



AMEOF120-HAMJZ



Picture coming soon

Open Frame

The AMEOF120-HAMJZ series is one of Aimtec's compact size open frame 120W AC/DC converter with active PFC, which is also suitable for medical equipment. It features a universal AC input and accepts a DC input voltage, while also coming standard with high efficiency, high reliability and double or reinforced isolation.

These converters offer excellent EMC and safety performance and meet IEC/EN/UL62368, GB4943, IEC/EN60335, IEC/EN61558, IEC/EN/ES60601 standards.

This series is suitable for industrial, streetlight control, security, telecommunications, smart home and medical applications.

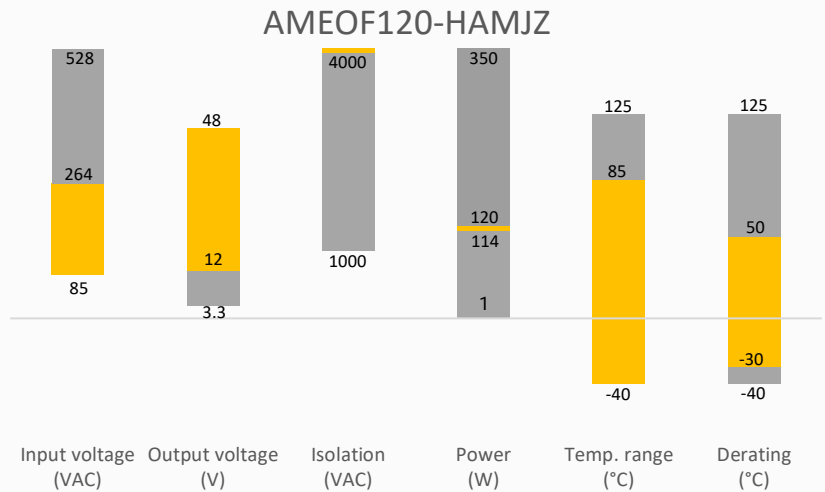
Features



- Universal Input: 85 - 264VAC/120 - 370VDC
- Active power factor correction
- Low leakage current: 0.1mA max.
- 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
- Designed to meet IEC/EN/UL62368, EN60335, EN61558, IEC/EN/ES60601-1



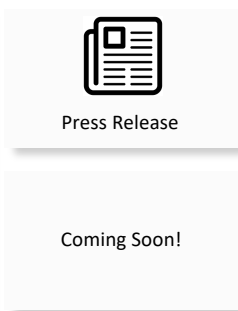
Summary



Training



Product Training Video
(click to open)



Application Notes

Applications



Power Grid



Industrial



Telecom



Medical

Models & Specifications

Single Output

Model	Input Voltage (VAC/Hz)	Input Voltage (VDC)	Nominal Output wattage (W)	Max Output wattage (W)*	Output Voltage (V)	Output Voltage Adjustable Range (V)	Output Current (A)	Maximum capacitive load (μ F)	Efficiency @230VAC Typ. (%)
AMEOF120-12SHAMJZ	85-264/50-60	120-370	114	141.6	12	11.4-12.6	9.5	6000	94
AMEOF120-15SHAMJZ	85-264/50-60	120-370	114	142.5	15	14.3-15.8	7.6	5000	94
AMEOF120-24SHAMJZ	85-264/50-60	120-370	120	150	24	22.8-25.2	5	3200	95
AMEOF120-27SHAMJZ	85-264/50-60	120-370	119.9	149.8	27	25.6-28.4	4.44	2400	95
AMEOF120-48SHAMJZ	85-264/50-60	120-370	120	150	48	45.6-50.4	2.5	1600	94.5

* Maximum duration 10S when working at max output wattage. Output wattage cannot exceed the nominal output wattage when the output voltage is trimmed up.

Input Specifications

Parameters	Conditions	Typical	Maximum	Units
Input current	115VAC		2	A
	230VAC		1	A
Inrush current	115VAC, cold start	40		A
	230VAC, cold start	75		A
Leakage	240VAC, normal condition		0.1	mA
	240VAC, single fault condition		0.5	mA
Power factor	115VAC, 100% load	≥ 0.98		
	230VAC, 100% load	≥ 0.94		

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	12, 15V	± 2		%
	24, 27, 48V	± 1		%
Line regulation	Full load	± 0.5		%
Load regulation	0-100% load	± 1		%
Ripple & Noise*	12, 15V		120	mV p-p
	24, 27V		150	mV p-p
	48V		200	mV p-p
Hold up time	230VAC	≥ 15		ms

* Ripple and Noise are measured at 20MHz bandwidth with a 10 μ F electrolytic capacitor and a 0.1 μ F ceramic capacitor. Please refer to the application note for specific details.

