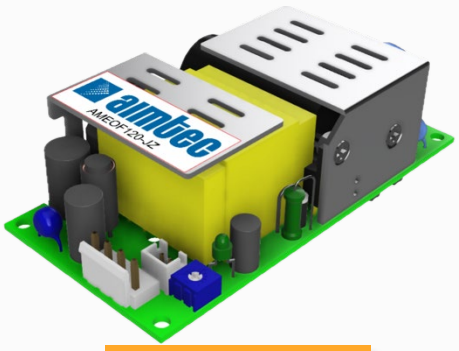
AMEOF120-JZ

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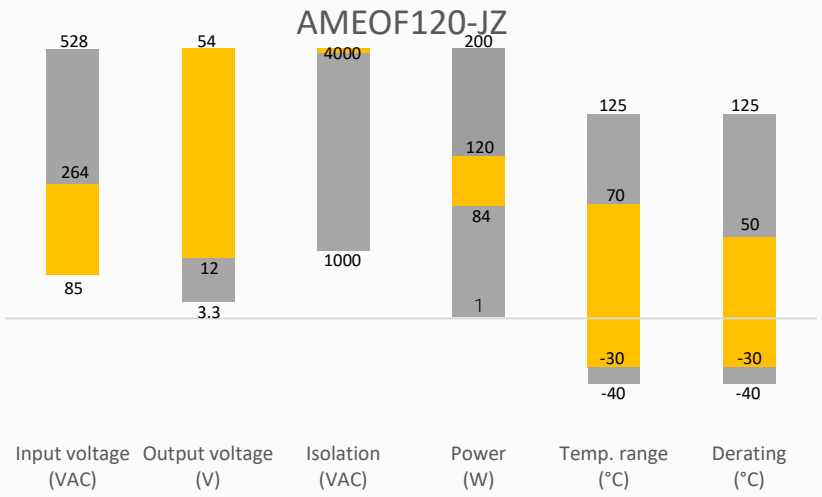
The AMEOF120-JZ series is one of Aimtec's compact (2"x4"x1.26") 120W AC/DC converter and is suitable for medical equipment. It features a universal AC input, which also accepts a DC input voltage, is cost-effective, has a high efficiency and high reliability and comes with double or reinforced isolation.

These converters offer excellent EMC and safety performance, meet IEC/EN/UL62368-1, GB4943, EN60335-1, IEC/EN61558-1, IEC/EN60601-1 standards and can be widely used in industrial, LED, street light control, security, telecommunications, smart home and medical applications.

Features

- Universal Input: 85 - 264VAC/120 - 370VDC
- Low leakage current: 0.1mA
- High isolation voltage: 4000VAC
- Output short circuit, over-current, over-voltage, over temperature protection
- Low no-load power consumption of 0.3W
- Suitable for Type BF application
- Approvals EN62368-1,
- Designed to meet IEC/UL62368-1, EN60335-1, IEC/EN61558-1, IEC/EN60601-1

Summary



Training

Product Training Video (click to open)

Press Release

Coming Soon!

Application Notes

Applications

Power Grid

Industrial

Telecom

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Models & Specifications

Single Output									
Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Cooling method	Max Output wattage (W)	Output Voltage (V)	Output Voltage Adjustable Range (V)	Max Output Current (A)	Maximum capacitive load (μF)	Efficiency @230VAC Typ. (%)
AMEOF120-12SJZ	85-264/ 47-63	120-370	Free air	84	12	11.4-12.6	7	6000	89
			10CFM	120			10		
AMEOF120-15SJZ	85-264/ 47-63	120-370	Free air	84	15	14.3-15.8	5.6	5000	89
			10CFM	120			8		
AMEOF120-24SJZ	85-264/ 47-63	120-370	Free air	84	24	22.8-25.2	3.5	3200	90
			10CFM	120			5		
AMEOF120-27SJZ	85-264/ 47-63	120-370	Free air	84	27	25.6-28.4	3.11	2400	90
			10CFM	120			4.44		
AMEOF120-36SJZ	85-264/ 47-63	120-370	Free air	84	36	35.28-37.8	2.33	2000	90
			10CFM	120			3.33		
AMEOF120-48SJZ	85-264/ 47-63	120-370	Free air	84	48	45.6-50.4	1.75	1600	91
			10CFM	120			2.5		
AMEOF120-54SJZ	85-264/ 47-63	120-370	Free air	84	54	51.3-55.5	1.56	1300	91
			10CFM	120			2.22		

