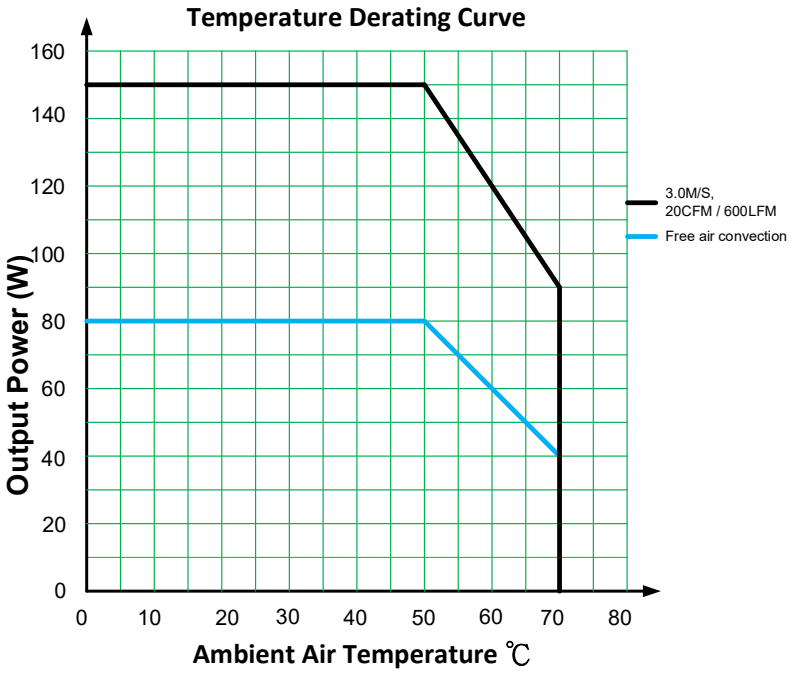
Parameters	Conditions	Typical	Maximum	Units
Over current protection		≥ 105	200	% of Iout
Over voltage protection		≥ 110	150	% of Vout
Short circuit protection	Auto recovery			
Operating temperature	See derating graph	0 to +70		°C
Storage temperature		-40 to +85		°C
Power Derating	+50 °C to +70 °C, forced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

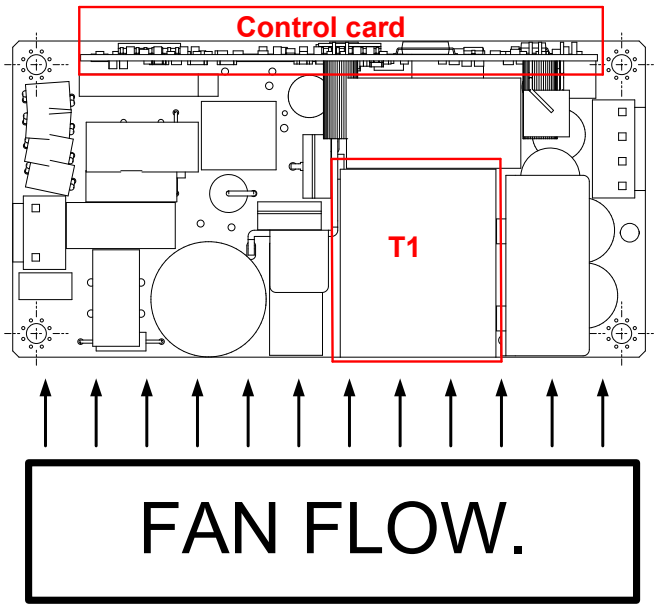
NOTE: All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Safety Specifications

Parameters		
Standards	Design to meet IEC/EN/UL 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