Isolation Specification

Parameters	Conditions	Typical	Maximum	Units
Tested I/O voltage	60 sec, leakage ≤ 5 mA	≥ 4000		VAC
Tested I/PE voltage	60 sec, leakage ≤ 5 mA	≥ 1500		VAC
Tested O/PE voltage	60 sec, leakage ≤ 5 mA	≥ 1500		VAC
Resistance I/O*	500VDC	> 100		M Ω

Resistance I/PE*	500VDC	>100		MΩ
Resistance O/PE*	500VDC	>100		MΩ
Means of protection I/O			2xMOPP	
Means of protection I/PE			1xMOPP	
Means of protection O/PE			1xMOPP	

* Tested under 25±5°C ambient temperature with relative humidity <70% and no condensation.

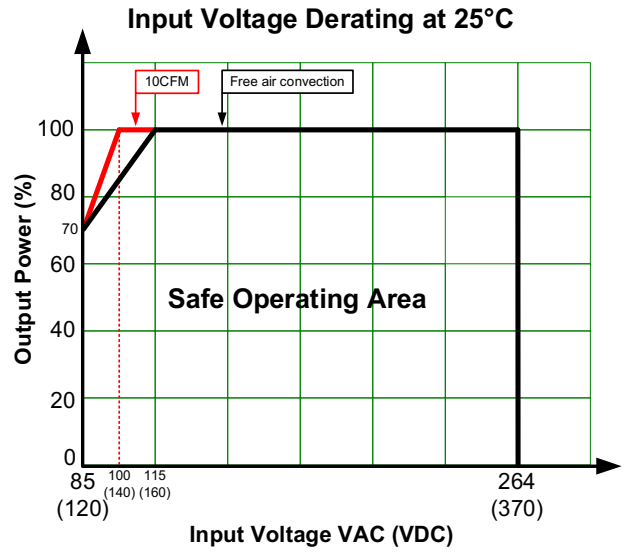
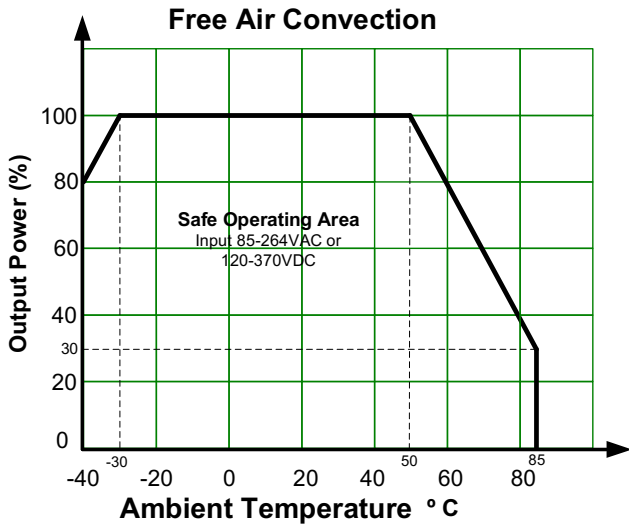
General Specifications				
Parameters	Conditions	Typical	Maximum	Units
Protection class	Class II without protective earth connection, Class I with protective earth connection			
Over current protection	Auto recovery, hiccup	≥ 130		% of Iout
Over voltage protection	12Vout, shut down, manual recovery		16	VDC
	15Vout, shut down, manual recovery		25	VDC
	24Vout, shut down, manual recovery		32	VDC
	27Vout, shut down, manual recovery		35	VDC
	48Vout, shut down, manual recovery		60	VDC
Short circuit protection	Hiccup, Continuous, Auto recovery time < 3S			
Over temperature protection	Shut down, manual recovery			
No-load power consumption			0.3	W
Operating temperature	See derating graph	-40 to +85		°C
Storage temperature		-40 to +85		°C
Power Derating	-40 °C to -30 °C	2.0		%/°C
	+50 °C to +85 °C	2.5		%/°C
	85VAC to 100VAC, forced air convection 10CFM	2.0		%/VAC
	85VAC to 115VAC, free air convection	1.0		%/VAC
Temperature coefficient		±0.03		%/°C
Cooling	Free air convection, forced air convection 10CFM			
Humidity	Non-condensing, storage	>10	95	% RH
	Non-condensing, operating	>20	90	% RH
Weight		125		g
Dimensions (L x W x H)		3.00 x 2.00 x 1.22 inches (76.2 x 50.8 x 31.0 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.