Input Specifications				
Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC		3	A
	230VAC		1.5	A
Inrush current	115VAC, cold start	30		A
	230VAC, cold start	60		A
Leakage current	264VAC, normal condition		0.1	mA
	264VAC, single fault condition		0.5	mA

Output Specifications				
Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	12V, 15V output, 0-100% load	±2		%
	Other output, 0-100% load	±1		%
Line regulation	Full load	±0.5		%
Load regulation	230VAC	±1		%
Ripple & Noise*	12V, 15V output	100	150	mV p-p
	Other output	120	200	mV p-p
Hold up time	230VAC input	50		ms
* Ripple and Noise are measured at 20MHz bandwidth. Please refer to the application note for specific details.				

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Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 5mA	≥4000		VAC
Tested I/PE voltage	60 sec, leakage ≤ 5mA	≥2000		VAC
Tested O/PE voltage	60 sec, leakage ≤ 5mA	≥1500		VAC
Resistance I/O*	500VDC	>100		MΩ
Resistance I, O/PE*	500VDC	>100		MΩ
MOP I/O		2xMOPP		
MOP I, O/PE		1xMOPP		

* Tested under 25±5°C ambient temperature with relative humidity <95% and no condensation.

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Protection class	Class II without protective earth connection, Class I with protective earth connection			
Over current protection	Auto recovery	≥ 115		% of Iout
Over voltage protection	12Vout, hiccup		16	VDC
	15Vout, hiccup		25	VDC
	24Vout, hiccup		32	VDC
	27Vout, hiccup		35	VDC
	36Vout, hiccup		50	VDC
	48, 54Vout, hiccup		60	VDC
Short circuit protection	Hiccup, Continuous, Auto recovery			
Over temperature protection	Shut down, manual recovery after the temperature drops below the threshold			
Fan power	15V	15V/0.4A, Voltage accuracy ±15%		
	12, 24, 27, 36, 48, 54V	12V/0.5A, Voltage accuracy ±15%		
No-load power consumption	12, 15, 24V output	0.25	0.3	W
	Other output	0.3	0.5	W
Operating temperature	See derating graph	-30 to +70		°C
Storage temperature		-40 to +85		°C
Power Derating	+50 °C to +70 °C, forced air convection 10CFM	3		%/°C
	+45 °C to +70 °C, free air convection, 12V, 15V	1.2		%/°C
	+50 °C to +70 °C, free air convection, others	1.5		%/°C
	85VAC to 115VAC	0.67		%/VAC
Temperature coefficient		±0.03		%/°C
Cooling	Free air convection, forced air convection 10CFM			
Humidity	Non-condensing, storage		95	% RH
	Non-condensing, operating		90	% RH
Weight		162		g
Dimensions (L x W x H)		4.00 x 2.00 x 1.26 inches (101.6 x 50.8 x 32.0 mm)		
MTBF	> 300 000 hrs (MIL-HDBK -217F, t=+25°C)			

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.