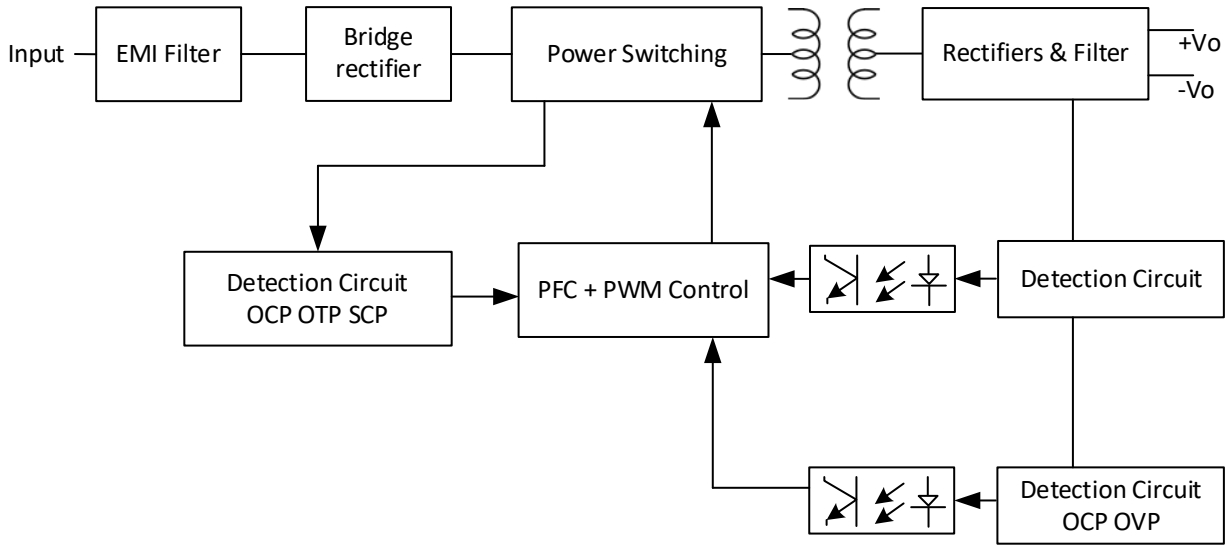
Derating





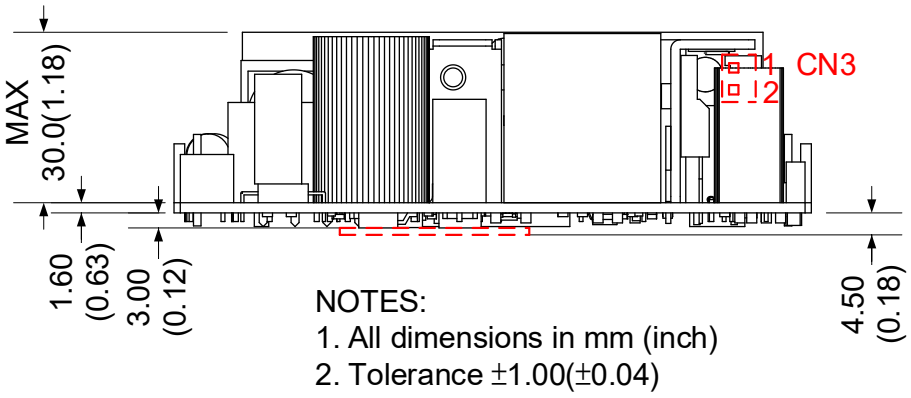
※ Output power vs Temperature with Forced Air Cooling with Airflow Direction from T1 to control card
Vin=90Vac