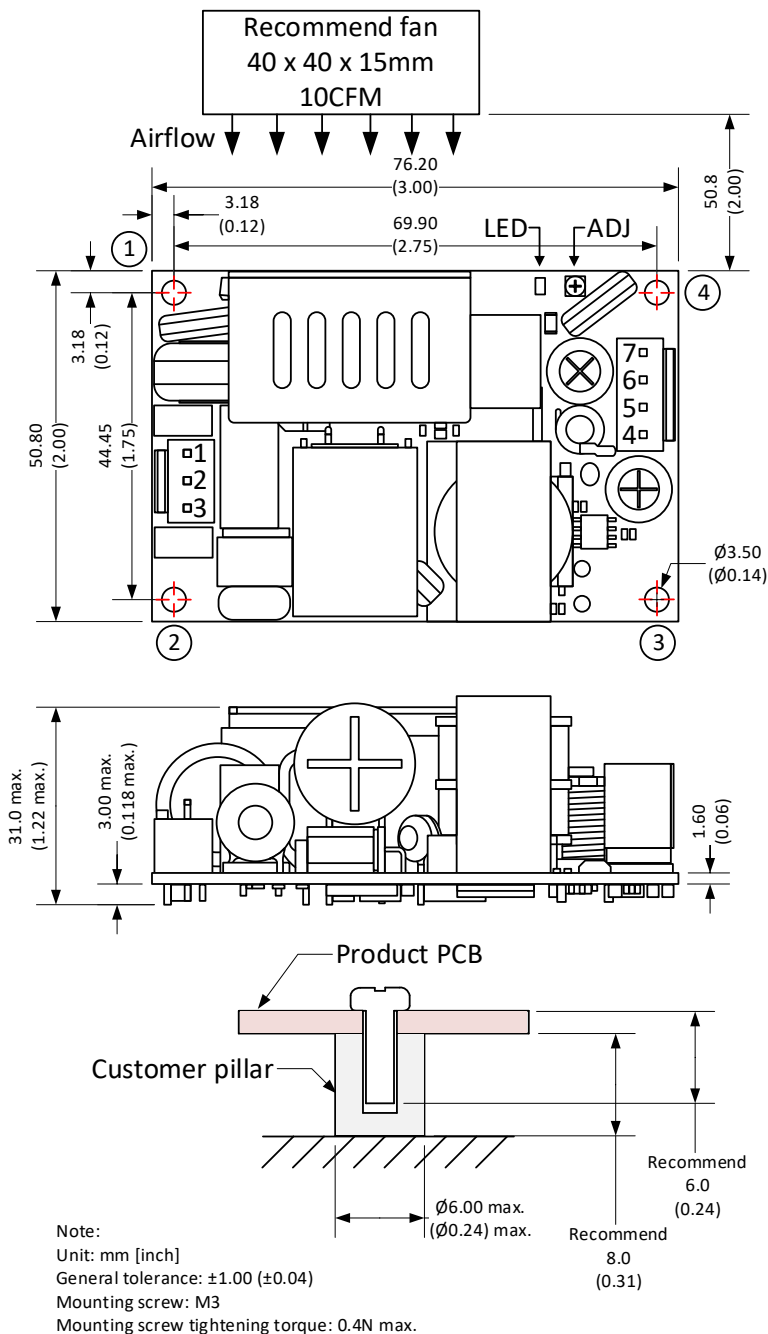
Safety Specifications	
Parameters	
Standards	Design to meet IEC/EN/UL62368-1, EN60335, IEC/EN61558, IEC/EN60601, ES60601-1 V3.1, CAN/CSA-C22.2 No.60601-1:14 Ed3, EN60601-1-2 Ed4, GB4943-1
	EMC - Conducted and radiated emission*
	EMC - Harmonic current emissions*
	Electrostatic Discharge Immunity
	RF, Electromagnetic Field Immunity
	Electrical Fast Transient/Burst Immunity
	Surge Immunity
	RF, Conducted Disturbance Immunity
Voltage dips, Short Interruptions Immunity	

* The power supply is considered as a component and will be installed in an end-product. All the EMC tests are performed with the power supply mounted on a 1mm thick 360mm x 360mm metal plate. The EMC compliance of the end-product must be reconfirmed.

Derating



Dimensions



Pin Output Specifications			
Pin	Function	Connector	Recommended connector
1	AC Input (N)	JST B3P-VH or equivalent	JST VHR
2	NC		JST SVH-21PT-P1.1 or equivalent
3	AC Input (L)	JST B4P-VH or equivalent	JST VHR
4	-V Output		JST SVH-21PT-P1.1 or equivalent
5	-V Output	JST B4P-VH or equivalent	JST VHR
6	+V Output		JST SVH-21PT-P1.1 or equivalent
7	+V Output		

Note:

1. It is needed to have $\geq 10\text{mm}$ distance between the product and external components for safety.
2. Connect mounting point 1 and 4 to protective earth for Class I system.
3. Connect mounting point 1 and 4 together for Class II system.

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 than the ones listed in this datasheet. 7. Warranty is in accordance with Aimtec's standard Terms of Sale available at www.aimtec.com.