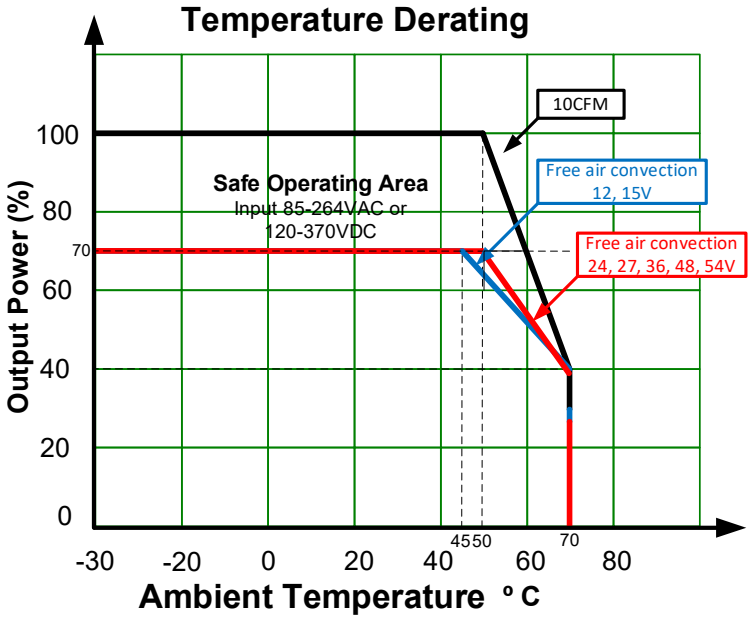
Safety Specifications

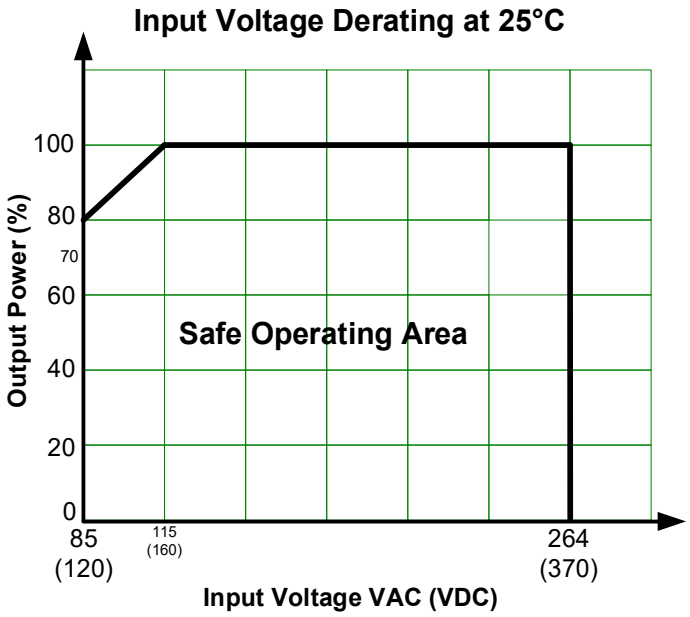
Parameters		
Agency approvals	BS EN62368-1	
Standards	Design to meet IEC/UL 62368-1, EN60335-1, IEC/EN61558-1, IEC/EN60601-1, CAN/CSA-C22.2 No.60601-1:14 Ed3, EN60601-1-2 Ed4, GB4943-1	
	EMC - Conducted and radiated emission	CISPR32/EN55032/EN55011, Class B
	EMC - Harmonic current emissions	IEC 61000-3-2 class A

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	Electrostatic Discharge Immunity	IEC 61000-4-2 Contact ±8KV, Air ±15KV, Criteria A
	RF, Electromagnetic Field Immunity	IEC 61000-4-3 10V/m, Criteria A
	Electrical Fast Transient/Burst Immunity	IEC 61000-4-4 ±2KV, Criteria A
	Surge Immunity	IEC 61000-4-5 L-L ±2KV L-G ±4KV, Criteria A
	RF, Conducted Disturbance Immunity	IEC 61000-4-6 10Vr.m.s, Criteria A
	Voltage dips, Short Interruptions Immunity	IEC 61000-4-11 100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods, Criteria B