Block Diagram

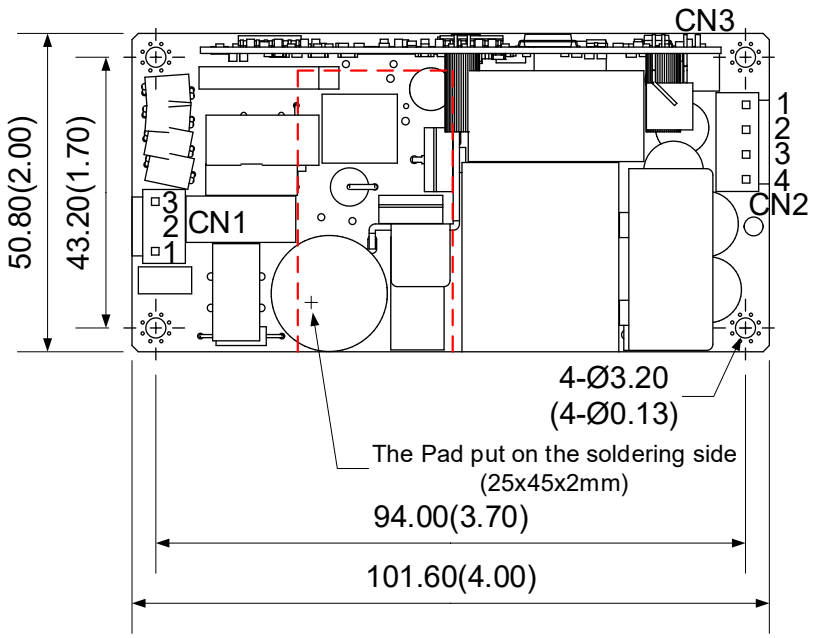


Dimensions

Open frame model



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

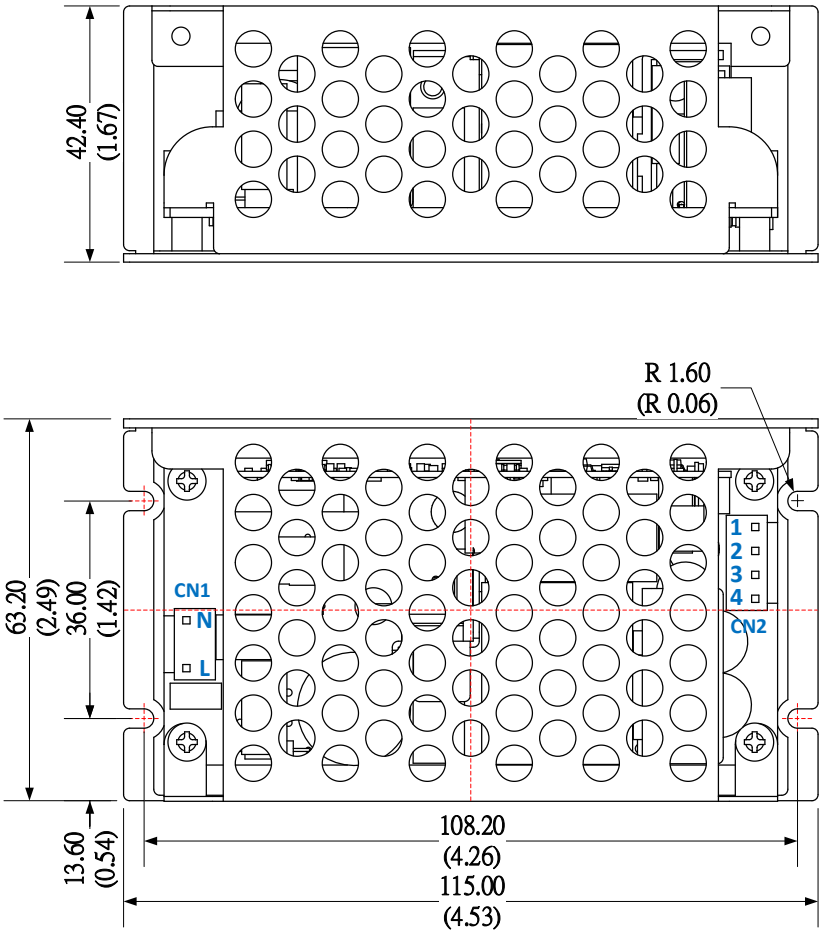


CN1 JST B 3P-VH with second pin removed or equivalent	
Pin	Function
1	AC L
2	NP
3	AC N

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)