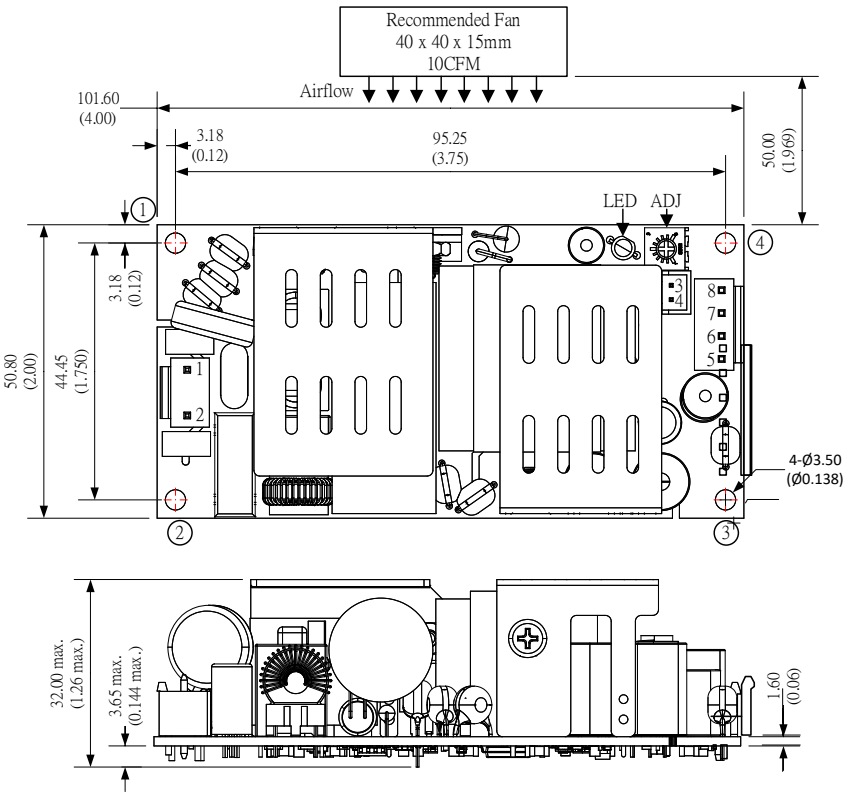
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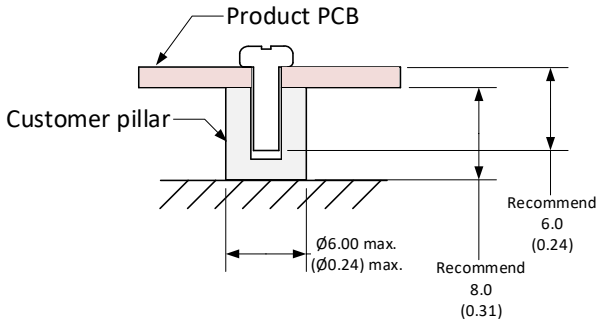




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Dimensions





Note:
Unit: mm [inch]
General tolerance: ±1.00 (±0.04)
Mounting screw: M3
Mounting screw tightening torque: 0.4N max.

Note:
1. It is needed to have ≥ 10mm distance between the product and external components for safety.
2. Connect mounting point 1 and 3 to protective earth for Class I system.
3. Connect mounting point 1 and 3 together for Class II system.

Pin Output Specifications			
Pin	Function	Connector	Recommended connector
1	AC Input (N)/ -V Input	JST B3P-VH or equivalent	JST VHR, JST SVH-21PT-P1.1 or equivalent
2	AC Input (L)/ +V Input		
3	- Fan Output	JST B2B-PH-K-S or equivalent	JST PHR, JST SPH-002T-P0.5S or equivalent
4	+ Fan Output		
5	-V Output	JST B6P-VH or equivalent	JST VHR, JST SVH-21PT-P1.1 or equivalent
6	-V Output		
7	+V Output		
8	+V 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 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.

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